NM - 22

MONITORING REPORTS



Kieling, Martyne

RE: Goodwin

From:Don Fernald [don.fernald@amec.com]Sent:Monday, September 30, 2002 6:18 AMTo:Kieling, MartyneSubject:RE: Goodwin

Hi Martyne,

See the following summary:

AMEC Earth & Environmental conducted bioremedial-enhancing activities at the Goodwin Treating Plant facility on September 4th through the 11th, 2002. The activities consisted of aeration and addition of moisture (water) to the soils that have been impacted hydrocarbons from historic crude oil releases. The moisture and oxygen stimulate the multiplication of the existing hydrocarbon degrading microorganisms present in the soils. The hydrocarbon-impacted soils were placed into "biopiles" and mixed with cow manure after excavation from the historic spill areas. The manure was used to add nitrogen to stimulate the multiplication of the hydrocarbon degrading microorganisms. Approximately 3,600 cubic yards of manure was mixed with 17,400 cubic yards of hydrocarbon-impacted soils. Upon conclusion of the last phase of bioremedial enhancement of the soils, five composite soil samples were obtained from various areas of the "biopiles" and submitted to Trace Analysis, Inc. for analysis of total petroleum hydrocarbons (TPH) and Benzene, Toluene, Ethylbenzene and Zylenes (BTEX) using EPA methods 8015 modified for gas and diesel range organics and 8021 respectively. The results of the analysis are listed as follows:

Sample Number	· · · · · · · · · · · · · · · · · · ·	BTEX	TPH DRO	TPH GRO
	Date	(ppm)	(ppm)	(ppm)
091102-01	9/11/02	0.122	393	1802
091102-02	9/11/02	0.0872	210	13.6
091102-03	9/11/02	0.0606	526	9.37
091102-04	9/11/02	0.0642	298	12.3
091102-05	9/11/02	0.0579	1040	15.5

Based on the data from the September 11, 2002 soil sampling, it appears as though soils are within the NMOCD objectives for cleanup of the site. AMEC requests written permission to backfill excavated areas at the Goodwin Treating Plant facility with the bioremediated soils from the biopiles.

Best Regards,

Don Fernald AMEC Earth & Environmental 2060 Afton Place Farmington, NM 87401 Ph: (505) 327-7928 Fx: (505) 326-5721 don.fernald@amec.com

> -----Original Message----- **From:** Kieling, Martyne [mailto:MKieling@state.nm.us] **Sent:** Wednesday, September 25, 2002 3:41 PM **To:** 'Don Fernald'

RE: Goodwin

Subject: RE: Goodwin

Thanks Don Until Monday

> -----Original Message----- **From:** Don Fernald [mailto:don.fernald@amec.com] **Sent:** Wednesday, September 25, 2002 3:21 PM **To:** 'Kieling, Martyne ' **Subject:** RE: Goodwin

Hi Martyne,

Thanks for the email. No problem on the delay. We will plan accordingly. I will have a summary report to you by Monday morning.

Talk to you Monday.

Best Regards,

Don Fernald

-----Original Message-----From: Kieling, Martyne To: 'Don.fernald@amec.com' Sent: 9/25/2002 5:38 PM Subject: Goodwin

Don,

Regarding our phone conversation on September 23, 2002. and September 25, 2002

You stated that the soil sample results from the September turning event at Goodwin showed soil TPH levels at 210 ppm, 298 ppm, ,393 ppm, 526 ppm and 1040 ppm. The OCD has determined that the soil has been remediated enough to push in the piles however since we went to the expense of turning the pile and adding water in early September it would be prudent for OCD to allow the pile to sit and take advantage of this latest expenditure and allow the pile to remediate to its fullest potential. In that regard, I would like to keep the original date of the first week of November as the target date for pushing this material back into the holes. Along with that I will want to catch five more samples to see how the levels have continued to drop. This data will aid us in future projects of a similar nature. Sampling of the pile can wait until the crew is on site to begin pushing in the piles.

RE: Goodwin ÷.

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I called Trace Analysis today and spoke to Nell Green and authorized 5 jars

to be shipped to your midland office under OCD's contract. All you need to

do is call and request them and give them the shipping address.

I apologize for the change of mind regarding my earlier verbal response.

Please call if you have any questions. I will be in the office on Monday September 30th.

Martyne J. Kieling Martyne J. Kieling **Environmental Geologist**

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REMEDIAL ACTION REPORT FOR THE GOODWIN TREATING PLANT WEST OF HOBBS, NEW MEXICO

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February 2003

Prepared For

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Completed by:

AMEC Earth & Environmental



2060 Afton Place Farmington, New Mexico 87401 (505) 327-7928

Project No. 2517000051

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APPENDIX G - SOIL TESTING ANALYTICAL DATA (BIOLOGICAL & CHLORIDES)



1.0 INTRODUCTION

AMEC Earth & Environmental (AMEC) was retained to conduct remedial activities for the State of New Mexico Energy, Minerals and Natural Resources Department-Oil Conservation Division (OCD) at the Goodwin Treating Plant facility located in Lea County, west of Hobbs, New Mexico. The remedial activities were conducted in accordance with the contract between AMEC and the State of New Mexico General Services Department Number 00-805-09-17656.

The Goodwin Treating Plant facility was operated prior to 1996 for treating or recovering crude oil from solids and produced water. Produced water, or salt water was disposed in an injection well located onsite. Management practices at the facility resulted in hydrocarbon contamination of soils located at the facility. Philip Environmental Services Corporation (PESC) conducted Field investigations and remedial activities in 2001. These activities included an investigation to determine hydrocarbon impacts to soil and groundwater in addition to remedial activities which included removal of most of the above ground storage tanks and tank bottoms. At the close of PESC's remedial activities during July of 2001, it was determined that approximately 15,000 cubic yards of hydrocarbon impacted soils remained on site at depths ranging from the surface down to five to eight feet below the surface.



2.0 PROJECT BACKGROUND

Previous Remedial Actions

PESC was contracted by the OCD to conduct limited remedial activities at the Goodwin Treating Plant site during 2001. PESC excavated and removed a total of 4,856 cubic yards of hydrocarbon-impacted soils from the Goodwin Treating Plant site and transported it to J&L Landfarm for remediation. This volume included tank bottom material that was not liquid enough to pump and was therefore, solidified for transport to the landfarm for treatment. Clean backfill soil was transported from the landfarm to the Goodwin Treating Plant site for backfilling-excavated areas.

PESC removed liquids from the tanks that were transported to Sundance Services and Controlled Recovery, Inc. (CRI) for recycling.

PESC removed the majority of the tanks, vessels, treaters, pipes, and other related equipment located on site. Two treaters and some associated piping were left on site. Materials that were salvageable or recyclable were sent to a salvage yard for processing. Materials that couldn't be recycled were sent to an EMNRD-OCD approved waste management facility for disposal CRI. Solid waste material, consisting of redwood tanks, steel tanks with foam insulation and other miscellaneous debris was transported to CRI for disposal.

On November 27, 2001, the OCD requested a cost estimate and proposal from AMEC to complete remedial activities at the Goodwin Treating Plant site. AMEC provided the OCD with a cost estimate and proposal to excavate and treat approximately 12,000 cubic yards of hydrocarbon-impacted soils onsite, transport up to 500 cubic yards of tank bottoms and highly saturated hydrocarbon-impacted soils to an approved commercial landfarm and remove the treaters from the site.



3.0 REMEDIAL ACTIVITIES

On Monday, June, 3, 2002 AMEC mobilized to the Goodwin Treating Plant site to begin remedial activities. On Tuesday, June 4th AMEC conducted a kick-off meeting, which consisted of a review of the site-specific health and safety plan, the project work plan and project documentation procedures. Mr. Larry Johnson with the OCD was present for a portion of this meeting and was presented a copy of the site-specific health and safety plan. After this meeting, excavation commenced on the northwest portion of the site. A chronology of the remedial activities performed by AMEC was documented and provided to the OCD via e-mail. A copy of this documentation is presented in Appendix A.

AMEC removed the two treaters and associated piping and equipment at the site. Prior to transport and disposal, AMEC screened the two vessels for Naturally Occurring Radioactive Materials (NORM). The vessels and residual contents were screened using a Ludlum Scintillator meter. Readings were detected less than the state of New Mexico threshold of 50 uR/hr. The treaters were sent to an OCD-approved facility (Lea Land Company) for disposal. A copy of the bill of lading and profile prepared for disposal of the treaters is included in Appendix B. AMEC subcontracted Hobbs Iron and Metal to complete the demolition, cutting and shearing of these treaters. Lea Land Company was subcontracted by AMEC to transport and dispose of these materials. The metal treater materials were not recycled due to the presence of residual hydrocarbons. It was deemed not cost effective to clean the treaters for recycling.

AMEC removed the tank bottom pile from the pit in the northwest corner of the facility. Tank bottom material was sent to an OCD-approved landfarm (J&L Landfarm) for reclamation along with other highly saturated hydrocarbon-impacted soils. AMEC subcontracted Martinez Trucking to transport these materials to J&L Landfarm for treatment. A total of 600 cubic yards of hydrocarbon-impacted soils and tank bottoms were transported to J&L Landfarm for treatment. Copies of the bill of ladings for the hydrocarbon-impacted soil and tank bottoms transported to J&L Landfarm are included in Appendix C.

AMEC excavated hydrocarbon-impacted soils around former tank footprint locations, hydrocarbon spills and other visually apparent areas of the former Goodwin Treating Plant facility. Areas not excavated include areas previously excavated and removed by PESC, areas around the disposal or injection well and areas that were not significantly impacted by hydrocarbons as determined visually and by field-testing with a photoionization detector (PID). Approximately 18,400 cubic yards of hydrocarbon-impacted soils were excavated by AMEC and treated onsite in the biopiles.

Photographs of site remedial activities are included in Appendix D.

3.1 Soil Screening and Sampling Procedures

Hydrocarbon-impacted soil that was highly contaminated and saturated as determined by visual observation was excavated to the practical extent. Once the hydrocarbon-impacted





soil areas appeared to be reduced to levels that appeared clean or relatively hydrocarbon free, soil samples were obtained and screened in the field using a PID to help determine the levels of volatile hydrocarbon constituents present. The PID was calibrated daily prior to use. PID screening was performed as often as necessary to determine the levels of volatile hydrocarbons present. Once an excavated area was less than 100 parts per million as determined with the PID, a duplicate soil sample was placed into approved laboratory sampling containers, properly labeled, documented on a chain-of-custody (COC) form, placed in a cooler with ice and delivered to the OCD Hobbs district office. The OCD directed AMEC to directly ship the samples to the New Mexico state contracted laboratory (Trace Analysis, Inc.) for analysis of Benzene, Toulene, Ethylbenzene, Xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH), Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) using Environmental Protection Agency (EPA) laboratory analysis Methods 8021 and 8015 Modified, respectively.

The criteria for determining remedial action levels for the site as directed by the OCD are listed as follows:

Surface soils to eight (8) feet below ground surface:

Constituent	Action Level (ppm)
Benzene	10
BTEX	50
ТРН	1000

Below eight (8) feet of ground surface:

Constituent	Action Level (ppm)
Benzene	10
BTEX	50
ТРН	100

Remedial action levels were determined based on the depth of groundwater at the site being approximately 58 feet below ground surface.

3.2 Sample numbers and location identification

Duplicate soil samples (where PID results indicated less than 100 ppm) were sent to the laboratory had the following numbering system assigned to each sample.

Current date – sample number

Example: 060502-01

The first part of each sample number contained the date in which the sample was obtained, for example June 5, 2002 was labeled as 060502, which was be followed by the sample number. The second part of the sample number identifies the sequential number of the sample in relation to the sample location. Sample numbers ran sequentially throughout the excavation phase of the project to depict the sample location. If laboratory data indicated that a sample location had not been excavated to the extent in which hydrocarbon-impacted soils had been removed to cleanup criteria, additional excavation was completed. After excavation, a field test was completed with the PID and a duplicate sample was submitted for laboratory analysis. The sample date would be the actual date the sample was obtained, and the second part of the sample number would be a duplicate of the location that had secondary excavation performed for that location.

3.3 Sampling Strategy

Excavation activities were initiated along the northwest corner of the site. Excavating proceeded to the east across the site following any observable hydrocarbon-impacted soils. Soil sampling and testing was conducted with the PID as needed to verify the concentration of hydrocarbons as determined in the field. Clearance samples were obtained as needed, but no less then on the center of a grid of 50' x 50' to verify remedial action levels that have been achieved. Once hydrocarbon-impacted soils appeared to be removed, a soil sample was obtained from the bottom of the excavation for field-testing. If field-testing (PID results) data indicated less than 100 parts per million, then a duplicate sample was obtained for laboratory analysis and to verify clearance of the excavated area.

The following is the analytical data from the soil samples obtained from the excavated areas at the Goodwin Treating Plant.

Sample No.	Date	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	TPH DRO	TPH GRO
1	05-Jun	<0.010	0.126	0.0364	0.032	0.194	<50	<1
2	05-Jun	<0.010	<0.010	<0.010	0.0172	0.0172	171	12.7
3	05-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	122	2.86
4	05-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
5	05-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
6	05-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	59.4	<1
7	05-Jun	<0.010	<0.010	<0.010	< 0.010	<0.010	<50	<1
8	05-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
9	10-Jun	<0.010	.0.14	0.0107	0.0117	0.0364	64.7	<1
10	10-Jun	<0.010	<0.010	0.0102	0.0104	0.0206	<50.0	<1
11	10-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	57.2	<1
12	10-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50.0	<1
Sample No.	Date	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	TPH DRO	TPH GRO
13	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	69.8	<1

ANALYTICAL DATA FROM SOIL SAMPLING EXCAVATED AREAS

14	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	109	<1
15	21-Jun	<0.010	<0.010	<0.010	0.0106	.0.106	179	<1
16	21-Jun	<0.010	<0.010	0.0167	0.0393	.0.56	1960	12.5
17	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	2.32
18	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
19	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
20	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
21	21-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	1530	<1
22	25-Jun	<0.010	<0.010	<0.010	0.0104	0.0104	<50	<1
23	25-Jun	<0.010	<0.010	0.0104	0.012	0.0224	<50	<1
24	25-Jun	<0.010	<0.010	0.0104	0.0109	0.0213	<50	<1
25	25-Jun	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
26	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
27	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	91.9	<1
28	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	66.3	<1
29	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	144	<1
30	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	224	<1
31	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	120	<1
32	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	102	<1
33	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
34	02-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
35	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
36	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
37	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
38	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
16*	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
21*	12-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
39	17-Jul	<0.010	<0.010	<0.010	0.013	0.013	<50	<1
40	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	50.9	<1
41	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
42	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
43	17-Jul	<0.010	<0.010	< 0.010	<0.010	<0.010	<50	<1
44	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
45	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
46	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1
47	17-Jul	<0.010	<0.010	<0.010	<0.010	<0.010	<50	<1

*16 & *21 are samples obtained from the same location of sample numbers 16 and 21 after additional excavation was completed to remove hydrocarbon-impacted soils.

AMEC completed the excavation and construction of the biopiles on July 17, 2002. Trace Analysis and the EMNRD-OCD provided a summary of analytical data from the excavation activities. This data is included in Appendix F.

3.4 Biopile Construction and Management

During the excavation of hydrocarbon-impacted soils, AMEC initiated the transport of cow manure from a local diary to the Goodwin site for construction of biopiles. AMEC constructed the biopiles concurrently with the excavation of the hydrocarbon-impacted soils. Cow manure was purchased from Martinez Trucking and transported to the site for use in construction of the biopiles. Approximately 4,564 Cubic yards of manure was transported to the Goodwin Treating Plant site for use in the biopiles. A ratio of approximately four parts hydrocarbon-impacted soils, to one part manure was used in construction of the biopiles. Biopiles consists of placing the hydrocarbon-impacted soils into long, high piles, mixed with manure. The addition of manure to hydrocarbonimpacted soils adds nutrients and stimulates the growth of indigenous organisms to assist with the degradation of hydrocarbons. Additionally, the organic matter in the manure helps retain moisture within the biopile, which is than readily available for the organisms that breakdown the hydrocarbons in the soil. While the biopiles were being constructed, AMEC transported water to the site with a water truck and applied it to the biopiles to assist with biodegradation of the hydrocarbons. Water was purchased from Gibbs Water Sales and transported to the site with a water truck and applied to the biopiles during construction to enhance biodegradation of the hydrocarbons.

Due to a need for increased space for construction of the biopiles, AMEC removed the fencing from the northern portion of the site and extended fencing to the north. Additionally, areas of the site that were excavated greater than eight feet were fenced to prevent livestock from potentially entering excavations.

On June 10, 2002, AMEC obtained two composite samples of the hydrocarbon-impacted soils that were excavated and submitted them to Trace Analysis, Inc. / BioLogic Resources, LLC to test for the presence of hydrocarbon-degrading organisms and chlorides. Since the site was historically used to treat crude oil and dispose of produced water, the presence of chlorides in high concentrations was a concern since chlorides can inhibit the populations of hydrocarbon-degrading organisms. The following is the data from the soil samples obtained and submitted for testing.

Sample No.	Date	Heterotrophic Plate Count CFU/g	Diesel Degrading Bacteria CFU/g	Heavy Oil Degrading Bacteria CFU/g	Chlorides mg/kg
061002-1	10-Jun	9.1x10 ⁶	7.1x10 ⁶	6.7x10 ⁶	3900
061002-2	10-Jun	5.6x10 ⁷	4.5x10 ⁶	2.7x10 ⁶	1900

ANALYTICAL DATA OF SOIL SAMPLES FOR HYDROCARBON-DEGRADING ORGANISMS

The data shows that chloride concentrations did not appear to be at levels that would inhibit biodegradation of the hydrocarbons within the soil, as the heterotrophic plate and bacteria counts are elevated.

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Biological and chloride analytical data is included in Appendix G.

On July 17, 2002 and soil samples were obtained from the biopiles for submittal to Trace Analysis, Inc. for testing of BTEX, TPH-DRO and TPH-GRO using EPA methods 8021 and 8015 Modified, respectively. After sampling biopile soils, the first "turning event" where the biopiles were moved, aerated and watered was initiated to enhance the biodegradation of the hydrocarbons. A subsequent turning event was initiated on September 4, 2002 with additional sampling of the biopiles being performed afterwards on September 11, 2002. Analytical data from the September 11, 2002 sampling event indicated that a sharp reduction in hydrocarbons within the biopiles had occurred. Therefore, an additional turning event was not deemed necessary and backfilling of the excavations was approved by the OCD. Additional sampling of soil from the biopiles was performed by the OCD on November 21, 2002. Analytical data from the biopile

Sample No.	Date	Benzene	Toluene	Ethylbenzene	M,P,O- Xylene	Total BTEX	TPH DRO	TPH GRO
1	17-Jul	<0.010	0.0461	0.173	0.446	0.665	4430	40.1
2	17-Jul	<0.010	0.0123	0.0658	0.293	0.371	5000	32
3	17-Jul	<0.010	0.0585	0.058	0.215	0.332	4490	18.6
4	17-Jul	0.356	0.953	1.83	6.21	9.35	3390	183
5	17-Jul	0.0556	0.0465	0.264	0.429	0.795	5140	39.9
6	17-Jul	<0.010	0.0213	0.0694	0.157	0.248	2730	24.1
7	17-Jul	<0.010	0.0202	0.042	0.0978	0.16	2410	16.3
8	17-Jul	<0.010	0.0733	0.46	1.25	1.78	2870	56.3
9	17-Jul	0.666	0.637	2.06	4.74	8.1	3170	124
10	17-Jul	<0.010	0.0146	0.13	0.584	0.729	3040	55.3
1	11-Sep	<0.010	0.0104	0.0425	0.0687	0.122	393	18.2
2	11-Sep	<0.010	<0.010	0.0262	0.061	0.0872	210	13.6
3	11-Sep	<0.010	<0.010	0.0138	0.0468	0.0606	526	9.37
4	11-Sep	<0.010	<0.010	0.0158	0.0484	0.0642	298	12.3
5	11-Sep	<0.010	<0.010	0.0227	0.0346	0.0573	1040	15.5
112102913	21-Nov	<0.010	<0.010	<0.010	<0.010	<0.010	225	4.54
112102920	21-Nov	<0.010	<0.010	<0.010	<0.010	<0.010	389	<1
112102928	21-Nov	<0.010	<0.010	<0.010	<0.010	<0.010	508	<1
112102936	21-Nov	<0.010	<0.010	<0.010	<0.010	<0.010	342	3.92
112102944	21-Nov	<0.010	<0.010	<0.010	<0.010	<0.010	411	<1

ANALYTICAL DATA FROM BIOPILES

A summary of the analytical data is included in Appendix F.



4.0 SITE CLOSURE ACTIVITIES

On December 2, 2002, AMEC initiated backfilling of soils from the biopiles into the previously excavated areas at the Goodwin Treating Plant site. Fencing installed around the deeper excavations was removed and stockpiled along the site for disposal by the OCD. AMEC completed backfilling and site closure operations on December 18, 2002.

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H

Lubbock, Texas 79424 800 • 378 • 1296 El Paso, Texas 79932 888 • 588 • 3443 E-Mail: lab@traceanalysis.com 806•794•1296 F. 915•585•3443 F.

6 FAX 806•794•1298 3 FAX 915•585•4944

Invoice #

56726

1220 S. Saint Francis Dr. Santa Fe, NM 87505

JAN 3 0 2003 Environmental Bureau Oil Conservation Division

RECEIVED

Invoice Date:

Order ID:

Dec 23, 2002

A02121919

Attn: Martyne Kieling

OCD

 Project #:
 Goodwin
 DFA VENDOR NUMBER: 752439743

 Project Name:
 Goodwin Well #1
 P.A. # 20-521-07-02497

Project Location:

Bill To:

Goodwin Treating Plant, Hobbs

Test	Quantity	Matrix	Description	Price	SubTotal
Fe, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Al, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Anions/Cations/Gener	al 1	Water	216781 - 216781	\$120.00	\$120.00
As, Total Chemis	try 1	Water	216781 - 216781	\$10.00	\$10.00
B, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Ba, Total	1	Water	216781 - 216781	\$10.00	\$10.00
BTEX/TPH GRO	1	Water	216781 - 216781	\$60.00	\$60.00
Cd, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Co, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Ag, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Cu, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Zn, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Hg, Total	1	Water	216781 - 216781	\$12.00	\$12.00
Mn, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Mo, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Ni, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Pb, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Se, Total	1	Water	216781 - 216781	\$10.00	\$10.00
Si, Total	1	Water	216781 - 216781	\$10.00	\$10.00
TPH DRO	1	Water	216781 - 216781	\$40.00	\$40.00
Cr, Total	1	Water	216781 - 216781	\$10.00	\$10.00

Payment Terms: Net 30 Days

Total \$402.00

04 to Pary 1-30-03

Mut I T. al

Director, Dr. Blair Leftwich



6701 Aberdeen Ave., Suite 9



Lubbock, TX 79424-1515

(806) 794-1296

Report Date: January 27, 2003Order Number: A02121919 Goodwin Well #1 Goodwin

TraceAnalysis, Inc.

Page Number: 1 of 2 Goodwin Treating Plant, Hobbs

Summary Report

Martyne Kieling OCD	Report Date:	January 27, 2003 A02121919	
1220 S. Saint Francis Dr. Santa Fe, NM 87505	Order ID Number:		
Project Number: Goodwin			

Project Name: Goodwin Well #1 Project Location: Goodwin Treating Plant, Hobbs

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
216781	1218021335	Water	2/18/02	13:35	12/19/02

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

			TPH DRO	TPH GRO			
1	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
216781 - 1218021335	0.002	0.002	< 0.001	< 0.001	0.004	<5.00	<0.1

Sample: 216781 - 1218021335

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as $CaCo3$
Bicarbonate Alkalinity		276	mg/L as CaCo3
Total Alkalinity		276	mg/L as CaCo3
Specific Conductance		1420	μ MHOS/cm
Total Mercury		< 0.0002	mg/L
Chloride	1	219	mg/L
Fluoride		1.44	mg/L
Nitrate-N		3.04	mg/L
Sulfate	2	41.6	mg/L
Naphthalene		< 0.0002	mg/L
Acenaphthylene		< 0.0002	mg/L
Acenaphthene		< 0.0002	mg/L
Fluorene		< 0.0002	mg/L
Phenanthrene		< 0.0002	mg/L
Anthracene		< 0.0002	mg/L
Fluoranthene		< 0.0002	mg/L
Pyrene		< 0.0002	mg/L
Benzo(a)anthracene		<0.0002	mg/L

Continued on next page

 1Sample re-ran on 12/23/02 in QC #25805. LCS %EA 91 RPD 0; Matrix spike %EA 90. RPD 0 %IA 91. 2Sample re-ran on 12/23/02 in QC #25805. LCS %EA 92 RPD 1; Matrix spike %EA 90. RPD 0 %IA 91.

This is only a summary. Please, refer to the complete report package for quality control data.

TraceAnalysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: January 27, 2003Order Number: A02121919 Goodwin Goodwin Well #1 Page Number: 2 of 2 Goodwin Treating Plant,Hobbs

Sample 216781 continued ...

Param	Flag	Result	Units
Chrysene		<0.0002	mg/L
Benzo(b)fluoranthene		< 0.0002	mg/L
Benzo(k)fluoranthene		< 0.0002	mg/L
Benzo(a)pyrene		< 0.0002	mg/L
Indeno(1,2,3-cd)pyrene		< 0.0002	mg/L
${\rm Dibenzo}({\rm a,h}){\rm anthracene}$		< 0.0002	mg/L
Benzo(g,h,i)perylene		< 0.0002	mg/L
Total Calcium		240	mg/L
Total Magnesium		24.0	mg/L
Total Potassium		7.89	mg/L
Total Sodium		217	mg/L
Total Dissolved Solids		830	mg/L
Total Aluminum		16.6	mg/L
Total Arsenic		< 0.050	mg/L
Total Barium		<0.100	mg/L
Total Boron		0.131	mg/L
Total Cadmium		< 0.005	mg/L
Total Chromium		0.0336	mg/L
Total Cobalt		< 0.025	mg/L
Total Copper		< 0.0125	mg/L
Total Iron		8.40	mg/L
Total Lead		<0.010	mg/L
Total Manganese		0.0926	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		< 0.025	mg/L
Total Selenium		< 0.050	mg/L
Total Silica		21.4	mg/L
Total Silver		< 0.0125	mg/L
Total Zinc		0.0281	mg/L
pH	3	7.7	s.u.

This is only a summary. Please, refer to the complete report package for quality control data.

³Sample received out of holding time

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79932

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Analytical and Quality Control Report

Martyne Kieling OCD 1220 S. Saint Francis Dr. Santa Fe, NM 87505

Report Date:

January 27, 2003

Order ID Number: A02121919

Project Number: Goodwin **Project Name:** Goodwin Well #1 **Project Location:** Goodwin Treating Plant, Hobbs

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
216781	1218021335	Water	2/18/02	13:35	12/19/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Blair Leftwich, Director



Report Date: January 27, 2003 Goodwin Order Number: A02121919 Goodwin Well #1 Page Number: 2 of 18 Goodwin Treating Plant,Hobbs

Analytical Report

Sample: 216781 - 1218021335

Analysis:	Alkalinity	Analytical Method:	E 310.1	QC Batch: QC259	53 Date Analyzed:	12/31/02
Analyst:	RS	Preparation Method:	N/A	Prep Batch: PB240	26 Date Prepared:	12/31/02
Param		Flag	Result	Units	Dilution	RDL
Hydroxide	Alkalinity	······································	<1.0	mg/L as CaCo3	1	1
Carbonate	Alkalinity		<1.0	mg/L as CaCo3	1	1
Bicarbonat	e Alkalinity		276	mg/L as CaCo3	1	4
Total Alkal	linity		276	mg/L as CaCo3	1	4

Sample: 216781 - 1218021335

Analysis:	BTEX	Analytical Method:	S 8021B	QC Batch:	QC25707 I	Date Analyzed:	12/19/02
Analyst:	CG	Preparation Method:	N/A	Prep Batch:	PB23823 I	Date Prepared:	12/19/02
Param		Flag	Result	Units	Dilut	ion	RDL
Benzene		······································	0.002	mg/L	1		0.001
Toluene			0.002	m mg/L	1		0.001
Ethylbenze	ne	•	< 0.001	mg/L	1		0.001
M,P,O-Xyle	ene		< 0.001	mg/L	1		0.001
Total BTE	X		0.004	mg/L	1		0.001

					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
TFT	1	0.0493	mg/L	1	0.10	49	70 - 130
4-BFB	2	0.0449	mg/L	1	0.10	44	70 - 130

Sample: 216781 - 1218021335

Analysis: Analyst:	Conductivity JSW	Analytical Method: Preparation Method:	SM 2510B N/A	·QC Batch: Prep Batch:	QC26063 PB24108	Date Analyzed: Date Prepared:	1/7/03 1/7/03
Param		Flag R	esult	Units		Dilution	RDL
Specific Cor	nductance		1420	μ MHOS/cn	n	1	

Sample: 216781 - 1218021335

Analysis: Analyst:	Hg, Total BC	Analytical I Preparation	Method: Method:	S 7470A N/A	QC Batch: Prep Batch:	QC25841 PB23940	Date Analyzed: Date Prepared:	$\frac{12}{26}$
Param		Flag	Re	sult	Units	Dilu	tion	RDL
Total Mercu	ıry		<0.0	002	mg/L	1		0.0002

¹Low surrogate recovery due to matrix interference.

²Low surrogate recovery due to matrix interference.

Report Date: January 27, 2003	Order Number: A02121919	Page Number: 3 of 18
Goodwin	Goodwin Well #1	Goodwin Treating Plant, Hobbs

Sample: 216781 - 1218021335

Analysis: Ion Chromatography (IC) Analytical Method: E 300.0 QC Batch: QC25779Date Analyzed: 12/20/02 Preparation Method: N/A Prep Batch: PB23886 Date Prepared: 12/20/02 Analyst: RS

Param	\mathbf{Flag}	Result	Units	Dilution	RDL
Chloride	3	219	mg/L	1	1
Fluoride		1.44	mg/L	5	0.20
Nitrate-N		3.04	mg/L	5	0.20
Sulfate	4	41.6	mg/L	1	1

Sample: 216781 - 1218021335

Analysis:	PAH	Analytical Method:	S 8270C	QC Batch:	QC26140	Date Analyzed:	1/8/03
Analyst:	RC	Preparation Method:	E 3510C	Prep Batch:	PB24138	Date Prepared:	12/23/02
Param		Flag	Re	sult	Units	Dilution	RDL
Naphthaler	ie	······································	<0.0	002	mg/L	1	0.0002
Acenaphthy	lene		<0.0	002	mg/L	1	0.0002
Acenaphthe	ene		<0.0	002	mg/L	1	0.0002
Fluorene			<0.0	002	$\mathrm{mg/L}$	1	0.0002
Phenanthre	ene		<0.0	002	mg/L	1	0.0002
Anthracene	9		<0.0	002	mg/L	1	0.0002
Fluoranthe	ne		<0.0	002	mg/L	1	0.0002
Pyrene			<0.0	002	mg/L	1	0.0002
Benzo(a)an	thracene		<0.0	002	mg/L	1	0.0002
Chrysene			<0.0	002	mg/L	· 1	0.0002
Benzo(b)flu	oranthene		<0.0	1002	mg/L	1	0.0002
Benzo(k)flu	oranthene		<0.0	002	mg/L	1	0.0002
Benzo(a)py	rene		<0.0	002	mg/L	1	0.0002
Indeno(1,2,	3-cd)pyren	e	<0.0	002	mg/L	1	0.0002
Dibenzo(a,	n)anthracei	ne	<0.0	002	$\mathrm{mg/L}$	1	0.0002
Benzo(g,h,i)perylene		<0.0	002	mg/L	1	0.0002

		Result	Units	Dilution	Spike	Percent Recovery	Recovery Limits
Surrogate	Flag				Amount		
Nitrobenzene-d5		54.96	mg/L	1	80	68	35 - 114
2-Fluorobiphenyl		59.36	$\mathrm{mg/L}$	1	80	74	43 - 116
Terphenyl-d14		53.78	$\mathrm{mg/L}$	1	80	67	33 - 141

Sample: 216781 - 1218021335

Analysis: Analyst:	Salts, Total BC	Analytical I Preparation	Method: Method:	S 6010B S 3010A	QC Batch: Prep Batch:	QC26478 PB24309	Date Analyzed: Date Prepared:	$\frac{1/22/03}{1/20/03}$
Param		Flag	Res	ult	Units	Diluti	on	RDL
Total Calci	um		2	240	mg/L	1		0.50
Total Magn	nesium		2	4.0	mg/L	· 1		0.50°
Total Potas	ssium		7	.89	mg/L	1		0.50
Total Sodiu	ım		2	217	mg/L	1		0.50

³Sample re-ran on 12/23/02 in QC #25805. LCS %EA 91 RPD 0; Matrix spike %EA 90. RPD 0 %IA 91. ⁴Sample re-ran on 12/23/02 in QC #25805. LCS %EA 92 RPD 1; Matrix spike %EA 90. RPD 0 %IA 91.

Report Date: January 27, 2003 Goodwin			Order Number: A02121919 Goodwin Well #1			Page Number: 4 of 18 Goodwin Treating Plant,Hobbs		
Sample: Analysis: Analyst:	216781 TDS RS	- 1218021335 Analytical Method: Preparation Method:	E 160.1 C N/A F	QC Batch: Prep Batch:	QC25799 PB23913	Date Analyzed: Date Prepared:	12/24/02 12/23/02	
Param		Flag	Result		Units	Dilution	RDL	
Total Dissol	ved Solids	1 100	830		mg/L	2	10	
Sample: Analysis: Analyst:	216781 TPH DRO BP	- 1218021335 Analytical Method Preparation Metho	: Mod. 8015 5d: 3510C - M	B QC Ba od. Prep E	tch: QC2588 atch: PB2397	4 Date Analyzed: 2 Date Prepared:	12/29/02 12/26/02	
D			TT '4		Dilution		זחמ	
Param	Flag	Result	Units		Dilution			
					Spike	Percent	Recovery	
Surrogate	FI	ag Result	Units	Dilution	Amount ·	Recovery	ZO 120	
Sample: Analysis: Analyst:	216781 TPH GRO CG	- 1218021335 Analytical Metho Preparation Met	od: 8015B hod: 5030	QC Batch: Prep Batcl	: QC25708 h: PB23823	Date Analyzed: Date Prepared:	12/19/02 12/19/02	
Param	Flag	Result	Units		Dilution		RDL	
GRO		< 0.1	mg/L		1		0.10	
Surrogate TFT 4-BFB	Flag 6 7	Result 0.104 0.095	Units I mg/L mg/L	Dilution 1 1	Spike Amount 0.10 0.10	Percent Recovery 49 45	Recovery Limits 70 - 130 70 - 130	
Sample: Analýsis: Analyst:	216781 Total Meta RR	- 1218021335 als Analytical Meth Preparation Met	od: S 6010B thod: S 3010A	G QC Bate Prep Ba	ch: QC25770 tch: PB23841	Date Analyzed: Date Prepared:	12/23/02 12/20/02	
Param		Flag	Result	Unit	s Di	lution	RDL	
Total Alum	inum		16.6	mg/	L	1	0.05	
Total Arsen	ic		< 0.050	mg/]	Լ r	1.	0.01	
Total Bariu	m		< 0.100	mg/	L r	1	0.01	
Total Cadm	ium		U.131 ~0.005	mg/	L T	1	0.005	
Total Chron	nium		<0.000 0.0336	mg/	ц Г.	1	0.000	
Total Cobel	t.		<0.0330 <0.025	mg/.	L [,	1	0.01	
Total Copp	er		< 0.0125	mg/	– L	1	0.01	

Continued ...

⁵Surrogate recovery out of range but within control charts for TPH1. ⁶Low surrogate recovery due to matrix interference. ⁷Low surrogate recovery due to matrix interference.

Report Date: January 27, 2003 Goodwin	Order Number: Goodwin W	Order Number: A02121919 Goodwin Well #1		Page Number: 5 of 18 Goodwin Treating Plant,Hobbs	
Continued Sample: 216781 Anal	ysis: Total Metals				
Param Flag	Result	Units	Dilution	RDL	
Total Iron	8.40	mg/L	1	0.05	
Total Lead	<0.010	mg/L	1	0.01	
Total Manganese	0.0926	mg/L	1	0.02	
Total Molybdenum	< 0.050	mg/L	1	0.05	
Total Nickel	< 0.025	mg/L	1	0.02	
Total Selenium	< 0.050	mg/L	1	0.05	
Total Silica	21.4	mg/L	1	0.05	
Total Silver	< 0.0125	mg/L	1	0.01	
Total Zinc	0.0281	mg/L	1	0.02	

Sample: 216781 - 1218021335

pH		8	7	.7	s.u.	1		1
Param		Flag	Resu	lt	Units	Dilutio	on	RDL
Analysis: Analyst:	pH RS	Analytica Preparati	l Method: on Method:	E 150.1 N/A	QC Batch: Prep Batch:	QC25798 PB23914	Date Analyzed: Date Prepared:	$\frac{12}{19}$



Report Date: January 27, 2003 Goodwin Order Number: A02121919 Goodwin Well #1 Page Number: 6 of 18 Goodwin Treating Plant,Hobbs

Quality Control Report Method Blank

Method Blank	QCBatch:	QC25707		
Param	Flag	Results	Units	Reporting Limit
Benzene		<0.001	mg/L	0.001
Toluene		< 0.001	mg/L	0.001
Ethylbenzene		< 0.001	mg/L	0.001
M,P,O-Xylene		< 0.001	mg/L	0.001
Total BTEX		< 0.001	mg/L	0.001

					Spike	Percent	Recovery
Surrogate	Flag	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
TFT		0.1	mg/L	1	0.10	100	70 - 130
4-BFB		0.098	mg/L	1	0.10	98	70 - 130

Method Blank

QCBatch: QC25708

Param		Flag	R	lesults	Units		Reporting Limit
GRO				<0.1	mg/L		0.10
					Spike	Percent	Recovery
Surrogate	Flag	\mathbf{Result}	\mathbf{Units}	Dilution	${\bf Amount}$	Recovery	Limits

Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
TFT		0.101	mg/L	1	0.10	101	70 - 130
4-BFB		0.0975	mg/L	1	0.10	97	70 - 130

Method Blank

QCBatch: QC25770

D		Darrulta	TT:+-	Reporting
Param	Flag	Results	Units	Limit
Total Aluminum		<0.100	mg/L	0.05
Total Arsenic		< 0.050	mg/L	0.01
Total Barium		<0.100	m mg/L	0.01
Total Boron		< 0.005	$\mathrm{mg/L}$	0.005
Total Cadmium		< 0.005	mg/L	0.005
Total Chromium		< 0.010	mg/L	0.01
Total Cobalt		< 0.025	mg/L	0.02
Total Copper		< 0.0125	mg/L	0.01
Total Iron		< 0.050	mg/L	0.05
Total Lead		<0.010	mg/L	0.01
Total Manganese		< 0.025	mg/L	0.02
Total Molybdenum		< 0.050	mg/L	0.05
Total Nickel		< 0.025	mg/L	0.02
Total Selenium		< 0.050	mg/L	0.05
				a

Continued ...

Report Date: January 27, 2003 Goodwin		Order Number: A02121919 Goodwin Well #1	Page Number: 7 of 18 Goodwin Treating Plant,Hobbs		
Continued				Benorting	
Param	Flag	Results	Units	Limit	
Total Silica		< 0.050	mg/L	0.05	
Total Silver		< 0.0125	mg/L	0.01	
Total Zinc		< 0.025	mg/L	0.02	

Method Blank QCBatch: QC25779

Param	Flag	Results	Units	Reporting Limit
Chloride		<1.0	mg/L	1
Fluoride		< 0.2	mg/L	0.20
Nitrate-N		< 0.2	mg/L	0.20
Sulfate		<1.0	mg/L	1

Method Blank QCBatch: QC25799

				Reporting
Param	Flag	Results	\mathbf{Units}	\mathbf{Limit}
Total Dissolved Solids		<10	mg/L	10

Method	Blank	QCBatch:	OC25841
TATCOMOG	Diam		

				Reporting
Param	Flag	Results	Units	\mathbf{Limit}
Total Mercury		< 0.0002	mg/L	0.0002

Method Blank QCBatch: QC25884

Param	F	ag	Res	ults	Units		Reporting Limit
DRO		<5.00		5.00	mg/L	50	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	9	7.90	mg/L	0.10	15	65	70 - 130

Method Blank

QCBatch: QC25953

⁹Surrogate recovery out of range but within control charts for TPH1.

Report Date: January 27, 2003 Goodwin		Order Number: A02121919 Goodwin Well #1	Pag Goodwin Trea	e Number: 8 of 18 ating Plant,Hobbs
				Reporting
Param	Flag	Results	Units	Limit
Hydroxide Alkalinity		<1.0	mg/L as CaCo3	1
Carbonate Alkalinity		<1.0	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.0	mg/L as CaCo3	4
Total Alkalinity		<4.0	mg/L as CaCo3	4

Method Blank

QCBatch: QC26063

	3			Reporting
Param	\mathbf{Flag}	Results	Units	Limit
Specific Conductance		5.86	μ MHOS/cm	

Method Blank

QCBatch: QC26140

				Reporting
Param	Flag	Results	Units	Limit
Naphthalene	•	< 0.0002	mg/L	0.0002
Acenaphthylene		< 0.0002	m mg/L	0.0002
Acenaphthene		< 0.0002	m mg/L	0.0002
Fluorene		< 0.0002	m mg/L	0.0002
Phenanthrene		< 0.0002	m mg/L	0.0002
Anthracene		< 0.0002	mg/L	0.0002
Fluoranthene		< 0.0002	mg/L	0.0002
Pyrene		< 0.0002	mg/L	0.0002
Benzo(a)anthracene		< 0.0002	mg/L	0.0002
Chrysene		< 0.0002	mg/L	0.0002
Benzo(b)fluoranthene		< 0.0002	m mg/L	0.0002
Benzo(k)fluoranthene		< 0.0002	mg/L	0.0002
Benzo(a)pyrene		< 0.0002	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		< 0.0002	$\mathrm{mg/L}$	0.0002
Dibenzo(a,h)anthracene		< 0.0002	mg/L	0.0002
Benzo(g,h,i)perylene		< 0.0002	m mg/L	0.0002

÷					Spike	Percent	Recovery
Surrogate	Flag	Result	\mathbf{Units}	Dilution	Amount	Recovery	Limits
Nitrobenzene-d5		52.55	mg/L	1	80	65	35 - 114
2-Fluorobiphenyl		57.65	mg/L	1	80	72	43 - 116
Terphenyl-d14		72.03	mg/L	1	80	90	33 - 141

Method Blank

QCBatch: QC26478

Param	Flag	Results	Units	Limit
Total Calcium		<0.5	mg/L	0.50
Total Magnesium		< 0.5	mg/L	0.50
Total Potassium		< 0.5	mg/L	0.50
Total Sodium		< 0.5	mg/L	0.50



Report Date: January 27, 2003 Goodwin

Order Number: A02121919 Goodwin Well #1

Page Number: 9 of 18 Goodwin Treating Plant, Hobbs

Quality Control Report Duplicate Samples

Duplica	ite	QCBatch:	QC25798						
Danam	Flor	Duplicate	Sample	IImita	,	Vilution	חסס	RPD Limit	
raram	F lag	nesun		Units	L 				
рн		8.3	8.3	s.u.		1	0	0	
Duplica	ıte	QCBatch:	QC25799						
			Duplicate	Sample				RPD	
Param		Flag	Result	Result	Units	Dilution	RPD	\mathbf{Limit}	
Total Disso	olved Solids		902	830	mg/L	1	8	9.7	

Duplicate QCBatch: QC25953

		Duplicate	Sample				RPD	
Param	Flag	Result	Result	Units	Dilution	RPD	\mathbf{Limit}	
Hydroxide Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2	-
Carbonate Alkalinity		<1.0	<1.0	mg/L as CaCo3	1	0	9.2	
Bicarbonate Alkalinity		314	320	mg/L as CaCo3	1	1	9.2	
Total Alkalinity		314	320	mg/L as CaCo3	1	1	9.2	

Duplicate	QCBatch:	QC26063						
D		Duplicate	Sample	TT. t.		מחמ	RPD	
Param	Flag	Result	Result	Units	Dilution	RPD	Limit	
Specific Conductance		1420	1420	μ MHOS/cm	1	0	20	

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch:

QC25707

					Spike					
	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	\mathbf{Result}	Result	Units	Dil.	Added	\mathbf{Result}	% Rec	RPD	Limit	Limit
MTBE	0.105	0.102	mg/L	1	0.10	< 0.001	105	2	70 - 130	20
Benzene	0.102	0.102	mg/L	1	0.10	< 0.001	102	0	70 - 130	20
Toluene	0.102	0.102	mg/L	1	0.10	< 0.001	· 102	0	70 - 130	20
Ethylbenzene	0.102	0.102	mg/L	1	0.10	< 0.001	102	0	70 - 130	20
M,P,O-Xylene	0.309	0.310	mg/L	1	0.30	< 0.001	103	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date Goodwin	Report Date: January 27, 2003 Goodwin			er Number: A0: Goodwin Well	2121919 #1	Page Number: 10 of 18 Goodwin Treating Plant,Hobbs			
Surrogate	LCS Result	LCSD Result	Units	Dilution	Spike Amount	LCS % Rec	LCSD % Rec	Recovery Limits	
TFT	0.089	0.1	mg/L	1	0.10	89	100	70 - 130	
4-BFB	0.096	0.101	mg/L	1	0.10	96	101	70 - 130	

Laboratory Control Spikes

QCBatch: QC25708

					Spike					
	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
GRO	0.894	1.06	mg/L	1	1	<0.1	89	16	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

C (LCS	LCSD	T T •,		Spike	LCS	LCSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
TFT	0.093	0.094	mg/L	1	0.10	93	94	70 - 130
4-BFB	0.0999	0.104	mg/L	1	0.10	99	104	70 - 130

Laboratory Control Spikes

QCBatch: QC25770

					Spike					
	LCS	LCSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	\mathbf{Result}	\mathbf{Result}	Units	Dil.	Added	Result	$\% { m Rec}$	RPD	\mathbf{Limit}	\mathbf{Limit}
Total Aluminum	0.895	0.886	mg/L	1	1	<0.100	90	1	75 - 125	20
Total Arsenic	0.428	0.424	mg/L	1	0.50	< 0.050	86	1	75 - 125	20
Total Barium	0.909	0.903	mg/L	1	1	< 0.100	91	1	75 - 125	20
Total Boron	0.0504	0.0503	mg/L	1	0.05	< 0.005	101	0	75 - 125	20
Total Cadmium	0.211	0.209	mg/L	1	0.25	< 0.005	84	1	75 - 125	20
Total Chromium	0.0862	0.0851	mg/L	1	0.10	< 0.010	86	1	75 - 125	20
Total Cobalt	0.215	0.213	mg/L	1	0.25	< 0.025	86	1	75 - 125	20
Total Copper	0.111	0.110	mg/L	1	0.12	< 0.0125	89	1	75 - 125	20
Total Iron	0.456	0.445	mg/L	1	0.50	< 0.050	91	2	75 - 125	20
Total Lead	0.462	0.460	mg/L	1	0.50	< 0.010	92	0	75 - 125	20
Total Manganese	0.232	0.230	mg/L	1	0.25	< 0.025	93	1	75 - 125	20
Total Molybdenum	0.475	0.472	mg/L	1	0.50	< 0.050	95	1	75 - 125	20
Total Nickel	0.220	0.218	mg/L	1	0.25	< 0.025	88	1	75 - 125	20
Total Selenium	0.391	0.388	mg/L	1	0.50	< 0.050	78	1	75 - 125	20
Total Silica	0.438	0.431	mg/L	1	0.50	< 0.050	88	2	75 - 125	20
Total Silver	0.111	0.110	mg/L	1	0.12	< 0.0125	89	1	75 - 125	20
Total Zinc	0.204	0.203	mg/L	1	0.25	< 0.025	82	0	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	Laboratory	/ Control	Spikes	QCBatch:	QC25779
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					Spike					
	LCS	LCSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	\mathbf{Limit}	Limit
Chloride	11.39	11.39	mg/L	1	12.50	<1.0	91	0	90 - 110	20
Fluoride	2.36	2.41	mg/L	1	2.50	< 0.2	94	2	90 - 110	20
Nitrate-N	2.35	2.36	mg/L	1	2.50	< 0.2	94	0	90 - 110	20
Sulfate	11.56	11.39	mg/L	1	12.50	<1.0	92	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory	Control	Spikes	QC	Batch:	QC25841					
					Spike					
	LCS	LCSD			Amount	Matrix			$\% \mathrm{Rec}$	RPD
Param	Result	Result	Units	Dil.	Added	Result	$\% \mathrm{Rec}$	RPD	Limit	Limit
Total Mercury	0.00101	0.00101	mg/L	1	0.001	< 0.0002	101	0	87 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Labora	Laboratory Control Spikes			QCBat	ch: QC258	384				
	LCS	LCSD			Spike Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
DRO	25.8	25.3	mg/L	0.10	25	< 5.00	103	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Recovery
Surrogate	\mathbf{Result}	\mathbf{Result}	Units	Dilution	Amount	% Rec	% Rec	Limits
n-Triacontane	10 10.1	11 10.1	mg/L	0.10	15	67	67	70 - 130

Laboratory Control Spikes

QCBatch: QC26140

					Spike					
	LCS	LCSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Naphthalene	62.52	53.48	mg/L	1	80	< 0.0002	78	15	16 - 96	20
Acenaphthylene	73.33	62.53	mg/L	1	80	< 0.0002	91	15	20 - 110	20
Acenaphthene	72.34	61.06	mg/L	1	80	< 0.0002	90	16	18 - 108	20
Fluorene	73.39	61.83	mg/L	1	80	< 0.0002	91	17	22 - 102	20
Phenanthrene	75.82	65.86	mg/L	1	80	< 0.0002	94	14	25 - 103	20
Anthracene	75.82	64.14	mg/L	1	80	< 0.0002	94	16	22 - 110	20
Fluoranthene	80.36	68.94	mg/L	1	80	< 0.0002	100	15	21 - 110	20
Pyrene	85.21	73.51	mg/L	1	80	< 0.0002	106	14	22 - 100	20
Benzo(a)anthracene	82.23	71.12	mg/L	1	80	< 0.0002	102	14	30 - 99	20
Chrysene	72.31	62.19	mg/L	1	80	< 0.0002	90	15	27 - 108	20
Benzo(b)fluoranthene	88.51	75.98	mg/L	1	80	< 0.0002	110	15	19 - 102	20
Benzo(k)fluoranthene	103.1	91.04	mg/L	1	80	< 0.0002	128	12	35 - 103	20
Benzo(a)pyrene	81.83	69.45	mg/L	1	80	< 0.0002	102	16	24 - 105	20
Indeno(1,2,3-cd)pyrene	63.41	48.8	mg/L	1	80	< 0.0002	79	26	22 - 108	20
Dibenzo(a,h)anthracene	45.78	34.89	mg/L	1	80	< 0.0002	57	26	23 - 77	20
Benzo(g,h,i)perylene	70.92	55.34	mg/L	1	80	< 0.0002	88	24	19 - 119	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

a	LCS	LCSD	•• •	D .1	Spike	LCS	LCSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
Nitrobenzene-d5	59.13	52.43	mg/L	1	80	73	65	35 - 114
2-Fluorobiphenyl	70.49	59.9	mg/L	1	80	88	74	43 - 116
							(Continued

¹⁰Surrogate recovery out of range but within control charts for TPH1. ¹¹Surrogate recovery out of range but within control charts for TPH1.

Report Date: January 27, 2003 Goodwin				Order Number: A02121919 Goodwin Well #1				Page Number: 12 of 18 Goodwin Treating Plant,Hobbs			
Surrogate	LCS Result	LCSD Result) : Ui	nits	Dilution	Spike Amount	LCS % Re	l ec	LCSD % Rec	Recovery Limits	
Terphenyl-d14	75.59	64.58	m	g/L	1	80	94		80	33 - 141	
Laboratory Control Spikes		QC	Batch:	QC26478							
	- 00	1.000			Spike				(7 D	000	
D	LCS	LCSD	** •/	D .1	Amount	Matrix	07 D	DDD	% Rec	RPD	
Param	Result	Result	Units	Dil.	Added	Result	% Rec	KPD	Limit	Limit	
Total Calcium	100	94.7	mg/L	1	100	< 0.5	100	5	85 - 115	20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

mg/L

mg/L

mg/L

91.2

96.9

97.6

1

1

1

Quality Control Report Matrix Spikes and Duplicate Spikes

100

100

100

< 0.5

< 0.5

< 0.5

96

102

99

5

5

1

85 - 115

85 - 115

85 - 115

20

20

20

Matrix Spikes

Total Magnesium

Total Potassium

Total Sodium

96.3

102

99.0

QCBatch: QC25770

					Spike					
	MS	MSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	Result	\mathbf{Result}	Units	Dil.	Added	\mathbf{Result}	$\% { m Rec}$	RPD	Limit	Limit
Total Aluminum	17.7	18.4	mg/L	1	1	16.6	1770	4	75 - 125	20
Total Arsenic	0.426	0.432	mg/L	1	0.50	< 0.050	85	1	75 - 125	20
Total Barium	0.963	0.973	mg/L	1	1	< 0.100	96	1	75 - 125	20
Total Boron	0.169	0.173	mg/L	1	0.05	0.131	338	2	75 - 125	20
Total Cadmium	0.192	0.195	mg/L	1	0.25	< 0.005	77	2	75 - 125	20
Total Chromium	0.110	0.112	m mg/L	1	0.10	0.0336	110	2	75 - 125	20
Total Cobalt	0.198	0.200	mg/L	1	0.25	< 0.025	79	1	75 - 125	20
Total Copper	0.117	0.119	mg/L	1	0.12	< 0.0125	94	2	75 - 125	20
Total Iron	8.83	8.82	mg/L	1	0.50	8.40	85	2	75 - 125	20
Total Lead	0.417	0.424	$\mathrm{mg/L}$	1	0.50	< 0.010	83	2	75 - 125	20
Total Manganese	0.299	0.302	$\mathrm{mg/L}$	1	0.25	0.0926	120	1	75 - 125	20
Total Molybdenum	0.448	0.451	mg/L	1	0.50	< 0.050	90	1	75 - 125	20
Total Nickel	0.205	0.208	$\mathrm{mg/L}$	1	0.25	< 0.025	82	1	75 - 125	20
Total Selenium	0.383	0.387	mg/L	1	0.50	< 0.050	77	1	75 - 125	20
Total Silica	12 26.0	22.9	mg/L	1	0.50	21.4	5200	13	75 - 125	20
Total Silver	0.110	0.110	mg/L	1	0.12	< 0.0125	88	0	75 - 125	20
Total Zinc	0.218	0.222	mg/L	1	0.25	0.0281	87	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC25779

¹²Matrix spike recovery invalid due to matrix effects. LCS demonstrates process under control.

Report Date: January 27, 2003 Goodwin				Order Ge	Number: A0 bodwin Well	2121919 #1		Page Number: 13 of 18 Goodwin Treating Plant, Hobbs			
Param	MS Result	MSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit	
Fluoride Nitrate-N	25.31 27.02	$24.77 \\ 27.40$	mg/L mg/L	1 1	25 25	1.44 3.04	95 95	2 1	82 - 101 87 - 100	20 20	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes		CBatch:	QC25841							
					Spike					
	MS	MSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	\mathbf{Result}	\mathbf{Result}	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Total Mercury	13 <0.0002	14 <0.0002	2 mg/L	1	0.001	< 0.0002	0	0	40 - 177	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spikes QCBatch: QC26478

					Spike					
	MS	MSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	\mathbf{Result}	\mathbf{Result}	Units	Dil.	Added	Result	$\% { m Rec}$	RPD	Limit	Limit
Total Calcium	497	479	mg/L	1	100	401	96	20	75 - 125	20
Total Magnesium	15 583	16 549	mg/L	1	100	419	164	23	75 - 125	20
Total Potassium	182	178	mg/L	1	100	77.9	104	3	75 - 125	20
Total Sodium	887	889	mg/L	1	100	807	80	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Quality Control Report Continuing Calibration Verification Standards

CCV (1) QCBatch: QC25707

			CCVs	\mathbf{CCVs}	\mathbf{CCVs}	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
MTBE		mg/L	0.10	0.105	105	85 - 115	12/19/02	
Benzene		mg/L	0.10	0.102	102	85 - 115	12/19/02	
Toluene		mg/L	0.10	0.101	101	85 - 115	12/19/02	
Ethylbenzene		mg/L	0.10	0.101	101	85 - 115	12/19/02	
M,P,O-Xylene		$\mathrm{mg/L}$	0.30	0.304	101	85 - 115	12/19/02	

ICV (1) QCBatch: QC25707

 13 ms recovery invalid due to spiking error, use lcs/lcsd to demonstrate the run is under control.

 $^{14}\mathrm{ms}$ recovery invalid due to spiking error, use lcs/lcsd to demonstrate the run is under control.

¹⁵ms recovery invalid due to matrix effect

¹⁶ms recovery invalid due to matrix effect

Report Date: January 27, 2003 Goodwin		Order Number: A02121919 Goodwin Well #1			Page Number: 14 of 18 Goodwin Treating Plant,Hobbs		
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed
MTBE	<u> </u>	mg/L	0.10	0.108	108	85 - 115	12/19/02
Benzene		mg/L	0.10	0.103	103	85 - 115	12/19/02
Toluene		mg/L	0.10	0.103	103	85 - 115	12/19/02
Ethylbenzene		mg/L	0.10	0.103	103	85 - 115	12/19/02
M,P,O-Xylene		mg/L	0.30	0.313	104	85 - 115	12/19/02

CCV(1)		QCBatch:	QC25708	QC25708								
			CCVs	CCVs	CCVs	Percent						
			True	Found	Percent	Recovery	Date					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed					
GRO		mg/L	1	1.05	105	85 - 115	12/19/02					

ICV (1) QCBatch: QC25708

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/L	1	0.915	91	85 - 115	12/19/02

CCV (1) QCBatch:

ch: QC25770

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
Total Aluminum		mg/L	2	1.96	98	90 - 110	12/23/02
Total Arsenic		mg/L	1	1.03	103	90 - 110	12/23/02
Total Barium		$\mathrm{mg/L}$	2	2.01	100	90 - 110	12/23/02
Total Boron		mg/L	0.10	0.104	104	90 - 110	12/23/02
Total Cadmium		mg/L	0.50	0.503	101	90 - 110	12/23/02
Total Chromium		mg/L	0.20	0.198	99	90 - 110	12/23/02
Total Cobalt		mg/L	0.50	0.498	100	90 - 110	12/23/02
Total Copper		$\mathrm{mg/L}$	0.25	0.245	98	90 - 110	12/23/02
Total Iron		mg/L	1	1.02	102	90 - 110	12/23/02
Total Lead		mg/L	1 .	1.02	102	90 - 110	12/23/02
Total Manganese		mg/L	0.50	0.499	100	90 - 110	12/23/02
Total Molybdenum		$\mathrm{mg/L}$	1	0.982	98	90 - 110	12/23/02
Total Nickel		$\mathrm{mg/L}$	0.50	0.493	99	90 - 110	12/23/02
Total Selenium		$\mathrm{mg/L}$	1	1.03	103	90 - 110	12/23/02
Total Silica		mg/L	1	1.04	104	90 - 110	12/23/02
Total Silver		$\mathrm{mg/L}$	0.25	0.252	101	90 - 110	12/23/02
Total Zinc		mg/L	0.50	0.501	100	90 - 110	12/23/02

Report Date: January 27, 2003 Goodwin			Order Numbe Goodwin	r: A02121919 Well #1		Page Number: 15 of 18 Goodwin Treating Plant,Hobbs		
			CCVs	CCVs	CCVs	Percent		
		*	True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Total Aluminum		mg/L	2	2.00	100	90 - 110	12/23/02	
Total Arsenic		mg/L	1	0.993	99	90 - 110	12/23/02	
Total Barium		mg/L	2	2.04	102	90 - 110	12/23/02	
Total Boron		mg/L	0.10	0.0983	98	90 - 110	12/23/02	
Total Cadmium		mg/L	0.50	0.500	100	90 - 110	12/23/02	
Total Chromium		mg/L	0.20	0.197	98	90 - 110	12/23/02	
Total Cobalt		mg/L	0.50	0.489	98	90 - 110	12/23/02	
Total Copper		mg/L	0.25	0.245	98	90 - 110	12/23/02	
Total Iron		mg/L	1	1.02	102	90 - 110	12/23/02	
Total Lead		mg/L	1	0.963	96	90 - 110	12/23/02	
Total Manganese		mg/L	0.50	0.494	99	90 - 110	12/23/02	
Total Molybdenum		mg/L	1	0.962	96	90 - 110	12/23/02	
Total Nickel		mg/L	0.50	0.485	97	90 - 110	12/23/02	
Total Selenium		mg/L	1	0.986	99	90 - 110	12/23/02	
Total Silica		mg/L	1	0.965	96	90 - 110	12/23/02	
Total Silver		mg/L	0.25	0.245	98	90 - 110	12/23/02	
Total Zinc		mg/L	0.50	0.487	97	90 - 110	12/23/02	

CCV (1) QCBatch: QC25779

			\mathbf{CCVs}	\mathbf{CCVs}	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride		mg/L	12.50	11.43	91	90 - 110	12/20/02	
Fluoride		mg/L	2.50	2.43	97	90 - 110	12/20/02	
Nitrate-N		mg/L	2.50	2.35	94	90 - 110	12/20/02	
Sulfate		$\mathrm{mg/L}$	12.50	11.49	91	90 - 110	12/20/02	

ICV (1) QCBatch: QC25779

			\mathbf{CCVs}	CCVs	\mathbf{CCVs}	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride		mg/L	12.50	11.39	91	90 - 110	12/20/02	
Fluoride		mg/L	2.50	2.48	99	90 - 110	12/20/02	
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	12/20/02	
Sulfate		mg/L	12.50	11.42	91	90 - 110	12/20/02	

CCV (1) QCBatch: QC25798

			\mathbf{CCVs}	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
pH		s.u.	7	7.1	101	-0.1 s.u +0.1 s.u.	12/19/02

Report Date: January 27, 2003 Goodwin			(Order Numb Goodwi	oer: A0212191 n Well #1	9	Page Number: 16 of Goodwin Treating Plant,Hob			
ICV (1)		QCBatch:	QC25798							
Param	Flag	Units	CCVs True Conc	CCVs Found Conc	s CCV I Perce Becov	/s ent	Percent Recovery Limits	Date Analyzed		
pH	Ing	s.u.	7	7.1	101	-0.1 s	<u>s.u +0.1 s.u.</u>	12/19/02		
CCV (1)		QCBatch:	QC25799)		<u>, , , , , , , , , , , , , , , , </u>	- 100 (1.69934) - 200 (2.775) - 1.775	, <i>i</i> , _i		
Param		Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed		
Total Dissolv	ved Solic	ls	mg/L	1000	1003	100	90 - 110	12/24/02		
ICV (1)		QCBatch:	QC25799	CCVs True	CCVs Found	CCVs Percent	Percent	Date		
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Total Dissolv	ved Solid	ls	mg/L	1000	1006	100	90 - 110	12/24/02		
CCV (1)		QCBatch:	QC25841	l CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Total Mercu	ry		mg/L	0.001	0.00096	96	80 - 120	12/26/02		
ICV (1)		QCBatch:	QC25841	CCVs True	CCVs Found	CCVs Percent	Percent Recoverv	Date		
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Total Mercu	ry		mg/L	0.001	0.00105	105	80 - 120	12/26/02		
CCV (1)		QCBatch:	QC25884 CC Tru	1 Vs	CCVs	CCVs Percent	Percent Recovery	Date		
Param	Flag	Units	G Cor		Conc.	Recovery	Limits	Analyzed		
DRO		mg/L	, 25	0	256	102	75 - 125	12/29/02		

Report Date: January 27, 2003 Goodwin			Order I Go	Number: A0212 odwin Well #1	Page Number: 17 of 18 Goodwin Treating Plant,Hobbs		
ICV (1)		QCBatch:	QC25884				
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
DRO		mg/L	250	253	101	75 - 125	12/29/02

CCV (1) QCBatch: QC25953

			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	\mathbf{Limits}	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	-	12/31/02
Carbonate Alkalinity		mg/L as CaCo3	0	224	0	-	12/31/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	14	0	-	12/31/02
Total Alkalinity		mg/L as CaCo3	250	238	95	90 - 110	12/31/02

ICV (1) QCBatch: QC25953

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0	<1.0	0	-	12/31/02
Carbonate Alkalinity		mg/L as CaCo3	0	228	0	-	12/31/02
Bicarbonate Alkalinity		mg/L as CaCo3	0	12	0	-	12/31/02
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	12/31/02

CCV (1) QCBatch: QC26063

			CCVs	\mathbf{CCVs}	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Specific Conductance		μ MHOS/cm	1409	1374	97	90 - 110	1/7/03

ICV (1) QCBatch: QC26063

			CCVs	\mathbf{CCVs}	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Specific Conductance		μ MHOS/cm	1412	1373	97	90 - 110	1/7/03

CCV (1) QCBatch: QC26140

Report Date: January 27, 2003		Ord	ler Number:	A02121919	Page Number: 18 of 18 Coodwin Troating Plant Hobbs				
Goodwin	_		Goodwin w	/ell #1	GC	Goodwin Treating Plant, Hobbs			
			CCVs	CCVs	CCVs	Percent			
			True	Found	Percent	Recovery	Date		
Param	\mathbf{Flag}	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Naphthalene		mg/L	60	62.99	104	80 - 120	1/8/03		
Acenaphthylene		mg/L	60	67.36	112	80 - 120	1/8/03		
Acenaphthene		$\mathrm{mg/L}$	60	66.5	110	80 - 120	1/8/03		
Fluorene		mg/L	60	62.67	104	80 - 120	1/8/03		
Phenanthrene		mg/L	60	67.9	113	80 - 120	1/8/03		
Anthracene		mg/L	60	66.19	110	80 - 120	1/8/03		
Fluoranthene		mg/L	60	67.07	111	80 - 120	1/8/03		
Pyrene		mg/L	60	67.3	112	80 - 120	1/8/03		
Benzo(a)anthracene		mg/L	60	68.75	114	80 - 120	1/8/03		
Chrysene		mg/L	60	65.21	108	80 - 120	1/8/03		
Benzo(b)fluoranthene		mg/L	60	57.52	95	80 - 120	1/8/03		
Benzo(k)fluoranthene		mg/L	60	62.55	104	80 - 120	1/8/03		
Benzo(a)pyrene		mg/L	60	68.7	114	80 - 120	1/8/03		
Indeno(1,2,3-cd)pyrene		mg/L	60	49.23	82	80 - 120	1/8/03		
Dibenzo(a,h)anthracene		mg/L	60	49.52	82	80 - 120	1/8/03		
Benzo(g,h,i)perylene		mg/L	60	51.57	85	80 - 120	1/8/03		
Nitrobenzene-d5		mg/L	60	65.8	109	80 - 120	1/8/03		
2-Fluorobiphenyl		mg/L	60	65.27	108	80 - 120	1/8/03		
Terphenyl-d14		mg/L	60	68 75	114	80 - 120	1/8/03		

CCV (1) QCBatch: QC26478

			CCVs True Conc.	CCVs	\mathbf{CCVs}	Percent Recovery Limits	Date Analyzed
				Found	Percent		
Param	Flag	\mathbf{Units}		Conc.	Recovery		
Total Calcium		mg/L	25	24.8	99	90 - 110	1/22/03
Total Magnesium		mg/L	25	24.5	98	90 - 110	1/22/03
Total Potassium		mg/L	25	25.4	101	90 - 110	1/22/03
Total Sodium		mg/L	25	26.4	105	90 - 110	1/22/03

ICV (1) QCBatch: QC26478

			CCVs	CCVs	CCVs	Percent																
			True	Found	Percent	Recovery	Date															
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed															
Total Calcium		mg/L	25	23.9	95	90 - 110	1/22/03															
Total Magnesium		mg/L	25	24.7	98	90 - 110	1/22/03															
Total Potassium		mg/L	25	25.4	101	90 - 110	1/22/03															
Total Sodium		mg/L	25	25.6	102	90 - 110	1/22/03															
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ENVIRONMENTAL BUREAU OIL CONSERVATION DIVISION





























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01/27/2003	12:42	8067941298	TRACEANALYSIS	PAGE
TraceAp	ыувіз, Ілс.	6701 Aberdeen Avc., Suite 9	Lubbock, TX 79424-1515	(806) 794-1296
Report I Goodwin	Date: Janua	ary 27, 2003Order Number: A02121919 Goodwin Well #1	Goodwir	Page Number: 1 of 2 a Treating Plant, Hobbs
		Summary	Report	
Martyne OCD	Kieling		Report Date:	January 27, 2003
1220 S. S Santa Fe	baint Franc , NM 8750	is Dr. 5	Order ID Numbe	r: A02121919
Project N Project N Project I	Number: Name: Location:	Goodwin Goodwin Well #1 Goodwin Treating Plant,Hobbs		

				Date	Time	Date
Sample	_]	Description	Matrix	Taken	Taken	Received
216781]	1218021335	Water	2/18/02	13:35	12/19/02

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

·····			TPH DRO	TPH GRO			
	Benzene	Tolucne	Ethylbenzene	M,P,O-Xylene	Total BTEX	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
216781 - 1218021335	0.002	0.002	<0.001	<0.001	0.004	<5.00	<0.1

Sample: 216781 - 1218021335

Param	Flag	Result	Units
Hydroxide Alkalinity		<1.0	mg/L as CaCo3
Carbonate Alkalinity		<1.0	mg/L as CaCo3
Bicarbonate Alkalinity		276	mg/L as CaCo3
Total Alkalinity		276	mg/L as CaCo3
Specific Conductance		1420	μ MHOS/cm
Total Mercury		<0.0002	mg/L
Chloride	1	219	mg/L
Fluoride		1.44	mg/L
Nitrate-N		3.04	mg/L
Sulfate	2	41.6	mg/L
Naphthalene		<0.0002	mg/L
Acenaphthylene		<0.0002	mg/L
Acenaphthene		<0.0002	mg/L
Fluorene		<0.0002	mg/L
Phenanthrene		<0.0002	mg/L
Anthracene		<0.0002	mg/L
Fluoranthene		<0.0002	mg/L
Pyrene		<0.0002	mg/L
Benzo(a)anthracene		<0.0002	mg/L

Continued on next page

PAGE

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¹Sample re-ran on 12/23/02 in QC #25805. LCS %EA 91 RPD 0; Matrix spike %EA 90. RPD 0 %IA 91. ²Sample re-ran on 12/23/02 in QC #25805. LCS %EA 92 RPD 1; Matrix spike %EA 90. RPD 0 %IA 91.

This is only a summary. Please, refer to the complete report package for quality control data.

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TRACEANALYSIS

PAGE Ø2

6701 Aberdeen Ave., Suite 9 TraceAnalysis, Inc.

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: January 27, 2003Order Number: A02121919 Goodwin Goodwin Well #1

Page Number: 2 of 2 Goodwin Treating Plant, Hobbs

Sample 216781 continued ...

Param	Flag	Result	Units
Chrysene		<0.0002	mg/L
Benzo(b)fluoranthene		<0.0002	mg/L
Bcnzo(k)fluoranthene		<0.0002	mg/L
Benzo(a)pyrene		<0.0002	mg/L
Indeno(1,2,3-cd)pyrene		<0.0002	mg/L
Dibenzo(a,h)anthracene		<0.0002	mg/L
Benzo(g,h,i)perylene		<0.0002	mg/L
Total Calcium		240	mg/L
Total Magnesium		24.0	mg/L
Total Potassium		7.89	mg/L
Total Sodium		217	mg/L
Total Dissolved Solids		830	mg/L
Total Aluminum		16.6	mg/L
Total Arsenic		<0.050	mg/L
Total Barium		<0.100	mg/L
Total Boron		0.131	mg/L
Total Cadmium		<0.005	mg/L
Total Chromium		0-0336	mg/L
Total Cobalt		< 0.025	mg/L
Total Copper		<0.0125	mg/L
Total Iron		8.40	mg/L
Total Lead		<0.010	mg/L
Total Manganese		0.0926	mg/L
Total Molybdenum		<0.050	mg/L
Total Nickel		<0.025	mg/L
Total Sclenium		<0.050	mg/L
Total Silica		21.4	mg/L
Total Silver		< 0.0125	mg/L
Total Zinc		0.0281	mg/L
pH	3	7.7	5.U.

⁸Sample received out of holding time

This is only a summary. Please, refer to the complete report package for quality control data.



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2.2 MONITOR WELL COMPLETION

A monitoring well was installed on March 27, 2001 in the location of the soil boring at a depth of 63 feet below ground surface (bgs). The well was completed using 20 feet of 0.01 inch slotted two-inch diameter schedule 40 PVC well screen at a depth of 43 to 63 feet bgs. The screen was placed in an approximate position of the groundwater interface where fifteen feet of well screen is above the water table and five feet is below the water table. The annulus around the well screen was backfilled with clean, 12-20 grade, silica sand-pack to a depth of 2-3 feet, above the top of the screen. A 2-3 feet thick bentonite seal was placed immediately above the sand-pack and quenched with water. The remaining well consists of solid, schedule 40 PVC that was placed from 43 feet bgs to approximately 2.5 feet above the ground surface. The remainder of the well annulas was grouted to the surface with bentonite. The monitoring well was completed with a concrete pad and locking well cover.

A copy of the monitoring well installation record is located in Appendix C.

2.3 GROUNDWATER SAMPLING AND TEST RESULTS

On March 28, 2001, Don Fernald with PSC developed and sampled the groundwater monitoring well, installed southeast of the emergency overflow pit. The total depth of the monitoring well was measured at 63.125 feet bgs. Groundwater was measured at 58.54 feet bgs. Prior to sampling, the monitoring well was developed by removing greater than three well volumes of water or approximately 25 gallons of water. Water samples obtained were labeled, documented on chain of custody forms and placed in a cooler with ice. Soil and groundwater samples obtained from the boring and monitoring well were submitted to Pinnacle Laboratories in Albuquerque, New Mexico on March 29, 2001. Groundwater samples obtained from the monitoring well were analyzed for concentrations of BTEX, polycyclic aromatic hydrocarbons (PAH), total dissolved solids (TDS), major cations/anions and New Mexico Water Quality Control Commission (WQCC) metals. Analytical results of the groundwater samples obtained from the monitoring well did not reveal the presence of elevated levels of BTEX, PAH or WQCC metals above current EPA, NMED levels. However, several other constituents were found to be above the NMED and the EPA groundwater standards. The constituents are listed as follows:

Table III - Groundwater	Quality Standards Exceeded for MW-1
-------------------------	-------------------------------------

Parameter	MW-1/62800404-01	MW-1/62800404-DUP	NMED/EPA Standard
Chloride	921 ppm	858 ppm	250 ppm / 250 ppm
Iron	1.88 ppm	0.268 ppm	1.0 ppm / 0.3 ppm
Manganese	0.242 ppm	0.221 ppm	0.2 ppm / 0.05 ppm



RE: Goodwin photos 12-10-02

Kieling, Martyne

From:Don Fernald [don.fernald@amec.com]Sent:Friday, December 13, 2002 7:24 AMTo:Kieling, MartyneSubject:RE: Goodwin photos 12-10-02

Hi Martyne,

I agree, some of the photos look a bit suspect. I spoke with James Penrod / AMEC, who is AMEC's field manager at Goodwin. James indicated that there appeared/smelled like a few hot spots. I have instructed James to segregate the soil that appeared contaminated for stockpiling and place only what appeared clean back into the hole.

Please call me at your convenience to discuss further.

Best Regards,

Don Fernald AMEC Earth & Environmental 2060 Afton Place Farmington, NM 87401 Ph: (505) 327-7928 Fx: (505) 326-5721 don.fernald@amec.com

-----Original Message-----From: Kieling, Martyne [mailto:MKieling@state.nm.us] Sent: Thursday, December 12, 2002 3:34 PM To: 'don.fernald@amec.com' Subject: FW: Goodwin photos 12-10-02

> -----Original Message---- > From: Sheeley, Paul
 > Sent: Wednesday, December 11, 2002 2:34 PM
 > To: Kieling, Martyne
 > Subject: Goodwin photos 12-10-02
 >

> <<Picture_0234.JPG>> <<Picture_0235.JPG>> <<Picture_0236.JPG>>
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6701 A 155 M	Aberdeen Avenue, Suite 9 cCutcheon, Suite H	Lubbock, Texa El Paso, Texa E-M	as 79424 800•378•1296 806•7 as 79932 888•588•3443 915•5 lail: lab@traceanalysis.com	94•1296 FAX 806•794•12 85•3443 FAX 915•585•49	98 44
Bill To: OC 12 Sa	:D 20 S. Saint Francis Dr nta Fe, NM 87505	•	RECEIVED DEC 1 2 2002 Environmental Bureau	Invoice # Invoice Date: Order ID:	56316 Dec 3, 200 A02112209
Attn: Wa	ayne Price Composite	Pile			
Project Name: Project Location:	Goodwin Goodwin 1	Freating F	P.A.# 20-5 Plant	21-07-02497	
Test	Quantity	Matrix	Description	Price	SubTotal
TPH DRO BTEX/TPH GRO	5 5	Soil Soil	214232 - 214236 214232 - 214236	\$40.00 \$60.00	\$200.00 \$300.00
Payment	Terms: Net 30 Days			Total	\$500.00

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Director, Dr. Blair Leftwich

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Martye Kieling ok to Pay 12-13-02

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Lubbock, TX 79424-1515

(806) 794-1296

Report Date: December 4, 2002Order Number: A02112209 Composite Pile Goodwin

6701 Aberdeen Ave., Suite 9

Page Number: 1 of 1 Goodwin Treating Plant

Summary Report

RECEIVED

Martyne Kieling OCD 1220 S. Saint Francis Dr. Santa Fe, NM 87505

TraceAnalysis, Inc.

DEC 1 2 2002 Environmental Bureau .

Order ID Number: A02112209

Report Date:

December 4, 2002

Project Number: Composite Pile Project Name: Goodwin Project Location: Goodwin Treating Plant

Date Time Date Sample Description Matrix Taken Taken Received 214232 11/22/02 112102913 Soil 11/21/02 9:13 214233 112102920 Soil 11/21/02 9:20 11/22/02 214234 112102928 Soil 11/21/02 9:28 11/22/02 214235 112102936 Soil 11/21/02 9:36 11/22/02 214236 112102944 Soil 11/21/02 9:44 11/22/02

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

			BTEX			TPH DRO	TPH GRO
	Benzene	Toluene	Ethylbenzene	M,P,O-Xylene	Total BTEX	DRO	GRO
Sample - Field Code	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
214232 - 112102913	< 0.010	<0.010	<0.010	< 0.010	< 0.010	225	4.54
214233 - 112102920	<0.010	< 0.010	< 0.010	< 0.010	<0.010	389	<1.00
214234 - 112102928	< 0.010	<0.010	<0.010	< 0.010	<0.010	508	<1.00
214235 - 112102936	< 0.010	<0.010	< 0.010	<0.010	<0.010	342	3.92
214236 - 112102944	<0.010	<0.010	<0.010	<0.010	<0.010	411	<1.00

This is only a summary. Please, refer to the complete report package for quality control data.

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H

Lubbock, Texas 79424 800 • 378 • 1296 El Paso, Texas 79932 E-Mail: lab@traceanalysis.com

888 • 588 • 3443

806 • 794 • 1296 FAX 806 • 794 • 1298 915•585•3443 FAX 915•585•4944

Analytical and Quality Control Report

Martyne Kieling OCD 1220 S. Saint Francis Dr. Santa Fe, NM 87505

Report Date:

December 4, 2002

Order ID Number: A02112209

Project Number: Composite Pile **Project Name:** Goodwin Project Location: Goodwin Treating Plant

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
214232	112102913	Soil	11/21/02	9:13	11/22/02
214233	112102920	Soil	11/21/02	9:20	11/22/02
214234	112102928	Soil	11/21/02	9:28	11/22/02
214235	112102936	Soil	11/21/02	9:36	11/22/02
214236	112102944	Soil	11/21/02	9:44	11/22/02

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Note: Samples will be disposed of 30 days from the report date unless the lab is contacted before the 30 days has past.

Dr. Blair Leftwich, Director
Composite	Pile	4, 2002	Order	Number: A02112 Goodwin	209	Page Num Goodwin Tre	ber: 2 of 11 eating Plan
·			Analyt	ical Repor	t		.:
	· . · ,	· · · · ·			· · ·		
					1. M		
Complex	014020	110100019	1	•			
Sample:	214232 · DTEV	- 112102913 Applytical Mathe	J. S 8021B	OC Batch	0C25117	Date Analyzed	11/22/02
Analysis:	CC	Preparation Meth	$d \cdot S = 5021D$	Pren Batch:	PB23347	Date Prepared:	11/22/02
Analyst.	0G	1 reparation meth		Tiep Daten.	1 120017	Dato I Toparoa.	//0-
Param		Flag	Result	Units	D	ilution	RDL
Benzene			< 0.010	mg/Kg		10	0.001
Toluene			< 0.010	mg/Kg		10	0.001
Ethvlbenze	ne		< 0.010	mg/Kg		10	0.001
M,P,O-Xyl	ene		< 0.010	mg/Kg		10	0.001
Total BTE	X		< 0.010	mg/Kg		10	0.001
		,					
~		· · · · · ·			Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Kecovery	Limits
TFT		0.876	mg/Kg	10	1	88	70 - 130
4-BFB		0.918	mg/Kg	· 10	1	92	70 - 130
						-	12/2/02
Param	\mathbf{Flag}	Result	τ.	Jnits	Dilution	• •	RDL
Param DRO	Flag	Result 225	t m	Jnits g/Kg	Dilution 1	· · · · · · · · · · · · · · · · · · ·	RDL 50
Param DRO	Flag	Result 225	t	Jnits g/Kg	Dilution 1		RDL 50
Param DRO	Flag	Result 225	 	Jnits g/Kg	Dilution 1	Domont	RDL 50
Param DRO	Flag	Result 225	Unita	Jnits g/Kg	Dilution 1 Spike	Percent	RDL 50 Recovery
Param DRO Surrogate	Flag	Result 225 ag Result 147	Units	Jnits g/Kg Dilution	Dilution 1 Spike Amount 150	Percent Recovery 98	Recovery Limits
Param DRO Surrogate n-Triaconta	Flag Fla	Result 225 ag Result 147	Units mg/Kg	Jnits g/Kg Dilution 1	Dilution 1 Spike Amount 150	Percent Recovery 98	RDL 50 Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta	Flag Fla	Result 225 ag Result 147	Units mg/Kg	Jnits g/Kg Dilution 1	Dilution 1 Spike Amount 150	Percent Recovery 98	RDL 50 Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta	Flag Fla	Result 225 ag Result 147	Units mg/Kg	Jnits g/Kg Dilution 1	Dilution 1 Spike Amount 150	Percent Recovery 98	Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta Sample:	Flag Fla ane 214232	Result 225 ag Result 147 - 112102913	Units mg/Kg	Jnits g/Kg Dilution 1	Dilution 1 Spike Amount 150	Percent Recovery 98	Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta Sample: Analysis:	Flag Fla ane 214232 TPH GRO	Result 225 ag Result 147 - 112102913 Analytical Me	Units mg/Kg thod: 8015	Jnits g/Kg Dilution 1 B QC Batch:	Dilution 1 Spike Amount 150 QC25118	Percent Recovery 98 Date Analyzed:	RDL 50 Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis:	Flag Fla ane 214232 TPH GRO CG	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M	Units mg/Kg thod: 80151 fethod: 5035	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch	Dilution 1 Spike Amount 150 QC25118 PB23347	Percent Recovery 98 Date Analyzed: Date Prepared:	RDL 50 Recovery Limits 70 - 130 11/22/02 11/22/02
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis: Baram	Flag Fla ane 214232 TPH GRO CG	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M	Units Mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch	Dilution 1 Spike Amount 150 QC25118 PB23347	Percent Recovery 98 Date Analyzed: Date Prepared:	Recovery Limits 70 - 130 11/22/02 11/22/02
Param DRO Surrogate n-Triaconta Sample: Analysis: Analyst: Param	Flag Fla ane 214232 TPH GRO CG Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result	Units mg/Kg thod: 8015 fethod: 5035	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10	Percent Recovery 98 Date Analyzed: Date Prepared:	Recovery Limits 70 - 130 11/22/02 11/22/02 RDL
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis: Param GRO	Flag Fla ane 214232 TPH GRO CG Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54	Units mg/Kg othod: 80151 fethod: 5035 Um	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg	Dilution 1 Spike Amount 150 QC25118 : PB23347 Dilution 10	Percent Recovery 98 Date Analyzed: Date Prepared:	RDL 50 Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10
Param DRO Surrogate n-Triaconta Analysis: Analysis: Analyst: Param GRO	Flag Fla ane 214232 TPH GRO CG Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54	Units mg/Kg ethod: 80151 fethod: 5035	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10	Percent Recovery 98 Date Analyzed: Date Prepared:	RDL 50 Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis: Param GRO	Flag Fla ane 214232 TPH GRO CG Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54	Units mg/Kg ethod: 80151 fethod: 5035	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike	Percent Recovery 98 Date Analyzed: Date Prepared: Percent	Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10 Recovery
Param DRO Surrogate n-Triaconta Sample: Analysis: Analyst: Param GRO Surrogate	Flag Fla ane 214232 TPH GRO CG Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54	Units mg/Kg thod: 80151 fethod: 5035	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg Dilution	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery	Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10 Recovery Limits
Param DRO Surrogate n-Triaconta Analysis: Analysis: Analyst: Param GRO Surrogate TFT	Flag Flag ane 214232 TPH GRO CG Flag Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54 Result 0.895	Units mg/Kg ethod: 80151 fethod: 5035 Units mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg Dilution 10	Dilution 1 Spike Amount 150 QC25118 CPB23347 Dilution 10 Spike Amount 0.10	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90	Recovery Limits 70 - 130 11/22/02 11/22/02 RDI 0.10 Recovery Limits 70 - 130
Param DRO Surrogate n-Triaconta Analysis: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB	Flag Fla ane 214232 TPH GRO CG Flag Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54 Result 0.895 1.13	Units mg/Kg ethod: 80151 fethod: 5035 Units mg/Kg mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg Dilution 10 10	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90 113	RDL 50 Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis: Param GRO Surrogate TFT 4-BFB	Flag Fla ane 214232 TPH GRO CG Flag Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54 Result 0.895 1.13	Units mg/Kg thod: 80151 fethod: 5035 Units mg/Kg mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits .g/Kg Dilution 10 10	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90 113	Recovery Limits 70 - 130 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130
Param DRO Surrogate n-Triaconta Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB	Flag Fla ane 214232 TPH GRO CG Flag Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54 Result 0.895 1.13	Units mg/Kg ethod: 80151 fethod: 5035 Units mg/Kg mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits .g/Kg Dilution 10 10	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 0.10	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90 113	Recovery Limits 70 - 130 11/22/02 11/22/02 RDI 0.10 Recovery Limits 70 - 130 70 - 130
Param DRO Surrogate n-Triaconta Sample: Analysis: Analysis: Param GRO Surrogate TFT 4-BFB Sample:	Flag Fla ane 214232 TPH GRO CG Flag Flag Flag	Result 225 ag Result 147 - 112102913 Analytical Me Preparation M Result 4.54 Result 0.895 1.13 - 112102920	Units mg/Kg thod: 80151 fethod: 5035 Units mg/Kg mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg Dilution 10 10	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 0.10	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90 113	Recovery Limits 70 - 130 11/22/02 11/22/02 RDI 0.10 Recovery Limits 70 - 130 70 - 130
Param DRO Surrogate n-Triaconta Analysis: Analysis: Param GRO Surrogate TFT 4-BFB Sample: Analysis:	Flag Fla ane 214232 TPH GRO CG Flag Flag Flag 214233 BTEX	Result225agResult147- 112102913Analytical Me Preparation M Result4.54Result0.8951.13- 112102920Analytical Metho	Units mg/Kg ethod: 80151 fethod: 5035 Units mg/Kg mg/Kg mg/Kg	Jnits g/Kg Dilution 1 B QC Batch: Prep Batch Jnits g/Kg Dilution 10 10 20 Batch:	Dilution 1 Spike Amount 150 QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117	Percent Recovery 98 Date Analyzed: Date Prepared: Percent Recovery 90 113 Date Analyzed:	Recovery Limits 70 - 130 11/22/02 11/22/02 RDI 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130

Composite 1	e: December Pile	r 4, 2002	Order	Number: A021122 Goodwin	209	Page Numl Goodwin Trea	per: 3 of 11 ating Plant
Param	. ,	Flag	Result	Units	Di	lution	RDL
Benzene	,		< 0.010	mg/Kg		10	0.001
Toluene	· · · ·		<0.010	8/8 mg/Kg		10	0.001
Fthulbongon				mg/Kg		10	0.001
M D O Y-l-			<0.010	mg/Kg		10	0.001
M,P,O-Ayle	ne 7		<0.010	mg/Kg	·.·	10	0.001
Total BTEX	<u> </u>	·	<0.010	mg/Kg		10	0.001
		-		•			
• •	-				Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
\mathbf{TFT}		0.811	mg/Kg	10	1	81	70 - 130
4-BFB		0.815	mg/Kg	10	1	81	70 - 130
Sample:	214233	- 112102920		•			
Analysis: Analyst:	TPH DRO BP	Analytical Met Preparation M	bod: Mod. 8 ethod: 3550 B	3015B QC Bate Prep Bat	ch: QC2529 tch: PB2348	7 Date Analyzed: 3 Date Prepared:	$\frac{12}{3}/02$ $\frac{12}{2}/02$
Param	Flag	Resul	t U	nits	Dilution		RDL
DRO		389) mg	g/Kg	1	······	50
u	· · · · · · · · · · · · · · · · · · ·	······································					, ,
					\mathbf{Spike}	Percent	Recovery
Surrogate	Fla	ag Result	Units	Dilution	Amount	Recovery	Limite
		ag resure	Onto	Difution	Timoune	Itecovery	1111103
n-Triacontai	ne	170	mg/Kg	1	150	113	70 - 130
n-Triacontar Sample: Analysis: Analyst:	ne 214233 TPH GRO CG	- 112102920 Analytical Me Preparation N	mg/Kg ethod: 8015E Method: 5035	1 3 QC Batch: Prep Batch:	150 QC25118 PB23347	Date Analyzed: Date Prepared:	11/22/02 11/22/02
n-Triacontar Sample: Analysis: Analyst: Param	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Me Preparation N Result	mg/Kg ethod: 8015E Method: 5035	1 3 QC Batch: Prep Batch:	QC25118 PB23347	Date Analyzed: Date Prepared:	11/22/02 11/22/02 BDL
n-Triacontar Sample: Analysis: Analyst: Param CBO	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Me Preparation M Result	mg/Kg ethod: 8015E Method: 5035	1 3 QC Batch: Prep Batch: nits	QC25118 PB23347 Dilution	113 Date Analyzed: Date Prepared:	11/22/02 11/22/02 RDL
n-Triacontar Sample: Analysis: Analyst: Param GRO	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Me Preparation M Result <1.00	mg/Kg ethod: 8015E Method: 5035 t U) mg	1 B QC Batch: Prep Batch: nits g/Kg	QC25118 PB23347 Dilution 10	Date Analyzed: Date Prepared:	11/22/02 11/22/02 RDL 0.10
n-Triacontar Sample: Analysis: Analyst: Param GRO	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Me Preparation M Result <1.00	mg/Kg ethod: 8015E Method: 5035 t U) mj	1 B QC Batch: Prep Batch: nits g/Kg	QC25118 PB23347 Dilution 10	Date Analyzed: Date Prepared:	11/22/02 11/22/02 RDL 0.10
n-Triacontar Sample: Analysis: Analyst: Param GRO	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Me Preparation M Result <1.00	ethod: 8015E Method: 5035 t U) m	1 B QC Batch: Prep Batch: nits g/Kg	QC25118 PB23347 Dilution 10 Spike	Date Analyzed: Date Prepared: Percent	11/22/02 11/22/02 RDL 0.10 Recovery
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate	ne 214233 TPH GRO CG Flag	- 112102920 Analytical Ma Preparation M Result Result	mg/Kg mg/Kg Method: 8015E Method: 5035 t U) mi	1 B QC Batch: Prep Batch: nits g/Kg Dilution	QC25118 PB23347 Dilution 10 Spike Amount	Date Analyzed: Date Prepared: Percent Recovery	11/22/02 11/22/02 RDL 0.10 Recovery Limits
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT	ne 214233 TPH GRO CG Flag Flag	- 112102920 Analytical Me Preparation M Result <1.00	ethod: 8015E Method: 5035 t U Units mg/Kg	1 B QC Batch: Prep Batch: nits g/Kg Dilution 10	QC25118 PB23347 Dilution 10 Spike Amount 0.10	Date Analyzed: Date Prepared: Percent Recovery 125	11/22/02 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB	ne 214233 TPH GRO CG Flag Flag	Iteration 170 - 112102920 Analytical Me Preparation M Result <1.00	mg/Kg mg/Kg Method: 5035 t U) ma Units mg/Kg mg/Kg	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 10	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10	Date Analyzed: Date Prepared: Percent Recovery 125 93	11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB	ne 214233 TPH GRO CG Flag Flag	Iteration 170 - 112102920 Analytical Me Preparation M Result <1.00	mg/Kg mg/Kg Method: 5035 t U) mj Units mg/Kg mg/Kg	1 Buildinian B QC Batch: Prep Batch: nits g/Kg Dilution 10 10	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10	Date Analyzed: Date Prepared: Percent Recovery 125 93	11/22/02 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample:	ne 214233 TPH GRO CG Flag Flag 214234	- 112102920 Analytical Me Preparation M Result <1.00 Result 1.25 0.930 - 112102928	mg/Kg mg/Kg Method: 5035 t U) ma Units mg/Kg mg/Kg	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10	Date Analyzed: Date Prepared: Percent Recovery 125 93	11/22/02 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130
n-Triaconta Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analysis:	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result 21.00 Result 1.25 0.930 - 112102928 Analytical Methor Preparation Methor 	mg/Kg mg/Kg Method: 5035 t U) mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 10 QC Batch: Prep Batch:	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 0.10 QC25117 PB23347	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared:	11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130
n-Triaconta Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analyst: Param	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result 1.00 Result Result 1.25 0.930 - 112102928 Analytical Methor Preparation Methor Flag 	mg/Kg mg/Kg Method: 5035 t U D ma Units mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 10 QC Batch: Prep Batch: Prep Batch: Units	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution	11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 11/22/02 11/22/02 RDL
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analyst: Param Benzene	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result <1.00 Result Result 1.25 0.930 - 112102928 Analytical Methor Preparation Methor Flag 	ethod: 8015E Method: 5035 t U) mg/Kg mg/Kg mg/Kg hod: S 8021B hod: S 5035 Result <0.010	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 QC Batch: Prep Batch: Prep Batch: Units mg/Kg	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347 Di	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution 10	11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 11/22/02 11/22/02 RDL 0.001
n-Triacontar Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analyst: Param Benzene Toluene	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result <1.00 Result 1.25 0.930 - 112102928 Analytical Metho Preparation Metho Flag 	ethod: $8015E$ Method: 5035 t U D mp Units mg/Kg mg/Kg mg/Kg hod: S 8021B hod: S 5035 Result <0.010 <0.010	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 10 QC Batch: Prep Batch: Prep Batch: Marking Ma	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347 Di	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution 10	11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 11/22/02 11/22/02 RDL 0.001 0.001
n-Triacontan Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analysis: Analyst: Param Benzene Toluene	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result <1.00 Result 1.25 0.930 - 112102928 Analytical Metho Preparation Metho Flag 	mg/Kg mg/Kg Method: 5035 t U 0 mg units mg/Kg mg/Kg mg/Kg od: S 8021B hod: S 5035 Result <0.010	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 10 QC Batch: Prep Batch: Prep Batch: Units mg/Kg mg/Kg	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347 Di	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution 10	11/22/02 11/22/02 11/22/02 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 70 - 130 11/22/02 11/22/02 RDL 0.001 0.001 0.001
n-Triacontan Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analysis: Analysis: Param Benzene Toluene Ethylbenzen	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result <1.00 Result 1.25 0.930 - 112102928 Analytical Metho Preparation Metho Flag 	mg/Kg mg/Kg Method: 5035 t U 0 mg units mg/Kg mg/Kg mg/Kg od: S 8021B nod: S 5035 Result <0.010	1 3 QC Batch: Prep Batch: mits g/Kg Dilution 10 10 10 QC Batch: Prep Batch: Prep Batch: Units mg/Kg mg/Kg mg/Kg	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347 Di	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution 10	11/22/02 70 - 130 70 - 130 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 0.001 0.001 0.001 0.001 0.001 0.001
n-Triacontan Sample: Analysis: Analyst: Param GRO Surrogate TFT 4-BFB Sample: Analysis: Analysis: Analysis: Param Benzene Toluene Ethylbenzen M,P,O-Xylei	ne 214233 TPH GRO CG Flag Flag 214234 BTEX CG	 - 112102920 Analytical Me Preparation M Result <1.00 Result 1.25 0.930 - 112102928 Analytical Metho Preparation Meth Flag 	mg/Kg mg/Kg Method: 5035 t U 0 mg units mg/Kg mg/Kg mg/Kg od: S 8021B nod: S 5035 Result <0.010	1 3 QC Batch: Prep Batch: nits g/Kg Dilution 10 10 QC Batch: Prep Batch: Prep Batch: Units mg/Kg mg/Kg mg/Kg	QC25118 PB23347 Dilution 10 Spike Amount 0.10 0.10 QC25117 PB23347 Di	Date Analyzed: Date Prepared: Percent Recovery 125 93 Date Analyzed: Date Prepared: lution 10 10	11/22/02 70 - 130 70 - 130 RDL 0.10 Recovery Limits 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 130 70 - 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001

Report Dat Composite	e: Decembe Pile	r 4, 2002	Order I	Number: A02112 Goodwin	209	Page Numl Goodwin Trea	per: 4 of 11 ating Plant
		Denult		Dilution	Spike	Percent	Recovery
Surrogate	Flag	Result					70, 130
1FT 4-BFB		0.805	mg/Kg mg/Kg	10	1	80 82	70 - 130
					·		
Sample	214234	- 112102928			· · · · ·	· · ·	
Analysis: Analyst:	TPH DRO BP	Analytical Meth Preparation Met	od: Mod. 8 hod: 3550 B	3015B QC Bat Prep Ba	ch: QC25297 atch: PB23483	Date Analyzed: Date Prepared:	$\frac{12/3}{02}$ $\frac{12}{2}/02$
Param	Flag	Result	U	nits	Dilution		RDL
DRO		508	mį	g/Kg	1		50
<u>.</u>					· .		
	· · · · ·		· .		с. н	D- 4	D
a			TT .	Dil di	Spike	Percent	Recovery
Surrogate	Fl	ag Result	Units	Dilution	Amount	116	$\frac{\text{Limits}}{70, 120}$
n-Irlacontal	ne	175	mg/Kg	1	150	110	70 - 130
		•					
		•					•
Sample:	214234	- 112102928	•				
Analysis:	TPH GRC	Analytical Met	hod: 8015E	B QC Batch:	QC25118	Date Analyzed:	11/22/02
Analyst:	CG ·	Preparation Me	ethod: 5035	Prep Batch	: PB23347	Date Prepared:	11/22/02
							. ,
Param	Flag	Result	U	nits	Dilution		RDL
GRO	· ·	<1.00	mį	g/Kg	10		0.10
				1			
				•	<i>a</i>	_	_
a		-			Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
		1.05	mg/Kg	10	0.10	105	70 - 130
4-DF D		0.920	mg/Kg	10	0.10	93	70 - 130
•••					. •		
Sample:	214235	- 112102936					
Analysis:	BTEX	Analytical Method	: S 8021B	QC Batch:	QC25117	Date Analyzed:	11/22/02
Analyst:	CG	Preparation Metho	d: S 5035	Prep Batch:	PB23347	Date Prepared:	11/22/02
Param		Flog	Doou!4	TT:4-	11	ution	זרום
Renzenc		r lag			D1	10	KDL
Toluene		•	<0.010	mg/Kg		10	0.001
Ethylbenzer	ne .	•	< 0.010	mg/Kg		10	0.001
M.P.O-Xvle	ne		< 0.010	mø/Kø	•	10	0.001 0.001
Total BTEX	ζ.	· . · .	< 0.010	mg/Kg		10	0.001
					· · · · · · · · · · · · · · · · · · ·		0.001
					• • • • •	•	·
	·	• •			Spike	Percent	Recoverv
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
TFT	•	0.876	mg/Kg	10	1	88	70 - 130
4-BFB		0.907	mg/Kg	10	1 ·	91	70 - 130

•							· · ·
Report Dat Composite	e: December Pile	r 4, 2002	Order N	Jumber: A02112 Goodwin	209	Page Numl Goodwin Tre	per: 5 of 11 ating Plant
Sample: Analysis: Analyst:	214235 TPH DRO BP	- 112102936 Analytical Metho Preparation Meth	d: Mod. 8 nod: 3550 B	015B QC Bate Prep Ba	ch: QC2529 tch: PB2348	7 Date Analyzed:3 Date Prepared:	12/3/02 12/2/02
Param	Flag	Result	Ui	nits	Dilution		RDL
DRO	8	342	mg	/Kg	1		50
· .	•			· · · ·	Snike	Percent	Recovery
Surrogate	Fla	ag Result	Units	Dilution	Amount	Recovery	Limits
n-Triaconta	ne	184	mg/Kg	1	150	122	70 - 130
Sample: Analysis: Analyst:	214235 TPH GRO CG	- 112102936 Analytical Meth Preparation Me	od: 8015B thod: 5035	QC Batch: Prep Batch:	QC25118 PB23347	Date Analyzed: Date Prepared:	11/22/02 11/22/02
Param	Flag	Result	Ui	nits	Dilution		RDL
GRO		3.92	mg	/Kg	10		0.10
					Spike	Percent	Recoverv
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
TFT		1.19	mg/Kg	10	0.10	119	70 - 130
4-BFB	· · · · · · · · · · · · · · · · · · ·	1.10	mg/Kg	10	0.10	110	70 - 130
		•					
Sample: Analysis: Analyst:	214236 BTEX CG	- 112102944 Analytical Method: Preparation Method	S 8021B l: S 5035	QC Batch: Prep Batch:	QC25117 PB23347	Date Analyzed: Date Prepared:	11/22/02 11/22/02
D				TT •		· · ·	DDI
Param Benzene		Flag	Result	Units	D	llution	
Toluene			< 0.010	mg/Kg		10	0.001
Ethylbenze	ne		< 0.010	mg/Kg	•	10	0.001
M,P,O-Xyle	ene		<0.010	mg/Kg	•	10	0.001
Total BTE	Χ	· · · · · · · · · · · · · · · · · · ·	<0.010	mg/Kg		10	0.001
Surrogate	Flag	Result	Units	Dilution	Spike	Percent	Recovery
TFT	× 1005	0.900	mg/Kg	10	1	<u>90</u>	70 - 130
4-BFB		0.891	mg/Kg	10	1	89	70 - 130
Sample: Analysis: Analyst:	214236 TPH DRO BP	- 112102944 Analytical Metho Preparation Meth	d: Mod. 8 10d: 3550 B	015B QC Bate Prep Ba	ch: QC2529 tch: PB2348	7 Date Analyzed: 3 Date Prepared:	$\frac{12/3/02}{12/2/02}$
Dana	7~1		· ·				DDT
raram DRO	Flag	Kesult // 11	U1	nits /Kg	Dilution		- RDL 50
			ing	/**5	1		

Report Dat Composite	te: December 4, Pile	2002	Order M	Number: A0211: Goodwin	Page Number: 6 of 11 Goodwin Treating Plant		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		177	mg/Kg	1	150	118	70 - 130
· ·			4				
Sample: Analysis: Analyst:	214236 - TPH GRO CG	112102944 Analytical Meth Preparation Me	iod: 8015B thod: 5035	QC Batch: Prep Batch	QC25118 n: PB23347	Date Analyzed: Date Prepared:	$\frac{11/22/02}{11/22/02}$
Param	Flag	Result	U	nits	Dilution		RDL
GRO		<1.00	mg	g/Kg	10		0.10
				· · ·	Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
TFT 4-BFB	· · · · · · · · · · · · · · · · · · ·	0.874 1.05	mg/Kg mg/Kg	10 10	0:10 0.10	87 105	70 - 130 70 - 130

Report Date: December 4, 2002Order Number: A02112209Page Number: 7 of 11Composite PileGoodwinGoodwin Treating Plant

Quality Control Report Method Blank

Method	Blank	OCBatch	0C25117
methou	Dialik	QUDatch:	QC20117

Param	Flag	Results	Units	Reporting Limit
Benzene		< 0.010	mg/Kg	0.001
Toluene	· .	< 0.010	mg/Kg	0.001
Ethylbenzene		<0.010	mg/Kg	0.001
M,P,O-Xylene		< 0.010	mg/Kg	0.001
Total BTEX	· · · · · · · · · · · · · · · · · · ·	<0.010	mg/Kg	0.001

	national asso				Spike	Percent	Recovery	
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits	
TFT	· · · · · · · · · · · · · · · · · · ·	0.899	mg/Kg	10	1	90	70 - 130	
4-BFB		0.918	mg/Kg	10	1	92	70 - 130	

Method Blank QCBatch: QC25118

Param		Flag	Re	Results <1.00		Units		
GRO			<				0.10	
•			· · ·	· · · ·				
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
TFT		1.01	mg/Kg	10	0.10	101	70 - 130	
4-BFB		1.04	mg/Kg	10	0.10	104	70 - 130	

Method Blank QCBatch: QC25297

Param	Flag		Resu	Results		Units		
DRO			<50).0	mg/Kg	·····	50	
· .							. ,	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits	
n-Triacontane		114	mg/Kg	1	150	76	70 - 130	

Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC25117



Report Date: December 4, 2002 Composite Pile				Order Number: A02112209 Goodwin			Page Number: 8 of 1 Goodwin Treating Plan			
Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount Added	Matrix Result	% Rec	RPD	% Rec Limit	RPD Limit
MTBE	0.818	0.885	mg/Kg	10	1	< 0.010	81	7	70 - 130	20
Benzene	0.883	0.909	mg/Kg	10	1	< 0.010	88	2	70 - 130	20
Toluene	0.895	0.932	mg/Kg	10	1	< 0.010	89	4 .	70 - 130	20
Ethylbenzene	0.935	0.972	mg/Kg	10	1	< 0.010	93	3	70 - 130	20
M,P,O-Xylene	2.80	2.91	mg/Kg	10	3	<0.010	93	3	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Recovery
Surrogate	Result	\mathbf{Result}	Units	Dilution	Amount	% Rec	% Rec	Limits
TFT	0.871	0.901	mg/Kg	10	1	87	90	70 - 130
4-BFB	0.9.9	0.982	mg/Kg	10	1	90	98	70 - 130

Laboratory Control Spikes

QCBatch: QC25118

	T CS	I CSD	1		Spike A mount	Motrix			% Dec	חסס
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
GRO	10.5	10.6	mg/Kg	10	1	<1.00	105	0	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Currente	LCS Descript	LCSD Beault	Ttalda	Dilution	Spike	LCS	LCSD	Recovery
Surrogate	nesuit	nesun	Units	Dilution	Amount	70 nec	70 nec	Linnus
TFT	0.924	0.968	mg/Kg	10	0.10	92	97	70 - 130
4-BFB	1.03	1.04	mg/Kg	10	0.10	103	104	70 - 130

Laboratory Control Spikes QCBatch: QC25297

					Spike					· •
	LCS	LCSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
DRO	231	235	mg/Kg	1	250	<50.0	92	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
n-Triacontane	¹ 99.6	2 102	mg/Kg	1	150	66	68	70 - 130

Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC25117

¹Surrogate recovery out of limits but within control charts for TPH1. ²Surrogate recovery out of limits but within control charts for TPH1.



Report Date: D Composite Pile	ecember 4	, 2002		Order	Number: A Goodwin	02112209	Page Number: 9 of 11 Goodwin Treating Plant			
	MS	MGD			Spike	Motnin			07 Dec	חחם
D	MD	MSD			Amount	Matrix	~ ~		% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
Benzene	0.824	0.836	mg/Kg	10	1	< 0.010	82	1	70 - 130	20
Toluene	0.845	0.864	mg/Kg	10	1	< 0.010	84	2	70 - 130	20
Ethylbenzene	0.886	0.902	mg/Kg	10	1	< 0.010	88	1	70 - 130	20
M,P,O-Xylene	2.68	2.72	mg/Kg	10	• 3	< 0.010	89	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	$\begin{array}{c} \mathrm{MSD} \\ \mathrm{Result} \end{array}$	Units	Dilution	Spike Amount	MS % Rec	MSD % Rec	Recovery Limits
TFT	0.846	0.858	mg/Kg	10	1	84	85	70 - 130
4-BFB	0.881	0.907	mg/Kg	10	· 1	88	90	70 - 130

Matrix Spikes QCBatch: QC25118

					Spike					
	MS	MSD			Amount	Matrix			% Rec	RPD
Param	Result	Result	Units	Dil.	Added	Result	% Rec	RPD	Limit	Limit
GRO	19.4	18.7	mg/Kg	10	1	8.81	106	6	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	$\% \ \mathrm{Rec}$	$\% { m Rec}$	Limits
TFT	1.05	1.12	mg/Kg	10	0.10	105	112	70 - 130
4-BFB	1.24	1.24	mg/Kg	10	0.10	124	124	70 - 130

Matrix Spikes QCBatch: QC25297

				•	Spike			•		
	MS	MSD			Amount	Matrix			$\% { m Rec}$	RPD
Param	Result	Result	\mathbf{Units}	Dil.	Added	\mathbf{Result}	% Rec	RPD	Limit	Limit
DRO	475	541	mg/Kg	1	250	225	100	23	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Sumorata	MS Basult	MSD Basult	TT :4	D:1	Spike	MS Ø D	MSD	Recovery
Surrogate	Result	Result	Units	Dilution	Amount	% Rec	% Rec	Limits
n-Triacontane	148	151	mg/Kg	1	150	98	100	70 - 130

Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC25117



CCV (2) QCBatch: QC25117

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/L	0.10	0.091	91	85 - 115	11/22/02
Benzene		mg/L	0.10	0.096	96	85 - 115	11/22/02
Toluene		mg/L	0.10	0.097	97	85 - 115	11/22/02
Ethylbenzene		mg/L	0.10	0.101	101	85 - 115	11/22/02
M,P,O-Xylene		mg/L	0.30	0.305	101	85 - 115	11/22/02

ICV (1)

QCBatch: QC25117

			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
MTBE		mg/L	0.10	0.0885	88	85 - 115	11/22/02
Benzene		mg/L	0.10	0.091	91	85 - 115	11/22/02
Toluene		mg/L	0.10	0.0932	93	85 - 115	11/22/02
Ethylbenzene		mg/L	0.10	0.0979	98	85 - 115	11/22/02
M,P,O-Xylene		mg/L	0.30	0.294	98	85 - 115	11/22/02

CCV (1) QCBatch: QC25118

			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	\mathbf{Units}	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1	1.08	108	85 - 115	11/22/02

14		· ·	•				
CCV (2)		QCBatch:	QC25118				
			CCVs	$\rm CCVs$	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
GRO		mg/Kg	1	1.15	115	85 - 115	11/22/02

Report Compos	Date: Decemi site Pile	per 4, 2002	C)rder N	umber: A Goodwi	A0211 n	2209		Page N Goodwin	lumbe n Trea	r: 11 of 11 ting Plant
ICV	(1)	QCBatch:	QC25118	•		<u> </u>		· ···			
			CCVs	•	CCVs	•	CCVs	• .	Percent		
•			True	•	Found		Percent		Recovery	. • • •	Date
Param	Flag	Units	Conc.		Conc.		Recovery		Limits		Analyzed
GRO		mg/Kg	1		1.05		105		85 - 115		11/22/02
		* . <u>.</u>		· .	-						
CCV	(1)	QCBatch:	QC25297				· .		· ·	·	·
		•	CCVs		CCVs		CCVs		Percent		•
		·	True		Found		Percent		Recovery		Date
Param	Flag	Units	Conc.		Conc.		Recovery		Limits		Analyzed
DRO		mg/Kg	250		252		101		75 - 125		12/3/02
1 S	1997 - 1997 -	. ,								- 11 î.	· · ·
CCV	(2)	QCBatch:	QC25297			·	•				
			CCVs		CCVs		CCVs		Percent	· /	
			True		Found		Percent		Recovery		Date
Param	Flag	Units	Conc.		Conc.		Recovery		Limits		Analyzed
DRO		mg/Kg	250		240		96		75 - 125		12/3/02
ICV	(1)	QCBatch:	QC25297				•			• .	
	,	. *	CCVs		CCVs		CCVs		Percent		
			True		Found		Percent		Recovery		Date
Param	Flag	Units	Conc.		Conc.		Recovery		Limits		Analyzed
DRO		mg/Kg	250		237		95		75 - 125		12/3/02

	Submittal of samples constitutes agreement to Ter	Relinquished by: Date: Time:	Relinquished by: J Date: Time:	Martyne Kiching "1/21/02 10:30	Relinquished by: Date: Time:			44 620 12 W	35 11 21 029 36	31 21 029 28	029201211 66	211230 112102913	LAB * FIELD CODE	Por Location: 6000/11/1 trushing P	Project #: Compost Pile	Invoice to: (If different from above)	Contact Person: Martyne Kicling	12 20 South Saint Francis	Company Name: Oil Conservation D	Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296	6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424	
	ms and condition	Received	Received t	0 L 201	Received t			 1 402	1 402	1 407	1 403	Loh 1	# CONTAINERS	lant				Drive	1V1510N	eAna		
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	rse side of C.O.C	Date:	Date:	20 12 111	Date:								HCL HNO3 NaHSO4	ingle Signature:	oject Name: 6			×# >M 87505	ione #:	Inc.		
ORIGINAL		Time:	Time:	11:00 A	Time:			 ×	×	×	×	×	H₂SO₄ METHOD NaOH ICE NONE	ESERVATIVE	odwin				342-921	Tel (915) 5 Fax (915) 5 1 (888) 58	4725 Ripley El Paso, Texas	
COPY				3				1/2/2 9:4	2/02 9:3	2:6 29:5	12/22 9:2	11/2/20 7:13			-				88	585-3443 585-4944 88-3443	Dr., Ste A ; 79922-1028	
ſ	Carrie	Temp Log-i	Intac				 						MTBE 8021B/602	<u>, I</u>		I		<u> </u>	_			
-	or # TININTD	n Review MM	space Y / N	ONLX	LAB USE			 X	× ×	X	X	×	TPH 418.1/TX1005 PAH 8270C Total Metals Ag As TCLP Metals Ag As	Ba Cd Cd Ba Cd Cd	P + D r Pb Se Cr Pb Se	E O Hg 601 e Hg	0B/200).7	(Circ	LAB Order	CHAIN-OF	
	802 928.				REMARKS								TCLP Volatiles TCLP Semi Volatile TCLP Pesticides RCI	es N/624				,	IALYSIS REC	10# Alaan	-CUSTODY A	
	9-585	12/58											GC/MS Semi. Vol. PCB's 8082/608 Pesticides 8081A/6 BOD, TSS, pH	8270C/62	25			·	thod No.)	bocch	ND ANALYS	Ţ
				h.	17																IS REQUEST	age
													Turn Around Time	if differen	t from s	tandard						+





Photo 1: Agua Well at the Goodwin Treating Plant. Looking north-northwest. Remediation complete, excavations filled, and site compacted and mounded.



Photo 1: Goodwin Treating Plant entrance. Looking east. Remediation complete, excavations filled, and site compacted and mounded.





Photo 1: Goodwin Treating Plant. Looking northeast from the entrance gate. Remediation complete, excavations filled, site compacted and mounded.

Kieling, Martyne

From: Sent: To: Cc: Subject: Kieling, Martyne Tuesday, September 24, 2002 10:32 AM Coss, David Matush, Mike Goodwin

David,

The compost pile test results are back for the September turning event at the Goodwin Treating Plant. Five samples were taken and the results are as follows- Total Petroleum Hydrocarbons are now down to 210, 298, 393, 526 and 1040 ppm. The prior sampling event on July 17 had TPH at 2754 ppm to 5180 ppm.

I have Given AMEC the go-ahead to begin backfilling the holes. This will probably take place the last week of October or first week of November. This will allow the pile to sit and remediate for another 7 to 8 week period. Effectively lowering the TPH even more. I am surprised and pleased that the composing worked as well and as fast as it did. I am ready to use this method again wherever we have the room to set it up.

I will keep you updated.

Martyne J. Kieling

Martyne J. Kieling Environmental Geologist

STATE OF NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

Telephone	Personal	Time <u>3:</u>	20 pm_ Di	ate 9-23-0	ى <u>۲</u>
Originating Party Alm 505-32)on Fernald LEC 1-7928	Othe	er Parties Mar	tyne Kieling	
Subject <u>Goodu</u> 5 Samples	sin - Remediati	on of Compe pH is Now	ost piles	3,210,29	8,
Discussion The	Fracility is	Good to Clo	<u>526</u>	, 1040 pp	m_ be
Time is A Contractor	Back Gilled ;. Wailable. AMEC Will	Probably Go	b with	end of O	<u>C</u> tober
Firstof No Plu to co	ovember. ntime remedi	this will icition For c	Allous notter +	to gu	The eeks
				•	
Conclusions or Agree	ments				
Distribution		Sign	ed Maly	gk[·	

Kieling, Martyne

From: Sent: To: Subject: Kieling, Martyne Monday, August 26, 2002 11:30 AM Coss, David Goodwin

David,

It seems that I am past due regarding keeping you updated on the Goodwin Project. I seem to have been a little under the weather this summer.

Placement of the compost pile was completed the third week of July and the contractors began turning the pile which had been sitting there for almost one month. Samples were taken on July 17, 2002 and the benzene, toluene, ethylbenzene and xylene (BTEX) levels are all below 50 ppm ranging from **9.35 ppm to 0.160 ppm**. Benzene levels are all below 10 ppm <detection to 0.666 ppm. Total petroleum hydrocarbons (TPH) results at the time of the first turning ranged from **5180 ppm to 2754 ppm**. Because the depth of ground water at the facility site is 85 feet below ground surface (bgs) OCD surface impoundment closure guidelines recommend the cleanup level for the soil to be no worse than the following.

From the surface to 8 feet bgs 10 benzene 50 BTEX 1000 TPH

For greater than 8 feet bgs

10 benzene

50 BTEX 100 TPH

This is recommended according to the OCD guidelines. There is also an option to demonstrate that there would be no migration of contaminates to ground water if something greater that the guidelines is placed back in the excavations. Transport models could be run or clay barriers could be placed in the bottom of the excavations. The OCD will evaluate these options further after we see the next batch of results.

The contractor will be on site the week of September 3, 2002 to turn the piles and sample again to see how the biodegradation is progressing. There should be enough money left to turn one more time which I project to be some time in mid October. There is also money dedicated to place the material back in the excavations. I should know more by the end of September when the analytical results come back.

I have the first Invoice (\$220,917.72) from AMEC and will forward it on to Della once I receive all of the receipts for items that were managed AT COST and have had it approved on this end.

If you have any questions please call (476-3488) or E-mail. I see that that other job of yours is keeping you busy, take care of yourself.

Martyne J. Kieling

Martyne J. Kieling Environmental Geologist dwin sampling

Kieling, Martyne

From:Don Fernald [don.fernald@amec.com]Sent:Monday, September 16, 2002 8:00 PMTo:Kieling, MartyneSubject:Goodwin - Water Truck

Hi Martyne,

AMEC is currently using a 2,000 gallon / 47 barrel water truck to collect, transport and spray water onto the biopiles for the Goodwin remedial project. The water truck is equipped with pumps, hoses and sprayers to perform these types of tasks. AMEC is currently charging the NMOCD \$200/day which includes use of the truck, maintenance and fuel.

AMEC's agreement with the NMSHTD has a line item of \$125/day for a water truck used to support drilling operations. Water trucks of this type generally consist of a truck with a 500-1,000 gallon poly tank. This equipment would not be feasible to use on a project such as Goodwin.

If you have any questions or need additional information, please contact me at (505) 327-7928 or (505) 320-9670.

Best Regards,

Don Fernald AMEC Earth & Environmental 2060 Afton Place Farmington, NM 87401 Ph: (505) 327-7928 Fx: (505) 326-5721 don.fernald@amec.com

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Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Summary Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending July 12, 2002

Saturday, July 6, 2002 through Friday, July 12, 2002

AMEC's remediation crew mobilized from Farmington to Hobbs, New Mexico on Monday, July 8, 2002. The Goodwin treating plant site reportedly received several inches of rain during the weekend of July $6^{th} \& 7^{th}$. The first part of the week was spent working the puddles of water from the recent rains into the soil. Continued excavation and mixing of hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site.

Laboratory data from BioLogical Resources who was subcontracted by Trace Analysis to analyze representative soil samples from the Goodwin Treating Plant was received. The data indicates that sufficient populations of diesel and heavy oil degrading bacteria are present at the site. Moderately elevated concentrations of chlorides were present in the two soil samples, but not at concentrations that would inhibit biological degradation of hydrocarbons.

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	Notes:	AM10	AT40	AP10		UPDD	Z4	T2A	T 4	P4	Po	CODES	AMEC	n Site Worl		leek Ending	ask #:	roject #:	meC earth roject:	
		0042	0053	0043	0029	0021	0010	9006	0005	0003	0002	ITEM				g: <u>June 7th</u>				7
		mileage	pick-up trucks	perdiem (4 - 5)	trackhoe 2 (3)	PID	secretary	field tech I (3)	field tech II	project scientist/manager	senior scientist	ITEM	On Site Work			7/12/2002	2	2517000051	Goodwin Treating Plant	
		Mile	Each	Each	mile	day	hour	hour	hour	hour	hour	UNIT					8	1	1	
					-							7-Jul	Date	Sat			Asst. S		Project	
		1,008	2.0	3.0	-	-		19.5	10.5		4.0	8-Jul	Date	Mon			upervis		t Managet Superv	
		71	2.0	4.0	3.0	-		31.0	11.5		4.0	9-Jul	Date	Tues		505-33	Bruce	505-33	i Morgai	
		69	2.0	3.0	3.0	•		21.0	12.0		4.0	10-Jul	Date	Wed		0-320-92	Hare	0-3061	n Killion	
		57	2.0	3.0	3.0	1.0		21.0	11.5		4.0	11-Jul	Date	Thurs		53				
		77	2.0	3.0	3.0	1.0		21.0	12.0		4.0	12-Jul	Date	Friday						
		X	X	4	X	X	X	X	X	X	X		X	Sunda		_				
Budget for	Weekly To	1,282.0	10.0	20.0	12.0	2.0	1	113.5	57.5	•	20.0			Units	Total					
r (b)	tal =	\$ 0.25	\$ 50.00	\$ 60.00	\$550.00	\$ 5.00	\$ 29.00	\$ 40.00	\$ 42.00	\$ 63.00	\$ 75.00			Rate						
	69	↔	↔	⇔	↔	↔	÷	လ	မာ	÷	↔			Cos	Esti	:				
130,542.50	17,085.50	320.50	500.00	1,200.00	6,600.00	10.00	ŧ	4,540.00	2,415.00	1	1,500.00			ts	mated					

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67,045.25	\$	đ	Budget (1	
2,527.75	11 40	Total	Weekly											Notes:	
1	\$		0												
1	7.00 \$	÷	0									CY	nanure/trucking (at cost)	IT30 n	_
1	۱ ج	↔	0									LS	ence (at cost)	UFAM fe	
5.75	0.25 \$	Ś	23		23.0							Mile	nileage	AM10 m	
50.00	50.00 \$	÷	1	X	1.0							Each	ick-up truck	AT40 p	
120.00	60.00 \$	θ	2			1.0	1.0					Each	erdiem	AP10 p	
800.00	200.00 \$	\$	4	X	1.0	1.0	1.0	1.0				Day	7 bbl transport	4	
152.00	0.20 \$	¢	760	X	240.0	200.0	280.0	40.0				BBL	Vater purchase	WFIA V	
1	550.00 \$	\$	0	Х								Each	ackhoe 2 (2)	ltr	
1	5.00 \$	÷	0	X								Each	ID	UPDD P	
1	29.00 \$	θ	0	X								Hour	ecretary	Z4 s	
1,400.00	40.00 \$	÷	35	X	12.0	11.5	11.5					Hour	eld tech I (2)	T2A fi	
-	42.00 \$	\$	0	X								Hour	eld tech II	T4 fi	
-	63.00 \$	\$	0	X								Hour	roject scientist/manager	P4 p	
1	75.00 \$	\$	0	X								Hour	enior scientist	PO s	_
osts	C	Rate	Units		12-Jul	11-Jul	10-Jul	9-Jul	8-Jul			Unit		CODES	_
stimated			Total	Date	Date	Date	Date	Date	e	e Dat	Dat		ITEM	AMEC	_
			ay	Sund	Fri	Thurs	Wed	Tues	n	Mo	Sat	atering	st Pile Set Up and Initial W	Onsite Compos	
												l			
							Date:		7/12/2002	<u>.</u>	Ending	Week	ioodwin	Reciever: G	
						53	-320-92	505-330					Ibert Martinez	Transporter: A	
							lare	Bruce H	ervisor:	it. Sup	As			Task #: 4	
							-3061	505-330					517000051	Project #: 2	
							rnald Killion	Don Fei Morgan	lanager: upervisor	ject N			Environmental Joodwin Treating Plant	AMEC Earth &	
) #	•		J		•		

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Weekly Summa	Project #:	Project:	Anna Earth &
ary for all tasks/items	2517000051	Goodwin Treating Plant	Environmental
Asst. Supervisor:		Project Supervisor:	Project Manager:

Bruce Hare 505-330-3061 Morgan Killion Don Fernald 505-330-320-9253

Week ending: Ju **BACKFILLING AND SITE RESTORATION** ONSITE COMPOST PILE SET UP AND INITIAL WATERING OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL **REMOVAL AND DISPOSAL OF HEATER-TREATERS** MAINTENANCE OF COMPOST PILE (3 turning events) ON SITE WORK CLAY LINER PLACEMENT **MOBILIZATION / DEMOBILIZATION** 12-Jul Tax = Task σ G 4 ω N 4 OCD Item Grand Total Total 5.25% g 0 a 0 6 a 3 3 Budget 298,953 284,041 14,912 542.50 25.00 69 69 60 67 6) 60 5 Week 6/7 43,324.32 11,183.25 \$ 10,050.00 \$ 41,163.25 15,311.00 \$2,161.07 4,619.00 \$0.00 \$0.00 \$0.00 5 Week 6/14 S 69 G 5 41,151.70 39,099.00 21,442.50 \$2,052.70 17,656.50 \$0.00 \$0.00 \$0.00 64 Week 6/21 69 69 6 60 30,168.39 \$1,504.84 14,440.25 28,663.55 9,800.50 4,422.80 \$ 6) Week 6/28 60 67 23,377.50 27,293.43 \$1,361.43 25,932.00 2,554.50 \$ Week 7/5 60 \$ 6 15,266.78 14,505.25 13,801.25 \$761.53 704.00 Week 7/ 69 69 s -69 20,6 17,0 19,6 2,5 1.0

	~	50	\$	-	5	50	-	\$	5	5	
77 847 56	8 874 26	168,976.30			4,422.80		48,212.50	10,050.00	101,672.00	4,619.00	12-Jul
\$ 208 052 80	¢ 14 012 14	\$ 284,040.75	\$29,629.00	\$0.00	\$3,225.00	\$ 35,602.00	\$ 67,045.25	\$10,000.00	\$130,542.50	\$7,997.00	Budget
4 101 105 33	A DAD RR	S 115,064.45	\$29,629.00	\$0.00	(\$1,197,80)	\$35,602.00	\$18,832.75	(\$50.00)	\$28,870.50	\$3,378.00	Remaining Budget
			7		6	Ch.	4	3	2	1	Task #

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COST SUMMARY FOR REMEDIAL ACTIONS AT THE GOODWIN TREAING PLANT SITE

AMEC	MOBIL	IZATION / DEMOBILIZATION				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P4	0003	project scientist/manager	hour	\$63	16	\$1,008.00
T4	0005	field tech II	hour	\$42	16	\$672.00
T2A	0006	field tech I	hour	\$40	48	\$1,920.00
	0029	trackhoe 2	day	\$550	6	\$3,300.00
AM10	0042	mileage	mile	\$0.25	1,988	\$497.00
AP10	0043	per diem	night	\$60	5	\$300.00
AT40	0053	pick-up trucks (3)	day	\$50	6	\$300.00
	ESTIM/	ATED TOTAL			(a)	\$7,997.00

AMEC	ON SIT	EWORK				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P0	0002	senior scientist	hour	\$75	50	\$3,750.00
P4	0003	project scientist/manager	hour	\$63	120	\$7,560.00
T4	0005	field tech II	hour	\$42	330	\$13,860.00
T2A	0006	field tech I (3)	hour	\$40	990	\$39,600.00
Z4	0010	secretary	hour	\$29	40	\$1,160.00
UPDD	0021	PID	day	\$5	30	\$150.00
	0029	trackhoe 2 (3)	day	\$550	90	\$49,500.00
AP10	0043	perdiem (4 - 5)	night	\$60	165	\$9,900.00
AT40	0053	pick-up truck (2)	day	\$50	90	\$4,500.00
AM10	0042	mileage	mile	0.25	2,250	\$562.50
	ESTIMA	ATED TOTAL			(b)	\$130,542.50

AMEC	OFFSIT	E HYDROCARBON SOIL TRAN	SPORT AND DISPOS	AL		
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$20	500	\$10,000.00
	ESTIM/	ATED TOTAL			(c)	\$10,000.00

AMEC	ONSITE	COMPOST PILE SET UP AND	DINITIAL WATERING	3			
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	STIMATED
	NO.			UNIT	UNITS		COSTS
PO	0002	senior scientist	hour	\$75	8	\$	600.00
P4	0003	project scientist/manager	hour	\$63	16	\$	1,008.00
T4	0005	field tech II	hour	\$42	99	\$	4,158.00
T2A	0006	field tech I (2)	hour	\$40	198	\$	7,920.00
Z4	0010	secretary	hour	\$29	8	\$	232.00
UPDD	0021	PID	day	\$5	10	\$	50.00
	0029	trackhoe 2 (2)	day	\$550	20	\$	11,000.00
UTVW	0052	water truck	day	\$125	-	\$	-
WFIA	Х	Water purchase (at cost)	130 bbl	\$39	34	\$	1,326.00
IS74	XX	120 bbl transport (at cost)	Hour	\$65	68	\$	4,420.00
AP10	0043	perdiem	night	\$60	30	\$	1,800.00
AT40	0053	pick-up truck	day	\$50	20	\$	1,000.00

AM10	0042	mileage	mile	0.25	750	\$ 187.50
UFAM		fence (at cost)	LS	Each	6,000	\$ 6,000.00
IT30		manure/trucking (at cost)	cubic yd	8.75	3,125	\$ 27,343.75
	ESTIM	ATED TOTAL			(d)	\$ 67,045.25

AMEC	MAINT	ENANCE OF COMPOST PILE	(3 turning events)				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	STIMATED
	NO.			UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$75	6	\$	450.00
P4	0003	project scientist/manager	hour	\$63	6	\$	378.00
T4	0005	field tech II	hour	\$42	240	\$	10,080.00
T2A	0006	field tech I	hour	\$40	-	\$	-
Z4	0010	secretary	hour	\$29	6	\$	174.00
UPDD	0021	PID	day	\$5	15	\$	75.00
	0029	trackhoe 2	day	\$550	15	\$	8,250.00
WFIA	Х	Water purchase (at cost)	130 bbl	\$39	110	\$	4,290.00
IS74	XX	120 bbl transport (at cost)	Hour	\$65	140	\$	9,100.00
UTVW	0052	water truck	day	\$125		\$	-
AP10	0043	perdiem	night	\$60	18	\$	1,080.00
AT40	0053	pick-up truck	day	\$50	21	\$	1,050.00
AM10	0042	mileage	mile	0.25	2,700	\$	675.00
	ESTIM/	ATED TOTAL			(e)	\$	35,602.00

AMEC	REMO	AL AND DISPOSAL OF HEATE	ER-TREATERS			
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
NI38		subcontract shear (at Cost)	LS	\$ 2,000.00	1.0	\$2,000.00
	0029	trackhoe 2	day	\$550	0.3	\$165.00
T2A	0006	field tech I	hour	\$40	3.0	\$120.00
P243		transport (at cost)	hour	\$60	8.0	\$480.00
IF10		Disposal (at cost)	ton	\$23	20.0	\$460.00
	ESTIM/	ATED TOTAL			(f)	\$3,225.00

AMEC	CLAY L	INER PLACEMENT				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
M005		clay (at cost)	cubic yd	\$7.50	-	\$0.00
T2A	0006	field tech I	hour	\$40	-	\$0.00
	0029	trackhoe 2	day	\$550	-	\$0.00
	ESTIM/	ATED TOTAL			(g)	\$0.00

AMEC	BACKF	ILLING AND SITE RESTORAT	TION			
CODES	ITEM NO.	ITEM	UNIT	PRICE PER UNIT	ESTIMATED UNITS	ESTIMATED COSTS
PO	0002	senior scientist	hour	\$75	16	\$1,200.00
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00
T4	0005	field tech II	hour	\$42	99	\$4,158.00
T2A	0006	field tech I	hour	\$40	198	\$7,920.00
Z4	0010	secretary	hour	\$29	16	\$464.00

	ESTIM	ATED TOTAL			(h)	\$29,629.00
AM10	0042	mileage	mile	0.25	900	\$225.00
AT40	0053	pick-up truck	day	\$50	20	\$1,000.00
AP10	0043	perdiem	night	\$60	35	\$2,100.00
	0029	trackhoe 2	day	\$550	20	\$11,000.00
UPDD	0021	PID	day	\$5	10	\$50.00

TOTALS FOR EACH PRICE AGREEMENT - ITEM NO.

AMEC	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
CODES	NO.			UNIT	UNITS	COSTS
P0	0002	senior scientist	hour	\$ 75	96	\$ 7,200.00
P4	0003	project scientist/manager	hour	\$ 63	182	\$ 11,466.00
T4	0005	field tech II	hour	\$ 42	784	\$ 32,928.00
T2A	0006	field tech I	hour	\$ 40	1,434	\$ 57,360.00
Z4	0010	secretary	hour	\$ 29	70	\$ 2,030.00
UPDD	0021	PID	day	\$ 5	65	\$ 325.00
	0029	trackhoe 2	day	\$ 550	151	\$ 83,215.00
AM10	0042	mileage	mile	\$ 0.25	8,588	\$ 2,147.00
AP10	0043	perdiem	night	\$ 60	253	\$ 15,180.00
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$ 20	500	\$ 10,000.00
WFIA		Water purchase (at cost)	130 bbl	\$ 39	144	\$ 5,616.00
IS74		120 bbl transport (at cost)	Hour	\$ 65	208	\$ 13,520.00
UTVW	0052	water truck	day	\$ 125		\$ -
AT40	0053	pick-up truck	day	\$ 50	157	\$ 7,850.00
UFAM		fence (at cost)		\$ 6,000	1	\$ 6,000.00
IT30		manure (at cost)	cubic yd	\$ 9	3,125	\$ 27,343.75
NI38		subcontract shear (at cost)	LS	\$ 2,000	1	\$ 2,000.00
		transport treaters (at cost)	hour	\$ 60	8	\$ 480.00
IF10		Disposal (at cost)	ton	\$ 23	8	\$ 184.00
M005		clay (at cost)	cubic yd	\$ 8	-	\$ -
	TOTAL	ESTIMATED COST FOR JO	В		(i)	\$284,844.75

Lea County Taxes

Total Estimated Cost with Taxes

5.25% \$ 14,954.35

\$299,799.10

Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Summary Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending July 5, 2002

Saturday, June 29, 2002 through Friday, July 5, 2002

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Continued excavation and mixing of hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. The crew left the site and mobilized back to Farmington on July 3, 2002 for the Independence Day holiday.

Notes:	AM10	AT40	AP10		UPDD	Z4	T2A	Т4	P4	Po	CODES	AMEC	On Site Woi		⊺ask #: Week Endin	AMEC Earth Project: Project #:
	0042	0053	0043	0029	0021	0010	0006	0005	0003	0002	ITEM		¥		a: June 7th	ı & Environn
	mileage	pick-up trucks	perdiem (4 - 5)	trackhoe 2 (3)	PID	secretary	field tech I (3)	field tech II	project scientist/manager	senior scientist	ITEM	On Site Work			2 7/5/2002	nental Goodwin Treating Plant 2517000051
	Mile	Each	Each	mile	day	hour	hour	hour	hour	hour	UNIT					
	139	2.0	4.0	3.0	-		32.5	11.5			29-Jun	Date	Sat		Assi, oupe	Project Ma Project Su
	72	2.0	4.0	3.0	1.0		32.5	11.5			1-Jul	Date	Mon		rvisor:	nager: pervisor
	147	3.0	4.0	3.0	1.0		32.5	11.5	4.5		2-Jul	Date	Tues		505-33(Don Fe : Morgar 505-33
	1,005	2.0					27.0	9.0			3-Jul	Date	Wed		nare 0-320-92	rnald n Killion 0-3061
											4-Jul	Date	Thurs		53	
											5-Jul	Date	Friday			
	X	X	4	X	X	X	X	X	X	X	X	X	Sunda			
Budget f	1,363.0	9.0	16.0	9.0	2.0		124.5	43.5	4.5	1			Units	Total		
or (b)	\$ 0.25	\$ 50.00	\$ 60.00	\$ 550.00	\$ 5.00	\$ 29.00	\$ 40.00	\$ 42.00	\$ 63.00	\$ 75.00			Rate			
130,542.50	\$ 340.75	\$ 450.00	\$ 960.00	\$ 4,950.00	\$ 10.00	с я	\$ 4,980.00	\$ 1,827.00	\$ 283.50	ب			Costs	Estimated		

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67,045.25	\$		idget (d)										
704.00	ŝ	11	eekly Total	×									Notes:
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1	0 \$	7.0	0\$								CY	manure/trucking (at cost)	IT30
1	÷	.	0 \$								LS	fence (at cost)	UFAM
•	5 \$	0.2	0\$								Mile	mileage	AM10
1	\$	50.C	0	X							Each	pick-up truck	AT40
	б \$	60.C	0\$								Each	perdiem	AP10
600.00	0 \$	200.0	3 \$	X				1.0	1.0	1.0	Day	47 bbl transport	
104.00	š Š	0.2	520 \$	X				80.0	80.0	360.0	BBL	Water purchase	WFIA
1	б \$	550.C	0\$	X							Each	trackhoe 2 (2)	
1	\$	5.C	0 \$	X							Each	PID	UPDD
1	б \$	29.C	0\$	X							Hour	secretary	Z4
1	0 \$	40.C	0 \$	X							Hour	field tech I (2)	T2A
1	\$	42.0	0	X							Hour	field tech II	T4
•	о \$	63.C	0\$	X							Hour	project scientist/manager	P4
	0 \$	75.C	\$ 0	X							Hour	senior scientist	PO
15	Cost	ate	nits Ra	Un	5-Jul	4-Jul	3-Jul	2-Jul	1-Ju	29-Jun	Unit		CODES
mated	Estin		tal	Date To	Date	Date	Date	Date	Date	Date		ITEM	AMEC
				Sunday	Fri	Thurs	Wed	Tues	Mon	Sat	βl	ost Pile Set Up and Initial Waterin	Onsite Comp
										ä			
							Date:		7/5/2002		Week Endir	Goodwin	Reciever:
						253	0-320-9	505-33				Albert Martinez	Transporter:
							Hare	r Bruce I	uperviso	Asst. Su		4	Task #:
							0-3061	505-33				2517000051	Project #:
						ב	n Killioi	Morgai	Supervis	Project		Goodwin Treating Plant	Project:
							ernald	Don Fe	Manager	Project		& Environmental	AMEC Earth a

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in Treating Plant

Project #: 2517000051 Weekly Summary for all tasks/items

Project Manager: Project Supervisor:

Asst. Supervisor:

Don Fernald Morgan Killion 505-330-3061 Bruce Hare 505-330-320-9253

•										Week ending: June 21, 2002
	BACKFILLING AND SITE RESTORATION	CLAY LINER PLACEMENT	REMOVAL AND DISPOSAL OF HEATER-TREATERS	MAINTENANCE OF COMPOST PILE (3 turning events)	ONSITE COMPOST PILE SET UP AND INITIAL WATERING	OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL	ON SITE WORK	MOBILIZATION / DEMOBILIZATION		<u>5-Ju</u>
Tax =	7		6	G	4	ω	2	1	Task	-
Total 5.25% Grand Toti	(h)	(g)	(f)	(e) \$	(d)	(c)	(b)	(a)	OCD Item	
284,041 14,912 298,953	\$29,629.00	\$0.00	\$3,225.00	35,602.00	67,045.25	\$10,000.00	\$130,542.50	\$7,997.00	Budget	
\$ 41,163.25 \$2,161.07 \$ 43,324.32	\$0.00	\$0.00	\$0.00	- \$	\$ 11,183.25	\$ 10,050.00	\$ 15,311.00	\$ 4,619.00	Week 6/7	
\$ 39,099.00 \$2,052.70 \$ 41,151.70	\$0.00	\$0.00	\$0.00	÷	\$ 21,442.50	\$	\$ 17,656.50	ب	Week 6/14	
\$ 28,663.55 \$1,504.84 \$ 30,168.39			\$ 4,422.80		\$ 9,800.50		\$ 14,440.25		Week 6/21	
\$ 25,932.00					\$ 2,554.50		\$ 23,377.50		Week 6/28	
\$ 14,505.25					\$ 704.00		\$ 13,801.25		Week 7/5	

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COST SUMMARY FOR REMEDIAL ACTIONS AT THE GOODWIN TREAING PLANT SITE

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AMEC	MOBIL	IZATION / DEMOBILIZATION				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P4	0003	project scientist/manager	hour	\$63	16	\$1,008.00
T4	0005	field tech II	hour	\$42	16	\$672.00
T2A	0006	field tech I	hour	\$40	48	\$1,920.00
	0029	trackhoe 2	day	\$550	6	\$3,300.00
AM10	0042	mileage	mile	\$0.25	1,988	\$497.00
AP10	0043	per diem	night	\$60	5	\$300.00
AT40	0053	pick-up trucks (3)	day	\$50	6	\$300.00
	ESTIMA	ATED TOTAL			(a)	\$7,997.00

AMEC	ON SIT	EWORK					
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED	
	NO.			UNIT	UNITS	COSTS	
PO	0002	senior scientist	hour	\$75	50	\$3,750.00	
P4	0003	project scientist/manager	hour	\$63	120	\$7,560.00	
T4	0005	field tech II	hour	\$42	330	\$13,860.00	
T2A	0006	field tech I (3)	hour	\$40	990	\$39,600.00	
Z4	0010	secretary	hour	\$29	40	\$1,160.00	
UPDD	0021	PID	day	\$5	30	\$150.00	
	0029	trackhoe 2 (3)	day	\$550	90	\$49,500.00	
AP10	0043	perdiem (4 - 5)	night	\$60	165	\$9,900.00	
AT40	0053	pick-up truck (2)	day	\$50	90	\$4,500.00	
AM10	0042	mileage	mile	0.25	2,250	\$562.50	
	ESTIMA	ATED TOTAL			(b)	\$130,542.50	

AMEC	OFFSIT	E HYDROCARBON SOIL TRAN	SPORT AND DISPOS	AL										
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED								
	NO.	NO. UNIT UNITS COSTS												
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$20	500	\$10,000.00								
	ESTIM/	STIMATED TOTAL (c) \$10,000.00												

AMEC	ONSITE	COMPOST PILE SET UP ANI	DINITIAL WATERING	3		_			
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	STIMATED		
	NO.			UNIT	UNITS	COSTS			
P0	0002	senior scientist	hour	\$75	8	\$	600.00		
P4	0003	project scientist/manager	hour	\$63	16	\$	1,008.00		
T4	0005	field tech II	hour	\$42	99	\$	4,158.00		
T2A	0006	field tech I (2)	hour	\$40	198	\$	7,920.00		
Z4	0010	secretary	hour	\$29	8	\$	232.00		
UPDD	0021	PID	day	\$5	10	\$	50.00		
	0029	trackhoe 2 (2)	day	\$550	20	\$	11,000.00		
UTVW	0052	water truck	day	\$125	-	\$	-		
WFIA	X	Water purchase (at cost)	130 bbl	\$39	34	\$	1,326.00		
IS74	XX	120 bbl transport (at cost)	Hour	\$65	68	\$	4,420.00		
AP10	0043	perdiem	night	\$60	30	\$	1,800.00		
AT40	0053	pick-up truck	day	\$50	20	\$	1,000.00		

AM10	0042	mileage	mile	0.25	750	\$ 187.50
UFAM		fence (at cost)	LS	Each	6,000	\$ 6,000.00
IT30		manure/trucking (at cost)	cubic yd	8.75	3,125	\$ 27,343.75
	ESTIM	ATED TOTAL			(d)	\$ 67,045.25

AMEC	MAINT	ENANCE OF COMPOST PILE	(3 turning events)					
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	STIMATED	
	NO.			UNIT	UNITS	COSTS		
P0	0002	senior scientist	hour	\$75	6	\$	450.00	
P4	0003	project scientist/manager	hour	\$63	6	\$	378.00	
T4	0005	field tech II	hour	\$42	240	\$	10,080.00	
T2A	0006	field tech I	hour	\$40		\$	-	
Z4	0010	secretary	hour	\$29	6	\$	174.00	
UPDD	0021	PID	day	\$5	15	\$	75.00	
	0029	trackhoe 2	day	\$550	15	\$	8,250.00	
WFIA	X	Water purchase (at cost)	130 bbl	\$39	110	\$	4,290.00	
IS74	XX	120 bbl transport (at cost)	Hour	\$65	140	\$	9,100.00	
UTVW	0052	water truck	day	\$125		\$		
AP10	0043	perdiem	night	\$60	18	\$	1,080.00	
AT40	0053	pick-up truck	day	\$50	21	\$	1,050.00	
AM10	0042	mileage	mile	0.25	2,700	\$	675.00	
	ESTIM/	ATED TOTAL			(e)	\$	35,602.00	

AMEC	REMOVAL AND DISPOSAL OF HEATER-TREATERS											
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED						
	NO.			UNIT	UNITS	COSTS						
NI38		subcontract shear (at Cost)	LS	\$ 2,000.00	1.0	\$2,000.00						
	0029	trackhoe 2	day	\$550	0.3	\$165.00						
T2A	0006	field tech I	hour	\$40	3.0	\$120.00						
P243		transport (at cost)	hour	\$60	8.0	\$480.00						
IF10		Disposal (at cost)	ton	\$23	20.0	\$460.00						
	ESTIMA	ATED TOTAL			(f)	\$3,225.00						

AMEC	CLAY L	INER PLACEMENT				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
M005		clay (at cost)	cubic yd	\$7.50	-	\$0.00
T2A	0006	field tech I	hour	\$40	-	\$0.00
	0029	trackhoe 2	day	\$550		\$0.00
	ESTIM/	ATED TOTAL			(g)	\$0.00

AMEC	BACKF	ILLING AND SITE RESTORAT	TION			
CODES	ITEM NO.	ITEM	UNIT	PRICE PER UNIT	ESTIMATED UNITS	ESTIMATED COSTS
P0	0002	senior scientist	hour	\$75	16	\$1,200.00
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00
T4	0005	field tech II	hour	\$42	99	\$4,158.00
T2A	0006	field tech I	hour	\$40	198	\$7,920.00
Z4	0010	secretary	hour	\$29	16	\$464.00

UPDD	0021	PID	day	\$5	10	\$50.00
	0029	trackhoe 2	day	\$550	20	\$11,000.00
AP10	0043	perdiem	night	\$60	35	\$2,100.00
AT40	0053	pick-up truck	day	\$50	20	\$1,000.00
AM10	0042	mileage	mile	0.25	900	\$225.00
	ESTIM	ATED TOTAL			(h)	\$29,629.00

TOTALS FOR EACH PRICE AGREEMENT - ITEM NO.

AMEC	ITEM	ITEM	UNIT	PRI	CE PER	ESTIMATED	E	STIMATED
CODES	NO.			1	JNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$	75	96	\$	7,200.00
P4	0003	project scientist/manager	hour	\$	63	182	\$	11,466.00
T4	0005	field tech II	hour	\$	42	784	\$	32,928.00
T2A	0006	field tech I	hour	\$	40	1,434	\$	57,360.00
Z4	0010	secretary	hour	\$	29	70	\$	2,030.00
UPDD	0021	PID	day	\$	5	65	\$	325.00
	0029	trackhoe 2	day	\$	550	151	\$	83,215.00
AM10	0042	mileage	mile	\$	0.25	8,588	\$	2,147.00
AP10	0043	perdiem	night	\$	60	253	\$	15,180.00
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$	20	500	\$	10,000.00
WFIA		Water purchase (at cost)	130 bbl	\$	39	144	\$	5,616.00
IS74		120 bbl transport (at cost)	Hour	\$	65	208	\$	13,520.00
UTVW	0052	water truck	day	\$	125		\$	
AT40	0053	pick-up truck	day	\$	50	157	\$	7,850.00
UFAM		fence (at cost)		\$	6,000	1	\$	6,000.00
IT30		manure (at cost)	cubic yd	\$	9	3,125	\$	27,343.75
NI38		subcontract shear (at cost)	LS	\$	2,000	1	\$	2,000.00
		transport treaters (at cost)	hour	\$	60	8	\$	480.00
IF10		Disposal (at cost)	ton	\$	23	8	\$	184.00
M005		clay (at cost)	cubic yd	\$	8		\$	
	TOTAL ESTIMATED COST FOR JOB (i) \$							

Lea County Taxes

Total Estimated Cost with Taxes

5.25% \$ 14,954.35

\$299,799.10

Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Summary Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending June 28, 2002

Saturday, June 22, 2002 through Friday, June 28, 2002

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Continued excavation and mixing of hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site.

	No	A١	Þ.	Þ		Ų L		-1		_	Ţ	co	AN	On Sit		Week	Task #	Projec	Projec	AMEC
)tes:	M10	T40	010		מס	<u>7</u> 4	2A	Г4	94	ŏ	DES	NEC	te Work		Ending	. 1	¥ #	Ħ	Earth
		0042	0053	0043	0029	0021	0010	0006	0005	0003	0002	ITEM		1		1: June 7th				& Environm
		mileage	pick-up trucks	perdiem (4 - 5)	trackhoe 2 (3)	PID	secretary	field tech I (3)	field tech II	project scientist/manager	senior scientist	ITEM	On Site Work			6/28/2002	2	2517000051	Goodwin Treating Plant	ental
		Mile	Each	Each	mile	day	hour	hour	hour	hour	hour	UNIT								
		36	1.0	2.0	2.0			6.5	7.5		-	22-Jun	Date	Sat			Asst. S		Project	Proiect
		29	2.0	4.0	3.0			33.0	12.0		4.0	24-Jun	Date	Mon			upervisor		Supervis	Manager
		59	2.0	4.0	3.0			32.5	11.5	8.0	4.0	25-Jun	Date	Tues		505-330-	Bruce Ha	505-330-	Morgan	Don Feri
		79	2.0	4.0	3.0			33.0	12.0		4.0	26-Jun	Date	Wed		320-9253	are	3061	Killion	nald
		54	2.0	4.0	3.0			32.5	11.5		4.0	27-Jun	Date	Thurs						
		101	2.0	4.0	3.0			32.5	11.5	4.0	4.0	28-Jun	Date	Friday						
		Х	X	4	X	X	X	X	X	Х	X	X	X	Sun						
Budget f	Weekly T	358.0	11.0	26.0	17.0	1	I	170.0	66.0	12.0	20.0			Units	Total					
or (b)	otal =	\$ 0.25	\$ 50.00	\$ 60.00	\$ 550.00	\$ 5.00	\$ 29.00	\$ 40.00	\$ 42.00	\$ 63.00	\$ 75.00			Rate						
130,542.50	\$ 23,377.50	\$ 89.50	\$ 550.00	\$ 1,560.00	\$ 9,350.00	\$	\$	\$ 6,800.00	\$ 2,772.00	\$ 756.00	\$ 1,500.00			Costs	Estimated					

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\$ 67,045.25		Budget (d)										
\$ 2,554.50	tal =	Weekly Tot										Notes:
\$ 9		0										
\$	\$ 7.00	0								CY	manure/trucking (at cost)	IT30
ن	ب ۱	0								LS	fence (at cost)	UFAM
\$ 20.50	\$ 0.25	82				,		33.0	49.0	Mile	mileage	AM10
\$ 100.00	\$ 50.00	2	X	,		,			2.0	Each	pick-up truck	AT40
\$ 120.00	\$ 60.00	2		•	1	1	1	-	2.0	Each	perdiem	AP10
\$ 1,200.00	\$ 200.00	ი	M	1.0	1.0	1.0	1.0	1.0	1.0	Day	47 bbl transport	
\$ 304.00	\$ 0.20	1520	X	360.0	280.0	240.0	200.0	280.0	160.0	BBL	Water purchase	WFIA
\$ 550.00	\$ 550.00	1	X	ı	1			-	1.0	Each	trackhoe 2 (2)	
•	\$ 5.00	0	X							Each	DIA	UPDD
\$	\$ 29.00	0	X							Hour	secretary	Z4
\$ 260.00	\$ 40.00	6.5	X	1	•	,	-	-	6.5	Hour	field tech I (2)	T2A
⇔ ∙	\$ 42.00	0	X							Hour	field tech II	74
69	\$ 63.00	0	X							Hour	project scientist/manager	P4
\$ 9	\$ 75.00	0	X							Hour	senior scientist	PO
Costs	Rate	Units	14-Jun	20-Jun	19-Jun	18-Jun	17-Jun	16-Jun	15-Jun	Unit		CODES
Estimated		Total	Date	Date	Date	Date	Date	Date	Date		ITEM	AMEC
			Sunday	Fri	Thurs	Wed	Tues	Mon	Sat	atering	ost Pile Set Up and Initial W	Onsite Compo
						Dale.	1-	200710710		AAGEV TIID	GOOMIII	Neclevel.
						Data:	•	c/30/3003	52.		Cooduin	Doniovor
					ដ)-320-925	505-330			,	Albert Martinez	Transporter:
						lare	Bruce H	pervisor:	Asst. Su	,	4	Task #:
)-3061	505-330			1	2517000051	Project #:
						rnald Killion	Don Fei Morgan	fanager: Supervisor:	Project N Project S		Goodwin Treating Plant	AMEC Earth & Proiect:
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roject:	& Environmental Goodwin Treating Plant		Project Manage Project Superv	er: isor:	Morg	an Killion				
roject #:	2517000051				505-3	30-3061				
Veekly Summ	nary for all tasks/items		Asst. Supervise	OF:	Bruce	Hare				
		1			505-3	30-320-9253				
Veek ending	28-Jun									-
		Task	OCD Item	Budget	<	Veek 6/7	Week 6/14	Week 6/21	Week 6/28	Week 7/5
	MOBILIZATION / DEMOBILIZATION	1	(a)	\$7,997.00	50	4,619.00				
	ON SITE WORK	2	(b)	\$130,542.50	\$	15,311.00	\$ 17,656.50	\$ 14,440.25	\$ 23,377.50	
	OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL	ω	(c)	\$10,000.00	S	10,050.00	s ,			
	ONSITE COMPOST PILE SET UP AND INITIAL WATERING	4	(d)	67,045.25	5	11,183.25	\$ 21,442.50	\$ 9,800.50	\$ 2,554.50	
	MAINTENANCE OF COMPOST PILE (3 turning events)	ch	(e) \$	35,602.00	5		•• •			
	REMOVAL AND DISPOSAL OF HEATER-TREATERS	6	(f)	\$3,225.00		\$0.00	\$0.00	\$ 3,224.50		
	CLAY LINER PLACEMENT		(8)	\$0.00		\$0.00	\$0.00			
	BACKFILLING AND SITE RESTORATION	7	(h)	\$29,629.00		\$0.00	\$0.00			
			Total	284,041	-	41,163.25	\$ 39,099.00	\$ 27,465.25	\$ 25,932.00	s ,
		Tax =	5.25%	14,912		\$2,161.07	\$2,052.70	\$1,441.93	\$1,361.43	
			Grand Total	298,953	\$	43,324.32	\$ 41,151.70	\$ 28,907.18	\$ 27,293.43	
COST SUMMARY FOR REMEDIAL ACTIONS AT THE GOODWIN TREAING PLANT SITE

AMEC	MOBIL	IZATION / DEMOBILIZATION				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P4	0003	project scientist/manager	hour	\$63	16	\$1,008.00
T4	0005	field tech II	hour	\$42	16	\$672.00
T2A	0006	field tech I	hour	\$40	48	\$1,920.00
	0029	trackhoe 2	day	\$550	6	\$3,300.00
AM10	0042	mileage	mile	\$0.25	1,988	\$497.00
AP10	0043	per diem	night	\$60	5	\$300.00
AT40	0053	pick-up trucks (3)	day	\$50	6	\$300.00
	ESTIM/	ATED TOTAL			(a)	\$7,997.00

AMEC	ON SIT	EWORK				
CODES	ITEM NO.	ITEM	UNIT	PRICE PER UNIT	ESTIMATED UNITS	ESTIMATED COSTS
P0	0002	senior scientist	hour	\$75	50	\$3,750.00
P4	0003	project scientist/manager	hour	\$63	120	\$7,560.00
T4	0005	field tech II	hour	\$42	330	\$13,860.00
T2A	0006	field tech I (3)	hour	\$40	990	\$39,600.00
Z4	0010	secretary	hour	\$29	40	\$1,160.00
UPDD	0021	PID	day	\$5	30	\$150.00
	0029	trackhoe 2 (3)	day	\$550	90	\$49,500.00
AP10	0043	perdiem (4 - 5)	night	\$60	165	\$9,900.00
AT40	0053	pick-up truck (2)	day	\$50	90	\$4,500.00
AM10	0042	mileage	mile	0.25	2,250	\$562.50
	ESTIMA	ATED TOTAL			(b)	\$130,542.50

AMEC	OFFSIT	FFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL							
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED			
	NO.			UNIT	UNITS	COSTS			
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$20	500	\$10,000.00			
	ESTIM/	ESTIMATED TOTAL (c)							

AMEC	ONSITE	COMPOST PILE SET UP ANI	D INITIAL WATERING	3				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	ESTIMATED	
	NO.			UNIT	UNITS		COSTS	
P0	0002	senior scientist	hour	\$75	8	\$	600.00	
P4	0003	project scientist/manager	hour	\$63	16	\$	1,008.00	
T4	0005	field tech II	hour	\$42	99	\$	4,158.00	
T2A	0006	field tech I (2)	hour	\$40	198	\$	7,920.00	
Z4	0010	secretary	hour	\$29	8	\$	232.00	
UPDD	0021	PID	day	\$5	10	\$	50.00	
	0029	trackhoe 2 (2)	day	\$550	20	\$	11,000.00	
UTVW	0052	water truck	day	\$125	-	\$	-	
WFIA	X	Water purchase (at cost)	130 bbl	\$39	34	\$	1,326.00	
IS74	XX	120 bbl transport (at cost)	Hour	\$65	68	\$	4,420.00	
AP10	0043	perdiem	night	\$60	30	\$	1,800.00	
AT40	0053	pick-up truck	day	\$50	20	\$	1,000.00	

AM10	0042	mileage	mile	0.25	750	\$ 187.50
UFAM		fence (at cost)	LS	Each	6,000	\$ 6,000.00
IT30		manure/trucking (at cost)	cubic yd	8.75	3,125	\$ 27,343.75
	ESTIM/	ATED TOTAL			(d)	\$ 67,045.25

AMEC	C MAINTENANCE OF COMPOST PILE (3 turning events)								
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	E	ESTIMATED		
	NO.			UNIT	UNITS		COSTS		
P0	0002	senior scientist	hour	\$75	6	\$	450.00		
P4	0003	project scientist/manager	hour	\$63	6	\$	378.00		
T4	0005	field tech II	hour	\$42	240	\$	10,080.00		
T2A	0006	field tech I	hour	\$40	-	\$	-		
Z4	0010	secretary	hour	\$29	6	\$	174.00		
UPDD	0021	PID	day	\$5	15	\$	75.00		
	0029	trackhoe 2	day	\$550	15	\$	8,250.00		
WFIA	X	Water purchase (at cost)	130 bbl	\$39	110	\$	4,290.00		
IS74	XX	120 bbl transport (at cost)	Hour	\$65	140	\$	9,100.00		
UTVW	0052	water truck	day	\$125	-	\$	-		
AP10	0043	perdiem	night	\$60	18	\$	1,080.00		
AT40	0053	pick-up truck	day	\$50	21	\$	1,050.00		
AM10	0042	mileage	mile	0.25	2,700	\$	675.00		
	ESTIM	STIMATED TOTAL (e)							

AMEC	REMOVAL AND DISPOSAL OF HEATER-TREATERS									
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED				
	NO.			UNIT	UNITS	COSTS				
NI38		subcontract shear (at Cost)	LS	\$ 2,000.00	1.0	\$2,000.00				
	0029	trackhoe 2	day	\$550	0.3	\$165.00				
T2A	0006	field tech I	hour	\$40	3.0	\$120.00				
P243		transport (at cost)	hour	\$60	8.0	\$480.00				
IF10		Disposal (at cost)	ton	\$23	20.0	\$460.00				
	ESTIM/	ATED TOTAL			(f)	\$3,225.00				

AMEC	CLAY LINER PLACEMENT								
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED			
	NO.			UNIT	UNITS	COSTS			
M005		clay (at cost)	cubic yd	\$7.50	-	\$0.00			
T2A	0006	field tech I	hour	\$40	-	\$0.00			
	0029	trackhoe 2	day	\$550	-	\$0.00			
	ESTIM/	ESTIMATED TOTAL (g)							

AMEC	BACKF	BACKFILLING AND SITE RESTORATION								
CODES	ITEM NO.	ITEM	UNIT	PRICE PER UNIT	ESTIMATED UNITS	ESTIMATED COSTS				
P0	0002	senior scientist	hour	\$75	16	\$1,200.00				
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00				
T4	0005	field tech II	hour	\$42	99	\$4,158.00				
T2A	0006	field tech I	hour	\$40	198	\$7,920.00				
Z4	0010	secretary	hour	\$29	16	\$464.00				

	ESTIM	IATED TOTAL			(h)	\$29,629.00
AM10	0042	mileage	mile	0.25	900	\$225.00
AT40	0053	pick-up truck	day	\$50	20	\$1,000.00
AP10	0043	perdiem	night	\$60	35	\$2,100.00
	0029	trackhoe 2	day	\$550	20	\$11,000.00
UPDD	0021	PID	day	\$5	10	\$50.00

TOTALS FOR EACH PRICE AGREEMENT - ITEM NO.

AMEC	ITEM	ITEM	UNIT	PR	CE PER	ESTIMATED	E	STIMATED
CODES	NO.				UNIT	UNITS		COSTS
PO	0002	senior scientist	hour	\$	75	96	\$	7,200.00
P4	0003	project scientist/manager	hour	\$	63	182	\$	11,466.00
T4	0005	field tech II	hour	\$	42	784	\$	32,928.00
T2A	0006	field tech I	hour	\$	40	1,434	\$	57,360.00
Z4	0010	secretary	hour	\$	29	70	\$	2,030.00
UPDD	0021	PID	day	\$	5	65	\$	325.00
	0029	trackhoe 2	day	\$	550	151	\$	83,215.00
AM10	0042	mileage	mile	\$	0.25	8,588	\$	2,147.00
AP10	0043	perdiem	night	\$	60	253	\$	15,180.00
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$	20	500	\$	10,000.00
WFIA		Water purchase (at cost)	130 bbl	\$	39	144	\$	5,616.00
IS74		120 bbl transport (at cost)	Hour	\$	65	208	\$	13,520.00
UTVW	0052	water truck	day	\$	125	-	\$	-
AT40	0053	pick-up truck	day	\$	50	157	\$	7,850.00
UFAM		fence (at cost)		\$	6,000	1	\$	6,000.00
IT30		manure (at cost)	cubic yd	\$	9	3,125	\$	27,343.75
NI38		subcontract shear (at cost)	LS	\$	2,000	1	\$	2,000.00
		transport treaters (at cost)	hour	\$	60	8	\$	480.00
IF10		Disposal (at cost)	ton	\$	23	8	\$	184.00
M005		clay (at cost)	cubic yd	\$	8	-	\$	
	TOTAL	ESTIMATED COST FOR JOI	В			(i)	\$2	84,844.75

Lea County Taxes

5.25% \$ 14,954.35

Total Estimated Cost with Taxes

\$299,799.10

Kieling, Martyne

From: Sent: To: Subject: Kieling, Martyne Tuesday, July 02, 2002 2:26 PM Coss, David Goodwin

David,

As of 3:00 pm on 7-2-02 Pits #3 and #4 have been excavated. They were both about 120 ft. long X 16 ft. wide X 23.6 feet deep. There was about 1000 cy removed from each pit. The sticky material was mixed and blended with soil and manure and added to the biopile. The crew will start back up on July 9th.

L

Have a good 4th of July

Martyne J. Kieling

Martyne J. Kieling Environmental Geologist

STATE OF NEW MEXICO ENERGY MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

MEMORANDUM OF MEETING OR CONVERSATION

Telephone	Personal	Time <u>3:</u>	<u>o pm</u> Data	e <u>7-2-02</u>
Originating Party M	andyne Kicling	Othe	er Parties Bruce S72.5	Hare - 320-9253
Subject	in Pits 3	ч Ц 		
Discussion <u>Excava</u> <u>23.6 Feet T</u> <u>each pit</u> <u>The Matrial</u> <u>Manure P</u> <u>Have Sto</u> <u>them open</u> <u>Should b</u> <u>Fencing of</u>	Lion approxi Deep. For Pit y has Had 100 ums vory St nd added to y rticol while poses a for c considered the Bio Pile	mately 18 # 3 and 20 cy App, ichy it wa he Bio-Pi with a with any Area	ko Ft Lon the Same corinantely as bitmeted ha. T Ramp Don d. Secou 4 Left or	y X 16 6+ wide for P; + #4 Remard. with Soil and the Pits in in Leaving ndary Fenceing for From the
Conclusions or Agreen	ients <u>Crew iwill</u> ite workiy	leave to on The	morrows 9th. of J	And will be
Distribution File		Signe	ed Manton	J14.

|

Kieling, Martyne

From: Sent: To: Subject: Kieling, Martyne Tuesday, July 02, 2002 11:47 AM Coss, David Goodwin update

David,

Enclosed please find an update as to the status of the Goodwin treating plant and three weekly reports from AMEC. As you will see there is not much left at the site but excavations. We have had three surprises.

The first was the size of the NW pit. It turned out to be long, narrow but shallow extending well past the midway point along the north fence line.

The second surprise was pit # 3 along the south fence line at the mid point. This has been excavated down to 17 feet. The material was highly saturated with hydrocarbons.

Finally, the third surprise was Pit # 4 just North of Pit # 3 which has also been excavated down to 17 feet and contains highly saturated hydrocarbon material.

As of yesterday the field supervisor said that we had enough funds to continue working for one more week. The crew will be taking off on July 3rd and returning on July 8th to begin on July 9th.

Give me a call or E-mail me if you need more details.





photo6.19.02.doc photo6.26.02.doc





Weekly Report 6-7.doc





ekly Report Weel 6-14.doc 6-

Weekly Report 6-21.doc

Martyne J. Kieling

Martyne J. Kieling Environmental Geologist

Goodwin sampling

Kieling, Martyne

From:Don Fernald [don.fernald@amec.com]Sent:Wednesday, June 26, 2002 7:38 PMTo:Kieling, MartyneSubject:Goodwin

Hi Martyne,

Hope your trip to SE NM was good.

The biological & chloride results are in - the plate counts look good, plenty of critters. Chlorides should be no problem, they were on the high side of normal.

Please see the attached reports for the weeks ending 6/14 & 6/21. The summary reports do get a little redundant. The number\$ look good, I anticipate coming in under budget for several task/items. Please note that the numbers may very a little after reconciliation with AMEC accounting and internal auditing. We did go over budget for offsite transport of hydrocarbon soils by \$50. We may go over budget for offsite disposal of heater treaters, we're waiting for the weight tickets from Lea Land. Let me know if this is a problem and what we'll need to do in order to get compensated.

I revised the budget to include use of a 47 bbl transport provided by AMEC to accommodate delivery and use of more water on the site to promote biodegradation of the hydrocarbons. I have highlighted these items in red on the revised costs.xls spreadsheet.

The crew will depart for Farmington on July 3rd for the independence day holiday. They will mobilize back to the site on July 8th and begin work again on the 9th.

I will be on vacation Monday-Friday/July 1st through the 5th and returning to work on the 8th. Should you need assistance, please contact Morgan. You may also leave a message on my cell phone as I will check messages periodically.

Hope you have a great July 4th Holiday!

Best Regards,

Don Fernald AMEC Earth & Environmental 2060 Afton Place Farmington, NM 87401 Ph: (505) 327-7928 Fx: (505) 326-5721 don.fernald@amec.com Goodwin Treating Plant June 25, 26 and 27, 2002 Phase III Investigation and cleanup.



Photo 1. Wellhead left in place. Scheduled to be plugged in 2002. Looking northeast



Photo 2. Excavation in foreground and construction of biopiles in background. Manure pile to the right. Looking north.



Photo 3. Biopile north of fence line.



Photo 5. Excavation of northwest has extended along the north fence line to just past the mid point of the north fence line.



Photo 6. Contractors taking confirmatory samples.



Photo 4. Continuation of biopile north of fence line.

Page 1

Goodwin Phase III June 25, 26 & 27, 2002



Photo 7. Excavation of the southwest corner of the facility. Overflows from south treater have been excavated beyond the fence line to the south and west.



Photo 8. Former west entrance looking east. New road constructed north to route trucks in and out.



Photo 9. West entrance road looking east from Maddox power plant road. Biopile on the left in the background.



Photo 10. Pit 3 found along the center of the south fence line. Excavation is down about 17 feet. Looking east.



Photo 11. Pit 3 along south fence. Material was saturated with hydrocarbons. Looking northeast.

Page 2

Goodwin Treating Plant June 25, 26 and 27, 2002 Phase III Investigation and cleanup.



Photo 12. June 27, Pit 4 found north of Pit 3. Material was saturated with hydrocarbons. Looking east.



Photo 12. June 27, Pit 4 in foreground, Pit 3 in background. Material was saturated with hydrocarbons. Looking southeast.

Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Summary Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending June 21st, 2002

Saturday, June 15, 2002

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Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on northern portion of the site and transport of these soils to the biopile area for mixing.

Monday, June 17, 2002

Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on northern portion of the site and transport of these soils to the biopile area for mixing.

Tuesday, June 18, 2002

Subcontractor (Hobbs Iron & Metal) arrives on site to decommission heater-treaters. The 47 bbl transport was mobilized to the site to allow for more water usage in biopiles and for dust control. The heater-treaters were decommissioned with a shear fitted to a tracked excavator. AMEC completed a NORM survey of tanks and contents (sludge). The Ludlum scintillator readings were recorded below 50 uR/hr. Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on northern portion of the site and transport of these soils to the biopile area for mixing.

Wednesday, June 19, 2002

Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on central portion of the site and transport of these soils to the biopile area for mixing. Discussed excavations around disposal well with OCD. OCD signed bill of ladings for disposal of heater-treaters and related materials.

Thursday, June 20, 2002

Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on central portion of the site and transport of these soils to the biopile area for mixing. Loaded four truckloads of heater-treater and associated debris for transport and disposal at the Lea Land, Inc. facility. Lea Land, Inc also provided transportation of the debris.

Friday, June 21, 2002

Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon-impacted soils continued on central portion of the site and transport of these soils to the biopile area for mixing.

AMEC Ear	th & Environr	nental		Project	Manage	Don Fer	'nald							
Project:		Goodwin Treating Plant		Project :	Supervis	Morgan	Killion							
Project #:		2517000051				505-330	-3061							
Task #:		2		Asst. Su	Iperviso	Bruce H	lare							
Week End	ing:June 7th	6/21/2002	_			505-330	-320-925			•				
											Total		Ŭ	timated
On Site W	ork			Sat	Mon	Tues	Wed	Thurs	Friday	Sunday	Units	Rate	Ŭ	osts
AMEC		On Site Work		Date	Date	Date	Date	Date	Date	X				
CODES	ITEM	ITEM	LINN	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun					
PO	0002	senior scientist	hour							X	1	\$ 75	<u>s</u> 00.3	-
P4	0003	project scientist/manager	hour						4.0	X	4.0	9 8	3.00 \$	252.00
T4	0005	field tech II	hour	11.5	11.5	11.5	11.5	6.0	11.5	M	63.5	\$	5.00 \$	2,667.00
T2A	0006	field tech I (3)	hour	22.0	22.0	10.5	10.5	10.5	10.5	X	86.0	\$	00.0	3,440.00
Z4	0010	secretary	hour							M	•	\$	\$ 00'6	
UPDD	0021	PID	day							X	•	\$	5.00 \$	•
	0029	trackhoe 2 (3)	mile	2.0	2.0	2.0	2.0	2.0	2.0	X	12.0	\$ 55(\$ 00'(6,600.00
AP10	0043	perdiem (4 - 5)	Each	3.0	3.0	2.0	2.0	2.0	2.0	4	18.0	90 \$.00 \$	1,080.00
AT40	0053	pick-up trucks	Each	1.0	1.0	1.0	1.0	1.0	1.0	X	6.0	ۍ ۲	00.0	300.00
AM10	0042	mileage	Mile	100	74	96	59	41	35	X	405.0	\$	0.25 \$	101.25
Notes:											Weekly ⁷	Γotal =	\$	14,440.25
											Budget 1	or (b)	•	30,542.50

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AMEC Earth & Environmental

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Budget for (b)

sciever:	Goodwin	_Week E	nding:	6/21/2002		Date:								
site Comp	ost Pile Set Up and Initial Wate	ring	Sat	Mon	Tues	Wed	Thurs	Fri	Sunday					
AMEC	ITEM		Date	Date	Date	Date	Date	Date	Date	Total		ľ	stimated	
CODES		Unit	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun	20-Jun	14-Jun	Units	Rate		osts	
РО	senior scientist	Hour							X	0	\$ 75	8		
P4	project scientist/manager	Hour							X	0	\$ 63	00		
T4	field tech II	Hour							X	0	\$ 42	8		
T2A	field tech I (2)	Hour	10.5	10.5	22.0	22.0	22.0	22.0	X	109	\$ 40	00.	5 4,360.	
Z4	secretary	Hour							X	0	\$ 29	8.	-	
UPDD	DID	Each							X	0	ۍ ه	00.	' '	
	trackhoe 2 (2)	Each	1.0	1.0	1.0	1.0	1.0	1.0	X	9	\$ 550	8	3,300.0	8
WFIA	Water purchase	BBL			120.0	400.0	220.0	200.0	X	940	0 \$	20	5 188.0	8
	47 bbl transport	Day		1.0	1.0	1.0	1.0	1.0	X	5	\$ 200	00	1,000.0	8
AP10	perdiem	Each	1.0	1.0	2.0	2.0	2.0	2.0		10	\$ 60	8	600.0	8
AT40	pick-up truck	Each	1.0	1.0	1.0	1.0	1.0	1.0	X	9	\$ 20	8.	300.0	8
AM10	mileage	Mile	28.0	53.0	40.0	24.0	25.0	40.0		210	0 \$.25	52.5	50
UFAM	fence (at cost)	LS L								0	s		1	<u> </u>
1T30	manure/trucking (at cost)	СҮ								0	\$	8		
										0			1	
ites:										Weekly To	otal =		3.008,6	20
														I
										Budget (d	~		67,045.2	25

Project Manager: Don Fernald Project Supervisor Morgan Killion 505-330-3061

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Asst. Supervisor:

Goodwin Treating Plant 251700051 4

Project #: Project:

Task #:

Transporter: Albert Martinez

AMEC Earth & Environmental

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Bruce Hare 505-330-320-9253

3 Ý	otals		1,200.00	302.50	3 220.00	5 720.00	5 782.00	33,224.50
	Costs T		\$ 1,200.00 \$	\$550 \$	\$40 \$	\$60 \$	\$23 \$	Fotal 4
	Sum (1.0	0.55	5.5	12.0	34.0	
	Date							
	Date							
	Date							
3 Date:	Date							
Don Fernald Morgan Killion 505-330-3061 Bruce Hare 505-330-320-925 6/21/2002	Date							ted
lger: :rvisor: isor:	Date	20-Jun		0.6	5.5	12.0	34.0	sed is estima
Project Mana Project Supe Asst. Superv Week ending	Date	18-Jun	1.0			-		onnage dispo
	UNIT		ر د	Hour	Hour	Hour	Ton	Note: T
. Environmental Goodwin Treating Plant 2517000051 6 Lea Land Co. Lea Land Co.	Heater-Treaters Demo	ITEM	subcontract shear	trackhoe 2	field tech I	transport	Disposal (at cost)	
AMEC Earth & Project: Project #: Task #: Transporter: Reciever:	AMEC	CODES	NI38		T2A	P243	IF10	Notes:

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AMEC ONSITE COMPOST PILE SET UP AND INITIAL WATERING

	\$10,050.00	(c)			IMATED TOTAL	EST	
Completed	\$10,050.00	600	\$17	5 bbls = cubic	5 disposal of contaminated soil	0045	YS6
	COSTS	UNITS	UNIT		5 .	N	
	ESTIMATED	ESTIMATED	PRICE PER	UNIT	ITEM	ΞS ITE	CODE
				POSAL	SITE HYDROCARBON SOIL TRANSPORT AND DIS	C OFF	AME

\$130,542.50	(d)		1	STIMATED TOTAL	
\$562.50	2,250	0.25	mile	042 mileage	AM10
\$4,500.00	90	\$50	day	053 pick-up truck (2)	AT40
\$9,900.00	165	\$60	night	043 perdiem (4 - 5)	AP10
\$49,500.00	06	\$550	day	029 trackhoe 2 (3)	
\$150.00	30	\$5	day	021 PID	
\$1,160.00	40	\$29	hour	010 secretary	Z4
\$39,600.00	066	\$40	hour	006 field tech I (3)	T2A
\$13,860.00	330	\$42	hour	005 field tech II	T4
\$7,560.00	120	\$63	hour	003 project scientist/manager	P4
\$3,750.00	50	\$75	hour	002 senior scientist	PO
COSTS	UNITS	UNIT		NO.	
ESTIMATED	ESTIMATED	PRICE PER	UNIT	ITEM	CODES
				N SITE WORK	AMEC

ESTIMATED TOTAL	AT40 0053 pick-up trucks (3)	AP10 0043 per diem	AM10 0042 mileage	0029 trackhoe 2	T2A 0006 field tech I	T4 0005 field tech II	P4 0003 project scientist/manager	NO.	CODES ITEM ITEM	AMEC MOBILIZATION / DEMOBILIZATIO			Daviniana mada ta allas		6/26/UZ COST SUMMARY FOR REA	6/26/02 COST SUMMARY FOR REA	6/26/02 COST SUMMARY FOR REN	6/26/02 COST SUMMARY FOR REP				
	day	night	mile	day	hour	hour	hour		UNIT	Z	V IOI IIIOIE Water usage to promi	a for more water search to promi	for more water lisses to nom	VEDIAL ACTIONS AT THE GOODW	VEDIAL ACTIONS AT THE GOODW	MEDIAL ACTIONS AT THE GOODW	NEDIAL ACTIONS AT THE GOODW	NEDIAL ACTIONS AT THE GOODW	MEDIAL ACTIONS AT THE GOODW			
	\$50	\$60	\$0.25	\$550	\$40	\$42	\$63	UNIT	PRICE PER			nte hinderredat	nte hinderredat	nte hiodegredat	IN TREAING PLA							
(a)	6	თ	1,988	6	48	16	16	UNITS	ESTIMATED			ion ion	ion	NI VIIE	NT SITE							
\$7,997.00	\$300.00	\$300.00	\$497.00	\$3,300.00	\$1,920.00	\$672.00	\$1,008.00	COSTS	ESTIMATED													

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\$ 35,602.00	(e)			MATED TOTAL	ESTIN	
\$ 822.00	3,288	0.25	mile	mileage	0042	AM10
\$ 1,250.00	25	\$50	day	pick-up truck	0053	AT40
\$ 2,160.00	36	\$60	night	perdiem	0043	AP10
\$	•	\$65	Hour	120 bbl transport (at cost)		IS74
\$ 3,800.00	19	\$200	day	47 bb transport		
\$ 2,000.00	10,000	\$0.20	bbi	Water purchase (at cost)	×	WFIA
\$ 10,450.00	19	\$550	day	trackhoe 2	0029	
\$ 80.00	16	\$5	day	PID	0021	UPDD
\$ 232.00	8	\$29	hour	secretary	0010	Z4
\$	-	\$40	hour	field tech I	0006	T2A
\$ 12,600.00	300	\$42	hour	field tech II	0005	Τ4
\$ 1,008.00	16	\$63	hour	project scientist/manager	0003	P4
\$ 1,200.00	16	\$75	hour	senior scientist	0002	PO
COSTS	UNITS	UNIT			NO.	
ESTIMATED	ESTIMATED	PRICE PER	UNIT	M ITEM	ITEN	CODES
			s)	TENANCE OF COMPOST PILE (3 turning event	MAIN	AMEC
\$ 67,045.25	(d)			MATED TOTAL	ESTIN	
\$ 27,343.75	3,125	8.75	cubic yd	manure/trucking (at cost)		IT30
\$ 6,000.00	6,000	Each	LS	fence (at cost)		UFAM
\$ 298.00	1,192	0.25	mile	mileage	0042	AM10
\$ 1,000.00	20	\$50	day	pick-up truck	0053	AT40
\$ 1,800.00	30	\$60	night	perdiem	0043	AP10
\$ 1,592.50	25	\$65	Hour	120 bbl transport (at cost)	X	IS74
\$ 1,326.00	6,630	\$0.20	bbl	Water purchase (at cost)	×	WFIA
\$ 4,000.00	20	\$200	day	47 bb transport		
\$ 10,725.00	20	\$550	day	trackhoe 2 (2)	0029	
\$ 50.00	10	\$5	day	PID	0021	UPDD
\$ 232.00	8	\$29	hour	secretary	0010	Z4
\$ 7,920.00	198	\$40	hour	field tech I (2)	9000	T2A
\$ 4,158.00	66	\$42	hour	field tech II	0005	Т4
ب	1	\$63	hour	project scientist/manager	0003	P4
\$ 600.00	8	\$75	hour	senior scientist	0002	PO
COSTS	UNITS	UNIT			NO.	
ESTIMATED	ESTIMATED	PRICE PER	UNIT	M ITEM	ITEM	CODES

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AMEC	BACKF	ILLING AND SITE RESTORATION				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
PO	0002	senior scientist	hour	\$75	16	\$1,200.00
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00
Τ4	0005	field tech II	hour	\$42	66	\$4,158.00
T2A	9000	field tech I	hour	\$40	198	\$7,920.00
Z4	0010	secretary	hour	\$29	16	\$464.00
UPDD	0021	PID	day	\$5	10	\$50.00
	0029	trackhoe 2	day	\$550	20	\$11,000.00
AP10	0043	perdiem	night	\$60	35	\$2,100.00
AT40	0053	pick-up truck	day	\$50	20	\$1,000.00
AM10	0042	mileage	mile	0.25	006	\$225.00
	ESTIM A	ATED TOTAL			(h)	\$29,629.00
MOBIL IZ	ATION /	DEMOBILIZATION	(a)	00.76675		

		T2A	M005		CODES	AMEC
ESTIMA	0029	0006		NO.	ITEM	CLAY L
TED TOTAL	trackhoe 2	field tech I	clay (at cost)		ITEM	INER PLACEMENT
	day	hour	cubic yd		UNIT	
	\$550	\$40	\$7.50	UNIT	PRICE PER	
(9)	-	-	-	UNITS	ESTIMATED	
\$0.00	\$0.00	\$0.00	\$0.00	COSTS	ESTIMATED	

\$3,225.00	(f)			TIMATED TOTAL	П
\$460.00	20.0	\$23	ton	Disposal (at cost)	IF10
\$480.00	8.0	\$60	hour	transport (at cost)	P243
\$120.00	3.0	\$40	hour	06 field tech I	T2A 00
\$165.00	0.3	\$550	day	29 trackhoe 2	0
\$2,000.00	1.0	\$ 2,000.00	LS	subcontract shear (at Cost)	NI38
COSTS	UNITS	UNIT		10 .	
ESTIMATED	ESTIMATED	PRICE PER	UNIT	TEM	CODES
				MOVAL AND DISPOSAL OF HEATER-TREATERS	AMEC R

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% \$ 14,914.76	5.25	Lea County Taxes (NMGRT) @
\$ 284,091		
h) \$29,629.00	(BACKFILLING AND SITE RESTORATION
g) \$0.00	(CLAY LINER PLACEMENT
(f) \$3,225.00		REMOVAL AND DISPOSAL OF HEATER-TREATERS
e) \$ 35,602.00	()	MAINTENANCE OF COMPOST PILE (3 turning events)
d) \$ 67,045.25	()	ONSITE COMPOST PILE SET UP AND INITIAL WATERING
c) \$10,050.00	()	OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL
b) \$130,542.50	()	ON SITE WORK

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Total Estimated Costs

5.25% \$ 14,914.76 \$ 299,006

												Week ei		Weekly	Project	Project;	AMEC E
			BACKFILLING AND SITE RESTORATION	CLAY LINER PLACEMENT	REMOVAL AND DISPOSAL OF HEATER-TREATERS	MAINTENANCE OF COMPOST PILE (3 turning events)	ONSITE COMPOST PILE SET UP AND INITIAL WATERING	OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL	ON SITE WORK	MOBILIZATION / DEMOBILIZATION		nding: June 21, 2002		Summary for all tasks/items	#: 2517000051	Goodwin Treating Plant	arth & Environmental
	Tax =		7		6	5	4	ω	2	1	Task						
Grand Total	5.25%	Total	(h)	(6)	(1)	(e)	(d)	(c)	(d)	(a)	OCD Item			Asst. Sup		Project Si	Project M
298,953	14,912	284,041	\$29,629.00	\$0.00	\$3,225.00	\$ 35,602.00	\$ 67,045.25	\$10,000.00	\$130,542.50	\$7,997.00	Budget			ervisor:		upervisor:	anager:
\$ 43,324.32	\$2,161.07	\$ 41,163.25	\$0.00	\$0.00	\$0.00	\$	\$ 11,183.25	\$ 10,050.00	\$ 15,311.00	\$ 4,619.00	Week 6/7		505-330-32	Bruce Hare	505-330-30	Morgan Ki	Don Ferna
\$ 41,151.70	\$2,052.70	\$ 39,099.00	\$0.00	\$0.00	\$0.00	ب	\$ 21,442.50	69 '	\$ 17,656.50	ک	Week 6/14		0-9253	Ű	61	llion	d
\$ 28,907.18	\$1,441.93	\$27,465.25			\$ 3,224.50		\$ 9,800.50		\$ 14,440.25		Week 6/21						
\$ 113,383.19	\$ 5,655.69	\$ 107,727.50	د ه	دی ۲	\$ 3,224.50	ک	\$ 42,426.25	\$ 10,050.00	\$ 47,407.75	\$ 4,619.00	Through 6/21						
298,953	14,912	284,041	\$29,629.00	\$0.00	\$3,225.00	\$ 35,602.00	\$ 67,045.25	\$10,000.00	\$130,542.50	\$7,997.00	Budget						
			\$29,629.00	\$0.00	\$0.50	\$35,602.00	\$24,619.00	(\$50.00)	\$83,134.75	\$3,378.00	Remaining Bu				¥	'n	- 1

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Goodwin Treating Plant June 19, 2002 Phase III Investigation and Cleanup



Photo 1. Scrap metal from heater treaters. Looking west.



Photo 4. Wellhead. Pressure unknown. Advised contractor to excavate only around the outside of the wellhead.



Photo 2. Scrap metal from heater treaters. Pile #2. Looking southwest



Photo 5. View #2 of wellhead. Contractor will only excavate this close to wellhead on all sides. Looking Southwest



Photo 3. Sludge from heater treaters. Nonregulated NORM contamination. Samples taken and removed from mass of pile show only background.



Photo 6. One of several holes dug for samples to be taken. GRO and DRO run on these holes and highest TPH was 183.7. Told contractor to backfill, as he was concerned that cattle may be lost in holes.

Page 1

Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Summary Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending June 14th, 2002

Saturday, June 8th, 2002

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Transport of 720 cubic yards of manure to the Goodwin site by subcontractor (Albert Martinez Trucking). Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon impacted soils continued on northern portion of the site.

Monday, June 10, 2002

Transport of 700 cubic yards of manure to the Goodwin site by subcontractor (Albert Martinez Trucking). Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon impacted soils continued on northern portion of the site. Transport of hydrocarbon-impacted soils from excavation area to the biopile areas to the north of the site.

Tuesday, June 11, 2002

Transport of 360 cubic yards of manure to the Goodwin site by subcontractor (Albert Martinez Trucking). Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon impacted soils continued on northern portion of the site. Transport of hydrocarbon-impacted soils from excavation area to the biopile areas to the north of the site.

Wednesday, June 12, 2002

Transport of 80 cubic yards of manure to the Goodwin site by subcontractor (Albert Martinez Trucking). Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon impacted soils continued on northern portion of the site. Transport of hydrocarbon-impacted soils from excavation area to the biopile areas to the north of the site.

Thursday, June 13, 2002

Continued mixing hydrocarbon-impacted soils with stockpiled manure and adding water hauled to the site. Excavation of hydrocarbon impacted soils continued on northern portion of the site. Transport of hydrocarbon-impacted soils from excavation area to the biopile areas to the north of the site.

Friday, June 14, 2002

Approximately ¼ to ½ inch of precipitation is reported for this day. Continued mixing hydrocarbon-impacted soils with stockpiled manure. Excavation of hydrocarbon impacted soils continued on northern portion of the site. Transport of hydrocarbon-impacted soils from excavation area to the biopile areas to the north of the site.

Goodwin AMEC Pre	Treating Plant Site oject No. 2-517-000051		
Code	Description	Α	mount
P0	Principal	\$	75.00
P3H	Senior Scientist/Engineer	\$	75.00
P4	Project Scientist/Engineer/Manager	\$	63.00
P6G	Staff Scientist/Engineer	\$	57.00
T2A	Field Technician I	\$	40.00
T4	Field Technician II	\$	42.00
U1	Draftsperson II	\$	40.00
U2	Draftsperson I	\$	40.00
W2	Administrator	\$	35.00
W2D	Secretary	\$	35.00
Z4	Clerk	\$	29.00

AMEC Ear	rth & Environn	nental		Project	Manage	Don Ferr	nald						
Project:		Goodwin Treating Plant		Project :	Supervi	Morgan I	Killion						
Project #:		251700051		l		505-330-	3061						
Task #:		2	-	Asst. Su	Iperviso	Bruce Ha	are						
Week End	ling: <u>June 7th</u>	6/7/2002				505-330-	320-9253						
											Total		Estimated
On Site W	ork			Sat	Mon	Tues	Wed	Thurs	Friday	Sunday	Units	Rate	Costs
AMEC		On Site Work		Date	Date	Date	Date	Date	Date	M			
CODES	ITEM	ITEM	UNIT	8-Jun	10-Jun	11-Jun	12-Jun	13-Jun	14-Jun	X			
PO	0002	senior scientist	hour	•	2.0	2.0	2.0	2.0		X	8.0	\$ 75.00	\$ 600.00
P4	0003	project scientist/manager	hour		3.0					X	3.0	\$ 63.00	\$ 189.00
T4	0005	field tech II	hour	11.5	12.5	12.0	12.5	12.0	12.0	X	72.5	\$ 42.00	\$ 3,045.00
T2A	0006	field tech I (3)	hour	22.0	23.5	22.5	23.5	23.0	22.5	X	137.0	\$ 40.00	\$ 5,480.00
Z4	0010	secretary	hour							X	١	\$ 29.00	۔ \$
UPDD	0021	PID	day	1.0	1.0	•			1.0	X	3.0	\$ 5.00	\$ 15.00
	0029	trackhoe 2 (3)	mile	2.0	2.0	2.0	2.0	2.0	2.0	X	12.0	\$550.00	\$ 6,600.00
AP10	0043	perdiem (4 - 5)	Each	3.0	3.0	3.0	3.0	3.0	3.0	3	21.0	\$ 60.00	\$ 1,260.00
AT40	0053	pick-up trucks	Each	1.0	3.0	1.0	1.0	1.0	1.0	M	8.0	\$ 50.00	\$ 400.00
AM10	0042	mileage	Mile	32	61	42	44	44	47	X	270.0	\$ 0.25	\$ 67.50
Notes:											Weekly T	otal =	\$ 17,656.50
											Budget fo	or (b)	130,542.50
											•		•

4

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AMEC Earth & Environmental

Project Manager: Don Fernald Project Superviso Morgan Killion 505-330-3061 Asst. Supervisor: Bruce Hare 505-330-320-9253 Week Ending: 6/7/2002 Date:

Goodwin Treating Plant

2517000051

Project #:

Project:

4

Task #:

Transporter:

Reciever:

AMEC Earth & Environmental

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Albert Martinez Goodwin

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468.00 420.00 300.00 49.50 1,305.00 2,580.00 3,300.00 \$ 13,020.00 \$ 21,442.50 Estimated Costs θ ω Ю မာ θ θ θ S S θ ഗ θ ഗ Ś 40.00 63.00 29.00 0.45 50.00 0.25 75.00 5.00 58.00 42.00 6 \$ 550.00 60.00 00.7 Weekly Total = Rate \$ 0 \$ 0 ئ 64.5 \$ \$ 0 \$ 0 22.5 \$ 198 \$ ფ ფ 1040 \$ Ś θ S 1860 ō 0 Total 9-Jun Units Sunday Date 14-Jun 10.5 0. <u>,</u> 0. 29.0 Date Fri 13-Jun 130.0 2.0 , 1.0 22.0 11.0 0.1 Thurs Date 12-Jun 11.0 -0 130.0 1.5 C 1.0 50.0 80.0 0.1 Date Wed 10-Jun 11-Jun 10.5 1.0 130.0 -0.-10 23.0 360.0 <u>،</u> Tues Date 110 -0 390.0 4.5 <u>,</u> 1.0 23.0 700.0 Date Mon 8-Jun 10.5 <u>,</u> 260.0 13.0 0. 1.0 51.0 720.0 Date Sat Unit **Onsite Compost Pile Set Up and Initial Watering** Hour Each Each Each Hour Hour Hour Each Hour Hour BBL Mile လ <u>ל</u> project scientist/manager manure/trucking (at cost) ITEM 120 bbl transport Water purchase senior scientist fence (at cost) trackhoe 2 (2) field tech I (2) pick-up truck field tech II secretary perdiem mileage DD CODES AMEC WFIA IS74 AM10 UFAM UPDD AP10 AT40 1<u>1</u>30 T2A P0 P4 4 74 Notes:

Budget (d) \$ 67,045.25

Earth & Environmental	t: Goodwin Treating Plant	:t #: 2517000051	y Summary for all tasks/items	
AMEC Eart	Project:	Project #:	Weekly Sui	

Project Manager: Project Supervisor:

Asst. Supervisor:

Bruce Hare 505-330-320-9253 Don Fernald Morgan Killion 505-330-3061

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Week ending: June 14, 2002

141119. June 14, 2002									
	Task	OCD Item	Budget	Wee	k 6/7	Week 6/14	Week 6/21	Through 6/	4
MOBILIZATION / DEMOBILIZATION	-	(a)	00'266'2\$	\$	619.00	۰ ج		\$ 4,619	8
ON SITE WORK	2	(q)	\$130,542.50	\$ 15,	311.00	\$ 17,656.50		\$ 32,967	.50
OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL	m	(c)	\$10,000.00	\$ 10,	020.00	ۍ ۲		\$ 10,050	8
ONSITE COMPOST PILE SET UP AND INITIAL WATERING	4	(p)	\$ 67,045.25	\$ 11,	183.25	\$ 21,442.50		\$ 32,625	.75
MAINTENANCE OF COMPOST PILE (3 turning events)	5	(e)	\$ 35,602.00		•	۰ ج		s	
REMOVAL AND DISPOSAL OF HEATER-TREATERS	9	(t)	\$3,225.00		\$0.00	\$0.00		\$	
CLAY LINER PLACEMENT		(6)	\$0.00		\$0.00	\$0.00		\$	
BACKFILLING AND SITE RESTORATION	2	(4)	\$29,629.00		\$0.00	\$0.00		\$,
		Total	284,041	\$ 41,	163.25	\$ 39,099.00	۰ ب	\$ 80,=02	.25
	Tax =	5.25%	14,912	\$2,	161.07	\$2,052.70		\$ 4,213	11.
		Grand Tot:	298,953	\$ 43,	324.32	\$ 41,151.70		\$ 84,476	.02

COST SUMMARY FOR REMEDIAL ACTIONS AT THE GOODWIN TREAING PLANT SITE

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AMEC	MOBIL	IZATION / DEMOBILIZATION			.=	
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P4	0003	project scientist/manager	hour	\$63	16	\$1,008.00
T4	0005	field tech II	hour	\$42	16	\$672.00
T2A	0006	field tech l	hour	\$40	48	\$1,920.00
	0029	trackhoe 2	day	\$550	6	\$3,300.00
AM10	0042	mileage	mile	\$0.25	1,988	\$497.00
AP10	0043	per diem	night	\$60	5	\$300.00
AT40	0053	pick-up trucks (3)	day	\$50	6	\$300.00
	ESTIMA	ATED TOTAL			(a)	\$7,997.00

AMÉC	ON SITI	EWORK				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P0	0002	senior scientist	hour	\$75	50	\$3,750.00
P4	0003	project scientist/manager	hour	\$63	120	\$7,560.00
T4	0005	field tech II	hour	\$42	330	\$13,860.00
T2A	0006	field tech I (3)	hour	\$40	990	\$39,600.00
Z4	0010	secretary	hour	\$29	40	\$1,160.00
UPDD	0021	PID	day	\$5	30	\$150.00
	0029	trackhoe 2 (3)	day	\$550	90	\$49,500.00
AP10	0043	perdiem (4 - 5)	night	\$60	165	\$9,900.00
AT40	0053	pick-up truck (2)	day	\$50	90	\$4,500.00
AM10	0042	mileage	mile	0.25	2,250	\$562.50
	ESTIMA	TED TOTAL			(b)	\$130,542.50

AMEC	OFFSIT	E HYDROCARBON SOIL TRAN	SPORT AND DISPOS	AL		
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$20	500	\$10,000.00
	ESTIM/	ATED TOTAL			(c)	\$10,000.00

AMEC	ONSITE	COMPOST PILE SET UP AND	INITIAL WATERING				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ES	TIMATED
	NO.			UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$75	8	\$	600.00
P4	0003	project scientist/manager	hour	\$63	16	\$	1,008.00
T4	0005	field tech II	hour	\$42	99	\$	4,158.00
T2A	0006	field tech I (2)	hour	\$40	198	\$	7,920.00
Z4	0010	secretary	hour	\$29	8	\$	232.00
UPDD	0021	PID	day	\$5	10	\$	50.00
	0029	trackhoe 2 (2)	day	\$550	20	\$	11,000.00
UTVW	0052	water truck	day	\$125	-	\$	-
WFIA	X	Water purchase (at cost)	130 bbl	\$39	34	\$	1,326.00
IS74	XX	120 bbl transport (at cost)	Hour	\$65	68	\$	4,420.00
AP10	0043	perdiem	night	\$60	30	\$	1,800.00
AT40	0053	pick-up truck	day	\$50	20	\$	1,000.00

AM10	0042	mileage	mile	0.25	750	\$ 187.50
UFAM		fence (at cost)	LS	Each	6,000	\$ 6,000.00
IT30		manure/trucking (at cost)	cubic yd	8.75	3,125	\$ 27,343.75
	ESTIM/	ATED TOTAL			(d)	\$ 67,045.25

AMEC	MAINTE	ENANCE OF COMPOST PILE	(3 turning events)				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ES	STIMATED
	NO.			UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$75	6	\$	450.00
P4	0003	project scientist/manager	hour	\$63	6	\$	378.00
T4	0005	field tech II	hour	\$42	240	\$	10,080.00
T2A	0006	field tech I	hour	\$40	-	\$	-
Z4	0010	secretary	hour	\$29	6	\$	174.00
UPDD	0021	PID	day	\$5	15	\$	75.00
	0029	trackhoe 2	day	\$550	15	\$	8,250.00
WFIA	Х	Water purchase (at cost)	130 bbl	\$39	110	\$	4,290.00
IS74	ХХ	120 bbl transport (at cost)	Hour	\$65	140	\$	9,100.00
UTVW	0052	water truck	day	\$125	-	\$	-
AP10	0043	perdiem	night	\$60	18	\$	1,080.00
AT40	0053	pick-up truck	day	\$50	21	\$	1,050.00
AM10	0042	mileage	mile	0.25	2,700	\$	675.00
	ESTIMA	ATED TOTAL			(e)	\$	35,602.00
				<u></u>			

AMEC	REMOV	AL AND DISPOSAL OF HEATE	R-TREATERS			
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
NI38		subcontract shear (at Cost)	LS	\$ 2,000.00	1.0	\$2,000.00
	0029	trackhoe 2	day	\$550	0.3	\$165.00
T2A	0006	field tech I	hour	\$40	3.0	\$120.00
P243		transport (at cost)	hour	\$60	8.0	\$480.00
IF10		Disposal (at cost)	ton	\$23	20.0	\$460.00
	ESTIMA	TED TOTAL			(f)	\$3,225.00

AMEC	CLAY L	INER PLACEMENT				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
M005		clay (at cost)	cubic yd	\$7.50	-	\$0.00
T2A	0006	field tech I	hour	\$40	-	\$0.00
	0029	trackhoe 2	day	\$550	-	\$0.00
	ESTIM/	ATED TOTAL			(g)	\$0.00

AMEC	BACKF	ILLING AND SITE RESTORAT	ΓΙΟΝ			
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P0	0002	senior scientist	hour	\$75	16	\$1,200.00
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00
T4	0005	field tech II	hour	\$42	99	\$4,158.00
T2A	0006	field tech I	hour	\$40	198	\$7,920.00
Z4	0010	secretary	hour	\$29	16	\$464.00



UPDD	0021	PID	day	\$5	10	\$50.00
	0029	trackhoe 2	day	\$550	20	\$11,000.00
AP10	0043	perdiem	night	\$60	35	\$2,100.00
AT40	0053	pick-up truck	day	\$50	20	\$1,000.00
AM10	0042	mileage	mile	0.25	900	\$225.00
	ESTIM/	ATED TOTAL			(h)	\$29,629.00

TOTALS FOR EACH PRICE AGREEMENT - ITEM NO.

AMEC	ITEM	ITEM	UNIT	PI	RICE PER	ESTIMATED	E	STIMATED
CODES	NO.				UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$	75	96	\$	7,200.00
P4	0003	project scientist/manager	hour	\$	63	182	\$	11,466.00
T4	0005	field tech II	hour	\$	42	784	\$	32,928.00
T2A	0006	field tech I	hour	\$	40	1,434	\$	57,360.00
Z4	0010	secretary	hour	\$	29	70	\$	2,030.00
UPDD	0021	PID	day	\$	5	65	\$	325.00
	0029	trackhoe 2	day	\$	550	151	\$	83,215.00
AM10	0042	mileage	mile	\$	0.25	8,588	\$	2,147.00
AP10	0043	perdiem	night	\$	60	253	\$	15,180.00
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$	20	500	\$	10,000.00
WFIA		Water purchase (at cost)	130 bbl	\$	39	144	\$	5,616.00
IS74		120 bbl transport (at cost)	Hour	\$	65	208	\$	13,520.00
UTVW	0052	water truck	day	\$	125	-	\$	-
AT40	0053	pick-up truck	day	\$	50	157	\$	7,850.00
UFAM		fence (at cost)		\$	6,000	1	\$	6,000.00
IT30		manure (at cost)	cubic yd	\$	9	3,125	\$	27,343.75
NI38		subcontract shear (at cost)	LS	\$	2,000	1	\$	2,000.00
		transport treaters (at cost)	hour	\$	60	8	\$	480.00
IF10		Disposal (at cost)	ton	\$	23	8	\$	184.00
M005		clay (at cost)	cubic yd	\$	8	-	\$	-
	TOTAL	ESTIMATED COST FOR JOB				(i)	\$2	84,844.75

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Lea County Taxes

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5.25% \$ 14,954.35

Total Estimated Cost with Taxes

\$299,799.10

Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending June 7th, 2002

Monday, June 3, 2002

AMEC mobilized equipment and personnel to Hobbs, New Mexico and the Goodwin Treating Plant to initiate remedial activities on Tuesday, June 4, 2002.

Tuesday, June 4, 2002

8:00 AM – Started the project with a kick off meeting, which included a review of the Health and Safety requirements for completing the project. The scope of work for the various tasks of the project were discussed and covered. Documentation procedures and reporting requirements were also reviewed. Mr. Larry Johnson with the NMOCD was present on site. AMEC discussed fencing issues with Larry to determine areas accessible for site work. Soil sample supplies, pick up and delivery were reviewed with Larry since the NMOCD would be handling all analytical testing costs.

Excavation of hydrocarbon-impacted soils was initiated on the northwest portion of the site. A hard impenetrable (with an excavator) caliche is present at depths from four to six feet below ground surface. This layer appears to limit hydrocarbon contaminant migration.

Wednesday, June 5, 2002

Excavation of hydrocarbon impacted soils continued. The fence was removed from the northern portion of the site to access other work areas. Albert Martinez Trucking transported 400 cubic yards of hydrocarbon-impacted soils and tank bottoms to J&L Landfarms for treatment. Four soil samples from the bottom of excavated areas were obtained for laboratory analysis of hydrocarbon constituents.

Thursday, June 6, 2002

Excavation of hydrocarbon impacted soils continued. An additional 200 cubic yards of hydrocarbon impacted soils and tank bottoms were transported to J&L Landfarms for treatment. 444 cubic yards of manure was delivered to the site and construction of biopiles was initiated on the northern portion of the site.

Friday, June 7, 2002

Excavation of hydrocarbon impacted soils continued. 820 cubic yards of manure was delivered to the site and construction of biopiles was initiated on the northern portion of the site. One load or 130 bbls of water was delivered to the site to mix into the biopiles with the manure and hydrocarbon impacted soils. Four soil samples from the bottom of excavated areas were obtained for laboratory analysis of hydrocarbon constituents. Samples obtained for analysis on June 5th & 7th were labeled, documented on chain of

custody forms, stored in a cooler with ice and transported to the TNM&O bus station as directed by the NMOCD for delivery to Trace Analysis for testing. Theses soil samples will be tested for total petroleum hydrocarbons using EPA Method 418.1.

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AMEC Earth & Environmental Project: Goodwin Treating Plant Project #: <u>2517000051</u> Task #: <u>3</u> Transporter: <u>Albert Martinez</u> Reciever: <u>J&L Landfarms</u>

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Project Manager: Project Supervisor:

Don Fernald

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Asst. Supervisor:

Morgan Killion 505-330-3061 Bruce Hare 505-330-320-9253

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	TEM	Date	Date	Date	Date	Date	Date
		2-Jun	e-Jun				
Transport	ళ	400	200				
Landfarm	Treatment						

st per Cubic Yard bert Martinez Trucking = \$4.25 / CY	Totals	€	16.75	per CY
Landfarm = \$12.50 / CY			600	CY Transported to J&L
Total Costs	11	\$ 1	0.050.00	

\$10,000.00

Budget (c) =

Notes:

Project Manager: Don Fernald Project Supervisol Morgan Killion 505-330-3061 Asst. Supervisor: Bruce Hare 505-330-320-9253 Week Ending: 6/7/2002 Date:

Goodwin Treating Plant

2517000051

Project #:

Task #:

Project:

Albert Martinez

Transporter:

Goodwin

Reciever:

AMEC Earth & Environmental

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116.00 120.00 100.00 45.00 14.25 ,100.00 840.00 8,848.00 \$ 11,183.25 Estimated Costs S S ŝ θ S ю ω Ω θ δ θ θ Э မာ ю 7.00 45.00 63.00 40.00 29.00 5.00 58.00 60.00 50.00 0.25 0 \$ 75.00 42.00 \$ 550.00 Rate Weekly Total = φ \$ 0 21 \$ ہ 0 ω ره 0 θ θ θ Ś θ 1264 \$ 0 0 2 2 57 0 Units Total Monday Tuesday Wed Thursday Friday Saturday Sunday Date Date 1.5 15.5 6-Jun 7-Jun 3 Date 29 820 5.5 0.5 28 444 Date Date Date Date Unit **Onsite Compost Pile Set Up and Initial Watering** Each Hour Hour Hour Hour Hour Each Hour Each Each BBL Mile പ |≿ project scientist/manager manure/trucking (at cost) ITEM 120 bbl transport Water purchase senior scientist trackhoe 2 (2) fence (at cost) field tech I (2) pick-up truck field tech II secretary PID perdiem mileage CODES AMEC UPDD WFIA **AP10 AM10** UFAM AT40 IS74 T2A IT30 Ы <u>7</u> 4 Z4 Notes:

\$ 67,045.25

Budget (d)

COST SUMMARY FOR REMEDIAL ACTIONS AT THE GOODWIN TREAING PLANT SITE

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AMEC	MOBIL	IZATION / DEMOBILIZATION				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
P4	0003	project scientist/manager	hour	\$63	16	\$1,008.00
T4	0005	field tech II	hour	\$42	16	\$672.00
T2A	0006	field tech I	hour	\$40	48	\$1,920.00
	0029	trackhoe 2	day	\$550	6	\$3,300.00
AM10	0042	mileage	mile	\$0.25	1,988	\$497.00
AP10	0043	per diem	night	\$60	5	\$300.00
AT40	0053	pick-up trucks (3)	day	\$50	6	\$300.00
	ESTIMA	ATED TOTAL			(a)	\$7,997.00

AMEC	ON SIT	EWORK				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.	· · ·		UNIT	UNITS	COSTS
P0	0002	senior scientist	hour	\$75	50	\$3,750.00
P4	0003	project scientist/manager	hour	\$63	120	\$7,560.00
T4	0005	field tech II	hour	\$42	330	\$13,860.00
T2A	0006	field tech I (3)	hour	\$40	990	\$39,600.00
Z4	0010	secretary	hour	\$29	40	\$1,160.00
UPDD	0021	PID	day	\$5	30	\$150.00
	0029	trackhoe 2 (3)	day	\$550	90	\$49,500.00
AP10	0043	perdiem (4 - 5)	night	\$60	165	\$9,900.00
AT40	0053	pick-up truck (2)	day	\$50	90	\$4,500.00
AM10	0042	mileage	mile	0.25	2,250	\$562.50
	ESTIMA	TED TOTAL			(b)	\$130,542.50

AMEC	OFFSIT	E HYDROCARBON SOIL TRAN	SPORT AND DISPOS	AL		
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED
	NO.			UNIT	UNITS	COSTS
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$20	500	\$10,000.00
	ESTIMA	TED TOTAL			(c)	\$10,000.00

AMEC	ONSITE	COMPOST PILE SET UP AND	NITIAL WATERING				
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ES	STIMATED
	NO.			UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$75	8	\$	600.00
P4	0003	project scientist/manager	hour	\$63	16	\$	1,008.00
T4	0005	field tech II	hour	\$42	99	\$	4,158.00
T2A	0006	field tech I (2)	hour	\$40	198	\$	7,920.00
Z4	0010	secretary	hour	\$29	8	\$	232.00
UPDD	0021	PID	day	\$5	10	\$	50.00
	0029	trackhoe 2 (2)	day	\$550	20	\$	11,000.00
UTVW	0052	water truck	day	\$125	-	\$	-
WFIA	Х	Water purchase (at cost)	130 bbl	\$39	34	\$	1,326.00
IS74	XX	120 bbl transport (at cost)	Hour	\$65	68	\$	4,420.00
AP10	0043	perdiem	night	\$60	30	\$	1,800.00
AT40	0053	pick-up truck	day	\$50	20	\$	1,000.00

AM10	0042	mileage	mile	0.25	750	\$	187.50
UFAM		fence (at cost)	LS	Each	6,000	\$	6,000.00
IT30		manure/trucking (at cost)	cubic yd	8.75	3,125	\$	27,343.75
	ESTIMATED TOTAL (d) \$						67,045.25

AMEC	MAINTENANCE OF COMPOST PILE (3 turning events)						
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED	
	NO.			UNIT	UNITS	COSTS	
P0	0002	senior scientist	hour	\$75	6	\$	450.00
P4	0003	project scientist/manager	hour	\$63	6	\$	378.00
T4	0005	field tech II	hour	\$42	240	\$	10,080.00
T2A	0006	field tech I	hour	\$40	-	\$	-
Z4	0010	secretary	hour	\$29	6	\$	174.00
UPDD	0021	PID	day	\$5	15	\$	75.00
	0029	trackhoe 2	day	\$550	15	\$	8,250.00
WFIA	Х	Water purchase (at cost)	130 bbl	\$39	110	\$	4,290.00
IS74	ΧХ	120 bbl transport (at cost)	Hour	\$65	140	\$	9,100.00
UTVW	0052	water truck	day	\$125	-	\$	-
AP10	0043	perdiem	night	\$60	18	\$	1,080.00
AT40	0053	pick-up truck	day	\$50	21	\$	1,050.00
AM10	0042	mileage	mile	0.25	2,700	\$	675.00
	ESTIMATED TOTAL (e)					\$	35,602.00

AMEC	REMOVAL AND DISPOSAL OF HEATER-TREATERS						
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED	
	NO.			UNIT	UNITS	COSTS	
NI38		subcontract shear (at Cost)	LS	\$ 2,000.00	1.0	\$2,000.00	
	0029	trackhoe 2	day	\$550	0.3	\$165.00	
T2A	0006	field tech I	hour	\$40	3.0	\$120.00	
P243		transport (at cost)	hour	\$60	8.0	\$480.00	
IF10		Disposal (at cost)	ton	\$23	20.0	\$460.00	
	ESTIMATED TOTAL (f)						

AMEC	MEC CLAY LINER PLACEMENT							
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED		
	NO.			UNIT	UNITS	COSTS		
M005		clay (at cost)	cubic yd	\$7.50	-	\$0.00		
T2A	0006	field tech I	hour	\$40	-	\$0.00		
	0029	trackhoe 2	day	\$550	-	\$0.00		
	ESTIM/	ATED TOTAL			(g)	\$0.00		

AMEC	BACKFILLING AND SITE RESTORATION						
CODES	ITEM	ITEM	UNIT	PRICE PER	ESTIMATED	ESTIMATED	
	NO.			UNIT	UNITS	COSTS	
P0	0002	senior scientist	hour	\$75	16	\$1,200.00	
P4	0003	project scientist/manager	hour	\$63	24	\$1,512.00	
T4	0005	field tech II	hour	\$42	99	\$4,158.00	
T2A	0006	field tech I	hour	\$40	198	\$7,920.00	
Z4	0010	secretary	hour	\$29	16	\$464.00	


TOTALS FOR EACH PRICE AGREEMENT - ITEM NO.

AMEC	ITEM	ITEM	UNIT	P	RICE PER	ESTIMATED	E	STIMATED
CODES	NO.				UNIT	UNITS		COSTS
P0	0002	senior scientist	hour	\$	75	96	\$	7,200.00
P4	0003	project scientist/manager	hour	\$	63	182	\$	11,466.00
T4	0005	field tech II	hour	\$	42	784	\$	32,928.00
T2A	0006	field tech I	hour	\$	40	1,434	\$	57,360.00
Z4	0010	secretary	hour	\$	29	70	\$	2,030.00
UPDD	0021	PID	day	\$	5	65	\$	325.00
	0029	trackhoe 2	day	\$	550	151	\$	83,215.00
AM10	0042	mileage	mile	\$	0.25	8,588	\$	2,147.00
AP10	0043	perdiem	night	\$	60	253	\$	15,180.00
YS60	0045	disposal of contaminated soil	5 bbls = cubic yd	\$	20	500	\$	10,000.00
WFIA		Water purchase (at cost)	130 bbl	\$	39	144	\$	5,616.00
IS74		120 bbl transport (at cost)	Hour	\$	65	208	\$	13,520.00
UTVW	0052	water truck	day	\$	125	-	\$	-
AT40	0053	pick-up truck	day	\$	50	157	\$	7,850.00
UFAM		fence (at cost)		\$	6,000	1	\$	6,000.00
IT30		manure (at cost)	cubic yd	\$	9	3,125	\$	27,343.75
NI38		subcontract shear (at cost)	LS	\$	2,000	1	\$	2,000.00
		transport treaters (at cost)	hour	\$	60	8	\$	480.00
IF10		Disposal (at cost)	ton	\$	23	8	\$	184.00
M005		clay (at cost)	cubic yd	\$	8	-	\$	-
	TOTAL	ESTIMATED COST FOR JOB				(i)	\$2	84,844.75
	Lea Co	ounty Taxes				5.25%	\$	14,954.35

. %

Total Estimated Cost with Taxes

\$299,799.10



Scrap metal from heater treaters.



Wellhead. Pressure unknown. Advised contractor to excavate only around the outside of the wellhead.



Scrap metal from heater treaters. Pile #2.



View #2 of wellhead. Contractor will only excavate this close to wellhead on all sides.



Sludge from heater treaters. Norm contamination. Samples taken and removed from mass of pile show only background.



One of several holes dug for samples to be taken. GRO and DRO run on these holes and highest TPH was 183.7. Told contractor to backfill, as he was concerned that cattle may be lost in holes.

Goodwin gampling

Kieling, Martyne

From: Don FernaldSent: Thursday, June 13, 2002 8:44 AMTo: Kieling, Martyne

Subject: Goodwin Report week ending 6-7

Hi Martyne,

Please see the attached reports for the week ending June 7, 2002. The word file is a summary of events for the week. The excel file includes estimated budget numbers for the week. The estimates on cost should be fairly accurate, but will require internal auditing by AMEC before final weekly costs are approved for invoicing to the NMOCD. Regarding the water issue, we will revise our budget to include a 4000 gallon water truck that we will operate. We will cut down on the project scientist time to allow us to stay within the original proposed budget for each item. I will email you the proposed revisions later today.

Please contact me via cell phone at 505-320-9670 on Friday and Monday, June 14th & 17th as I will be out of the office should you have any questions.

Best Regards,

Don Fernald AMEC Earth & Environmental 2060 Afton Place Farmington, NM 87401 Ph: (505) 327-7928 Fx: (505) 326-5721 don.fernald@amec.com

Goodwin Treating Plant 2517000051 2 6/7/2002 AMEC Earth & Environmental Project #: Project: Task #:

Week Ending:

Project Supervisor: Morgan Killion 505-330-3061 **Don Fernald Bruce Hare** Project Manager: Asst. Supervisor:

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505-330-320-9253

On Site W	ork			Monday	Tuesday	Wed	Thursday	Friday	Saturday
AMEC		On Site Work		Date	Date	Date	Date	Date	Date
CODES	ITEM	ITEM	UNIT		4-Jun	2-Jun	e-Jun	un(~2	
P0	0002	senior scientist	hour		5.0		1	3.0	
P4	0003	project scientist/manager	hour		8.0	8.0	4.0	4.0	
T4	0005	field tech II	hour		11.0	12.5	12.0	12.0	
T2A	9000	field tech I (3)	hour		31.0	32.5	27.5	18.0	
Z4	0010	secretary	hour		2.0	2.0	2.0	2.0	
UPDD	0021	DID	day			1.0	1.0	1.0	
	0029	trackhoe 2 (3)	mile		3.0	3.0	2.5	1.5	
AP10	0043	perdiem (4 - 5)	Each		4.0	4.0	3.0	3.0	
AT40	0053	pick-up trucks	Each		3.0	3.0	2.0	2.0	
AM10	0042	mileage	Mile		104	122	63	69	
Notoe.									

Notes:

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	Total		ш	stimated
Sunday	Units	Rate	<u>о</u>	osts
$\left \right\rangle$				
\mathbb{N}				
$\Big $	8.0	\$ 75.0	5 0	600.009
X	24.0	\$ 63.0	0	\$ 1,512.00
X	47.5	\$ 42.0(5 0	\$ 1,995.00
X	109.0	\$ 40.0	5 0	\$ 4,360.00
X	8.0	\$ 29.0	5 0	\$ 232.00
X	3.0	\$ 5.0	5 0	\$ 15.00
X	10.0	\$ 550.0	5 0	\$ 5,500.00
	14.0	\$ 60.0	с С	\$ 840.00
X	10.0	\$ 50.0	0	\$ 500.00
\mathbb{N}	358.0	\$ 0.2	5	\$ 89.50
	Weekly 7	Fotal =		\$ 15,643.50

Budget for (b) 130,542.50

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Goodwin Treating Plant Remediation New Mexico Energy Minerals and Natural Resources Department, Oil Conservation Division

Report Submitted by:AMEC Earth & EnvironmentalProject No. 2517000051Week Ending June 7th, 2002

Monday, June 3, 2002

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AMEC mobilized equipment and personnel to Hobbs, New Mexico and the Goodwin Treating Plant to initiate remedial activities on Tuesday, June 4, 2002.

#### Tuesday, June 4, 2002

8:00 AM – Started the project with a kick off meeting, which included a review of the Health and Safety requirements for completing the project. The scope of work for the various tasks of the project were discussed and covered. Documentation procedures and reporting requirements were also reviewed. Mr. Larry Johnson with the NMOCD was present on site. AMEC discussed fencing issues with Larry to determine areas accessible for site work. Soil sample supplies, pick up and delivery were reviewed with Larry since the NMOCD would be handling all analytical testing costs.

Excavation of hydrocarbon-impacted soils was initiated on the northwest portion of the site. A hard impenetrable (with an excavator) caliche is present at depths from four to six feet below ground surface. This layer appears to limit hydrocarbon contaminant migration.

#### Wednesday, June 5, 2002

Excavation of hydrocarbon impacted soils continued. The fence was removed from the northern portion of the site to access other work areas. Albert Martinez Trucking transported 400 cubic yards of hydrocarbon-impacted soils and tank bottoms to J&L Landfarms for treatment. Four soil samples from the bottom of excavated areas were obtained for laboratory analysis of hydrocarbon constituents.

#### Thursday, June 6, 2002

Excavation of hydrocarbon impacted soils continued. An additional 200 cubic yards of hydrocarbon impacted soils and tank bottoms were transported to J&L Landfarms for treatment. 444 cubic yards of manure was delivered to the site and construction of biopiles was initiated on the northern portion of the site.

#### Friday, June 7, 2002

Excavation of hydrocarbon impacted soils continued. 820 cubic yards of manure was delivered to the site and construction of biopiles was initiated on the northern portion of the site. One load or 130 bbls of water was delivered to the site to mix into the biopiles with the manure and hydrocarbon impacted soils. Four soil samples from the bottom of excavated areas were obtained for laboratory analysis of hydrocarbon constituents. Samples obtained for analysis on June 5<sup>th</sup> & 7<sup>th</sup> were labeled, documented on chain of

custody forms, stored in a cooler with ice and transported to the TNM&O bus station as directed by the NMOCD for delivery to Trace Analysis for testing. Theses soil samples will be tested for total petroleum hydrocarbons using EPA Method 418.1.

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# Soil sampling procedures for the Goodwin Treating Site Remediation AMEC Project No. 2517000051

## Background

The Goodwin Treating Plant was located on an approximately 200' x 200' parcel of land that was formerly used to recover residual hydrocarbons from tank bottoms and brine water. Initial phases of the project consisted of the removal of numerous tanks and remediation of some of the soils located along the southeastern portion of the site in the emergency overflow pit. During the previous remedial actions surface hydrocarbon impacts were widespread throughout the site.

#### **Excavation and Sampling Procedures**

During this "Phase III Remediation of the Goodwin Site, hydrocarbon impacted soil that is grossly impacted (highly contaminated and saturated) as determined by visual observation will be excavated to practical extent. Once the hydrocarbon impacted soil areas appear to be reduced, soil samples will be obtained and screened in the field using a photoionization detector (PID) to help determine the levels of volatile hydrocarbon constituents present. PID screening will be performed as often as necessary to determine the levels of volatile hydrocarbons present. Once an excavated area is believed to be free of hydrocarbons in accordance with clean up criteria, a duplicate soil sample will be placed into approved laboratory sampling containers, properly labeled, documented on a chain-of-custody (COC) form, placed in a cooler with ice and delivered to the New Mexico Energy Minerals & Natural Resources Department (EMNRD) Oil Conservation Division (OCD) Hobbs district office. The OCD will ship the samples to the New Mexico state contracted laboratory (Trace Analysis) for analysis of Benzene, Toulene, Ethylbenzene, Xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH) using Environmental Protection Agency laboratory analysis Methods 8021 and 8015 Modified respectively. The criteria for determining remedial action levels for the site as directed by the OCD are as follows:

| Constituent | Action Level (ppm) |
|-------------|--------------------|
| Benzene     | 10                 |
| BTEX        | 50                 |
| TPH         | 1000               |

Surface soils to eight (8) feet below ground surface:

Below eight (8) feet of ground surface:

| Constituent | Action Level (ppm) |
|-------------|--------------------|
| Benzene     | 10                 |
| BTEX        | 50                 |
| TPH         | 100                |

Remedial action levels were determined based on the depth of groundwater at the site being approximately 58 feet below ground surface.

A field soil vapor headspace measurement of 100 ppm may be substituted for a laboratory analysis of the Benzene and BTEX concentration limits.

The contaminant concentration limit for TPH is the concentration limit above background levels.

#### Sample numbers and location identification

All soil samples obtained for field-testing with a PID or sent to the laboratory will have the following numbering system assigned to each sample.

Current date – sample number

Example: 060602-01 060602-02 060602-03 060702-04 060702-05 060802-06

The first part of each sample number will contain the date in which the sample was obtained, for example June 6, 2002 will be 060602, which will be followed by the sample number for this phase of the project and run sequentially to ending with the last sample obtained for field or laboratory testing for the project. For example, if the last sample for this project is obtained on July 9, 2002 and it is 67<sup>th</sup> sample obtained for field or laboratory testing, the sample number will be 070902-67.

#### Sampling Strategy

Excavating will be initiated along one of the four corners or boundaries of the site. Excavating will proceed across the site following any observable hydrocarbon impacted soils. Sampling will be conducted with the PID as needed to verify the concentration of hydrocarbons as determined in the field. Clearance samples will be obtained as needed, but no less then on the center of a grid of 50' x 50' to verify remedial action levels have been achieved.

| ĥ        | JUN-04-02 13:13                               | From: 8152219                                                                | 15053939758                                                     | T-569 P.01/03 job-163                                    |
|----------|-----------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------|
|          | ALL STOLEN                                    |                                                                              |                                                                 |                                                          |
|          |                                               | NEW MEXICO FNE                                                               | RCV MINEDA                                                      | 10                                                       |
|          |                                               | NATURAL RESC                                                                 | ITRCES DEPAR                                                    |                                                          |
| G        | ARY E JORNSON                                 |                                                                              |                                                                 |                                                          |
|          | Governor<br>Betty Rivern<br>Cabinet Secretary | •                                                                            |                                                                 | Lori Wrotenbery<br>Director<br>Oil Conservation Division |
|          |                                               |                                                                              |                                                                 |                                                          |
| F        | AX                                            |                                                                              |                                                                 |                                                          |
|          | TO:                                           | MARTUNE KIELING                                                              |                                                                 |                                                          |
|          | FROM:                                         | LAREY JOHNSON<br>Energy Minerals and Natural Re<br>Oil Conservation Division | sources Department,                                             |                                                          |
|          | RE:                                           | ATTACHED LEGAL ?                                                             |                                                                 |                                                          |
|          | DATE:                                         |                                                                              |                                                                 |                                                          |
|          |                                               |                                                                              |                                                                 |                                                          |
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| -        |                                               |                                                                              |                                                                 |                                                          |
|          |                                               |                                                                              |                                                                 |                                                          |
|          |                                               | Pages (Includ                                                                | ling Transmittal)                                               |                                                          |
| <b>_</b> |                                               |                                                                              |                                                                 |                                                          |
|          |                                               | Oil Conservation Division * 1625 Fre<br>Phone: (505) 393-6161 * Fax (505) 39 | anch Drive * Hobbs, New Mexic<br>93-0720 * http://www.emnrd.sta | o 88240<br>ce.nm.us                                      |
|          |                                               |                                                                              |                                                                 |                                                          |

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| JUN-04-02 | 13:14                                  | From:8152219                   | 1                                               | 5053939758          | T-569         | P.02/03<br>23456 | Job-163                                         |
|-----------|----------------------------------------|--------------------------------|-------------------------------------------------|---------------------|---------------|------------------|-------------------------------------------------|
|           |                                        | NMOCD                          | Certificate of Waste St<br>711 FACILITY: J&L LA | atus<br>NDFARM, INC | 1000112829303 | AIN 2<br>RLYSI   | S. E. B. S. |
| C         | <del>j</del> ener<br><del>i</del> ener | ATOR <u>Mark</u>               | Morrico all Consort                             | ATION DIV.          | 1310N         | ·····            |                                                 |
| S         | EC                                     | <u>31</u>                      | TOWNSHIP <u>18-5</u>                            | RANGE               | 37-E          |                  |                                                 |
| c<br>v    | COUNT                                  | TY <i>LEA</i><br>E DESCRIPTION | STATE <u>21, Ma</u><br>Nont- Haz - Soit         | <u></u> Waste       | QTY           |                  |                                                 |
| T         | RUCK                                   | ING COMPANY                    | MARTINEZ TRUC                                   | Konig               |               |                  |                                                 |

# EXEMPT WASTE

-2

As a condition of acceptance for disposal. I hereby certify that this waste is an exempt waste as defined by the EPA(Environmental Protection Agency). Waste is generated from oil and gas exploration and production operations; exempt from RCRA(Resource Conservation and Recovery Act, Subtitle C regulations. I do certify that hazardous or listed waste pursuant to EPA provisions has not been added or mixed with the waste, nor mixed with any non-exempt material.

#### NON-EXEMPT WASTE

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the EPA's (Environmental Protection Agency) July 1988 Regulatory determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as nonhazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 2613.

I certify that this waste has been surveyed for Naturally Occurring Radioactive Material (NORM) and NORM concentrations do not exceed that listed in 20 NMAC 3.1 Subpart 1402, C and D.

| COMPANY AGENT              |                    |
|----------------------------|--------------------|
| ADDRESS 1625 N. FRENCH DR. | Hobbs N. MIX B8240 |
| DATE JUNE 4 2002           |                    |

JUN-04-02 13:14 From:8152219

-

15053939758

T-569 P.03/03 Job-163 RECEIVED

OCT 1 7 2001

Environmental Bureau Oil Conservation Division

Certificate of Waste Status

NMOCD 711 FACILITY: J&L LANDFARM, INC.

| GENERATOR NEW MEXICO OIL CONSERVATION DIVISION                 |
|----------------------------------------------------------------|
| GENERATING SITE GOOD WIN TREATING PLANT                        |
| SEC <u>31</u> TOWNSHIP <u>18-S</u> RANGE <u>37-E</u>           |
| COUNTY LEA STATE N M                                           |
| WASTE DESCRIPTION EXEMPT HYDROGOR BON SOIL & WASTE QTY. 494844 |
| TRUCKING COMPANY_MARTINEZ TRUELING                             |
| EXEMPT WASTE                                                   |

As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the EPA(Environmental Protection Agency). Waste is generated from oil and gas exploration and production operations; exempt from RCRA(Resource Conservation and Recovery Act, Subtitle C regulations. I do certify that bazardous or listed waste pursuant to EPA provisions has not been added or mixed with the waste, nor mixed with any non-exempt material.

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l certify that this waste has been surveyed for Naturally Occurring Radioactive Material(NORM) and NORM concentrations do not exceed that listed in 20 NMAC 3.1 Subpart 1402. C and D,

| COMPANY AGENT   | Marting 27th                             |
|-----------------|------------------------------------------|
| (0)             | riginal Signature                        |
| (N              | ame)                                     |
| ADDRESS 12.20 9 | South Scint Frances, Sente Fr. NM & 7505 |
| DATE JUNE 2     | 1. 2001                                  |

# SCOPE OF WORK PHASE III REMEDIATION GOODWIN TREATING PLANT LEA COUNTY NEW MEXICO JANUARY 2, 2002

New Mexico State Highway and Transportation Department (NMSHTD) Price Agreement – Site Maintenance & Monitoring - 00-805-09-17658 Contract Vendor 1) AMEC Earth and Environmental, Inc. (Agra Earth and Environmental, Inc.) 8519 Jefferson, NE, Albuquerque, NM 87113, Tel 1-505-821-1801, TIN 911641772,

#### A. <u>SUMMARY</u>

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The contractor shall perform the work necessary to perform the Phase III cleanup of the Goodwin Treating Plant Site, to properly remove equipment and surface contamination, investigate the extent of subsurface soil contamination, and remediate/restore the facility site. The Goodwin Treating Plant is located in the SW/4 NW/4 of Section 31, Township 18 South, Range 37 East, NMPM, Lea County, New Mexico.

#### B. <u>SCOPE OF WORK</u>

The scope of work includes, but is not limited to:

- 1. Removal of two treaters/separators and associated piping and equipment. Items must be sent to an OCD-approved disposal facility and must be disposed of in accordance with the rules of the OCD.
- 2. Removal of the tank bottom pile from the pit in the northwest corner of the facility. Tank bottom material must be sent to an OCD-approved landfarm for reclamation.
- 3. Removal or composting of contaminated soil from the former tank footprint locations. Contaminated soil removed must be sent to an OCD-approved landfarm for reclamation.
  - a. The decision to remove or compost will be made after item 2 is complete.
  - b. Composting will include the addition of manure from a local dairy or feedlot source, the addition of water if precipitation is poor, and turning every two weeks for 6 months.
  - c. Turning may not be approved until spring when the activity of the microbes is optimal.

- 4. Back hauling of clean soil from the landfarm facility. The amount to be back hauled will be determined by the existing volume of clean fill currently at the facility and the volume of contaminated soil excavated and removed from the facility.
- 5. Sampling within the excavations for analysis at an OCD contracted laboratory.
- 6. Installation of a clay barrier within the excavations if determined appropriate by the OCD.
- 7. Back filling excavations with clean fill material when the OCD-approved clean up criteria have been met.
- 8. Providing written weekly updates once fieldwork begins regarding work performed, volumes of material removed, volumes of material hauled in and overall costs. Updates will be submitted monthly during the composting phase.
- 9. Preparation and submittal of a Phase III report. The report must include the work completed by the Phase III remediation and recommendations for any further remediation activity.
- 10. The work is more particularly described in paragraph D, herein.

# C. <u>MERGER</u>

This Agreement, and attachments thereto, together with NMSHTD Price Agreement No. 00-805-09-17658, constitutes the entire agreement between the parties hereto and all previous agreements, conditions, promises, inducements and understandings shall be deemed to have merged in this Agreement.

# D. <u>SUMMARY OF PHASE III REMEIDAL ACTIONS AT THE GOODWIN TREATING</u> <u>PLANT</u>

| MOBILI | ZATION / DEMOBILIZATION   |       |           |       |            |
|--------|---------------------------|-------|-----------|-------|------------|
| ITEM   | ITEM                      | UNIT  | PRICE PER | UNITS | COSTS      |
| NO.    |                           |       | UNIT      |       |            |
| 0003   | project scientist/manager | hour  | \$63      | 16    | \$1,008.00 |
| 0005   | field tech II             | hour  | \$42      | 16    | \$672.00   |
| 0006   | field tech I              | hour  | \$40      | 48    | \$1,920.00 |
| 0029   | trackhoe 2                | day   | \$550     | 6     | \$3,300.00 |
| 0042   | Mileage                   | mile  | \$0.25    | 1,988 | \$497.00   |
| 0043   | per diem                  | night | \$60      | 5     | \$300.00   |
| 0053   | pick-up trucks (3)        | day   | \$50      | 6     | \$300.00   |
| TOTAL  |                           |       |           | (a)   | \$7,997.00 |

| ON SITE | WORK |      |           |       |       |
|---------|------|------|-----------|-------|-------|
| ITEM    | ITEM | UNIT | PRICE PER | UNITS | COSTS |
| NO.     |      |      | UNIT      |       |       |

Phase III Goodwin Treating Plant Page 3 January 2, 2002

| 0002             | senior scientist          | hour  | \$75  | 50    | \$3,750.00  |  |  |
|------------------|---------------------------|-------|-------|-------|-------------|--|--|
| 0003             | project scientist/manager | hour  | \$63  | 120   | \$7,560.00  |  |  |
| 0005             | field tech II             | hour  | \$42  | 330   | \$13,860.00 |  |  |
| 0006             | field tech I (3)          | hour  | \$40  | 990   | \$39,600.00 |  |  |
| 0010             | secretary                 | hour  | \$29  | 40    | \$1,160.00  |  |  |
| 0021             | PID                       | day   | \$5   | 30    | \$150.00    |  |  |
| 0029             | trackhoe 2 (3)            | day   | \$550 | 90    | \$49,500.00 |  |  |
| 0043             | perdiem (4 - 5)           | night | \$60  | 165   | \$9,900.00  |  |  |
| 0053             | pick-up truck (2)         | day   | \$50  | 90    | \$4,500.00  |  |  |
| 0042             | mileage                   | mile  | 0.25  | 2,250 | \$562.50    |  |  |
| TOTAL (b) \$130, |                           |       |       |       |             |  |  |

| OFFSITI     | OFFSITE HYDROCARBON SOIL TRANSPORT AND DISPOSAL |                   |                   |       |             |  |  |  |  |  |
|-------------|-------------------------------------------------|-------------------|-------------------|-------|-------------|--|--|--|--|--|
| ITEM<br>NO. | ITEM                                            | UNIT              | PRICE PER<br>UNIT | UNITS | COSTS       |  |  |  |  |  |
| 0045        | disposal of contaminated soil                   | 5 bbls = cubic yd | \$20              | 500   | \$10,000.00 |  |  |  |  |  |
| TOTAL       |                                                 |                   |                   | (c)   | \$10,000.00 |  |  |  |  |  |

| ONSITE COMPOST PILE SET UP AND INITIAL WATERING |                                       |          |           |          |    |           |  |  |  |  |
|-------------------------------------------------|---------------------------------------|----------|-----------|----------|----|-----------|--|--|--|--|
| ITEM                                            | ITEM                                  | UNIT     | PRICE PER | UNITS    |    | COSTS     |  |  |  |  |
| NO.                                             |                                       |          | UNIT      |          |    |           |  |  |  |  |
| 0002                                            | senior scientist                      | hour     | \$75      | 8        | \$ | 600.00    |  |  |  |  |
| 0003                                            | project scientist/manager             | hour     | \$63      | 16       | \$ | 1,008.00  |  |  |  |  |
| 0005                                            | field tech II hour \$42 99            |          | \$        | 4,158.00 |    |           |  |  |  |  |
| 0006                                            | field tech I (2) hour \$40 198        |          | \$        | 7,920.00 |    |           |  |  |  |  |
| 0010                                            | secretary                             | hour     | \$29      |          | \$ | 232.00    |  |  |  |  |
| 0021                                            | PID                                   | day      | \$5       | 10       | \$ | 50.00     |  |  |  |  |
| 0029                                            | trackhoe 2 (2)                        | day      | \$550     | 20       | \$ | 11,000.00 |  |  |  |  |
| 0052                                            | water truck                           | day      | \$125     | -        | \$ | -         |  |  |  |  |
|                                                 | Water purchase (at cost)              | 130 bbl  | \$39      | 34       | \$ | 1,326.00  |  |  |  |  |
|                                                 | 120 bbl transport (at cost)           | Hour     | \$65      | 68       | \$ | 4,420.00  |  |  |  |  |
| 0043                                            | perdiem                               | night    | \$60      |          | \$ | 1,800.00  |  |  |  |  |
| 0053                                            | pick-up truck                         | day      | \$50      | 20       | \$ | 1,000.00  |  |  |  |  |
| 0042                                            | mileage                               | mile     | 0.25      | 750      | \$ | 187.50    |  |  |  |  |
|                                                 | fence (at cost)                       | LS       | Each      | 6,000    | \$ | 6,000.00  |  |  |  |  |
|                                                 | manure/trucking (at cost)             | cubic yd | 8.75      | 3,125    | \$ | 27,343.75 |  |  |  |  |
| TOTAL                                           | · · · · · · · · · · · · · · · · · · · |          |           | (d)      | \$ | 67,045.25 |  |  |  |  |

| MAINTENANCE OF COMPOST PILE (3 turning events) |                           |      |                   |       |    |           |  |  |  |
|------------------------------------------------|---------------------------|------|-------------------|-------|----|-----------|--|--|--|
| ITEM<br>NO.                                    | ITEM                      | UNIT | PRICE PER<br>UNIT | UNITS |    | COSTS     |  |  |  |
| 0002                                           | senior scientist          | hour | \$75              | 6     | \$ | 450.00    |  |  |  |
| 0003                                           | project scientist/manager | hour | \$63              | 6     | \$ | 378.00    |  |  |  |
| 0005                                           | field tech II             | hour | \$42              | 240   | \$ | 10,080.00 |  |  |  |
| 0006                                           | field tech l              | hour | \$40              | -     | \$ | -         |  |  |  |

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Phase III Goodwin Treating Plant Page 4 January 2, 2002

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|       |                             |         |       |       | <br>            |
|-------|-----------------------------|---------|-------|-------|-----------------|
| 0010  | secretary                   | hour    | \$29  | 6     | \$<br>174.00    |
| 0021  | PID                         | day     | \$5   | 15    | \$<br>75.00     |
| 0029  | trackhoe 2                  | day     | \$550 | 15    | \$<br>8,250.00  |
|       | Water purchase (at cost)    | 130 bbl | \$39  | 110   | \$<br>4,290.00  |
|       | 120 bbl transport (at cost) | Hour    | \$65  | 140   | \$<br>9,100.00  |
| 0052  | water truck                 | day     | \$125 | •     | \$<br>-         |
| 0043  | perdiem                     | night   | \$60  | 18    | \$<br>1,080.00  |
| 0053  | pick-up truck               | day     | \$50  | 21    | \$<br>1,050.00  |
| 0042  | mileage                     | mile    | 0.25  | 2,700 | \$<br>675.00    |
| ΤΟΤΑΙ | L                           |         |       | (e)   | \$<br>35,602.00 |

| REMOV | EMOVAL AND DISPOSAL OF HEATER-TREATERS |      |             |       |            |  |  |  |  |  |  |
|-------|----------------------------------------|------|-------------|-------|------------|--|--|--|--|--|--|
| ITEM  | ITEM                                   | UNIT | PRICE PER   | UNITS | COSTS      |  |  |  |  |  |  |
| NO.   |                                        |      | UNIT        |       |            |  |  |  |  |  |  |
|       | subcontract shear (at Cost)            | LS   | \$ 2,000.00 | 1.0   | \$2,000.00 |  |  |  |  |  |  |
| 0029  | trackhoe 2                             | day  | \$550       | 0.3   | \$165.00   |  |  |  |  |  |  |
| 0006  | field tech I                           | hour | \$40        | 3.0   | \$120.00   |  |  |  |  |  |  |
|       | transport (at cost)                    | hour | \$60 8.     | 8.0   | \$480.00   |  |  |  |  |  |  |
|       | Disposal (at cost)                     | ton  | \$23        | 20.0  | \$460.00   |  |  |  |  |  |  |
| TOTAL | -                                      |      |             | (f)   | \$3,225.00 |  |  |  |  |  |  |

| ITEM  | ITEM           | UNIT     | PRICE PER | UNITS | COSTS  |  |
|-------|----------------|----------|-----------|-------|--------|--|
| NO.   |                |          | UNIT      |       |        |  |
|       | clay (at cost) | cubic yd | \$7.50    | -     | \$0.00 |  |
| 0006  | field tech I   | hour     | \$40      | -     | \$0.00 |  |
| 0029  | trackhoe 2     | day      | \$550     | -     | \$0.00 |  |
| TOTAL |                |          |           | (g)   | \$0.00 |  |

| BACKFILLING AND SITE RESTORATION |                           |       |           |       |                    |  |  |  |  |  |
|----------------------------------|---------------------------|-------|-----------|-------|--------------------|--|--|--|--|--|
| ITEM                             | ITEM                      | UNIT  | PRICE PER | UNITS | COSTS              |  |  |  |  |  |
| NO.                              |                           |       | UNIT      |       |                    |  |  |  |  |  |
| 0002                             | senior scientist          | hour  | \$75      | 16    | \$1,200.00         |  |  |  |  |  |
| 0003                             | project scientist/manager | hour  | \$63      | 24    | <u>\$1,512.0</u> 0 |  |  |  |  |  |
| 0005                             | field tech II             | hour  | \$42      | 99    | \$4,158.00         |  |  |  |  |  |
| 0006                             | field tech I              | hour  | \$40      | 198   | \$7,920.00         |  |  |  |  |  |
| 0010                             | secretary                 | hour  | \$29      | 16    | \$464.00           |  |  |  |  |  |
| 0021                             | PID                       | day   | \$5       | 10    | \$50.00            |  |  |  |  |  |
| 0029                             | trackhoe 2                | day   | \$550     | 20    | \$11,000.00        |  |  |  |  |  |
| 0043                             | perdiem                   | night | \$60      | 35    | \$2,100.00         |  |  |  |  |  |
| 0053                             | pick-up truck             | day   | \$50      | 20    | \$1,000.00         |  |  |  |  |  |
| 0042                             | mileage                   | mile  | 0.25      | 900   | \$225.00           |  |  |  |  |  |
| TOTAL                            |                           |       |           | (h)   | \$29,629.00        |  |  |  |  |  |

Phase III Goodwin Treating Plant Page 5 January 2, 2002

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COMMISSIONER'S OFFICE Phone (505) 827-5760 Fax (505) 827-5766

ADMINISTRATION Phone (505) 827-5700 Fax (505) 827-5853

GENERAL COUNSEL Phone (505) 827-5713 Fax (505) 827-4262

PUBLIC AFFAIRS Phone (505) 827-1245 Fax (505) 827-5766

June 6, 2002

Stephen C. Ross NM Energy, Minerals and Natural Resources Department 1220 South St. Francis Drive Santa Fe, NM 87505

Re: Right-of-Entry Permit No. ROE-659

Dear Mr. Ross:

Enclosed is an approved copy of the captioned right-of-entry permit. If any corrections are necessary, please let us know and we will retype or amend this permit as necessary.

If you have any questions, please feel free to contact this office at the above address or at (505) 827-5728 or 5729.

Singerely, Mui Casca

Lorrie Gasca, Management Analyst Surface Resources Division



New Mexico State Land Office Commissioner of Public Lands Ray Powell, M.S., D.V.M. COMMERCIAL RESOURCES Phone (505) 827-5724 Fax (505) 827-6157

MINERAL RESOURCES Phone (505) 827-5744 Fax (505) 827-4739

ROYALTY MANAGEMENT Phone (505) 827-5772 Fax (505) 827-4739

SURFACE RESOURCES Phone (505) 827-5793 Fax (505) 827-5711

# *"WE WORK FOR EDUCATION"*

# NEW MEXICO STATE LAND OFFICE Ray B. Powell, Commissioner of Public Lands New Mexico State Land Office Building P.O. Box 1148, Santa Fe, NM 87504-1148

# RIGHT OF ENTRY PERMIT CONTRACT NO. 659

# **1. RIGHT OF ENTRY PERMIT**

This permit is hereby issued under the authority established by Section 19-1-2 NMSA (1985). Therefore, and in consideration of and subject to the terms, covenants, conditions, agreements, obligations and reservations contained in the permit and all other existing rights, the Commissioner of Public Lands, New Mexico State Land Office, State of New Mexico, hereinafter called "COMMISSIONER," grants to NM Energy, Minerals and Natural Resources Department Oil and Conservation Division of 1220 South St. Francis Drive, Santa Fe, NM 87505 hereinafter called "PERMITTEE," authorized use of a specific tract(s) of state trust land described in this permit.

### 2. TERM AND LAND DESCRIPTION

Right of entry is granted for a term of 1 year commencing April 11, 2002 to April 11, 2003 to the following state lands: SW4NW4 of Section 31, Township 18 South, Range 37 East. Phase III Investigation, Cleanup and Environmental Remediation of the Goodwin Treating Plant.

3. **FEE.** 

No charge.

#### 4. PERMITTED USE

Permitted use is for the purpose of: Access to the above location (see #2 land description). AMEC, the contractor will secure the facility with locking gate and will be working under a site health and safety plan. They will be using heavy equipment to remove old equipment, oilfield waste, and contaminated soil. They will use approximately 10 acres directly north of the facility fence line to construct soil compost windrows. The granting of this permit does not allow access across private lands.

#### 5. IMPROVEMENTS

No improvements shall be placed on the premises without the prior written consent of the Commissioner.

# 6. RESERVATIONS

Commissioner reserves the right to execute permits on the land granted by this permit for

and the second 
mining purposes and for the extraction of oil, gas, salt, geothermal resources, and other mineral deposits therefrom and the right to go upon, explore for, mine, remove and sell same. Commissioner further reserves the right to sell or dispose of natural surface products of said lands and to grant such other right-of-way and easements as provided for by law.

# 7. COMPLIANCE WITH LAWS

Permittee shall at its own expense comply fully with and be subject to all regulations, rules, ordinances, and requirements of the Commissioner including, but not limited to the Cultural Properties Act, NMSA 1978 as amended. It is illegal for any person or his agent to appropriate, excavate, injure, or destroy any historic, or prehistoric ruin or monument, or any object of historical, archaeological, architectural, or scientific value situated on lands owned or controlled by the State Land Office without a valid permit issued by the Cultural Properties Review Committee and approved by the Commissioner of Public Lands.

# 8. HOLD HARMLESS

Permittee shall have, save, and hold harmless, indemnify and defend Commissioner and the State of New Mexico, and their agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of Permittee under this permit off or on the Commissioner' premises or arising out of the presence on the Commissioner's premises of any agent, contractor or subcontractor of Permittee.

# 9. AMENDMENT

This permit shall not be altered, changed or amended except by an instrument in writing executed by Commissioner and Permittee.

# **10. WITHDRAWAL**

Commissioner reserves the right to withdraw any or all of the land authorized for use under this permit. If applicable, Permittee shall vacate the acreage specified within 30 days after receipt of written notification of withdrawal from the Commissioner.

# **11. CANCELLATION**

The violation by Permittee of any of the terms, conditions or covenants of this permit or the nonpayment by Permittee of the fees due under this permit shall at the option of the Commissioner be considered a default and shall cause the cancellation of this permit 30 days after Permittee has been sent written notice of such.

# **12. PRESERVE AND PROTECT**

The Permittee agrees to preserve and protect the natural environmental conditions of the land encompassed in this permit, and to take those reclamation or corrective actions that are accepted soil and water conservation practices and that are deemed necessary by the Commissioner to protect the land from pollution, erosion, or other environmental degradation.

# **13. RECLAMATION**

The Permittee agrees to reclaim those areas that may be damaged by activities conducted thereon.

# 14. SPECIAL INSTRUCTIONS AND OR RESTRICTIONS

1. No off road traffic allowed

2. No wood collection or tree cutting allowed.

**3.** Disturbing, dislodging, damaging, defacing, destroying or removing historical archaeological, paleontological or cultural sites or artifacts is prohibited.

4. Disturbing, dislodging, damaging, defacing, destroying any improvement, fixture, item, object or thing placed or located in, under or upon the land is prohibited.

5. Entries to lands are limited to those State Lands with public access.

6. Any other activities not listed are not allowed unless prior written approval from the Commissioner of Public Lands is granted.

WITNESS the hands and seals of PERMITTEE and COMMISSIONER on the day and year first above written.

i rotenbury Telephone: 476-3460 PERMITTEE

#### ACKNOWLEDGMENT

STATE OF NEW MEXICO COUNTY OF SANTA FE The foregoing instrument was acknowledged before me this day of pril ,2002. My Commission Expires: 2/18/03NOTARY PUBLIC BLIC LANDS

#### TERMS AND CONDITIONS UNLESS OTHERWISE SPECIFIED

Environmental Bureau Oil Conservation Division 2002 August

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- 1. General: When the State Purchasing Agent issues a purchase document in response to the Vendor's bid, a binding contract is created.
- Variation in Quantity: No variation in the quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, packing or all manufacturing process, and then only to the extent, if any, specified elsewhere in this order.
- 3. Assignment:

A. Neither the order, nor any interest therein, nor claim thereunder, shall be assigned or transferred by the Vendor, except as set forth in subparagraph 3B below or as expressly authors by the state purchasing agent's office. No such assignment or transfer shall relieve the Vendor from the obligations and liabilities under this order.

B. Vendor agrees that any and all claims for overcharge resulting from antitust violations which are borne by the State as to goods, services, and materials purchased in connection with hereby assigned to the State.

- 4. State Furnished Property: State furnished property shall be returned to the State upon request in the same condition as received except for ordinary wear, tear and modifications ordered her
- 5. Discounts: Prompt payment discounts will not be considered in computing the low bid. Discounts for payment within 20 days will be considered after the award of the contract. Discounted to computed from the date of receipt of the merchandise or invoice, whichever is later.
- Inspection: Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for non-conformance with specifications shall be removed, at the Vendor's risk promptly after notice of rejection.
- Inspection of Plant: The State Purchasing Agent may inspect, at any reasonable time, the part or the contractor's, or any subcontractor's plant or place of business, which is related to the perithis contract.
- 8. Commercial Warranty: The Vendor agrees that the supplies or services furnished under this order shall be covered by the most favorable commercial warranties the Vendor gives to any custome supplies or services, and that the rights and remedies provided herein shall extend to the State and are in addition to and do not limit any rights afforded to the State by any other clause of this criticagrees not to disclaim warranties of fitness for a particular purpose of merchantability.
- 9. Taxes: The unit price shall exclude all State taxes.
- 10. Packing, Shipping and Invoicing:
  - A. The State's purchase document number and the Vendor's name, user's name and location shall be shown on each packing and delivery ticket, package, bill of lading and other correspondence in connection with the shipments. The user's count will be accepted by the Vendor as final and conclusive on all shipment not accompanied by a packing ticket.
  - B. The Vendor's invoice shall be submitted in triplicate, duly certified and shall contain the following information: order number, description of supplies or services, quantities, unit a extended totals. Separate invoices shall be rendered for each and every complete shipment.
  - C. Invoice must be submitted to the using agency and NOT THE STATE PURCHASING AGENT.
- 11. Default: The State reserves the right to cancel all or any part of this order without cost to the State, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, the Vendor liable for any excess costs occasioned by the State due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of causes beyc-control and without the fault or negligence of the Vendor; such causes include, but are not restricted to, acts of God or the public enemy, acts of the State or Federal Government, fires, floods, exceer quarantine restrictions, strikes, freight embargoes, unusually severe weather and defaults of subcontractors due to any of the above, unless the State shall determine that the supplies or services to furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery scheduled. The rights and remedies of the State provided in traparagraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.
- 12. Non-collusion: In signing this bid, the Vendor certifies helphe has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this offer submittee to State Purchasing Agent.
- 13. Non-discrimination: Vendors doing business with the State of New Mexico must be in compliance with the Federal Civil Rights Act of 1964 and Title VII of the Act. (Rev., 1979), and the Americans Disabilities Act of 1990, (Public Law 101-336).
- 14. The Procurement Code: Sections 13-1-28 through 13-1-89 NMSA 1978\_imposes civil and criminal-penalties for its violation, to addition, the New Mexico orivinal statutes impose felony penanties for bribes, gratuities and kickbacks.
- 15. All bid items are to be NEW and of most current production, unless otherwise specified.
- Payment for purchases: Except as otherwise agreed to: Late payment charges may be assessed against the user state agency in the amount and under the conditions set forth in Section 13-1-158 / 1978.
- 17. Workers' Compensation: The Contractor agrees to comply with state laws and rules pertaining to workers' compensation benefits for its employees. If the Contractor fails to comply with the Workers' Compensation Act and applicable rules when required to do so, this { Agreement} may be terminated by the contracting agency.
- 18. ATTENTION: Failure to complete all information on the bid envelope might necessitate the prenature opening of the bid is order to identify the bid file. The bid number should be identified on the outside of the bid envelope.

# GENERAL SERVICES DEPARTMENT PURCHASING DIVISION

DEPARTMENT PRICE AGREEMENT

#### **ARTICLE I - STATEMENT OF WORK**

Under the terms and conditions of this Price Agreement the <u>using agency</u> may issue orders for items and/or services described here: The terms and conditions of this Price Agreement shall form a part of each order issued hereunder.

The item and/or services to be ordered shall be as listed under ARTICLE IX - Price Schedule. All orders issued hereunder will be both an order number and this Price Agreement number. Ag It is understood that no guarantee or warranty is made or implied, either the New Mexico State Purchasing Agent or the user, that any order for any definite quantity will be issued under this Price Agreement. The contractor is required to accept the order and furnish the items and/or services in accordance with the article: contained hereunder for the quantity of each order issued.

#### **ARTICLE II - TERM**

The term of this Price Agreement for issuance of orders shall be as indicated in specifications

#### **ARTICLE III - SPECIFICATIONS**

Items and/or services furnished hereunder shall conform to the requirements of specifications and/or drawings applicable to items listed under ARTICLE IX - Price Schedule. Orders issued against this schedule will show the applicable Price Agreement item(s), numbers(s), and price(s); however they may not describe the item(s) fully.

### **ARTICLE IV - SHIPPING AND BILLING INSTRUCTIONS**

Contractor shall ship in accordance with the instructions of this form. Shipment shall be made only against specific orders which the user may place with the contractor during the term indicated in ARTICLE II - TERM. The contractor shall enclose a packing list with each shipment listing the order number, Price Agreement number and the commercial parts number (if any) for each item. Delivery shall be made as indicated on page 1. If vendor is unable to meet stated delivery the State Purchasing Agent must be notified.

#### **ARTICLE V - TERMINATION**

This Price Agreement may be terminated by either signing party upon written notice to the other at least thirty (30) days in advance of the date of termination. Notice of Termination of the Price Agreement SHALL NOT AFFECT ANY OUTSTANDING ORDERS.

#### ARTICLE VI- AMENDMENT

This Price Agreement may be amended by mutual agreement of the NM State Purchasing Agent and the contractor upon written notice by either party to the other. An amendment to this Price Agreement SHALL NOT AFFECT ANY OUTSTANDING ORDERS issued prior to the effective date of the amendment as mutually agreed upon, and as published by the NM state Purchasing Agent. Amendments affecting price adjustments and/or extension of contract expiration are not allowed unless specifically provided for in the bid and contract documents.

#### **ARTICLE VII - ISSUANCE OR ORDERS**

Only written signed orders are valid under this Price Agreement. Form SPD-001A is the approved form for state agencies issuing Contract Orders under this Price Agreement. Other authorized government entities may utilize form SPD-001A or forms adapted by them for their own use.

ARTICLE VIII - PACKING (IF APPLICABLE) Packing shall be in conformance with standard commercial practices.

## **ARTICLE IX - PRICE SCHEDULE**

Prices as listed in the Price Schedule hereto attached, ARE FIRM.

Page 2

### DEPARTMENT PRICE AGREEMENT

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Under the terms and conditions of this Price Agreement the <u>using agency</u> may issue orders for items and/or services described here: The terms and conditions of this Price Agreement shall form a part of each order issued hereunder.

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#### **ARTICLE II - TERM**

The term of this Price Agreement for issuance of orders shall be as indicated in specifications

#### **ARTICLE III - SPECIFICATIONS**

Items and/or services furnished hereunder shall conform to the requirements of specifications and/or drawings applicable to items listed under ARTICLE IX - Price Schedule. Orders issued against this schedule will show the applicable Price Agreement item(s), numbers(s), and price(s); however they may not describe the item(s) fully.

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#### **ARTICLE V - TERMINATION**

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#### **ARTICLE IX - PRICE SCHEDULE**

Prices as listed in the Price Schedule hereto attached, ARE FIRM.

Page 2

STATE OF NEW MEXICO

PURCHASING DIVISION

GENERAL SERVICES DEPARTMENT

00-805-09-17658

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PAGE 3

| CONTRACT | VENDORS:                                                                                   |                  | •                              |                                       |
|----------|--------------------------------------------------------------------------------------------|------------------|--------------------------------|---------------------------------------|
| ( 1)     | -5080420 505-821-180<br>AGRA EARTH & ENVIRONN<br>8519 JEFFERSON NE                         | 01<br>Mental INC | PAY DISC:<br>FOB:<br>DELIVERY: | NET 45<br>DESTINATION<br>AS REQUESTED |
|          | ALBUQUERQUE                                                                                | NM 87113-0000    | TAX-ID -                       |                                       |
| (4)      | -5362041 505-243-549<br>FAITH ENGINEERING INC<br>ATTN:STUART E FAITH<br>1000 LOMAS BLVD NW | <b>4</b>         | PAY DISC:<br>FOB:<br>DELIVERY: | NET 30<br>DESTINATION<br>UPON ORDER   |
|          | ALBUQUERQUE                                                                                | NM 87102-0000    | TAX-ID -                       |                                       |
| (7)      | -5422702 505-334-737<br>KLEINFELDER INC<br>4905 HAWKINS NE                                 | 3                | PAY DISC:<br>FOB:<br>DELIVERY: | NET<br>DESTINATION<br>AS REQUESTED    |
|          | ALBUQUERQUE                                                                                | NM 87109-0000    | TAX-ID -                       |                                       |
| (9)      | -5187719 505-268-266<br>RESPEC INC<br>4775 INDIAN SCHOOL RD<br>SUITE 300                   | l<br>NE          | PAY DISC:<br>FOB:<br>DELIVERY: | NET 30<br>DESTINATION<br>AS REQUESTED |

ALBUQUERQUE NM 87110-0000 TAX-ID -

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M \*APPROX\* UNIT \* ARTICLE\*UNIT \* CONTRACT\* QTY \*\*AND DESCRIPTION\*PRICE \* VENDOR ITEM \*APPROX\* UNIT \* ARTICLE STATE WIDE MULTIPLE SITE MONITORING AND REPORTING AT VARIOUS M001 SITES INCLUDING TUCUMCARI, SANTA ROSA, WILLIAMSBURG, CARLSBAD, "OLD" GALLUP, "OLD" BELEN MAINTENANCE PATROL YARDS AND OTHER SITES AS REQUIRED. SAMPLING OF SOIL AND GROUNDWATER CONTAMINATED BY DIESEL, GASOLINE SALT OR OTHER CONTAMINANTS. AWARD WILL BE TO LOWEST RESPONSIVE BIDDER. "ALL OR NONE." TO ESTABLISH A CONTRACT FOR A PERIOD OF TWO YEARS FROM DATE OF AWARD, FOR WORK AT NMSHTD MAINTENANCE YARDS OR OTHER SITES. WORK SHALL CONSIST OF WORKPLAN PREPARATION. SAMPLING FOR LABORATORY TESTING\* OF GROUNDWATER IN ON-SITE WELLS AND SITE SOIL. QUARTERLY REPORTS IN THREE (3) COPIES ARE REQUIRED, PER SITE.NO "MARK-UP" OF SUBCONTRACTOR COSTS SHALL BE ALLOWED. SCOPE OF WORK: PREPARATION AND MANAGEMENT OF WORKPLANS, INCLUDING COORDINATION WITH THE NEW MEXICO ENVIRONMENT DEPARTMENT. MANAGEMENT OF FIELD AND LABORATORY WORK, INCLUDING -------PREPARATION OF REPORTS AND C.A.F. CLAIMS, UNDER THE SUPERVISION OF A N.M. CERTIFIED SCIENTIST. SOIL AND GROUNDWATER MONITORING OF EXSITING SITE WELLS AND STOCKPILES BY SAMPLING. LABORATORY TESTING AND REPORTING 4 TIMES YEARLY. EMERGENCY AND CONTINGENCY MANAGEMENT OF COST NOT ANTICIPATED IN THIS ------SCOPE OF WORK SUCH AS DAMAGE TO SURFACE AND SUBSURFACE EQUIPMENT AND WELLS CAUSED BY EARTHQUAKE, VANDALISM, VIOLENT WEATHER OR OTHER EVENTS.ELECTRICAL, PLUMBING, MASONRY, CARPENTRY, DRILLING AND EXCAVATION WORK MAY BE REQUIRED. TASK DESCRIPTION FREQUENCY

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A. WORKPLAN PREPARATION......YEARLY B. GROUNDWATER SAMPLING\*.....QUARTER YEARLY C. REPORTING......QUARTER YEARLY D. C.A.F.CLAIM PREPARATION.....TWICE YEARLY

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|-----------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM                  | *AP<br>*                                                                             | PROX                                                                                                        | UNIT                                                                                                        | *                                                                                             | ARTIC                                                                                                    | LE<br>D DESCRI                                                                                                                | PTION                                                                                                                                                                    | *                                                                                                                 | UNIT<br>PRICE                                               | *<br>*<br>* | CONTRACT<br>VENDOR                                                                                                                                                                                                                 |
|                       |                                                                                      |                                                                                                             |                                                                                                             |                                                                                               |                                                                                                          |                                                                                                                               | · · · · · · · · · · · · · · · · · · ·                                                                                                                                    |                                                                                                                   |                                                             |             |                                                                                                                                                                                                                                    |
|                       | E.<br>-                                                                              | CONT                                                                                                        | IGENC                                                                                                       | Y EVI                                                                                         | ents &                                                                                                   | SOIL SA                                                                                                                       | MPLING*                                                                                                                                                                  | AS REQUI                                                                                                          | RED                                                         |             |                                                                                                                                                                                                                                    |
|                       |                                                                                      | *COS<br>WIT<br>FOR                                                                                          | TS OF<br>H AND<br>WATE                                                                                      | LABC<br>BY N<br>R, SC                                                                         | ORTARY<br>IMSHTD<br>OIL ANI                                                                              | ANALYSE<br>USING A<br>DAIR SAN                                                                                                | S SHALL BE (<br>SEPARATE PR<br>MPLES.                                                                                                                                    | COORDINAT                                                                                                         | ed<br>Ement                                                 |             |                                                                                                                                                                                                                                    |
|                       | HOUN<br>HERN<br>THE<br>WILN                                                          | RLY R<br>EIN.<br>MINI<br>L BE                                                                               | ATES<br>INDIV<br>MUM E<br>BASED                                                                             | MUST<br>IDUAL<br>DUCAT<br>ON T                                                                | CONFOR<br>S ASSI<br>ION/EX<br>ASK PE                                                                     | em to the<br>Gned to<br>Perience<br>Rformed                                                                                   | E CATEGORIES<br>A TASK MUST<br>E CRITERIA.                                                                                                                               | DEFINED<br>MEET<br>PAYMENT                                                                                        |                                                             |             | M002                                                                                                                                                                                                                               |
|                       | EXPE                                                                                 | ENSES                                                                                                       | -                                                                                                           |                                                                                               |                                                                                                          |                                                                                                                               |                                                                                                                                                                          |                                                                                                                   |                                                             |             | n de la construcción de la constru<br>Construcción de la construcción de l |
|                       | EXPE<br>DEPA<br>BELC<br>RENT<br>PRIC<br>EQUI<br>SPEC<br>MANU<br>SHIP<br>BILL<br>FO U | INSES<br>RTMEN<br>W FOP<br>CAL EC<br>CE. EX<br>PMENTI<br>L ANI<br>IALIZ<br>FACTU<br>PING,<br>ED AT<br>SER F | NOT I<br>NT AT<br>R RENJ<br>QUIPME<br>CPENSE<br>C NOT<br>D CUSI<br>LED IN<br>JRED I<br>TELE<br>COSI<br>COSI | EXPLI<br>RATE<br>TAL O<br>ENT S<br>ES ANI<br>LIST<br>COMAR<br>IVEST<br>IN-HOU<br>PHONE<br>TY. | CITLY<br>S THAT<br>R PURC<br>HALL N<br>D ORDI<br>ED MAY<br>Y RENT<br>IGATIV<br>JSE MA<br>JSE MA<br>OICES | PRE-APPR<br>LO NOT<br>HASE. T<br>OT EXCEE<br>NARY INV<br>BE BILL<br>AL OR LE<br>E OR REM<br>Y BE BILL<br>ECTRICAL<br>TO BE PI | OVED MAY BE<br>EXCEED THE I<br>THE TOTAL BI<br>D 120% OF TH<br>ESTIGATIVE A<br>ED AT RATES<br>ASE RATES, (<br>EDIAL EQUIPM<br>LED AT COST<br>CHARGES SHA<br>ROVIDED QUAR | BILLED 1<br>MAXIMUM I<br>LLABLE CO<br>HE PURCHA<br>AND REMED<br>NOT TO E<br>DR AT COS<br>MENT<br>ALL BE<br>ALL BE | TO THE<br>LISTED<br>OST FOR<br>ASE<br>DIAL<br>EXCEED<br>OT. |             |                                                                                                                                                                                                                                    |
|                       | -<br>DR LO<br>DR E                                                                   | NOTE:<br>OCAL<br>ACH I                                                                                      | PRI<br>OPTIO<br>NDIVI                                                                                       | CE SH<br>N TAX<br>DUAL                                                                        | IALL NC<br>(ES).<br>ITEM E                                                                               | DT INCLU<br>SUCH TAN<br>BID AT AN                                                                                             | DE STATE GRO<br>K OR TAXES S<br>PPROPRIATE R                                                                                                                             | OSS RECEI<br>HALL BE A<br>ATE.                                                                                    | PTS TAX<br>ADDED                                            |             | M003                                                                                                                                                                                                                               |
| e<br>e<br>S<br>N      | SOND:<br>SID S<br>SURE:<br>NEW N                                                     | ING:<br>SECUR<br>FY CO<br>4EXIC                                                                             | ITY I<br>MPANY<br>O SHA                                                                                     | n the<br>Auth<br>LL Be                                                                        | FORM<br>ORIZEI<br>REQUI                                                                                  | of a suf<br>to do e<br>red in t                                                                                               | RETY BOND EX<br>BUSINESS IN<br>THE AMOUNT O                                                                                                                              | ECUTED BY<br>THE STATY<br>F \$10,000                                                                              | Y A<br>E OF .<br>D.00.                                      |             |                                                                                                                                                                                                                                    |
| -<br>A<br>B<br>S<br>- | 100<br>OND<br>USIN<br>UCCE                                                           | )% PE<br>Exec<br>IESS<br>ISSFU                                                                              | RFORM<br>UTED :<br>IN TH<br>L BID                                                                           | ANCE<br>BY A<br>E STA<br>DER P                                                                | EOND A<br>SURETY<br>TE OF<br>RIOR T                                                                      | ND A 100<br>COMPANY<br>NEW MEXI<br>O AWARD                                                                                    | A PAYMENT A<br>AUTHORIZED<br>CO WILL BE<br>OF CONTRACT                                                                                                                   | ND MATERI<br>TO DO<br>REQUIRED<br>-                                                                               | IALS<br>OF THE                                              |             |                                                                                                                                                                                                                                    |
| C<br>A                | ONTR<br>. F<br>P                                                                     | ACTOI<br>URNIS<br>PERFOI                                                                                    | r(s) i<br>Sh ali<br>Rm Thi                                                                                  | FURTH<br>L EQU<br>E WOR                                                                       | ER AGR<br>IPMENT<br>K SPEC                                                                               | EES TO:<br>, LABOR<br>IFIED.                                                                                                  | AND TOOLS RI                                                                                                                                                             | EQUIRED T                                                                                                         | 0                                                           |             |                                                                                                                                                                                                                                    |

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| ITEM | *APPROX* | UNIT *  | ARTICLE     | . *           | UNIT       | * CONTRACT |
|      | * QTY *  | *       | AND DESCRIP | TION *        | PRICE      | * VENDOR   |
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B. PROVIDE COMPETENT SUPERVISION AND SKILLED PERSONNEL TO CARRY ON ALL WORK IN PROGRESS.

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- C. COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTIONS NECESSARY TO PROTECT THE LIFE AND HEALTH OF EMPLOYEES ON THE JOB AND THE SAFETY OF THE PUBLIC, AND TO PROTECT THE PROPERTY OF THE STATE OF NEW MEXICO IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THIS CONTRACT.
- D. PROVIDE WORKMEN ADEQUATE INSURANCE, INCLUDING BUT NOT LIMITED TO WORKMAN'S COMPENSATION.
- E. MAKE NECESSARY ARRANGEMENTS FOR STORAGE OF HIS TOOLS AND/OR EQUIPMENT. THE NMSHTD WILL NOT BE RESPONSIBLE FOR ANY LOST OR STOLEN PROPERTY.
- F. BE RESPONSIBLE FOR ALL CLEANUP WORK ON THE PROJECT SITE(S) AND AT THE EQUIPMENT STORAGE AREA(S) PRIOR TO FINAL INSPECTION AND ACCEPTANCE.
- G. COMPLY WITH ALL APPLICABLE CODES FOR THIS TYPE OF WORK.

H. BE HELD LIABLE FOR ANY DAMAGES WHICH OCCUR BECAUSE OF HIS NEGLIGENCE OR THAT OF HIS EMPLOYEES.

THIS IS A PUBLIC WORKS CONTRACT, SUBJECT TO THE PROVISIONS OF THE PUBLIC WORKS MINIMUM WAGE ACT, SECTIONS 13-14-11 THRU 13-4-17, ET SEQ. NMSA 1978 AS AMENDED. MINIMUM WAGE RATES AS DETERMINED AND PUBLISHED BY THE STATE LABOR COMMISSION, SANTA FE, NM SHALL BE IN EFFECT AND UTILIZED BY THE CONTRACTOR DURING THE LIFE OF THIS CONTRACT. WAGE DECISION NO. DATED IS A PART OF THIS AGREEMENT. . . . A POTENTIAL CONTRACTOR OR THE CONTRACTOR AGREES TO COMPLY WITH STATE LAWS AND RULES PERTAINING TO WORKER'S COMPEN-SATION INSURANCE COVERAGE FOR ITS EMPLOYEES, IF CONTRACTOR FAILS TO COMPLY, WITH THE WORKER'S COMPENSATION ACT AND APPLICABLE RULES WHEN REQUIRED TO DO SO, THE CONTRACT MAY BE CANCELLED EFFECTIVE IMMEDIATELY.

CONTRACTOR(S) SHALL INDEMNIFY AND HOLD HARMLESS THE STATE, ITS OFFICERS AND EMPLOYEES, AGAINST LIABILITY, CLAIMS, M004

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| ITEM                    | *APPR | ox* t | UNIT | *   | ARTICLE | )<br>)       | *         | UNIT    | * CONTRACT |
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DAMAGES, LOSSES OR EXPENSES ARISING OUT OF BODILY INJURY TO PERSONS OR DAMAGE TO PROPERTY CAUSED BY, OR RESULTING FROM, CONTRACTOR(S) AND/OR ITS EMPLOYEES, OWN NEGLIGENT ACT(S) OR OMISSION(S) WHILE CONTRACTOR, AND/OR ITS EMPLOYEES, PERFORM(S) OR FAILS TO PERFORM IT'S OBLIGATIONS AND DUTIES UNDER THE TERMS AND CONDITIONS OF THIS AGREEMENT. THIS SAVE HARMLESS AND INDEMNIFICATION CLAUSE IS SUBJECT TO THE IMMUNITIES, PROVISIONS, AND LIMITATIONS OF THE TORT CLAIMS ACT (41-4-1, ET SEQ., N.M.S.A. 1978 COMP) AND SECTION 56-7-1, N.M.S.A. 1978 COMP. AND ANY AMEND-MENTS THERETO. IT IS SPECIFICALLY AGREED BETWEEN THE PARTIES EXECUTING THIS AGREEMENT THAT IT IS NOT INTENDED BY ANY OF THE PROVISIONS OF ANY PART OF THE AGREEMENT TO CREATE THE PUBLIC OR ANY MEMBER THEREOF A THIRD PARTY BENEFICIARY OR TO AUTHORIZE ANYONE NOT A PARTY TO THE AGREEMENT TO MAINTAIN A SUIT(S) FOR WRONGFUL DEATH(S), BODILY AND/OR PERSONAL INJURY(IES) TO PERSON(S), DAMAGE(S) TO PROPERTY(IES) AND/OR ANY OTHER CLAIM(S) WHATSOEVER PURSUANT TO THE PROVISIONS OF THIS AGREEMENT.

THE CONTRACTOR SHALL PROCURE AND MAINTAIN AT THE CON-TRACTOR'S EXPENSE INSURANCE OF THE KINDS AND IN THE AMOUNTS HEREIN PROVIDED. THIS INSURANCE SHALL BE PROVIDED BY INSURANCE COMPANIES AUTHORIZED TO DO BUSINESS IN NEW MEXICO AND SHALL COVER ALL OPERATIONS UNDER THE CONTRACT, WHETHER PERFORMED BY THE CONTRACTOR, THE CONTRACTOR'S AGENTS OR EMPLOYEES OR BY SUBCONTRACTORS. ALL INSURANCE PROVIDED SHALL REMAIN IN FULL FORCE AND EFFECT FOR THE ENTIRE PERIOD OF THE WORK, UP TO AND INCLUDING FINAL ACCEPTANCE, AND THE REMOVAL OF ALL EQUIPMENT AND EMPLOYEES, AGENTS AND SUBCONTRACTORS THEREFROM.

A) PUELIC LIABILITY AND AUTOMOBILE LIABILITY INSURANCE.

1. GENERAL LIABILITY: BODILY INJURY LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE APPLICABLE IN FULL TO THE SUBJECT PROJECT SHALL BE PROVIDED IN THE FOLLOWING MINIMUM AMOUNTS:

BODILY INJURY LIABILITY:

\$1,000,000 EACH PERSON; \$2,000,000 EACH OCCURRENCE (ANNUAL AGGREGATE)

PROPERTY DAMAGE LIABILITY:

\$2,000,000 EACH OCCURRENCE (ANNUAL AGGREGATE)

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| ITEM | *APPROX* | UNIT *  | ARTICLE         | *             | UNIT    | * CONTRACT |
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- A. THE POLICY TO PROVIDE THIS INSURANCE IS TO BE WRITTEN ON A COMPREHENSIVE GENERAL LIABILITY FORM OR COMMERCIAL GENERAL LIABILITY FORM WHICH MUST INCLUDE THE FOLLOWING:
  - 1. COVERAGE FOR LIABILITY ARISING OUT OF THE OPERATION OF INDEPENDENT CONTRACTORS.
  - 2. COMPLETED OPERATION COVERAGE.
  - 3. ATTACHMENT OF THE BROAD FORM COMPREHENSIVE GENERAL LIABILITY ENDORSEMENT.
- B. IN THE EVENT THAT THE USE OF EXPLOSIVES IS A REQUIRED PART OF THE CONTRACT, THE CONTRACTORS INSURANCE MUST INCLUDE COVERAGE FOR INJURY TO OR DESTRUCTION OF PROPERTY ARISING OUT OF BLASTING OR EXPLOSION.
- C. IN THE EVENT THAT A FORM OF WORK NEXT TO AN EXISTING BUILDING OR STRUCTURE IS A REQUIRED PART OF THE CONTRACT, THE CONTRACTOR'S INSUR-ANCE MUST INCLUDE COVERAGE FOR INJURY TO OR DESTRUCTION OF PROPERTY ARISING OUT OF:
  - 1. THE COLLAPSE OF OR STRUCTURAL INJURY TO BUILDINGS OR STRUCTURES DUE TO EXCAVATION, INCLUDING BURROWING, FILLING OR BACK-FILLING IN CONNECTION THEREWITH, OR TO TUNNELING, COFFERDAM WORK OR CAISSON WORK OR TO MOVING, SHORING, UNDERPINNING, RAZING OR DEMOLITION OF BUILDINGS OR STRUCTURES OR REMOVAL OR REBUILDING OF STRUCTUAL SUPPORTS THEREOF.
- D. COVERAGE MUST BE INCLUDED FOR INJURY TO OR DE-STRUCTION OF PROPERTY ARISING OUT OF INJURY TO OR DESTRUCTION OF WIRES, CONDUITS, PIPES, MAINS, SEWERS OR OTHER SIMILAR PROPERTY OR ANY APPARTUS IN CONNECTION THEREWITH BELOW THE SURFACE OF THE GROUND, IF SUCH INJURY OR DESTRUCTION IS CAUSED BY OR OCCURS DURING THE USE OF MECHANICAL EQUIPMENT FOR THE PURPOSE OF EXCAVATING, DIGGING OR DRILLING, OR TO INJURY TO OR DESTRUCTION OF PROPERTY AT ANY TIME RESULTING THEREFROM.

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| ITEM | *A  | PPROX* | UNIT  | *   | ARTICLE | 2           | *         | UNIT     | *   | CONTRACT |
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2. AUTOMOHILE LIABILITY INSURANCE COVERAGE FOR THE CONTRACTOR (WHETHER INCLUDED IN THE POLICY PROVIDING GENERAL LIABILITY INSURANCE OR IN A SEPERATE POLICY) MUST PROVIDE LIABILITY FOR THE OWNERSHIP, OPERATION AND MAINTENANCE OF OWNED, NON-OWNED AND HIRED CARS. THE LIMITS OF LIABILITY INSURANCE SHALL BE PROVIDED IN THE FOLLOWING AMOUNTS:

BODILY INJURY LIABILITY:

\$1,000,000 EACH PERSON: \$2,000,000 EACH OCCURRENCE (ANNUAL AGGREGATE)

PROPERTY DAMAGE LIABILITY:

\$2,000,000 EACH OCCURRENCE (ANNUAL AGGREGATE)

B. WORKER'S COMPENSATION INSURANCE.

THE CONTRACTOR'S SHALL ALSO CARRY WORKER'S COMPENSATION INSURANCE OR OTHERWISE FULLY COMPLY WITH THE PROVISION OF THE NEW MEXICO WORKMEN'S COMPENSATION ACT AND OCCUPATIONAL DISEASE DISABLEMENT LAW.

IF THE CONTRACTOR IS AN "OWNER-OPERATOR" OF SUCH EQUIPMENT, IT IS AGREED THAT THE STATE OF NEW MEXICO ASSUMES NO RESPONSIBILITY, FINANCIAL OR OTHERWISE, FOR ANY INJURIES SUSTAINED BY THE "OWNER-OPERATOR" DURING THE PERFORMANCE OF SAID CONTRACT.

C. CERTIFICATE OF INSURANCE/DEPARTMENT AS ADDITIONAL INSURED. THE CONTRACTOR BEING AWARDED THE CONTRACT/PRICE AGREE-MENT SHALL FURNISH EVIDENCE OF CONTRACT-OR'S INSURANCE COVERAGE BY A CERTIFICATE OF INSURANCE. THE CERTIFICATE OF INSUR-ANCE SHALL BE SUBMITTED PRIOR TO AWARD OF THE CONTRACT/PRICE AGREEMENT.

THE CONTRACTOR SHALL HAVE THE N.M. STATE

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| ITEM | *A  | PPROX* | UNIT  | *   | ARTICLE | )<br>#      | *             | UNIT  | *    | CONTRACT |
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HIGHWAY & TRANSPORTATION DEPARTMENT NAMED AS AN ADDITIONAL INSURED ON THE COMPRE-HENSIVE GENERAL LIABILITY FORM OR COMMER-CIAL GENERAL LIABILITY FORM FURNISHED BY THE CONTRACTOR PURSUANT TO PARAGRAPH (A) 1. AND (A) 2., OF THIS SUBSECTION. THE CERTIFICATE OF INSURANCE SHALL STATE THAT THE COVERAGE PROVIDED UNDER THE POLICY IS PRIMARY OVER ANY OTHER VALID AND COLLECT-IBLE INSURANCE.

THE CERTIFICATE OF INSURANCE SHALL ALSO INDICATE COMPLIANCE WITH THESE SPECIFI-CATIONS AND SHALL CERTIFY THAT THE COVER-AGE SHALL NOT BE CHANGED, CANCELLED OR ALLOWED TO LAPSE WITHOUT GIVING THE DEPARTMENT THIRTY (30) DAYS WRITTEN NOTICE ALSO, A CERTIFICATE OF INSURANCE SHALL BE FURNISHED TO THE DEPARTMENT ON RENEWAL OF A POLICY OR POLICIES AS NECESSARY DURING THE TERMS OF THE CONTRACT. THE DEPARTMENT SHALL NOT ISSUE A NOTICE TO PROCEED UNTIL SUCH TIME AS THE ABOVE REQUIREMENTS HAVE BEEN MET.

- D. UMERELLA COVERAGE: THE INSURANCE LIMITS CITED IN THE ABOVE PARAGRAPHS ARE MINIMUM LIMITS. THIS SPECIFICATION IS IN NO WAY INTENDED TO DEFINE WHAT CONSTITUTES ADEQU-ATE INSURANCE COVERAGE FOR INDIVIDUAL CON-TRACTOR. THE DEPARTMENT WILL RECOGNIZE FOLLOWING FORM EXCESS COVERAGE (UMBRELLA) AS MEETING THE REQUIREMENTS OF SUBSECTION (A) 1.A. OF SECTION, SHOULD SUCH INSURANCE OTHERWISE MEET ALL REQUIREMENTS OF SUCH SUBSECTIONS.
- E. OTHER REQUIRED INSURANCE: THE CONTRACTOR SHALL PROCURE AND MAINTAIN, WHEN REQUIRED BY THE DEPT., FORM AND TYPES OF BAILEE INSURANCE SUCH AS, BUT NOT LIMITED TO, BUILDER'S RISK INSURANCE, CONTRACTOR'S EQUIPMENT INSURANCE, RIGGER'S LIABILITY PROPERTY INSURANCE, ETC. IN AN AMOUNT NECESSARY TO PROTECT THE DEPARTMENT AGAINST CLAIMS, LOSSES AND EXPENSES ARISING FROM THE DAMAGE, DISAPPEAPANCE

#### STATE OF NEW MEXICO GENERAL SERVICES DEPARTMENT

PURCHASING DIVISION

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| ITEM | *A | PPRO      | ζ*    | UNIT  | *     | ARTICL | E           |         | *      | UNIT   | *     | CONTRACT |
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OR DESTRUCTION OF PROPERTY OF OTHERS IN THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR, INCLUDING PROPERTY OF OTHERS BEING INSTALLED, ERECTED OR WORKED UPON BY THE CONTRACTOR, HIS AGENTS OR SUB-CONTRACTORS.

F. RAILROAD INSURANCE: IN THE EVENT THAT RAILROAD PROPERTY IS AFFECTED BY THE SUB-JECT CONTRACT, THE CONTRACTOR, IN ADDITION TO THE ABOVE REQUIREMENTS, SHALL BE RE-QUIRED TO FURNISH A RAILROAD PROTECTIVE LIABILITY POLICY IN THE NAME OF THE RAIL-ROAD COMPANY INVOLVED. IN ADDITION, ON THOSE RAILS THAT ARE USED BY THE NATIONAL RAILROAD PASSENGER CORPORATION (NRPC), THE CONTRACTOR WILL ALSO OBTAIN A RAILROAD PROTECTIVE LIABILITY POLICY IN THE NAME OF NRPC.

THE LIMITS OF LIABILITY FOR THE RAILROAD PROTECTIVE LIABILITY POLICY (OR POLICIES) MUST NE NEGOTIATED WITH THE RAILROAD COMPANY ON A HAZARD AND RISK BASIS IN NO EVENT WILL THE LIMITS EXCEED THE FOLLOWING:

BODILY INJURY LIABILITY, PROPERTY DAMAGE LIABILITY:

\$2,000,000 EACH OCCURANCE

LIABILITY AND PHYSICAL DAMAGE TO PROPERTY:

\$6,000,000 AGGREGATE

THE LIMITS OF LIABILITY STATED ABOVE APPLY TO THE COVERAGE AS SET FORTH IN THE RAILROAD PROTECTIVE LIABILITY ENDORSEMENT FORM, SUBJECT TO THE TERMS, CONDITIONS AND EXCLUSIONS FOUND IN THE FORM.

THE POLICY MUST AFFORD COVERAGE AS PROVIDED IN THE STANDARD RAILROAD PROTECTIVE LIABILITY ENDORSEMENT (AASHTO FORM).

THE CONTRACTOR AGREES TO COMPLY WITH STATE LAWS AND RULES PERTAINING TO WORKERS' COMPENSATION INSURANCE COVERAGE FOR

# STATE OF NEW MEXICO GENERAL SERVICES DEPARTMENT 00-805-09-17658 PURCHASING DIVISION

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# ITEM \*APPROX\* UNIT \* ARTICLE\*UNIT \* CONTRACT\* QTY \*\*AND DESCRIPTION\*PRICE \* VENDOR \*\*\*\*\*\*\*\*\*\*\*\*

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ITS EMPLOYEES. IF CONTRACTOR FAILS TO COMPLY WITH THE WORKERS' COMPENSATION ACT AND APPLICABLE RULES WHEN REQUIRED TO DO SO, THE CONTRACT MAY BE CANCELLED EFFECTIVE IMMEDIATELY.

THE PRICE QUOTED HEREIN REPRESENTS THE TOTAL COMPENSATION TO BE PAID BY THE STATE FOR GOODS AND/OR SERVICES PROVIDED. IT IS UNDERSTOOD THAT THE PARTY PROVIDING SAID GOODS AND/OR SERVICES TO THE STATE IS RESPONSIBLE FOR PAYMENT OF ALL COSTS OF LABOR, EQUIPMENT, TOOLS, MATERIALS, FEDERAL TAX, PERMITS, LICENSES, FEES AND ANY OTHER ITEMS NECESSARY TO COMPLETE THE WORK PROVIDED. THE PRICES QUOTED IN THIS CONTRACT INCLUDE AN AMOUNT SUFFICIENT TO COVER SUCH COSTS.

THE CONDITIONS AND SPECIFICATIONS SENT OUT IN THE INVITATION TO BID ARE INSEPARABLE AND INDIVISIBLE. ANY VENDOR, BY SUB-MITTING A BID, AGREES TO BE BOUND BY ALL SUCH CONDITIONS OR SPECIFICATIONS SENT OUT IN THIS INVITATION TO BID, AND ALL OTHER DOCUMENTS REQUIRED TO BE SUBMITTED, SHALL BE RETURNED BY THE VENDOR IN HIS BID PACKAGE. FAILURE TO DO SO OR ANY ATTEMPT TO VARY OR CHANGE THE CONDITIONS OR SPECIFICATIONS OF THE BID SHALL, AT THE DISCRETION OF THE STATE CONSTITUTE GROUNDS FOR REJECTION OF THE ENTIRE BID.

BIDDERS SHALL PROMPLY NOTIFY THE NMSHTD OF ANY AMBIGUITY, INCONSISTENCY OR ERROR WHICH THEY MAY DISCOVER UPON THE EXAMINATION OF THE BIDDING DOCUMENTS, OR OF THE SITE AND LOCAL CONDITIONS.

THE OWNER SHALL HAVE THE RIGHT TO REJECT ANY OR ALL BIDS. AND IN PARTICULAR TO REJECT A BID NOT ACCOMPANIED BY DATA REQUIRED BY THE BIDDING DOCUMENTS, OR A BID IN ANY WAY INCOMPLETE OR IRREGULAR.

CONTRACTOR SHALL BE CONSIDERED AN INDEPENDENT CONTRACTOR AND NOT AN EMPLOYEE OF THE STATE OF NEW MEXICO. HOWEVER, DIRECTIONS AS TO TIME AND PLACE OF PERFORMANCE AND COMPLIANCE WITH RULES AND REGULATIONS MAY BE REQUIRED BY THE USING AGENCY.

PAYMENT FOR SERVICES PERFORMED WILL BE INITIATED UPON FINAL ACCEPTANCE AND INSPECTION OF WORK.

WITHIN FIFTEEN DAYS AFTER THE DATE THE DEPARTMENT RECEIVES WRITTEN NOTICE FROM THE CONTRACTOR THAT PAYMENT IS REQUESTED FOR SERVICES, CONSTRUCTION OR ITEMS OF TANGIBLE PERSONAL PROPERTY DELIVERED ON SITE AND RECEIVED, THE DEPARTMENT

M005

# STATE OF NEW MEXICO ENERAL SERVICES DEPARTMENT O0-805-09-17658 PURCHASING DIVISION PAGE 13

| *************************************** |    |        |       |     |                |               |          |     |          |  |  |
|-----------------------------------------|----|--------|-------|-----|----------------|---------------|----------|-----|----------|--|--|
| ITEM                                    | *A | PPROX* | UNIT  | *   | ARTICLE        | *             | UNIT     | *   | CONTRACT |  |  |
|                                         | *  | QTY *  |       | *   | AND DESCRIPTIO | ON *          | PRICE    | *   | VENDOR   |  |  |
| ****                                    | ** | *****  | ***** | *** | *****          | ************* | ******** | *** | *******  |  |  |

SHALL ISSUE A WRITTEN CERTIFICATION OF COMPLETE OR PARTIAL ACCEPTANCE OR REJECTION OF THE SERVICES, CONSTRUCTION OR ITEMS OF TANGIBLE PERSONAL PROPERTY. IF THE DEPARTMENT FINDS THAT THE SERVICES, CONSTRUCTION OR ITEM OF TANGIBLE PERSONAL PROPERTY ARE NOT ACCEPTABLE, IT SHALL, WITHIN THIRTY (30) DAYS AFTER THE DATE OF RECEIPT OF WRITTEN NOTICE FROM THE CONTRACTOR THAT PAYMENT IS REQUESTED, PROVIDE TO THE CON-TRACTOR A LETTER OF EXCEPTION EXPLAINING THE DEFECT OR OBJECTION TO THE SERVICES, CONSTRUCTION OR DELIVERED TANGIBLE PERSONAL PROPERTY ALONG WITH DETAILS OF HOW THE CONTRACTOR MAY PROCEED TO PROVIDE REMEDIAL ACTION. UPON CERTIFICATION BY THE DEPARTMENT THAT THE SERVICES, CONS-TRUCTION OR ITEMS OF PERSONAL PROPERTY HAVE BEEN RECEIVED AND ACCPETED, PAYMENT SHALL BE TENDERED TO THE CONTRACTOR WITHIN THIRTY (30) DAYS AFTER THE DATE OF CERTIFICATION. IF PAYMENT IS MADE BY MAIL, THE PAYMENT SHALL BE DEEMED TENDERED ON THE DATE IT IS POSTMARKED. AFTER THE THIRTIETH DAY FROM THE DATE THAT WRITTEN CERTIFICATION OF ACCEPTANCE IS ISSUED, LATE PAYMENT CHARGES SHALL BE PAID ON THE UNPAID BALANCE DUE ON THE CONTRACT TO THE CONTRACTOR AT THE RATE OF 1-1/2 PERCENT PER MONTH. FOR PURCHASES FUNDED BY STATE OR FEDERAL GRANTS TO LOCAL PUBLIC BODIES, IF THE LOCAL PUBLIC BODY HAS NOT RECEIVED THE FUNDS FROM THE FEDERAL OR STATE FUNDING AGENCY, BUT HAS ALREADY CERTIFIED THAT THE SERVICES, CONSTRUCTION OR ITEMS OF TANGIBLE PERSONAL PROPERTY HAVE BEEN RECEIVED AND ACCEPTED, PAYMENTS SHALL BE TENDERED TO THE CONTRACTOR WITHIN FIVE (5) WORKING DAYS OF RECEIPT OF FUNDS FROM THAT FUNDING AGENCY.

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FINAL PAYMENTS SHALL BE MADE WITHIN THIRTY DAYS AFTER THE WORK HAS BEEN APPROVED AND ACCEPTED BY THE DEPARTMENT'S SECRETARY OR HIS DULY AUTHORIZED REPRESENTATIVE.

M006 VENDOR SHALL FURNISH NEW MEXICO CONTRACTORS LICENSE NUMBER WITH BID. N.M. CONTRACTORS LICENSE NO. GS-29 LICENSE NO.

ALL WORK SHALL BE PERFORMED DURING NORMAL WORKING HOURS, WEEKDAYS FROM 7:30 A.M. THRU 4:00 P.M.. NO WORK SHALL BE PERFORMED ON SATURDAYS, SUNDAYS, OR HOLIDAYS, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE NMSHTD. COORDINATION FOR ALL WORK PERFORMED WILL BE MADE BY CONTACTING THE STATE MAINTENANCE BUREAU, P.O. BOX 1149, SANTA FE, NM 87504-1149. (505) 827-5699.

VENDORS ARE REQUESTED TO INDICATE THEIR FEDERAL TAX ID, NM CRS OR SOCIAL SECURITY NUMBER

M008

M007

| **** | *******  | ******* | ******          | *****      | ******* | *** | *******  |
|------|----------|---------|-----------------|------------|---------|-----|----------|
| ITEM | *APPROX* | UNIT *  | ARTICLE         | *          | UNIT    | *   | CONTRACT |
|      | * QTY *  | *       | AND DESCRIPTION | *          | PRICE   | *   | VENDOR   |
| **** | ******** | ******  | ******          | ********** | ******* | *** | ******   |

0001 50.0 HOURLY PRINCIPAL -- GRADUATE SCIENCE DEGREE OR ENGINEERING DEGREE, PLUS FIVE (5) YEARS EXPERIENCE, OR AT LEAST TEN (10) YEARS EXPERIENCE IN INVESTIGATION AND REMEDIATION OF CONTAMINATION IN SOIL AND GROUND WATER. ADMINISTRATIVE AND/OR PROFESSIONAL HEAD OF ORGANIZATION. DIRECTS PROFESSIONAL STAFF. CHARGES A VERY LIMITED NUMBER OF HOURS PER SITE, AS IN REVIEW OF PROJECT DOCUMENTS.

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- 75.000000 (1)
- 120.000000 (4)
  - 40.000000 ( 7)
- 100.000000 ( 9)

0002 200.0 HOURLY SENIOR SCIENTIST/ENGINEER--SCIENCE OR ENGINEERING DEGREE AND AT LEAST THREE (3) YEARS APPLICABLE EXPERIENCE. PROFESSIONAL REGISTRATION WHEN APPLICABLE. SENIOR TECHNI-CAL LEADER. DEVELOPS TECHNICAL AND BUDGETARY APPROACH TO WORK ORDER. DUTIES INCLUDE AQUI-FER CHARACTERIZATION, REVIEW OF TECHNICAL REPORTS AND REMECIAL ACTION PLANS. SUPERVISE WORK ACTIVITIES OF LOWER LEVEL PROFESSIONAL STAFF. COORDINATES AND COMMUNICATES WITH AGENCY PERSONNEL AND CLIENT REGARDING CON-TRACTS, GENERAL DIRECTION AND PROBLEMS AT WORK SITE. GENERALLY PERFORMS LIMITED FIELD WORK. PERFORMS DESIGN AND INVESTIGATION WORK IN TECHNICALLY COMPLEX SITUATIONS.

75.000000 (1)

90.000000 (4)
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| **** | ******   | ****** | *****           | ****** | ******  | ******   |
|------|----------|--------|-----------------|--------|---------|----------|
| ITEM | *APPROX* | UNIT * | ARTICLE         | . *    | UNIT '  | CONTRACT |
|      | * QTY *  | *      | AND DESCRIPTION | . *    | PRICE   | VENDOR   |
| **** | *******  | ****** | *****           | ****** | ******* | ******   |

\*\* ITEM 0002 CONTINUED \*\*

75.000000 (7)

#### 75.000000 (9)

0003 200.0 HOURLY PROJECT SCIENTIST/ENGINEER/MANAGER--ENGINEERING, HYDROLOGY, GEOLOGY, OR A RELATED SCIENCE DEGREE AND AT LEAST TWO (2) YEARS APPLICABLE EXPERIENCE. INDENTIFIES PROBLEMS AND DEVELOPS INVESTIGATIVE AND REME-DIAL SOLUTIONS TO WORK SITE SITUATIONS. CON-SULTS WITH HIGHER LEVEL PROFESSIONAL STAFF. PREPARES WORKPLANS, COST ESTIMATES AND REPORTS. PERFORMS MODELING. ANALYZES AND INTERPRETS FIELD DATA. SUPERVISES LOWER LEVEL REMEDIATION ACTIVITIES. FREQUENTLY COMMUNICATES WITH AGENCY PERSONNEL AND NMED.

- 63.000000 (1)
- 70.000000 (4)
- 61.000000 (7)
- 60.000000 (9)

0004 800.0 HOURLY STAFF SCIENTIST/ENGINEER--ENGINEERING, GEOLOGY, HYDROLOGY OR RELATED SCIENCE DEGREE AND AT LEAST ONE YEAR EXPERIENCE. IMPLEMENTS FIELD WORK FOR ON-SITE INVESTI-GATION AND REMEDIATION ACTIVITIES INCLUDING SITE CHARACTERIZATION, DRILLING SUPERVISION,

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| **** | *** | * * * * * * | **** | * * * * | ******  | *********** | ******* | ******* | *** | *******  |
|------|-----|-------------|------|---------|---------|-------------|---------|---------|-----|----------|
| ITEM | *AJ | PPROX*      | UNIT | *       | ARTICLE |             | *       | UNIT    | *   | CONTRACT |
|      | *   | QTY *       | r    | *       | AND     | DESCRIPTION | *       | PRICE   | *   | VENDOR   |
| **** | *** | *****       | **** | ****    | ******  | *****       | ******* | ******* | *** | ******   |

\*\* ITEM 0004 CONTINUED \*\*

AND MONITORING WELL INSTALLATION AND SAMPLING ACTIVITIES. ASSISTS IN MODELING, HYDROGEO-LOGIC DATA ANALYSIS, AND REPORT PREPARATION. CONSULTS WITH HIGHER LEVEL PROFESSIONAL STAFF

57.000000 ( 1)

55.000000 (4)

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- 42.000000 (7)
- 50.000000 ( 9)

0005 1600.0 HOURLY FIELD TECHNICIAN II--SCIENCE OR ENGINEERING DEGREE, OR TWO (2) YEARS EXPERIENCE. SUPERVISES INSTALLATION, MAINTENANCE, AND REPAIR OF INVESTIGATIVE AND REMEDIATION MACHINERY AND EQUIPMENT. CONDUCT SAMPLING AND MONITORING. MAINTAINS MACHINERY AND EQUIPMENT.

- 42.000000 (1)
  - 50.000000 (4)
  - 32.000000 (7)

35.000000 (9)

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| ************************************** | * ARTICLE<br>* AND DESCRIPTION                                                                                                                                                                                              | *                                                                         | UNIT<br>PRICE                           | CON<br>VEN | VTRACT<br>VDOR |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------|------------|----------------|
| 0006 1600.0 HOURL                      | Y FIELD TECHNICIAN INO DEGREE<br>PERFORMS ASSIGNED FIELD WORK<br>LABOR TASKS. ASSISTS IN EQUI<br>TION AND MAINTENANCE. CONDUC<br>MONITORING. ASSISTS WITH FIE<br>OF SUBCONTRACTORS. THIS CATE<br>HEAVY EQUIPMENT OPERATORS. | REQUIRED<br>AND ROUTI<br>PMENT INS<br>TS SAMPLI<br>LD SUPERV<br>GORY INCL | NE<br>TALLA-<br>NG AND<br>ISION<br>UDES |            |                |
|                                        |                                                                                                                                                                                                                             |                                                                           | 40.000000                               | (          | 1)             |
|                                        |                                                                                                                                                                                                                             | 4                                                                         | 10.00000                                | . (        | 4)             |

24.000000 (7)

30.000000 ( 9)

0007 800.0 HOURLY DRAFTSPERSON II--TWO (2) YEARS SCHOOLING AND FIVE (5) YEARS EXPERIENCE, OR TEN (10) YEARS EXPERIENCE. TECHNICALLY FAMILIAR WITH BASIC ENGINEERING PRINCIPLES AND CONSTRUCTION METHODOLOGIES. WORKS INDEPEN-DENTLY; WORK PRODUCT REVIEWED BY PROFESSIONAL ENGINEER. PROFICIENT WITH AUTOCAD OR OTHER FORMS OF COMPUTER AIDED DESIGN DRAFTING.

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- 50.000000 (4)
- 38.000000 (7)

35.000000 ( 9)

<sup>40.000000 (1)</sup> 

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| *****<br>ITEM<br>***** | ***********<br>*APPROX* U<br>* QTY *<br>********** | NIT * ARTICLE<br>* AND DESCRIP                                                                                              | **************************************                                                                       | UNIT<br>PRICE               | * CO<br>* VE | NTRACT<br>NDOR |
|------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|--------------|----------------|
| 0008                   | 200.0 HO                                           | URLY DRAFTSPERSON ITW<br>OR ONE (1) YEAR RH<br>(1) YEAR EXPERIENC<br>A REGISTERED ENGIN<br>SOME COMPUTER-AIDH               | NO (2) YEARS EXPERI<br>ELATED COLLEGE AND<br>CE. WORKS DIRECTLY<br>NEER OR SCIENTIST.<br>ED DRAFTING SKILLS. | ENCE<br>ONE<br>UNDER<br>HAS |              |                |
|                        |                                                    |                                                                                                                             |                                                                                                              | 40.00000                    | (            | 1)             |
|                        |                                                    |                                                                                                                             |                                                                                                              | 35.000000                   | (            | 4)             |
|                        |                                                    |                                                                                                                             |                                                                                                              | 25.000000                   | а<br>(       | 7)             |
|                        |                                                    |                                                                                                                             |                                                                                                              | 30.000000                   | (            | 9)             |
| 0009                   | 100.0 HOU                                          | RLY ADMINISTRATORNO<br>TRACKS WORKPLAN CO<br>PROCESSES INVOICES<br>ORDERING OF EQUIPM<br>ADMINISTRATIVE WOR<br>PREPARATION. | DEGREE REQUIRED.<br>STS, PREPARES AND<br>, ADMINISTERS LEASI<br>ENT, AND PERFORMS G<br>K FOR REPORT AND WO   | NG AND<br>ENERAL<br>RKPLAN  |              |                |
|                        |                                                    |                                                                                                                             |                                                                                                              | 35.000000                   | (            | 1)             |
|                        |                                                    | :                                                                                                                           |                                                                                                              | 50.000000                   | (            | 4)             |
|                        |                                                    |                                                                                                                             |                                                                                                              | 32.000000                   | (            | 7)             |
|                        |                                                    |                                                                                                                             |                                                                                                              | 35.000000                   | (            | 9)             |
| 0010                   | 200.0 HOU                                          | RLY SECRETARYNO DEGRE<br>GENERAL OFFICE WORK                                                                                | E REQUIRED. PERFOR<br>, TYPING FILING, AN                                                                    | rms<br>1D                   |              |                |

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| ITEM | *APPROX*<br>* QTY * | UNIT  | * ;<br>*     | ARTICLE<br>AND | DESCRIPTIC | )N    | *                  | UNIT<br>PRICE | * CC<br>* VE | NTRACT |
|------|---------------------|-------|--------------|----------------|------------|-------|--------------------|---------------|--------------|--------|
| **** | ******              | ***** | ****         | ******         | *********  | ***** | ******             | *********     | ****         | *****  |
|      |                     |       | ** .         | LTEM OU.       |            |       | • • • • • •        |               |              |        |
|      |                     |       | BIDI<br>FRON | 0 ER TO 1      | INDICATE   | PRICE | ¥ DISCO<br>CATALOG | UNT           |              |        |
|      |                     |       | 0%           |                |            |       |                    |               |              |        |
|      |                     |       |              |                |            |       |                    |               | (            | 1)     |
|      |                     |       |              |                |            |       |                    |               |              |        |
|      |                     |       | 02 N         | ·/ ʌ           |            |       |                    | 20.000000     | (            | 4)     |
|      |                     |       | 03,14        | / 4            |            |       |                    |               | ÷ (          | 7)     |
|      |                     |       | AT C         | OST, 5%        |            |       |                    |               |              |        |
|      |                     |       |              |                |            |       |                    |               | (            | 9)     |
| 0018 | 50.0 E              | A/DAY | EXPL         | OSIMETE        | R          |       |                    |               |              |        |
|      |                     |       |              |                |            |       |                    |               |              |        |
|      |                     |       |              |                |            |       |                    | 5.000000      | . (          | 1)     |
|      |                     |       |              |                |            |       | ·                  |               |              |        |
|      |                     |       |              |                |            |       |                    | 5.000000      | (            | 4)     |
|      |                     | •     |              |                |            |       |                    |               |              |        |
|      |                     |       |              |                |            |       |                    | 10.000000     | (            | 7)     |
|      |                     |       | :            |                |            |       |                    | 40.00000      | t            | 9)     |
|      |                     |       |              |                |            |       |                    |               | · •          | -,     |

5.000000 (1)

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| ITEM *APPROX* UNIT * ARTICLE *<br>* QTY * * AND DESCRIPTION * | UNIT<br>PRICE | * CONTRACT<br>* VENDOR |
|---------------------------------------------------------------|---------------|------------------------|
| ** ITEM 0019 CONTINUED **                                     |               |                        |
|                                                               | 5.000000      | (4)                    |
|                                                               | 40.000000     | (7)                    |
| 0020 160.0 EA/DAY INTERFACE PROBE                             | 10.000000     | (9)                    |
|                                                               | 5.00000       | (1)                    |
|                                                               | 5.00000       | (4)                    |
|                                                               | 40.000000     | (7)                    |
| 0021 160.0 EA/DAY OVM (PID/FID)                               | 20.000000     | (9)                    |
| ••                                                            | 5.000000      | .(1)                   |
|                                                               | 25.000000     | (4)                    |
|                                                               | 45.000000     | (7)                    |

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| ITEM | *APPROX* UN<br>* QTY * | VIT * ARTICLE<br>* AND DESCRIPTION      | * UNIT *<br>* PRICE * | CONTRACT<br>VENDOR |
|------|------------------------|-----------------------------------------|-----------------------|--------------------|
|      |                        | ** ITEM 0021 CONTINUED **               |                       |                    |
|      |                        | ,                                       | 50.00000              | (9)                |
| 0022 | 160.0 EA/1             | DAY OXYGEN METER (AIR)                  |                       |                    |
|      |                        |                                         | 5.00000               | (1)                |
|      |                        |                                         | 5.000000              | 4 (4)              |
|      |                        |                                         | 20.00000              | (7)                |
| 0023 | 160.0 EA/D.            | AY PH METER                             | 60.00000              | (9)                |
|      |                        |                                         | 5.00000               | (1)                |
|      |                        | :                                       | 5.00000               | (4)                |
|      |                        | :                                       | 10.000000             | (7)                |
|      |                        |                                         | 10.00000              | (9)                |
| 0024 | 160.0 EA/DA            | Y ANEMOMETER, PORTABLE<br>NON-RECORDING |                       |                    |

### STATE OF NEW MEXICO GENERAL SERVICES DEPARTMENT 00-805-09-17658 PURCHASING DIVISION

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| ******<br>ITEM *<br>* | *******<br>APPROX*<br>QTY * | ******<br>UNIT | * * * * *   | ARTICLE<br>AND DESCRIP           | PTION           | ******* | UNIT<br>PRICE | * * * *<br>* CC<br>* VE | NTRACT |
|-----------------------|-----------------------------|----------------|-------------|----------------------------------|-----------------|---------|---------------|-------------------------|--------|
|                       |                             |                | **          | ITEM 0024 CONT                   | INUED **        |         |               |                         |        |
|                       |                             |                |             |                                  |                 |         | 5.000000      | (                       | 1)     |
|                       |                             |                |             |                                  |                 |         | 5.000000      | (                       | 4)     |
|                       |                             |                |             |                                  |                 |         | 40.000000     | (                       | 7)     |
| 0025                  | 50 0 5                      | יא רח/ הי      | 83.01       |                                  | 7 ITD 51 - 60   |         | 50.000000     | . (                     | 9)     |
| 0023                  | 50.0 E                      | a/ day         | DIG         | DEPTH 12'-18'                    | 5"<br>5         |         |               |                         |        |
|                       |                             |                |             |                                  |                 |         | 120.000000    | (                       | 1)     |
|                       |                             |                |             |                                  |                 |         | 120.000000    | (                       | 4)     |
|                       |                             |                |             |                                  |                 |         | 120.000000    | (                       | 7)     |
| 0026                  | 20.0                        |                |             |                                  |                 |         | 150.000000    | (                       | 9)     |
|                       | 20.0 E1                     | a/ day         | MACK<br>DIG | HOL-MEDIUM DUT<br>DEPTH 14'-19'8 | 1 HF 63-75<br>" |         |               | • •                     |        |
|                       |                             |                |             |                                  |                 |         | 157.000000    | (                       | 1)     |

157.500000 (4)

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| ******<br>ITEM *<br>****** | APPROX*<br>QTY * | "*****<br>UNIT | * * * * *<br>*<br>* | ARTICLE<br>AND D      | ********<br>ESCRIPTI<br>******* | ********<br>ON<br>******* | *******<br>*<br>* | UNIT<br>PRICE | * * * * * * * * * * C(<br>* V] | NTRACT |
|----------------------------|------------------|----------------|---------------------|-----------------------|---------------------------------|---------------------------|-------------------|---------------|--------------------------------|--------|
|                            |                  |                | **                  | ITEM 002              | 5 CONTIN                        | JED **                    |                   |               |                                |        |
|                            |                  |                |                     |                       |                                 | ÷                         |                   | 157.000000    | (                              | 7)     |
|                            |                  |                |                     |                       |                                 |                           |                   | 200.000000    | (                              | 9)     |
| 0027                       | 20.0 E           | a/day          | BACH<br>DIG         | KHOE-HEAV<br>DEPTH 17 | Y DUTY,<br>'-21'                | HP 95-11                  | 5                 |               |                                |        |
|                            |                  |                |                     |                       |                                 |                           |                   | 157.000000    | 4 (                            | 1)     |
|                            |                  |                |                     |                       |                                 |                           |                   | 157.500000    | (                              | 4)     |
|                            |                  |                |                     |                       |                                 |                           |                   | 157.000000    | (                              | 7)     |
| 0029                       | 20 0 57          | , זי זי איני   |                     |                       |                                 |                           |                   | 300.000000    | (                              | 9)     |
| 0028                       | 20.0 EF          | YDAY<br>S      | 95-10               | DOHP: DIG             | DEPTH 2                         | (TRACK<br>0'-22'          | EXCAVAT           | OR)           |                                |        |
|                            |                  |                | :                   |                       |                                 |                           |                   | 400.000000    | (                              | 1)     |
|                            |                  |                | :                   |                       |                                 |                           |                   | 221.000000    | . (                            | 4)     |
|                            |                  |                |                     |                       |                                 |                           |                   | 400.000000    | (                              | 7)     |
|                            |                  |                |                     |                       |                                 |                           |                   | 350.000000    | (                              | 9)     |

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| *****<br>ITEM<br>***** | *APPROX* UNIT * ARTICLE *<br>* QTY * * AND DESCRIPTION *         | UNIT<br>PRICE | * * * *<br>* CO<br>* VE | ******<br>NTRACT<br>NDOR |
|------------------------|------------------------------------------------------------------|---------------|-------------------------|--------------------------|
| 0029                   | 20.0 EA/DAY TRACKHOE MEDIUM DUTY, 150-155HP<br>DIG DEPTH 24'-26' |               |                         |                          |
|                        |                                                                  | 550.000000    | (                       | 1)                       |
|                        |                                                                  | 476.000000    | (                       | 4)                       |
|                        |                                                                  | 550.000000    | (                       | 7)                       |
| 0030                   | 20.0 EA/DAY TRACKHOE HEAVY DUTY, 195-200HP<br>DIG DEPTH OVER 26' | 500.000000    | . (                     | 9)                       |
|                        |                                                                  | 550.000000    | (                       | 1)                       |
|                        |                                                                  | 600.000000    | (                       | 4)                       |
|                        |                                                                  | 550.000000    | (                       | 7)                       |
| 0031                   | 100.0 FT. 2" BLANK PVC, 10 FT. SECTIONS                          | 800.000000    | (                       | 9)                       |
|                        |                                                                  | 15.500000     | (                       | 1)                       |
|                        |                                                                  | 15.000000     | (                       | 4)                       |

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| ITEM  | *APPROX* UNIT<br>* QTY * | * 2<br>* | ARTICI<br>ANI                           | le<br>D des | SCRIPTION      | *<br>, * | UNIT<br>PRICE | * CC<br>* VE | NTRACT |
|-------|--------------------------|----------|-----------------------------------------|-------------|----------------|----------|---------------|--------------|--------|
| ***** | *****                    | *****    | *****                                   | ****        | ******         | ******   | *****         | ****         | *****  |
|       |                          | ** ]     | TEM O                                   | 031         | CONTINUED **   |          |               |              |        |
|       |                          |          |                                         |             |                |          | 14.610000     | (            | 7)     |
|       |                          |          |                                         |             |                |          | 1.500000      | (            | 9)     |
| 0032  | 100.0 FT.                | 4" B     | LANK I                                  | PVC,        | 10 FT. SECTION | S        |               |              |        |
|       |                          |          |                                         |             |                |          | 33.000000     | · (          | 1)     |
|       |                          |          |                                         |             |                |          | 32.500000     | (            | 4)     |
|       |                          |          |                                         |             |                |          | 33.150000     |              | 7)     |
| 0033  | 100.0 FT.                | 2" SC    | RFEN.                                   | 10          | FT. SECTIONS   | :        | 4.000000      | (            | 9)     |
|       |                          | 2 00     | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 10          |                |          |               |              |        |
|       |                          | :        |                                         |             |                |          | 24.000000     | (            | 1)     |
|       |                          | :        |                                         |             |                |          | 22.250000     | (            | 4)     |
|       |                          |          |                                         |             |                |          | 26.170000     | (            | 7)     |
|       |                          |          |                                         |             |                |          | 2.800000      | (            | 9)     |

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| *****<br>ITEM<br>***** | ************************************** | * ARTICLE<br>* AND DESCRIPTION   | * UNIT<br>* PRICE | CONTRACT |
|------------------------|----------------------------------------|----------------------------------|-------------------|----------|
| 0034                   | 100.0 FT.                              | 4" SCREEN, 10 FT. SECTIONS       |                   |          |
|                        |                                        |                                  | 57.000000         | (1)      |
|                        |                                        |                                  | 56.500000         | (4)      |
|                        |                                        |                                  | 55.050000         | (7)      |
| 0035                   | 500.0 SACK                             | FILTER PACK SAND PER 100# SACK   | 6.800000          | (9)      |
|                        |                                        |                                  | 6.60000           | (1)      |
|                        |                                        |                                  | 13.200000         | ( 4)     |
|                        |                                        | ÷                                | 5.820000          | (7)      |
| 0036                   | 500.0 EA.                              | BENTONITE PELLETS PER 50# BUCKET | 8.290000          | (9)      |
|                        |                                        |                                  | 30.00000          | (1)      |

37.850000 ( 4)

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| ITEM | *APPROX* UI<br>* QTY * | NIT * ARTICLE<br>* AND DESCRIPTION | *<br>* | UNIT<br>PRICE | * CONTRACT<br>* VENDOR |
|------|------------------------|------------------------------------|--------|---------------|------------------------|
| ~~~~ |                        | ***********                        | *****  | ****          | ******                 |
|      |                        | ** ITEM 0036 CONTINUED **          |        |               |                        |
|      |                        |                                    |        |               |                        |
|      |                        | ,<br>,                             |        | 27.000000     | (7)                    |
|      |                        |                                    |        |               | ( ))                   |
|      |                        | JUH BUCKET                         |        |               |                        |
|      |                        |                                    |        | 46.750000     | (9)                    |
| 0037 | 500.0 EA.              | BENTONITE CHIPS PER 50# SACK       |        |               |                        |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        | 6.600000      | ( 1)                   |
|      |                        | •                                  |        |               |                        |
|      |                        |                                    |        | 8.100000      | (4)                    |
|      |                        |                                    |        |               | -                      |
|      |                        |                                    |        | C 100000      |                        |
|      |                        |                                    |        | 8.100000      | ( /)                   |
|      |                        | PER 50# SACK                       |        |               |                        |
|      |                        |                                    | •      | 8.500000      | (9)                    |
| 0038 | 50.0 EA.               | 8" MANHOLE                         |        |               |                        |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        | 50.000000     | (1)                    |
|      |                        |                                    |        |               |                        |
|      |                        | •                                  |        | 42.000000     | (4)                    |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        |               | <i>·</i>               |
|      |                        |                                    |        | 4/.00000      | (7)                    |
|      |                        |                                    |        |               |                        |
|      |                        |                                    |        | 50.000000     | (9)                    |
|      |                        |                                    |        |               |                        |

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| ITEM | APPROX* UNI:<br>* QTY * | F * ARTICLE<br>* AND DESCRIPTION | * * * | UNIT<br>PRICE | CONTRACT |
|------|-------------------------|----------------------------------|-------|---------------|----------|
| 0039 | 50.0 EA.                | 12" MANHOLE                      |       |               |          |
|      |                         |                                  |       | 65.000000     | (1)      |
|      |                         |                                  |       | 68.900000     | (4)      |
|      |                         |                                  |       | 59.900000     | (7)      |
| 0040 | 10000.0 EA.             | COPIES; EACH/PAGE                |       | 72.250000     | (9)      |
|      |                         |                                  |       | 0.050000      | (1)      |
|      |                         |                                  |       | 0.050000      | (4)      |
|      |                         | PAGE                             |       |               | (7)      |
| 0041 | 500.0 EA.               | FAX TRANSMISSION; EACH/PAGE      |       | 0.050000      | (9)      |
|      |                         |                                  |       |               | (1)      |
|      |                         |                                  |       | 0.100000      | (4)      |

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| ****<br>ITEM | *APPROX* UNIX<br>* QTY * | F * ARTICLE<br>* AND DESCRIPTION | * UNIT<br>* PRICE | ***********<br>* CONTRACT<br>* VENDOR |
|--------------|--------------------------|----------------------------------|-------------------|---------------------------------------|
|              |                          | ** ITEM 0041 CONTINUED **        |                   |                                       |
|              |                          | DACE                             | н<br>             | (7)                                   |
|              |                          | FAGL                             | 0.100000          | (9)                                   |
| 0042         | MILE                     | MILEAGE-                         |                   |                                       |
|              |                          | PERSONAL VEHICLE MILEAGE         |                   |                                       |
|              |                          |                                  | 0.250000          | (1)                                   |
|              |                          |                                  | 0.250000          | (4)                                   |
|              |                          |                                  | 0.320000          | (7)                                   |
|              |                          |                                  | 0.300000          | (9)                                   |
| 0043         | 100.0 EA.                | PER DIEM/OVERNIGHT               |                   |                                       |
|              |                          |                                  |                   |                                       |
|              |                          |                                  | 60.000000         | (1)                                   |
|              |                          | :                                |                   |                                       |
|              |                          |                                  | 60.000000         | (4)                                   |
|              |                          |                                  | 75.000000         | (7)                                   |
|              |                          |                                  |                   | (9)                                   |

| · ·          |                          | STATE OF NEW MEXICO<br>GLNERAL SERVICES DEPARTMENT<br>PURCHASING DIVISION                    | 00-805-09-17658<br>PAGE 33 |                        |  |  |
|--------------|--------------------------|----------------------------------------------------------------------------------------------|----------------------------|------------------------|--|--|
| ****<br>ITEM | *APPROX* UNIT<br>* QTY * | * ARTICLE *<br>* AND DESCRIPTION *                                                           | UNIT<br>PRICE              | * CONTRACT<br>* VENDOR |  |  |
| 0044         | 50.0 BARREI              | L DISPOSAL OF CONTAMINATED FLUIDS AT<br>LOCAL CERTIFIED FACILITIES<br>FOB DISPOSAL FACILITY. | *******                    | *****                  |  |  |
|              |                          |                                                                                              | 115.000000                 | (1)                    |  |  |
|              |                          |                                                                                              | 150.000000                 | (4)                    |  |  |
|              |                          |                                                                                              | 100.000000                 | (7)                    |  |  |
| 0045         | 50.0 BARREL              | DISPOSAL OF CONTAMINATED SOILS AT<br>LOCAL, DERTIFIED FACILITIES.                            | 120.000000                 | (9)                    |  |  |
|              |                          | PER BARREL, FOB DISPOSAL FACILITY                                                            | 115.000000                 | (1)                    |  |  |
|              |                          |                                                                                              | 150.000000                 | (4)                    |  |  |
|              |                          | :                                                                                            | 100.000000                 | (7)                    |  |  |
| 0046         | 100.0 HOUR               | :<br>SITE SURVEYING                                                                          | 120.000000                 | (9)                    |  |  |
|              |                          |                                                                                              |                            |                        |  |  |

57.000000 (1)

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| ************************************** | )X* UNIT<br>. * | **************************************                                                                                                      | UNIT<br>PRICE | CONTRACT<br>VENDOR |
|----------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------------|
|                                        |                 | ** ITEM 0046 CONTINUED **                                                                                                                   |               |                    |
|                                        |                 |                                                                                                                                             | 75.000000     | (4)                |
|                                        |                 |                                                                                                                                             | 85.000000     | (7)                |
| 0047 50000 0                           |                 | MORIIIZATION. MILE WETTE WITT                                                                                                               | 80.000000     | (9)                |
| 0047 30000.0                           |                 | MINIMUM MOBILIZATION<br>DRILL RIG (MEDIUM)                                                                                                  | •             |                    |
|                                        |                 |                                                                                                                                             | 0.750000      | (1)                |
|                                        |                 |                                                                                                                                             | 0.150000      | ( 4)               |
|                                        |                 | ·. ·                                                                                                                                        | 2.500000      | (7)                |
|                                        |                 |                                                                                                                                             | 1.000000      | (9)                |
| .0048                                  | FOOT            | HOLLOW-STEM AUGER DRILLING SERVICES<br>(2-3 MAN CREW) SMALL TO MEDIUM RIGS<br>(CME 55 OR 75 OR EQUIVALENT)<br>TO BE INDICATED RATE PER FOOT |               |                    |
|                                        |                 | BASED ON A 2" MONITOR WELL                                                                                                                  |               |                    |
|                                        |                 |                                                                                                                                             | 20.000000     | (1)                |

13.000000 (4)

#### STATE OF NEW MEXICO . GENERAL SERVICES DEPARTMENT O0-805-09-17658 PURCHASING DIVISION PAGE 35

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| *****<br>ITEM | *APPROX* UNIT<br>* QTY * | * ARTICLE *<br>* AND DESCRIPTION *                                                                | UNIT<br>PRICE | * CO<br>* VE | NTRACT<br>NDOR |
|---------------|--------------------------|---------------------------------------------------------------------------------------------------|---------------|--------------|----------------|
|               |                          | ** ITEM 0048 CONTINUED **                                                                         |               |              |                |
|               |                          | · · · · · ·                                                                                       | 8.00000       | (            | 7)             |
|               |                          | \$100.00                                                                                          |               |              |                |
|               |                          |                                                                                                   | 13.000000     | (            | 9)             |
| 0049          | FOOT                     | HOLLOW-STEM AUGER DRILLING SERVICES:<br>(2-3 MAN CREW) LARGE RIGS (FAILING<br>F-10 OR EQUIVALENT) |               |              |                |
|               |                          | TO BE INDICATED RATE PER FOOT<br>BASED ON A 4" MONITOR WELL                                       |               |              |                |
|               |                          |                                                                                                   | 34 000000     | ,            | • 1            |
|               | ·                        |                                                                                                   | 34.000000     | (            | ±/             |
|               |                          | \$35.00                                                                                           |               | _            |                |
|               |                          |                                                                                                   | 12.000000     | (            | 4)             |
|               |                          |                                                                                                   | 10.000000     | (            | 7}             |
|               |                          | \$150/HOUR                                                                                        |               |              |                |
|               |                          |                                                                                                   | 19.000000     | (            | 9)             |
| 0050          | 500.0 HOUR               | AIR ROTARY                                                                                        |               |              |                |
|               |                          |                                                                                                   | ·             |              |                |
|               |                          | •                                                                                                 | 230 00000     | 1            | 7)             |
|               |                          |                                                                                                   | 230.000000    | . (          | - /            |
|               |                          |                                                                                                   | 140.000000    | (            | 4)             |
|               |                          |                                                                                                   |               |              |                |
|               |                          |                                                                                                   | 150.000000    | (            | 7)             |
|               |                          |                                                                                                   |               |              |                |

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| *****<br>ITEM | *APPROX* UNI1<br>* QTY * | ARTICLE * ARTICLE * AND DESCRIPTION *              | UNIT<br>PRICE | * CONTRACT<br>* VENDOR |
|---------------|--------------------------|----------------------------------------------------|---------------|------------------------|
|               |                          | ** ITEM 0050 CONTINUED **                          |               |                        |
| 0051          | 2000 0 57                | <b>60</b> 771/2                                    | 170.000000    | (9)                    |
| 0031          |                          | MATERIALS TO BE CORED-THROUGH ARE<br>SITE SPECIFIC |               |                        |
|               |                          |                                                    | 21.000000     | (1)                    |
|               |                          |                                                    | 21.000000     | (4)                    |
|               |                          |                                                    | 50.000000     | (7)                    |
| 0052          | 50.0 DAY                 | WATER TRUCK                                        | 12.000000     | . (9)                  |
|               |                          |                                                    |               |                        |
|               |                          | :                                                  | 125.000000    | (1)                    |
|               |                          | •                                                  | 100.000000    | (4)                    |
|               |                          |                                                    | 150.000000    | (7)                    |
|               |                          |                                                    | 100.000000    | (9)                    |

| · • •                 |                       | STATE OF NEW MEXICO<br>GENERAL SERVICES DEPARTMENT<br>PURCHASING DIVISION | 00-805-09-<br>PAGE | 17658<br>37                      |
|-----------------------|-----------------------|---------------------------------------------------------------------------|--------------------|----------------------------------|
| ******<br>ITEM *<br>* | APPROX* UNIT<br>QTY * | ************************************                                      | UNIT<br>PRICE      | * CONTRACT<br>* VENDOR<br>* **** |
| 0053                  | 50.0 DAY              | PICKUP TRUCK<br>2" WELL CORING                                            |                    |                                  |
|                       |                       |                                                                           | 50.000000          | (1)                              |
|                       |                       |                                                                           | 50.000000          | (4)                              |
|                       |                       |                                                                           | 45.000000          | (7)                              |
| 0054                  | 50.0 DAY              | STEAM CLEANER<br>2" WELL CORING                                           | 50.000000          | (9)                              |
|                       |                       |                                                                           | 90.000000          | (1)                              |
|                       |                       | :                                                                         | 90.00000           | (4)                              |
|                       |                       |                                                                           | 45.000000          | (7)                              |
| 0055 .                | HOURLY                | STANDBY TIME-<br>TO BE BASED ON STANDARD DRILL CREW                       | 50.000000<br>TIME  | (9)                              |
|                       |                       |                                                                           | 100.000000         | (1)                              |

100.000000 (4)

|                     |                            | STATE<br>GENERAL<br>PURC               | OF NEW MEXICO<br>SERVICES DEPARTM<br>HASING DIVISION | ENT          | 00-805-09-<br>PAGE   | 1765<br>3      | 8               |
|---------------------|----------------------------|----------------------------------------|------------------------------------------------------|--------------|----------------------|----------------|-----------------|
| *******<br>ITEM *AI | ***********<br>PPROX* UNIT | ************************************** | *****                                                | ******       | ************<br>UNIT | ****<br>* COI  | *****<br>NTRACT |
| *                   | QTY *<br>********          | *                                      | ESCRIPTION<br>***************                        | *<br>******* | PRICE                | * VE1<br>***** | NDOR            |
|                     |                            | ** ITEM 005                            | 5 CONTINUED **                                       |              |                      |                |                 |
|                     |                            |                                        | ,                                                    |              | 70.000000            | (              | 7}              |
|                     |                            |                                        |                                                      |              | 100.000000           | (              | 9)              |
| 0056                | °.<br>T                    | SYSTEM SERVI                           | CES: REPLACEMENT                                     | PARTS;       |                      |                |                 |
|                     |                            | IE;                                    |                                                      |              |                      |                |                 |
|                     |                            | EXTRACTION B 200 CFM                   | LOWER % DIS                                          | SCOUNT       |                      |                |                 |
|                     |                            | 08                                     |                                                      |              |                      |                |                 |
|                     |                            |                                        |                                                      |              |                      | (              | 1)              |
|                     |                            | 10%                                    |                                                      |              |                      |                |                 |
|                     |                            |                                        |                                                      |              |                      | (              | 4)              |
|                     |                            | AT COST                                |                                                      |              |                      |                |                 |
|                     |                            |                                        |                                                      | :            |                      | (              | 7)              |
|                     |                            | AT COST, 5%                            |                                                      |              |                      |                |                 |
|                     |                            |                                        |                                                      |              |                      | (              | 9)              |
| 0057                | PER                        | LEVEL B PROTE<br>PER WORKER/PE         | ECTION SUIT-<br>ER DAY                               |              |                      |                |                 |
|                     |                            | :                                      | ;<br>;<br>;                                          |              | 200.000000           | (              | 1)              |
|                     |                            |                                        | •<br>•                                               |              | 150.000000           | (              | 4)              |
|                     |                            |                                        |                                                      |              | 100.000000           | (              | 7)              |

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STATE OF NEW MEXICO GENERAL SERVICES DEPARTMENT O0-805-09-17658 PURCHASING DIVISION

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| TTTTM | ********* | יאאאאיז<br>זהאזדיתי אי |                 | *        | ********* |            |
|-------|-----------|------------------------|-----------------|----------|-----------|------------|
| TTCM  | "AFFRUA"  | ONTI -                 | ARIICLE         | -        | ONTI      | ~ CONTRACT |
|       | * QTY *   | *                      | AND DESCRIPTION | *        | PRICE     | * VENDOR   |
| ****  | ******    | *****                  | ******          | ******** | ******    | *****      |

\*\* ITEM 0057 CONTINUED \*\*

500.000000 ( 9)

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57 ITEM(S), 57 AWARDED \*\*\*\*

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### Kieling, Martyne

From: Sent: To: Subject: Kieling, Martyne Wednesday, June 05, 2002 3:36 PM Williams, Chris RE: Agua well plugging

#### sounds good !

From:Williams, ChrisSent:Wednesday, June 05, 2002 12:06 PMTo:Kieling, MartyneSubject:RE: Agua well plugging

Yes- They have to start on the well package before July 15. I think we can put the Agua well to the last. Which should be after AMEC is complete.

-----Original Message-----From: Kieling, Martyne Sent: Wednesday, June 05, 2002 12:11 PM To: Williams, Chris Subject: RE: Agua well plugging

Chris,

Thanks for the Information. AMEC just started on Tuesday they have scheduled 6 weeks on site with the week of the 4th of July off. Just so your drillers are not hindered by the AMEC crew I would suggest that they dont start on the Agua well untill July 22 or so. Will that work or are there contract deadlines to consider?

Martyne

-----Original Message-----From: Williams, Chris Sent: Wednesday, June 05, 2002 6:28 AM To: Kieling, Martyne Subject: Agua well plugging

The well is not plugged . We are waiting on pluggers. They probably won't begin until the later part of June or early July. Chris

#### Kieling, Martyne

From:Kieling, MartyneSent:Wednesday, June 05, 2002 11:16 AMTo:Coss, DavidCc:Meyers, Myra; Norwick, Jim; Anderson, LeonSubject:RE: Goodwin Treating plant

We will check in with your Hobbs district office . Thanks

Martyne (505)-476-3488

-----Original Message-----

| From:    | Coss, David                                |
|----------|--------------------------------------------|
| Sent:    | Wednesday, June 05, 2002 7:02 AM           |
| To:      | Kieling, Martyne                           |
| Cc:      | Meyers, Myra; Norwick, Jim; Anderson, Leon |
| Subject: | RE: Goodwin Treating plant                 |

Martyne, please have the contractor or Larry Johnson check with Leon Anderson or Myra Meyers in our Hobbs office regarding the fencing question. They can contact our grazing lessee to discuss the issue. I'm ok with waiting to build the fence if our district staff have discussed it with the lessee and they are in the loop.

-----Original Message-----From: Kieling, Martyne Sent: Tuesday, June 04, 2002 4:45 PM To: Coss, David Subject: Goodwin Treating plant

David,

Amec has begun work at the Goodwin Treating Plant today. I was unable to make it down there this week to check on the progress. However, our district environmental guy Larry Johnson has been out to look at the work. The contractors have already dug down 12 feet in the pit that was in the Northwest corner and are removing existing contaminated soil piled up from the previous operations last summer to an offsite landfarm. They are also planning on how to lay out the fencing for the compost area and an access road for the trucks.

I do want to let you know that we have not yet received a signed copy of the access agreement. We are proceeding with the work in hopes that the agreement will show up soon. For your benefit... the Agreement was signed by us on April 15, 2002, it was then returned to us yesterday for a correction and I then sent it back to Debra Padilla corrected yesterday.

We do have one question regarding the fencing of the additional acres north of the facility. Should the contractors place the fencing and then build the compost piles within or can they wait and see how much area is going to be need and fence it after the piles have been constructed? There are cattle on the outside acres surrounding the facility. We could save money waiting to see how much area is needed ... but we may end up with an upset rancher. Which would you prefer?

Thanks for you help.

Martyne J. Kieling

Martyne J. Kieling Environmental Geologist 6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H Lubbock, Texas 79424 El Paso, Texas 79932 El Paso 7944 El Paso 7944 El Paso 7944

| Bill To: OCD Hot<br>1625 N. F<br>Hobbs, N |                  | Hobbs Office<br>N. French Drive<br>ps, NM 88240 |        | RECEIVED                                    | Invoice #          | <b>55052</b><br>Sep 16, 2002 |  |
|-------------------------------------------|------------------|-------------------------------------------------|--------|---------------------------------------------|--------------------|------------------------------|--|
| Attn:                                     | Larry Johr       | Larry Johnson                                   |        | vironmental Bureau<br>Conservation Division | Order ID:          | A02091319                    |  |
| • .                                       | , ÷              |                                                 |        |                                             |                    |                              |  |
| Project #:                                |                  | 251700005                                       | 1 .    | ······································      |                    |                              |  |
| Project Name                              | :                | Goodwinn                                        | •      | P.A.# 20-521-07                             | -02497             |                              |  |
| Project Locati                            | on:              | West of Ho                                      | bbs NM | ·                                           |                    |                              |  |
| Test                                      | · · · ·          | Quantity                                        | Matrix | Description                                 | Price              | SubTotal                     |  |
| TPH DRO                                   | •                | 5                                               | Soil   | 207897 - 20790                              | 91 \$40.00         | \$200.00                     |  |
| BIEX/IPH GR                               | u<br>ment Terms: | 5<br>                                           | 501    | 207897 - 20790                              | л \$60.00<br>Таба! | \$300.00                     |  |

Director, Dr. Blair Leftwich





| TraceAnalysis, In                                          | c. 0701 .                               | Aberdeen Ave., Suite 9                           | LUDDOC                                                            | K, FX 79424-1010 | (000) 794-1290                          |
|------------------------------------------------------------|-----------------------------------------|--------------------------------------------------|-------------------------------------------------------------------|------------------|-----------------------------------------|
| Report Date: Sep<br>2517000051                             | tember 18, 2002O                        | rder Number: A02091319<br>Goodwinn               |                                                                   |                  | Page Number: 1 of 1<br>West of Hobbs NM |
|                                                            |                                         | Summary 1                                        | Report                                                            |                  |                                         |
| Bob Wilcox                                                 |                                         | RECEIVE                                          | D                                                                 | Report Date:     | September 18, 2002                      |
| AMEC<br>301 N. Colorado St Suite 350<br>Midland, Tx. 79701 |                                         | OCT 2 1 2<br>Environmental E<br>Oil Conservation | OCT 2 1 2002<br>Environmental Bureau<br>Oil Conservation Division |                  | A02091319                               |
| Project Number:<br>Project Name:<br>Project Location:      | 2517000051<br>Goodwinn<br>West of Hobbs | NM                                               |                                                                   |                  | · · · · · · · · · · · · · · · · · · ·   |
|                                                            |                                         |                                                  | ·····                                                             |                  | 8                                       |
| a 1                                                        | <b>~</b> • • •                          |                                                  | Date                                                              | Time             | Date                                    |
| Sample                                                     | Description                             | Matrix                                           | Taken                                                             | Taken            | Received                                |
| 207897                                                     | 091102-01                               | Soil                                             | 9/11/02                                                           | 16:05            | 9/13/02                                 |
| 207898                                                     | 091102-02                               | Soil                                             | 9/11/02                                                           | 16:10            | 9/13/02                                 |
| 207899                                                     | 091102-03                               | Soil                                             | 9/11/02                                                           | 16:15            | 9/13/02                                 |
| 207900                                                     | 091102-04                               | Soil                                             | 9/11/02                                                           | 16:20            | 9/13/02                                 |
| 207901                                                     | 091102-05                               | Soil                                             | 9/11/02                                                           | 16:25            | 9/13/02                                 |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

| , , , , , , , , , , , , , , , , , , , |         |         | BTEX         |              | TPH DRO    | TPH GRO |       |
|---------------------------------------|---------|---------|--------------|--------------|------------|---------|-------|
|                                       | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO   |
| Sample - Field Code                   | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm) |
| 207897 - 091102-01                    | < 0.010 | 0.0104  | 0.0425       | 0.0687       | 0.122      | 393     | 18.2  |
| 207898 - 091102-02                    | <0.010  | <0.010  | 0.0262       | 0.061        | 0.0872     | 210     | 13.6  |
| 207899 - 091102-03                    | < 0.010 | <0.010  | 0.0138       | 0.0468       | 0.0606     | 526     | 9.37  |
| 207900 - 091102-04                    | <0.010  | <0.010  | 0.0158       | 0.0484       | 0.0642     | 298     | 12.3  |
| 207901 - 091102-05                    | <0.010  | <0.010  | 0.0227       | 0.0346       | 0.0573     | 1040    | 15.5  |

This is only a summary. Please, refer to the complete report package for quality control data.



|                                             |                          | E-Mail: la             | b@traceanalysis.com                                      | 5=3443 FAX 915=585=49       | 98<br>44                        |
|---------------------------------------------|--------------------------|------------------------|----------------------------------------------------------|-----------------------------|---------------------------------|
| Bill To:                                    | OCD                      |                        |                                                          | Invoice #                   | 53950                           |
|                                             | 1220 S. Saint Francis Dr |                        |                                                          |                             |                                 |
|                                             | Santa Fe, NM 87505       |                        |                                                          | Invoice Date:               | Sep 11, 2002                    |
| Attn:                                       | Wayne Price              |                        |                                                          | Order ID:                   | A02071508                       |
| Project #:                                  | 2-517-0000               | )51                    |                                                          |                             |                                 |
| Project Nam                                 | e: Goodwin 1             | reating Plant          | t                                                        |                             |                                 |
|                                             | tion: 8 Miles We         | st of Hobbs,           | NM                                                       |                             |                                 |
| Project Loca                                |                          |                        |                                                          |                             |                                 |
| Project Loca<br>Test                        | Quantity                 | Matrix                 | Description                                              | Price                       | SubTotal                        |
| Project Loca<br>Test                        | Quantity                 | <b>Matrix</b><br>Soil  | <b>Description</b><br>201543 - 201548                    | Price<br>\$40.00            | SubTotal                        |
| Project Loca<br>Test<br>TPH DRO<br>Chloride | Quantity<br>6<br>1       | Matrix<br>Soil<br>Soil | <b>Description</b><br>201543 - 201548<br>201548 - 201548 | Price<br>\$40.00<br>\$15.00 | SubTotal<br>\$240.00<br>\$15.00 |

Director, Dr. Blair Leftwich

0K to Pay Myk 9-11-02

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**TRACEANALYSIS** 



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### Analytical and Quality Control Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240 Report Date:

July 29, 2002

Order ID Number: A02071508

Project Number:2-517-000051Project Name:Goodwin Treating PlantProject Location:8 Miles West of Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 201543 | 071202-21   | Soil   | 7/12/02 | 9:06  | 7/13/02  |
| 201544 | 071202-16   | Soil   | 7/12/02 | 9:18  | 7/13/02  |
| 201545 | 071202-35   | Soil   | 7/12/02 | 9:45  | 7/13/02  |
| 201546 | 071202-36   | Soil   | 7/12/02 | 10:00 | 7/13/02  |
| 201547 | 071202-37   | Soil   | 7/12/02 | 10:15 | 7/13/02  |
| 201548 | 071202-38   | Soil   | 7/12/02 | 10:56 | 7/13/02  |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.



TraceAnalysis, Inc.

Martyne Kieling

OCD Hobbs Office 1625 N. French Drive 6701 A deen Ave., Suite 9

Lubbock, TX 124-1515

(806) 794-1296

Report Date: July 29, 2002Order Number: A02071508 2-517-000051 Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

## Summary Report

Report Date:

July 29, 2002

Order ID Number: A02071508

Hobbs, NM 88240 Project Number: 2-517-000051 Project Location: 8 Miles West of Hobbs, NM

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 201543 | 071202-21   | Soil   | 7/12/02 | 9:06  | 7/13/02  |
| 201544 | 071202-16   | Soil   | 7/12/02 | 9:18  | 7/13/02  |
| 201545 | 071202-35   | Soil   | 7/12/02 | 9:45  | 7/13/02  |
| 201546 | 071202-36   | Soil   | 7/12/02 | 10:00 | 7/13/02  |
| 201547 | 071202-37   | Soil   | 7/12/02 | 10:15 | 7/13/02  |
| 201548 | 071202-38   | Soil   | 7/12/02 | 10:56 | 7/13/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         |              | TPH DRO    | TPH GRO |       |
|---------------------|---------|---------|--------------|--------------|------------|---------|-------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO   |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm) |
| 201543 - 071202-21  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0   | <1.00 |
| 201544 - 071202-16  | < 0.010 | < 0.010 | < 0.010      | 0.0107       | 0.0107     | <50.0   | <1    |
| 201545 - 071202-35  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50     | <1.00 |
| 201546 - 071202-36  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0   | <1    |
| 201547 - 071202-37  | <0.010  | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0   | <1    |
| 201548 - 071202-38  | <0.010  | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0   | <1    |

| Sample: 201548 | - 071202-38 |        | 02021222324 253623<br>02021222324 253623<br>02021222324 253623<br>02021222324 253623 |
|----------------|-------------|--------|--------------------------------------------------------------------------------------|
| Param          | Flag        | Result | (9 St Units                                                                          |
| Chloride       | 1           | 1350   |                                                                                      |
|                |             |        |                                                                                      |

<sup>1</sup>The matrix spike %EA = 95 and RPD = 0

This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: July 29, 2002 2-517-000051

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Order Number: A02071508 Goodwin Treating Plant Page Number: 2 of 15 8 Miles West of Hobbs, NM

### **Analytical Report**

#### Sample: 201543 - 071202-21 Analysis: BTEX Analytical Method: QC Batch: QC21929 Date Analyzed: 7/15/02 S 8021B Analyst: CG Preparation Method: S 5035 Prep Batch: PB20753 Date Prepared: 7/15/02 Param Units Dilution RDL Flag Result Benzene < 0.010 mg/Kg 10 0.001 Toluene mg/Kg 10 0.001< 0.010Ethylbenzene < 0.010 mg/Kg 10 0.001 M,P,O-Xylene 10 < 0.010 mg/Kg 0.001 **Total BTEX** < 0.010 mg/Kg 10 0.001 Spike Percent Recovery Surrogate Flag Units Amount Recovery Result Dilution Limits TFT 0.917 mg/Kg 10 1 92 70 - 130 4-BFB 0.864mg/Kg 10 1 86 70 - 130 Sample: 201543 - 071202-21 Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21988 Date Analyzed: 7/17/02 Analyst: MM Preparation Method: 3550 B Prep Batch: PB20801 Date Prepared: 7/16/02 Dilution RDL Param Flag Result Units DRO <50.0 mg/Kg 50 1

| <b>a</b>      | 1731                                   |        | <b>TT</b> |          | Spike  | Percent  | Recovery |
|---------------|----------------------------------------|--------|-----------|----------|--------|----------|----------|
| Surrogate     | Flag                                   | Result | Units     | Dilution | Amount | Recovery | Limits   |
| n-Triacontane | ······································ | 151    | mg/Kg     | 1        | 150    | 101      | 70 - 130 |

#### Sample: 201543 - 071202-21

| Analysis: | TPH GRO | Analytical Met    | hod:   | 8015B | QC Batch:   | QC21930  | Date A  | nalyzed: | 7/15/02   |
|-----------|---------|-------------------|--------|-------|-------------|----------|---------|----------|-----------|
| Analyst:  | CG      | Preparation Me    | ethod: | 5035  | Prep Batch: | PB20753  | Date Pí | epared 4 | 257/15/02 |
|           |         |                   |        |       |             |          | 67      | •        | 125400    |
| Param     | Flag    | $\mathbf{Result}$ |        | Units | Γ           | Dilution | 12"     | ~        | ŔDL       |
| GRO       |         | <1.00             |        | mg/Kg | 5           | 10       | 180     | 22.      | 0.10      |
|           |         |                   |        |       |             |          | 10      | 200      |           |
|           |         |                   |        |       |             | Spike    | Perce   | entô     | Recovery  |
| Surrogate | Flag    | Result            | Units  | s D   | lution      | Amount   | Recov   | ery      | Limits    |
| TFT       |         | 0.779             | mg/K   | g     | 10          | 0.10     | 78      |          | 70 - 130  |
| 4-BFB     |         | 0.839             | mg/K   | g     | 10          | 0.10     | 84      |          | 70 - 130  |

#### Sample: 201544 - 071202-16

| Analysis: | BTEX | Analytical Method:  | S 8021B | QC Batch:   | QC21934 | Date Analyzed: | 7/16/02 |
|-----------|------|---------------------|---------|-------------|---------|----------------|---------|
| Analyst:  | DN   | Preparation Method: | S 5035  | Prep Batch: | PB20758 | Date Prepared: | 7/16/02 |

| Report Date: July 29, 2002<br>2-517-000051 |                                |                                                                   | Orde<br>Goo       | r Number<br>odwin Tre | r: A02071508<br>eating Plant |                          | Page Number: 3 of 15<br>8 Miles West of Hobbs, NM |                                          |  |
|--------------------------------------------|--------------------------------|-------------------------------------------------------------------|-------------------|-----------------------|------------------------------|--------------------------|---------------------------------------------------|------------------------------------------|--|
| Param                                      |                                | Flag                                                              | Resu              | lt.                   | Units                        |                          | Dilution                                          | RDL                                      |  |
| Benzene                                    |                                | 1 105                                                             | <u></u>           | 0                     | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| Toluene                                    |                                |                                                                   |                   | .0<br>ົ               | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| Fthylbongon                                |                                |                                                                   | <0.01             | 0                     | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| M P O Ywley                                | no                             |                                                                   | 0.01              | .0                    | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| Total BTEY                                 | 7                              |                                                                   | 0.010             | 7<br>17               | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
|                                            | <u> </u>                       | ., <u>,,,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                    | 0.010             |                       | mg/ ng                       |                          | 10                                                | 0.001                                    |  |
|                                            |                                |                                                                   |                   |                       |                              | Spike                    | Percent                                           | Recovery                                 |  |
| Surrogate                                  | $\mathbf{Flag}$                | $\operatorname{Result}$                                           | Units             | <b>;</b>              | Dilution                     | Amount                   | Recovery                                          | Limits                                   |  |
| TFT                                        | ·······                        | 0.883                                                             | mg/K              | g                     | 10                           | 1                        | 88                                                | 70 - 130                                 |  |
| 4-BFB                                      |                                | 0.861                                                             | mg/K              | g                     | 10                           | 1                        | 86                                                | 70 - 130                                 |  |
| Sample:<br>Analysis:<br>Analyst:           | <b>201544</b><br>TPH DRO<br>MM | - 071202-16<br>Analytical Meth<br>Preparation Me                  | iod: I<br>thod: 3 | Mod. 801<br>3550 B    | 5B QC Bat<br>Prep Ba         | ch: QC219<br>atch: PB208 | 988 Date Analyzed:<br>301 Date Prepared:          | 7/17/02<br>7/16/02                       |  |
| Param                                      | Flag                           | Result                                                            |                   | Unit                  | S                            | Dilution                 | · · · · · · · · · · · · · · · · · · ·             | RDL                                      |  |
| DRO                                        |                                | <50.0                                                             |                   | mg/ŀ                  | ζg                           | 1                        |                                                   | 50                                       |  |
| Sample:<br>Analysis:                       | Fla<br>ne<br>201544<br>TPH GRO | ag Result<br>150<br>- 071202-16<br>Analytical Me<br>Propagation M | Ur<br>mg<br>thod: | hits<br>/Kg<br>8015B  | Dilution<br>1<br>QC Batch:   | Amount<br>150<br>QC21946 | Recovery<br>100<br>Date Analyzed:                 | Limits<br>70 - 130<br>7/16/02<br>7/16/02 |  |
| D                                          |                                |                                                                   | ictilod.          | 0000<br>TT 1          |                              | D. 1 D20100              | Date i repared.                                   | 1/10/02                                  |  |
| Param                                      | Flag                           | Result                                                            |                   |                       | iS<br>7                      | Dilution                 |                                                   |                                          |  |
| GRO                                        |                                |                                                                   | <del>_</del> •    | mg/P                  | \g                           | 10                       | •<br>••••••••••••••••••••••••••••••••••••         | 0.10                                     |  |
| Surrogate                                  | Flag                           | Result                                                            | Unit              | -                     | Dilution                     | Spike<br>A mount         | Percent                                           | Recovery                                 |  |
| TFT                                        | I 10g                          | 1 2                                                               | mg/k              | σ                     | 10                           |                          | 120                                               | 70 - 120                                 |  |
| 4-BFB                                      |                                | 0.849                                                             | mg/K              | g                     | 10                           | 0.10                     | .85.2 4.5 -6                                      | ~70 - 130                                |  |
| Sample:<br>Analysis:<br>Analyst:           | <b>201545</b><br>BTEX<br>CG    | - 071202-35<br>Analytical Metho<br>Preparation Meth               | d: S<br>od: S     | 8021B<br>5035         | QC Batch:<br>Prep Batch:     | QC21929<br>PB20753       | Bate Analyzed:<br>Date Prepared:                  | 7/15/02<br>7/15/02                       |  |
| Param                                      |                                | Flag                                                              | Resu              | ılt                   | Units                        | · •                      | Dilution                                          | RDL                                      |  |
| Benzene                                    |                                | 0                                                                 | < 0.0             | 10                    | mg/Kg                        |                          | 10 01.5.1                                         | 0.001                                    |  |
| Toluene                                    |                                |                                                                   | < 0.0             | 10                    | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| Ethylbenzer                                | ne                             |                                                                   | < 0.0             | 10                    | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| M.P.O-Xvle                                 | ene                            |                                                                   | < 0.0             | 10                    | mg/Kg                        |                          | 10                                                | 0.001                                    |  |
| Total BTE                                  | x                              |                                                                   | < 0.0             | 10                    | 0/8<br>mg/Kg                 |                          | 10                                                | 0.001                                    |  |

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| Report Date: July 29, 2002<br>2-517-000051                    |                                |                                                      | Order Num<br>Goodwin 7                               | ber: A02071508<br>Freating Plant          |                             | Page Number: 4 of 15<br>8 Miles West of Hobbs, NM        |                                           |  |
|---------------------------------------------------------------|--------------------------------|------------------------------------------------------|------------------------------------------------------|-------------------------------------------|-----------------------------|----------------------------------------------------------|-------------------------------------------|--|
| Surrogate                                                     | Flag                           | Result                                               | Units                                                | Dilution                                  | Spike<br>Amount             | Percent<br>Recovery                                      | Recovery<br>Limits                        |  |
| TFT<br>4-BFB                                                  |                                | $0.849 \\ 0.771$                                     | mg/Kg<br>mg/Kg                                       | 1 .                                       | 1<br>1                      | 85<br>77                                                 | 70 - 130<br>70 - 130                      |  |
|                                                               |                                |                                                      |                                                      |                                           |                             |                                                          |                                           |  |
| Sample:<br>Analysis:<br>Analyst:                              | 201545<br>TPH DRO<br>MM        | - 071202-35<br>Analytical Meth<br>Preparation Met    | od: Mod. 8<br>thod: 3550 B                           | 015B QC Bate<br>Prep Ba                   | ch: QC21988<br>tch: PB20801 | Date Analyzed:<br>Date Prepared:                         | 7/17/02<br>7/16/02                        |  |
| Param                                                         | Flag                           | Result                                               | U                                                    | nits                                      | Dilution                    |                                                          | RDL                                       |  |
| DRO                                                           |                                | <50                                                  | mg                                                   | /Kg                                       | 1                           |                                                          | 50                                        |  |
| Surrogate                                                     | FI                             | ar Becult                                            | Unite                                                | Dilution                                  | Spike<br>A mount            | Percent                                                  | Recovery                                  |  |
| n-Triaconta                                                   | ne                             | 152 152                                              | mg/Kg                                                | 1                                         | 150                         | 101                                                      | 70 - 130                                  |  |
| Sample:<br>Analysis:<br>Analyst:                              | <b>201545</b><br>TPH GRO<br>CG | - 071202-35<br>Analytical Me<br>Preparation M        | thod: 8015E<br>lethod: 5035                          | 3 QC Batch:<br>Prep Batch                 | QC21930<br>: PB20753        | Date Analyzed:<br>Date Prepared:                         | 7/15/02<br>7/15/02                        |  |
| Param                                                         | Flag                           | $\operatorname{Result}$                              | U                                                    | nits                                      | Dilution                    |                                                          | RDL                                       |  |
| GRO                                                           |                                | <1.00                                                | mg                                                   | g/Kg                                      | 10                          |                                                          | 0.10                                      |  |
| Surrogate                                                     | Flag                           | Result                                               | Units                                                | Dilution                                  | Spike<br>Amount             | Percent<br>Recovery                                      | Recovery<br>Limits                        |  |
| 4-BFB                                                         |                                | 0 774                                                | mg/Kg                                                | 10                                        | 0.10                        | 129<br>77                                                | 70 - 130                                  |  |
| Sample:<br>Analysis:<br>Analyst:                              | <b>201546</b><br>BTEX<br>DN    | - 071202-36<br>Analytical Method<br>Preparation Meth | $\begin{array}{llllllllllllllllllllllllllllllllllll$ | QC Batch:<br>Prep Batch:                  | QC21934<br>PB20758          | Date Analyzed:<br>Date Prepared. <sup>24</sup>           | 7/16/02                                   |  |
| Param                                                         |                                | Flag                                                 | Result                                               | Units                                     | Dil                         | ution                                                    | m RDL                                     |  |
| Benzene<br>Toluene<br>Ethylbenzer<br>M,P,O-Xyle<br>Total BTEX | ne<br>one<br>ζ                 |                                                      |                                                      | mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg |                             | 10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 | 0.001<br>0.001<br>0.001<br>0.001<br>0.001 |  |
|                                                               |                                |                                                      |                                                      |                                           |                             | LLOLGS!                                                  | c<br>                                     |  |
| Surrogate                                                     | Flag                           | Result                                               | Units                                                | Dilution                                  | Spike<br>Amount             | Percent<br>Recovery<br>71                                | Recovery<br>Limits                        |  |
| 4-BFB                                                         | 1                              | 0.693                                                | mg/Kg                                                | 10                                        | 1                           | 69                                                       | 70 - 130                                  |  |

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<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Date: July 29, 2002<br>2-517-000051                  |                                |                                                       | Order Number: A02071508<br>Goodwin Treating Plant |                                           |                                 | Page Number: 5 of 15<br>8 Miles West of Hobbs, NM |                                             |
|-------------------------------------------------------------|--------------------------------|-------------------------------------------------------|---------------------------------------------------|-------------------------------------------|---------------------------------|---------------------------------------------------|---------------------------------------------|
| Sample:<br>Analysis:<br>Analyst:                            | <b>201546</b><br>TPH DRO<br>MM | - 071202-36<br>Analytical Metho<br>Preparation Meth   | od: Mod. 80<br>nod: 3550 B                        | 15B QC Bate<br>Prep Ba                    | h: QC21988<br>tch: PB20801      | Date Analyzed:<br>Date Prepared:                  | 7/17/02<br>7/16/02                          |
| Param                                                       | Flag                           | Result                                                | Un                                                | its                                       | Dilution                        |                                                   | RDL                                         |
| DRO                                                         | * ***0                         | <50.0                                                 | mg/                                               | ′Kg                                       | 1                               |                                                   | 50                                          |
|                                                             |                                |                                                       |                                                   |                                           |                                 | · · · ·                                           | 1-1                                         |
| Surrogate                                                   | Fla                            | ag Result                                             | Units                                             | Dilution                                  | Spike<br>Amount                 | Percent<br>Recovery                               | Recovery<br>Limits                          |
| n-Triaconta                                                 | ne                             | 152                                                   | mg/Kg                                             | 1                                         | 150                             | 101                                               | 70 - 130                                    |
| Sample:<br>Analysis:<br>Analyst:                            | <b>201546</b><br>TPH GRO<br>CG | - 071202-36<br>Analytical Meth<br>Preparation Me      | hod: 8015B<br>ethod: 5035                         | QC Batch:<br>Prep Batch                   | QC21946<br>: PB20758            | Date Analyzed:<br>Date Prepared:                  | 7/16/02<br>7/16/02                          |
| Param                                                       | Flag                           | Result                                                | Un                                                | its                                       | Dilution                        |                                                   | RDL                                         |
| GRO                                                         | <del></del>                    | <1                                                    | mg/                                               | /Kg                                       | 10                              |                                                   | 0.10                                        |
| Surrogate<br>TFT<br>4-BFB                                   | Flag<br>2                      | Result<br>0.925<br>0.68                               | Units<br>mg/Kg<br>mg/Kg                           | Dilution<br>10<br>10                      | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>92<br>68                   | Recovery<br>Limits<br>70 - 130<br>70 - 130  |
| Sample:<br>Analysis:<br>Analyst:                            | <b>201547</b><br>BTEX<br>DN    | - 071202-37<br>Analytical Method<br>Preparation Metho | : S 8021B<br>d: S 5035                            | QC Batch:<br>Prep Batch:                  | QC21934<br>PB20758              | Date Analyzed:<br>Date Prepared:                  | 7/16/02<br>7/16/02                          |
| Param                                                       |                                | Flag                                                  | Result                                            | Units                                     | Dilı                            | ution                                             | RDL                                         |
| Benzene<br>Toluene<br>Ethylbenze<br>M,P,O-Xyle<br>Total BTE | ne<br>ene<br>X                 |                                                       | <0.010<br><0.010<br><0.010<br><0.010<br><0.010    | mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg |                                 | 10<br>10<br>10<br>10<br>10                        | 0.001<br>0.001<br>0.001<br>0.001<br>0.001   |
| Surrogate<br>TFT<br>4-BFB                                   | Flag                           | Result<br>0.91<br>0.894                               | Units<br>mg/Kg<br>mg/Kg                           | Dilution<br>10<br>10                      | Spike<br>Amount<br>1<br>1       | Percent<br>Recovery<br>91<br>89                   | 7Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:                            | <b>201547</b><br>TPH DRO<br>MM | - 071202-37<br>Analytical Metho<br>Preparation Met    | od: Mod. 80<br>hod: 3550 B                        | )15B QC Bat<br>Prep Ba                    | ch: QC21988<br>.tch: PB20801    | Date Analyzed:<br>Date Prepared:                  | 7/17/02<br>7/16/02                          |
| ······                                                      |                                |                                                       |                                                   |                                           |                                 | Co                                                | ntinued                                     |

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 $^{2}$ Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Date<br>2-517-00005       | e: July 29, 20<br>1         | 002                                                        | Order Number: A02071508<br>Goodwin Treating Plant |                          |                    | Page Number: 6 of 15<br>8 Miles West of Hobbs, NM |                               |
|----------------------------------|-----------------------------|------------------------------------------------------------|---------------------------------------------------|--------------------------|--------------------|---------------------------------------------------|-------------------------------|
| Continue<br>Param                | d Sample:<br>Flag           | 201547 Analysis<br>Result                                  | : TPH DRO<br>Un                                   | its                      | Dilution           |                                                   | RDL                           |
| Daram                            | Flor                        | Popult                                                     | Un                                                | ita l                    | Dilution           |                                                   | זחק                           |
| DRO                              | 1 lag                       | <50.0                                                      | mg/                                               | Ιιδ<br>Κσ                | 1                  |                                                   | <u></u>                       |
|                                  |                             |                                                            |                                                   | · · · · ·                | -                  |                                                   |                               |
|                                  |                             |                                                            |                                                   |                          |                    |                                                   |                               |
| _                                |                             |                                                            |                                                   |                          | Spike              | Percent                                           | Recovery                      |
| Surrogate                        | Fla                         | g Result                                                   | Units                                             | Dilution                 | Amount             | Recovery                                          | Limits                        |
| n-Triacontar                     | ne                          | 146                                                        | mg/Kg                                             | 1                        | 150                | 97                                                | 70 - 130                      |
|                                  |                             |                                                            |                                                   |                          |                    |                                                   |                               |
| Sample:                          | 201547                      | - 071202-37                                                |                                                   |                          |                    |                                                   |                               |
| Analysis:                        | TPH GRO                     | Analytical Me                                              | thod: 8015B                                       | QC Batch:                | QC21946            | 5 Date Analyzed:                                  | 7/16/02                       |
| Analyst:                         | CG                          | Preparation M                                              | Iethod: 5035                                      | Prep Batch:              | PB20758            | Date Prepared:                                    | 7/16/02                       |
| Demons                           | :                           | D]t                                                        |                                                   | ·                        |                    |                                                   | וחת                           |
| CRO                              | Flag                        | Result                                                     | Un                                                | lts                      | Dilution           |                                                   | $\underline{\qquad}$ RDL 0.10 |
| <u>GIU</u>                       |                             |                                                            | mg/                                               | IXg                      | 10                 |                                                   | 0.10                          |
|                                  |                             |                                                            |                                                   |                          |                    |                                                   |                               |
|                                  |                             |                                                            |                                                   |                          | Spike              | Percent                                           | Recovery                      |
| Surrogate                        | Flag                        | Result                                                     | Units                                             | Dilution                 | Amount             | Recovery                                          | Limits                        |
| $\overline{\mathrm{TFT}}$        |                             | 0.758                                                      | mg/Kg                                             | 10                       | 0.10               | 76                                                | 70 - 130                      |
| <u>4-BFB</u>                     |                             | 0.878                                                      | mg/Kg                                             | 10                       | 0.10               | 88                                                | 70 - 130                      |
| Sample:<br>Analysis:<br>Analyst: | <b>201548</b><br>BTEX<br>DN | <b>- 071202-38</b><br>Analytical Metho<br>Preparation Meth | d: S 8021B<br>.od: S 5035                         | QC Batch:<br>Prep Batch: | QC21934<br>PB20758 | Date Analyzed:<br>Date Prepared:                  | 7/16/02<br>7/16/02            |
| Param                            |                             | Flag                                                       | Result                                            | Units                    |                    | Dilution                                          | RDL                           |
| Benzene                          |                             |                                                            | < 0.010                                           | mg/Kg                    |                    | 10                                                | 0.001                         |
| Toluene                          |                             |                                                            | < 0.010                                           | mg/Kg                    |                    | 10                                                | 0.001                         |
| Ethylbenzer                      | ne                          |                                                            | <0.010                                            | mg/Kg                    | ·                  | 10                                                | 0.001                         |
| M,P,O-Xyle                       | ne                          |                                                            | < 0.010                                           | mg/Kg                    |                    | 10                                                | 0.001                         |
| Total BTEX                       | <u> </u>                    |                                                            | <0.010                                            | mg/Kg                    |                    | 10                                                | 0.001                         |
| Sumo moto                        | Elog                        | Decult                                                     | Unito                                             | Dilution                 | Spike              | Percent                                           | Recovery                      |
| TET                              | r lag                       |                                                            | mg/Kg                                             | 10                       |                    | Recovery                                          | $\frac{1111115}{70 - 130}$    |
| 4-BFB                            |                             | 0.879                                                      | mg/Kg<br>mg/Kg                                    | 10                       | 1                  | 87 88                                             | ₹70÷130                       |
| Sample                           | 2015/8                      | - 071202-38                                                |                                                   |                          |                    |                                                   |                               |
| Analysis:                        | Ion Chrome                  | atography (IC) An                                          | alvtical Method                                   | : E 300.0 QC             | Batch:             | OC22260 Date Analyz                               | ed: 7/25/02                   |
| Analyst:                         | JSW                         | Pr                                                         | eparation Metho                                   | od: N/A Pre              | p Batch:           | PB21026 Date Prepar                               | ed: 7/25/02                   |
| Param                            | Flag                        | Result                                                     | Units                                             | Dilution                 |                    |                                                   | RDL                           |
| Chloride                         | 3                           | 1350                                                       | mg/Kg                                             | 100                      |                    |                                                   | 1                             |

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<sup>3</sup>The matrix spike %EA = 95 and RPD = 0

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| Report Da<br>2-517-0000          | te: July 29, 20<br>51            | 02 0                                                     | Order Numl<br>Goodwin 7 | per: A0207150<br>Treating Plant |               | Page Number: 7 of 15<br>8 Miles West of Hobbs, NM |                                  |                    |
|----------------------------------|----------------------------------|----------------------------------------------------------|-------------------------|---------------------------------|---------------|---------------------------------------------------|----------------------------------|--------------------|
| Sample:                          | 201548 -                         | 071202-38                                                | <u> </u>                |                                 |               | , <u>, , , , , , , , , , , , , , , , , , </u>     |                                  |                    |
| Analysis:                        | TPH DRO                          | Analytical Method:                                       | Mod. 80                 | 15B QC Ba                       | atch:         | QC21988                                           | Date Analyzed:                   | 7/17/02            |
| Analyst:                         | MM                               | Preparation Method                                       | d: 3550 B               | Prep I                          | Batch:        | PB20801                                           | Date Prepared:                   | 7/16/02            |
| Param                            | Flag                             | $\operatorname{Result}$                                  | Ur                      | its                             | Dilu          | ition                                             |                                  | RDL                |
| DRO                              |                                  | <50.0                                                    | mg                      | /Kg                             | 1             |                                                   | ······                           | 50                 |
| Surrogate                        | Flag                             | Besult                                                   | Unite                   | Dilution                        |               | Spike                                             | Percent                          | Recovery           |
| Surrogate                        | r iag                            |                                                          | Units                   |                                 |               |                                                   |                                  |                    |
| n-1riaconta                      | ine                              | 140                                                      | mg/Kg                   | <u>L</u>                        |               | 150                                               | 97                               | 10 - 130           |
| Sample:<br>Analysis:<br>Analyst: | <b>201548 -</b><br>TPH GRO<br>CG | <b>071202-38</b><br>Analytical Metho<br>Preparation Meth | d: 8015B<br>od: 5035    | QC Batcl<br>Prep Bat            | h: Ç<br>ch: P | )C21946<br>B20758                                 | Date Analyzed:<br>Date Prepared: | 7/16/02 $7/16/02$  |
| Param                            | Flag                             | Result                                                   | Ur                      | nits                            | Dilu          | ition                                             |                                  | RDL                |
| GRO                              |                                  | <1                                                       | mg                      | /Kg                             | 1             | 0                                                 |                                  | 0.10               |
| Surrogate                        | Flag                             | Result 1                                                 | Units                   | Dilution                        | A             | Spike<br>mount                                    | Percent<br>Recovery              | Recovery<br>Limits |
| TFT                              |                                  | 1.28 m                                                   | ng/Kg                   | 10                              |               | 0.10                                              | 128                              | 70 - 130           |
| 4-BFB                            |                                  | 0.856 m                                                  | ig/Kg                   | 10                              |               | 0.10                                              | 86                               | 70 - 130           |



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Order Number: A02071508 Goodwin Treating Plant Page Number: 8 of 15 8 Miles West of Hobbs, NM

### Quality Control Report Method Blank

| Method Bl       | ank  | QCBatch:          | QC21929          |          |                  |                                        |                                 |
|-----------------|------|-------------------|------------------|----------|------------------|----------------------------------------|---------------------------------|
| <b>D</b>        |      |                   |                  |          | <b>TT</b> • (    |                                        | Reporting                       |
| Param           | ,    | Flag              |                  | Results  | Units            |                                        | Limit                           |
| Benzene         |      |                   |                  | <0.010   | mg/Kg            |                                        | 0.001                           |
| Toluene         |      |                   |                  | <0.010   | mg/Kg            |                                        | 0.001                           |
| Ethylbenzene    |      |                   |                  | < 0.010  | mg/Kg            |                                        | 0.001                           |
| M,P,O-Aylene    |      |                   |                  | <0.010   | mg/Kg            |                                        | 0.001                           |
| Total BTEX      |      |                   |                  | <0.010   | mg/Kg            | .,                                     | 0.001                           |
|                 |      |                   |                  |          | Spike            | Percent                                | Recovery                        |
| Surrogate       | Flag | $\mathbf{Result}$ | $\mathbf{Units}$ | Dilution | Amount           | Recovery                               | Limits                          |
| TFT             |      | 1.08              | mg/Kg            | 10       | 1                | 108                                    | 70 - 130                        |
| <u>4-BFB</u>    |      | 0.799             | mg/Kg            | 10       | 1                | 80                                     | 70 - 130                        |
| Method Bl       | ank  | QCBatch:          | QC21930          |          |                  |                                        |                                 |
| D               |      |                   | 5                | <b>.</b> |                  |                                        | Reporting                       |
| Param           |      | Flag              | Re               | sults    | Units            |                                        | Limit                           |
| GRU             |      |                   |                  | <1       | mg/Kg            |                                        |                                 |
| Surrogate       | Flag | Regult            | Units            | Dilution | Spike<br>A mount | Percent                                | Recovery<br>Limits              |
| TET             | Tag  | <u>1 01</u>       | mg/Kg            | 10       | 0.10             | 101                                    | 70 - 130                        |
| 4-BFB           |      | 0.772             | mg/Kg            | 10       | 0.10             | 77                                     | 70 - 130                        |
| Method B        | lank | QCBatch:          | QC21934          | Ł        |                  |                                        |                                 |
| Daram           |      | Flog              |                  | Results  | Unite            |                                        | Reporting                       |
| Renzene         |      | 1.198             |                  |          | ma/Ka            | •                                      | 0.001                           |
| Toluene         |      |                   |                  | <0.010   | mg/Kg            | ><br>r                                 | 2.001<br>μ <sup>2</sup> - Ω 001 |
| Ethylbenzene    |      |                   |                  | < 0.010  | mg/Ke            |                                        | 0.001                           |
| $M_P O_X vlene$ |      |                   |                  | <0.010   | mg/Kg            |                                        | 2,001                           |
| Total BTEX      |      |                   |                  | <0.010   | mg/Kg            |                                        | S (0.001                        |
|                 |      |                   |                  |          |                  | · ···································· |                                 |
|                 |      |                   |                  |          | Spike            | Percent                                | Recovery                        |
| Surrogate       | Flag | Result            | Units            | Dilution | Amount           | Recovery                               | Limits                          |
| TFT             |      | 1.04              | mg/Kg            | 10       | 1                | 104                                    | 70 - 130                        |
| 4-BFB           |      | 0.996             | mg/Kg            | 10       | 1                | 100                                    | 70 - 130                        |

| Report Date: Jul<br>2-517-000051 | ly 29, 2002 |                  | Order Num<br>Goodwin | ber: A02071508<br>Treating Plant |                               | Page Number: 9 of 15<br>8 Miles West of Hobbs, NM |                                |  |
|----------------------------------|-------------|------------------|----------------------|----------------------------------|-------------------------------|---------------------------------------------------|--------------------------------|--|
| Method Bla                       | nk          | QCBatch:         | QC21946              |                                  |                               |                                                   |                                |  |
| Param                            |             | Flag             | Resu                 | lts                              | Units                         |                                                   | Reporting<br>Limit             |  |
| GRO                              |             | ·····            | ·····                | <1                               | mg/Kg                         |                                                   | 0.10                           |  |
| Surrogate                        | Flag        | Result           | Units                | Dilution                         | Spike<br>Amount               | Percent<br>Recovery                               | Recovery<br>Limits             |  |
| TFT<br>4-BFB                     |             | 11.3<br>9.72     | mg/Kg<br>mg/Kg       | 10<br>10                         | 0.10<br>0.10                  | 113<br>97                                         | 70 - 130<br>70 - 130           |  |
| Method Bla                       | nk          | QCBatch:<br>Flag | QC21988<br>Resu      | llts                             | Units                         |                                                   | Reporting<br>Limit             |  |
| DRO                              |             |                  | <                    | :50                              | mg/Kg                         |                                                   | 50                             |  |
| Surrogate<br>n-Triacontane       | Flag        | Result<br>167    | Units<br>mg/Kg       | Dilution                         | Spike<br><u>Amount</u><br>150 | Percent<br>Recovery<br>111                        | Recovery<br>Limits<br>70 - 130 |  |
| Method Bla                       | nk          | QCBatch:         | QC22260              |                                  | •<br>•                        |                                                   |                                |  |
| Param                            |             | Flag             | Res                  | ults                             | Units                         |                                                   | Reporting<br>Limit             |  |

# Quality Control Report Lab Control Spikes and Duplicate Spikes

| Laborat     | ory Control   | Spikes         | QC     | Batch: | QC21929                  |                  |       |     |          |                |
|-------------|---------------|----------------|--------|--------|--------------------------|------------------|-------|-----|----------|----------------|
| Param       | LCS<br>Result | LCSD<br>Result | Units  | Dil.   | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec    | RPD<br>Limit   |
| MTBE        | 1.08          | 1.07           | mg/Kg  | 10     | 1                        | < 0.010          | 108   | 0   | 70 - 130 | 20             |
| Benzene     | 1.04          | 1.04           | mg/Kg  | 10     | 1                        | < 0.010          | 104   | 0   | 70 - 130 | 20             |
| Toluene     | 1.04          | 1.03           | mg/Kg  | 10     | 1                        | < 0.010          | 104   | \`0 | 70 - 130 | 20             |
| Ethylbenzen | e 1.04        | 1.03           | mg/Kg  | 10     | 1                        | < 0.010          | 104   | ١٥. | 70 - 130 | * 20           |
| M,P,O-Xyler | ne 3          | 2.98           | mg/Kg  | 10     | 3                        | <0.010           | 100   | Ò   | 70 - 130 | .20            |
|             | · · · ·       |                | 1. 000 |        | . 1 . 1                  |                  |       |     | Secret   | ба<br>11<br>21 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | LCSD<br>Result | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|----------------------------------------------------------------|----------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 1.05                                                           | 1.04           | mg/Kg | 10       | 1               | 105          | 104           | 70 - 130           |
| 4-BFB     | 1.02                                                           | 1.01           | mg/Kg | 10       | 1               | 102          | 101           | 70 - 130           |
| ,         |                                                                |                |       |          |                 |              |               |                    |

| Report D<br>2-517-000                      | ate: July 29, 20<br>0051           | 002                              | 0                   | rder N<br>Goodw | umber: A020<br>in Treating I | )71508<br>Plant                  |                                | Page Number: 10 of 15<br>8 Miles West of Hobbs, NM |               |                    |  |
|--------------------------------------------|------------------------------------|----------------------------------|---------------------|-----------------|------------------------------|----------------------------------|--------------------------------|----------------------------------------------------|---------------|--------------------|--|
| Labora                                     | tory Contro                        | ol Spikes                        | QC                  | Batch:          | QC21930                      |                                  |                                |                                                    |               |                    |  |
|                                            |                                    |                                  |                     |                 | Spike                        |                                  |                                |                                                    |               |                    |  |
|                                            | LCS LO                             | CSD                              |                     |                 | Amount                       | Matrix                           | ~ -                            |                                                    | % Rec         | RPD                |  |
| Param                                      | Result Re                          | esult Ui                         | nits D              | il.             | Added                        | Result                           | % Rec                          | RPD                                                | Limit         | Limit              |  |
| GRO                                        | 8.96 8                             | .46 mg                           | <u>;/Kg 1</u>       | 0               | 1                            | <1                               | 90                             | 5                                                  | 80 - 120      | 20                 |  |
| Percent red<br>Surrogate                   | covery is based o<br>LCS<br>Result | on the spike r<br>LCSD<br>Result | esult. RPD<br>Units | is based        | d on the spike<br>Dilution   | e and spike d<br>Spike<br>Amount | luplicate resu<br>LCS<br>% Rec | lt.                                                | LCSD<br>% Rec | Recovery<br>Limits |  |
| TFT                                        | 0.896                              | 0.879                            | mg/K                | g               | 10                           | 0.10                             | 90                             |                                                    | 88            | 70 - 130           |  |
| 4-BFB                                      | 0.972                              | 0.995                            | mg/K                | g               | 10                           | 0.10                             | 97                             |                                                    | 99            | 70 - 130           |  |
| Laboratory Control Spikes QCBatch: QC21934 |                                    |                                  |                     |                 |                              |                                  |                                |                                                    |               |                    |  |
|                                            | LCS                                | LCSD                             |                     |                 | Amount                       | Matrix                           |                                |                                                    | % Rec         | RPD                |  |
| Param                                      | Result                             | Result                           | Units               | Dil.            | Added                        | Result                           | % Rec                          | RPD                                                | Limit         | Limit              |  |
| MTBE                                       | 1.03                               | 1.03                             | mg/Kg               | 10              | 1                            | < 0.010                          | 103                            | 0                                                  | 70 - 130      | 20                 |  |
| Benzene                                    | 1.04                               | 1.03                             | mg/Kg               | 10              | 1                            | < 0.010                          | 104                            | 1                                                  | 70 - 130      | 20                 |  |

1

1

3

Dilution

10

10

102

102

98

LCS

% Rec

104

104

0

1

1

70 - 130

70 - 130

70 - 130

LCSD

 $\% {
m Rec}$ 

102

102

20

20 20

Recovery

Limits

70 - 130

70 - 130

< 0.010

< 0.010

< 0.010

Spike

Amount

1

1

1.02

1.02

2.95

LCS

Result

1.04

1.04

Laboratory Control Spikes

1.02

1.01

2.92

LCSD

Result

1.02

1.02

mg/Kg

mg/Kg

mg/Kg

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Units

mg/Kg

mg/Kg

10

10

10

Toluene

Ethylbenzene

M,P,O-Xylene

Surrogate

TFT

4-BFB

QCBatch: QC21946

|            |                                 |             |                      |          | Spike           |                         |                            |             |               |                  |
|------------|---------------------------------|-------------|----------------------|----------|-----------------|-------------------------|----------------------------|-------------|---------------|------------------|
|            | LCS                             | LCSD        |                      |          | Amount          | Matrix                  |                            |             | % R           | ec RPD           |
| Param      | Result                          | Result      | Units                | Dil.     | Added           | $\mathbf{Result}$       | % Rec                      | RPD         | Lim           | it Limit         |
| GRO        | 1.05                            | 1.02        | mg/Kg                | 10       | 1               | <1                      | 105                        | 2           | 80 -          | 120 - 20         |
| Percent re | covery is base<br>LCS<br>Popult | ed on the s | spike result.<br>CSD | RPD is b | ased on the spi | ke and spike o<br>Spike | luplicate re<br>LC<br>oz p | esult.<br>S | LCSD          | Recovery         |
| TET        | 1 05                            |             | 065                  | mg/Kg    | 10              |                         | /0 10                      | 5           | <u>70 Rec</u> | 2 Dimits         |
| 4-BFB      | 1.02                            | 1.          | .02                  | mg/Kg    | 10              | 0.10                    | 10                         | 2           | 90<br>102     | $\circ_{70-130}$ |
|            | -                               |             |                      |          |                 |                         |                            |             | to so a so    | Č(               |

Laboratory Control Spikes

QCBatch: QC21988

| Report 2-517-00 | Date: July 2<br>00051 | 29, 2002 |       | Order<br>Good | Number: A0<br>Iwin Treating | Page Number: 11 of 15<br>8 Miles West of Hobbs, NM |       |     |               |       |  |  |
|-----------------|-----------------------|----------|-------|---------------|-----------------------------|----------------------------------------------------|-------|-----|---------------|-------|--|--|
| Conti           | nued                  |          |       |               | -                           |                                                    |       |     |               |       |  |  |
|                 |                       |          |       |               | Spike                       |                                                    |       |     |               | ·     |  |  |
|                 | LCS                   | LCSD     |       |               | Amount                      | Matrix                                             |       |     | $\% { m Rec}$ | RPD   |  |  |
| Param           | Result                | Result   | Units | Dil.          | Added                       | Result                                             | % Rec | RPD | Limit         | Limit |  |  |
|                 |                       | •        |       |               | Spike                       |                                                    |       |     |               | •     |  |  |
|                 | LCS                   | LCSD     |       |               | Amount                      | Matrix                                             |       |     | $\% { m Rec}$ | RPD   |  |  |
| Param           | Result                | Result   | Units | Dil.          | Added                       | Result                                             | % Rec | RPD | Limit         | Limit |  |  |
| DRO             | 286                   | 298      | mg/Kg | 1             | 250                         | <50                                                | 114   | 4   | 70 - 130      | 20    |  |  |
|                 |                       |          |       |               |                             |                                                    |       |     |               |       |  |  |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD   |       |          | Spike  | LCS   | LCSD  | Recovery |
|---------------|--------|--------|-------|----------|--------|-------|-------|----------|
| Surrogate     | Result | Result | Units | Dilution | Amount | % Rec | % Rec | Limits   |
| n-Triacontane | 165    | 164    | mg/Kg | 1        | 150    | 110   | 109   | 70 - 130 |

Laboratory Control Spikes

QCBatch: QC22260

| Param    | LCS<br>Besult      | LCSD<br>Besult     | Units | Dil | Spike<br>Amount<br>Added | Matrix<br>Result | % Bec | RPD | % Rec<br>Limit | RPD<br>Limit |
|----------|--------------------|--------------------|-------|-----|--------------------------|------------------|-------|-----|----------------|--------------|
| Chloride | <sup>4</sup> 29.15 | <sup>5</sup> 29.10 | mg/Kg | 1   | 12.50                    | 17.27            | 233   | 0 0 | 90 - 110       | 20           |
| Sulfate  | <sup>6</sup> 27.54 | <sup>7</sup> 27.70 | mg/Kg | 1   | 12.50                    | 15.97            | 220   |     | 90 - 110       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

# Quality Control Report Matrix Spikes and Duplicate Spikes

**Matrix Spikes** 

QCBatch: QC21929

|              |        |        |       |      | $\mathbf{Spike}$        |         |       |          |          |       |
|--------------|--------|--------|-------|------|-------------------------|---------|-------|----------|----------|-------|
|              | MS     | MSD    |       |      | $\operatorname{Amount}$ | Matrix  |       |          | % Rec    | RPD   |
| Param        | Result | Result | Units | Dil. | Added                   | Result  | % Rec | RPD      | Limit    | Limit |
| Benzene      | 0.864  | 0.857  | mg/Kg | 10   | 1                       | < 0.010 | 86    | 0        | 70 - 130 | 20    |
| Toluene      | 0.881  | 0.862  | mg/Kg | 10   | 1                       | < 0.010 | 88    | <b>2</b> | 70 - 130 | 20    |
| Ethylbenzene | 0.887  | 0.868  | mg/Kg | 10   | 1                       | < 0.010 | 88    | 2        | 70 - 130 | - 20  |
| M,P,O-Xylene | 2.54   | 2.48   | mg/Kg | 10   | 3                       | < 0.010 | 84    | 2        | 70 - 130 | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Percent reco | very is based     | on the spike            | result. RPD | is based on the | e spike and spi | ke duplicate  | result.  | Set 2    |
|--------------|-------------------|-------------------------|-------------|-----------------|-----------------|---------------|----------|----------|
|              | MS                | MSD                     |             |                 | Spike           | MS            | MSD      | Recovery |
| Surrogate    | $\mathbf{Result}$ | $\operatorname{Result}$ | Units       | Dilution        | Amount          | $\% { m Rec}$ | % Rec    | 🔊 Limits |
| TFT          | 0.916             | 0.902                   | mg/Kg       | 10              | 1               | 91            | 90       | 70 - 130 |
| 4-BFB        | 0.861             | 0.852                   | mg/Kg       | 10              | 1               | 86            | .85      | 70 - 130 |
|              |                   |                         |             |                 |                 |               | <u> </u> | et .     |

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<sup>4</sup>This was a soil run, so the blank soil should be subtracted. The %EA = 95 and RPD = 0.

<sup>5</sup>This was a soil run, so the blank soil should be subtracted. The %EA = 95 and RPD = 0.

 $^6\mathrm{This}$  was a soil run, so the blank soil should be subtracted. The %EA = 93 and RPD = 1

<sup>7</sup>This was a soil run, so the blank soil should be subtracted. The %EA = 93 and RPD = 1.

| Report D<br>2-517-000 | Date: July 2<br>0051           | 9, 2002       |             | Order Number: A02071508<br>Goodwin Treating Plant |                          |                  |           | Page Number: 12 of 15<br>8 Miles West of Hobbs, NM |                    |              |
|-----------------------|--------------------------------|---------------|-------------|---------------------------------------------------|--------------------------|------------------|-----------|----------------------------------------------------|--------------------|--------------|
| Matrix                | Spikes                         | Q             | QCBatch:    |                                                   |                          |                  |           |                                                    |                    |              |
| Param                 | MS<br>Result                   | MSD<br>Result | Units       | Dil.                                              | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec     | RPD                                                | % Rec<br>Limit     | RPD<br>Limit |
| GRO                   | 9.38                           | 10.3          | mg/Kg       | 10                                                | 1                        | <1.00            | 94        | 9                                                  | 80 - 120           | 20           |
| Percent r             | ecovery is b                   | based on th   | e spike res | ult. RPD is                                       | based on t               | he spike and     | spike dup | licate re                                          | sult.              |              |
| Surrogate             | MS MSD<br>rogate Besult Besult |               | Units       | Dilution                                          | Spike<br>A mount         | M<br>S % F       | S<br>Sec  | MSD<br>% Bec                                       | Recovery<br>Limits |              |

10

10

0.10

0.10

98

91

100

86

70 - 130

70 - 130

#### Matrix Spikes QCBatch: QC21946

0.981

0.912

0.997

0.86

TFT

4-BFB

|       |        |        |       |      | Spike  |                         |               |     |                        |                        |
|-------|--------|--------|-------|------|--------|-------------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD    |       |      | Amount | Matrix                  |               |     | $\% { m Rec}$          | RPD                    |
| Param | Result | Result | Units | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | < 1    | 1.02   | mg/Kg | 10   | 1      | <1                      | 96            | 5   | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

mg/Kg

mg/Kg

| Surrogate | MS<br>Besult | MSD<br>Result | Units | Dilution | Spike<br>A mount | MS<br>% Bec | MSD<br>% Bec | Recovery<br>Limits |
|-----------|--------------|---------------|-------|----------|------------------|-------------|--------------|--------------------|
| TFT       | 0.927        | 1.04          | mg/Kg | 10       | 0.10             | 93          | 104          | 70 - 130           |
| 4-BFB     | 0.86         | 0.91          | mg/Kg | 10       | 0.10             | 86          | 91           | 70 - 130           |

#### Matrix Spikes QCBatch: QC21988

|       |                   |        |       |      | Spike  |                   |               |     |                  |                        |
|-------|-------------------|--------|-------|------|--------|-------------------|---------------|-----|------------------|------------------------|
|       | MS                | MSD    |       |      | Amount | Matrix            |               |     | $\% { m Rec}$    | RPD                    |
| Param | $\mathbf{Result}$ | Result | Units | Dil. | Added  | $\mathbf{Result}$ | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | $\operatorname{Limit}$ |
| DRO   | 240               | 255    | mg/Kg | 1    | 250    | <50.0             | 96            | 6   | 70 - 130         | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate     | ${ m MS} { m Result}$ | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD Recovery |
|---------------|-----------------------|-------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|
| n-Triacontane | 142                   | 144                                                         | mg/Kg | 1        | 150             | 94          | 96 70 - 130  |
|               |                       | · · · · · · · · · · · · · · · · · · ·                       |       |          |                 |             |              |

# Quality Control Report Continuing Calibration Verification Standards

CCV(1)

QCBatch: QC21929

| Report Date: July 29, 2002<br>2-517-000051 |      |       | Order Number: A02071508<br>Goodwin Treating Plant |                        |                             | Page Number: 13 of 15<br>8 Miles West of Hobbs, NM |                  |  |
|--------------------------------------------|------|-------|---------------------------------------------------|------------------------|-----------------------------|----------------------------------------------------|------------------|--|
| Param                                      | Flag | Units | CCVs<br>True<br>Conc.                             | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits                      | Date<br>Analyzed |  |
| MTBE                                       |      | mg/L  | 0.10                                              | 0.0949                 | 94                          | 85 - 115                                           | 7/15/02          |  |
| Benzene                                    |      | mg/L  | 0.10                                              | 0.103                  | 103                         | 85 - 115                                           | 7/15/02          |  |
| Toluene                                    |      | mg/L  | 0.10                                              | 0.101                  | 101                         | 85 - 115                                           | 7/15/02          |  |
| Ethylbenzene                               |      | mg/L  | 0.10                                              | 0.0999                 | 99                          | 85 - 115                                           | 7/15/02          |  |
| M,P,O-Xylene                               |      | mg/L  | 0.30                                              | 0.287                  | 95                          | 85 - 115                                           | 7/15/02          |  |

#### ICV (1) QCBatch: QC21929

|              |      |                 | CCVs  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|--------------|------|-----------------|-------|-----------------|-----------------|----------|----------|
|              |      |                 | True  | Found           | Percent         | Recovery | Date     |
| Param        | Flag | Units           | Conc. | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L            | 0.10  | 0.109           | 109             | 85 - 115 | 7/15/02  |
| Benzene      |      | mg/L            | 0.10  | 0.104           | 104             | 85 - 115 | 7/15/02  |
| Toluene      |      | $\mathrm{mg/L}$ | 0.10  | 0.105           | 105             | 85 - 115 | 7/15/02  |
| Ethylbenzene |      | mg/L            | 0.10  | 0.104           | 104             | 85 - 115 | 7/15/02  |
| M,P,O-Xylene |      | mg/L            | 0.30  | 0.300           | 100             | 85 - 115 | 7/15/02  |

#### CCV (1) QCBatch: QC21930

|       |      |       | CCVs  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|-------|------|-------|-------|-----------------|-----------------|----------|----------|
|       |      |       | True  | Found           | Percent         | Recovery | Date     |
| Param | Flag | Units | Conc. | Conc.           | Recovery        | Limits   | Analyzed |
| GRO   |      | mg/Kg | 1     | 0.92            | 92              | 85 - 115 | 7/15/02  |

#### ICV (1) QCBatch: QC21930

|       |        |                  | CCVs             | CCVs  | CCVs     | Percent  |          |
|-------|--------|------------------|------------------|-------|----------|----------|----------|
|       |        |                  | $\mathbf{T}$ rue | Found | Percent  | Recovery | Date     |
| Param | Flag   | $\mathbf{Units}$ | Conc.            | Conc. | Recovery | Limits   | Analyzed |
| GRO   | ······ | mg/Kg            | 1                | 1.04  | 104      | 85 - 115 | 7/15/02  |

#### CCV (1) QC21934 QCBatch:

| CCV (1)      | QCBa | tch: QC21 | 934   |        | 020232223       |           |            |
|--------------|------|-----------|-------|--------|-----------------|-----------|------------|
|              |      |           | CCVs  | CCVs   | $\mathrm{CCVs}$ | Percent   |            |
|              |      |           | True  | Found  | Percent         | Recovery  | S Date     |
| Param        | Flag | Units     | Conc. | Conc.  | Recovery        | Limits    | & Analyzed |
| MTBE         |      | mg/L      | 0.10  | 0.100  | 100             | 85 - 1415 | ~7/16/02   |
| Benzene      |      | m mg/L    | 0.10  | 0.0986 | 99              | 85 - 115  | × 7/16/02  |
| Toluene      |      | mg/L      | 0.10  | 0.0971 | 97              | 85 - 115  | 7/16/02    |
| Ethylbenzene |      | mg/L      | 0.10  | 0.097  | 97              | 85 - 115  | 7/16/02    |
| M,P,O-Xylene |      | mg/L      | 0.30  | 0.281  | 94              | 85 - 115  | 7/16/02    |

| Report Date:<br>2-517-000051 | July 2 | 9, 2002  |                         | Order Nur<br>Goodwin | mber: A020715<br>Treating Plan | 08<br>t         | Page Number: 14 of 15<br>8 Miles West of Hobbs, NM |                   |  |
|------------------------------|--------|----------|-------------------------|----------------------|--------------------------------|-----------------|----------------------------------------------------|-------------------|--|
| CCV (2)                      |        | QCBatch: | QC21                    | 934                  |                                |                 |                                                    |                   |  |
|                              |        |          |                         | CCVs                 | CCVs                           | CCVs            | Percent                                            |                   |  |
|                              |        |          |                         | True                 | Found                          | Percent         | Recovery                                           | Date              |  |
| Param                        |        | Flag U   | nits                    | Conc.                | Conc.                          | Recovery        | Limits                                             | Analyzed          |  |
| MTBE                         |        | m        | g/L                     | 0.10                 | 0.0907                         | 90              | 85 - 115                                           | 7/16/02           |  |
| Benzene                      |        | m        | g/L                     | 0.10                 | 0.101                          | 101             | 85 - 115                                           | 7/16/02           |  |
| Toluene                      |        | m        | $_{\rm lg/L}$           | 0.10                 | 0.101                          | 101             | 85 - 115                                           | 7/16/02           |  |
| Ethylbenzene                 |        | m        | ıg/L                    | 0.10                 | 0.0987                         | 98              | 85 - 115                                           | 7/16/02           |  |
| M,P,O-Xylene                 |        | m        | lg/L                    | 0.30                 | 0.285                          | 95              | 85 - 115                                           | 7/16/02           |  |
| ICV (1)                      |        | QCBatch: | QC219                   | 034                  |                                |                 |                                                    |                   |  |
|                              |        |          |                         | 001-                 | 001-                           | 001/-           | Donorit                                            |                   |  |
|                              |        |          |                         | CUVS                 | CCVs                           | Donaant         | Percent                                            | Data              |  |
| Param                        |        | Flog I   | nite                    | Conc                 | Cone                           | Becovery        | Limits                                             | A nalwzed         |  |
| MTRE                         |        |          | $\frac{1105}{\sigma/T}$ | 0.10                 | 0.0012                         |                 | 85 - 115                                           | 7/16/02           |  |
| Benzene                      |        | n.<br>m  | ισ/L                    | 0.10                 | 0.101                          | 101             | 85 - 115                                           | $\frac{7}{16}/02$ |  |
| Toluene                      |        | n<br>m   | 15/12<br>19/L           | 0.10                 | 0.0988                         | 99              | 85 - 115                                           | $\frac{7}{16}$    |  |
| Ethylbenzene                 |        | m        | -8/<br>ησ/L             | 0.10                 | 0.0972                         | 97              | 85 - 115                                           | $\frac{7}{16}$    |  |
| M,P,O-Xylene                 |        | n        | ng/L                    | 0.30                 | 0.278                          | 93              | 85 - 115                                           | 7/16/02           |  |
| CCV (1)                      |        | QCBatch: | QC21                    | .946                 |                                |                 |                                                    |                   |  |
|                              |        |          |                         | CCVs                 | CCVs                           | CCVs            | Percent                                            |                   |  |
|                              |        |          |                         | True                 | Found                          | Percent         | Recovery                                           | Date              |  |
| Param                        | Flag   | Units    |                         | Conc.                | Conc.                          | Recovery        | Limits                                             | Analyzed          |  |
| GRO                          |        | mg/Kg    |                         | 1                    | 0.897                          | 89              | 85 - 115                                           | 7/16/02           |  |
| ICV (1)                      |        | QCBatch: | QC219                   | 946                  |                                |                 |                                                    |                   |  |
|                              |        |          |                         | CCVs                 | $\mathbf{CCVs}$                | $\mathrm{CCVs}$ | Percent                                            |                   |  |
|                              |        |          |                         | True                 | Found                          | Percent         | Recovery                                           | Date              |  |
| Param                        | Flag   | Units    |                         | Conc.                | Conc.                          | Recovery        | Limits                                             | Analyzed          |  |
| GRO                          |        | mg/Kg    |                         | 1                    | 0.919                          | 91              | 85 - 115                                           | 7/16/02           |  |
|                              |        |          |                         |                      |                                |                 | AS P                                               |                   |  |
| CCV(1)                       |        | QCBatch: | QC2                     | 1988                 |                                |                 | 6                                                  |                   |  |
|                              |        |          |                         | CCVs                 | CCVs                           | CCVs            | Percent                                            |                   |  |
|                              |        |          |                         | True                 | Found                          | Percent         | Recovery                                           | Date              |  |
| Param                        | Flag   | Units    |                         | Conc.                | Conc.                          | Recovery        | Limits                                             | Analyzed          |  |
| DRO                          | U      | mg/Kg    |                         | 250                  | 272                            | 108             | 75 - 125                                           | 7/17/02           |  |

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(3) (\*)

CCV (2) QCBatch: QC21988

| Report Date:<br>2-517-000051 | Report Date: July 29, 2002<br>2-517-000051 |             |                       | umber: A02071<br>in Treating Pla | Page Number: 15 of 15<br>8 Miles West of Hobbs, NM |                               |                  |
|------------------------------|--------------------------------------------|-------------|-----------------------|----------------------------------|----------------------------------------------------|-------------------------------|------------------|
| Param                        | Flag                                       | Units       | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.           | CCVs<br>Percent<br>Recovery                        | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
| DRO                          |                                            | mg/Kg       | 250                   | 287                              | 114                                                | 75 - 125                      | 7/17/02          |
| ICV (1)                      | Ç                                          | QCBatch: QC | C21988                |                                  |                                                    |                               |                  |
|                              |                                            |             | CCVs<br>True          | CCVs<br>Found                    | CCVs<br>Percent                                    | Percent<br>Recovery           | Date             |
| Param                        | Flag                                       | Units       | Conc.                 | Conc.                            | Recovery                                           | Limits                        | Analyzed         |
| DRO                          | . <u></u>                                  | mg/Kg       | 250                   | 276                              | 110                                                | 75 - 125                      | 7/17/02          |
| CCV (1)                      |                                            | QCBatch: C  | 2C22260               |                                  |                                                    |                               |                  |
|                              |                                            |             | CCVs<br>True          | CCVs<br>Found                    | CCVs<br>Percent                                    | Percent                       | Date             |
| Param                        | Flag                                       | Units       | Conc.                 | Conc.                            | Recovery                                           | Limits                        | Analyzed         |
| Chloride                     | 0                                          | mg/L        | 12.50                 | 12.03                            | 96                                                 | 90 - 110                      | 7/25/02          |
| Sulfate                      |                                            | mg/L        | 12.50                 | 11.82                            | 94                                                 | 90 - 110                      | 7/25/02          |
| ICV (1)                      | (                                          | QCBatch: Q  | C22260                |                                  |                                                    |                               |                  |
|                              |                                            |             | COV                   | COV.                             | COV                                                | D                             |                  |

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| Flag | Units | CCVs<br>True<br>Conc.      | CCVs<br>Found<br>Conc.                       | CCVs<br>Percent<br>Recovery                                                                                                                                                     | Percent<br>Recovery<br>Limits                                                   | Date<br>Analyzed                                                                                                       |
|------|-------|----------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
|      | mg/L  | 12.50                      | 11.63                                        | 93                                                                                                                                                                              | 90 - 110                                                                        | 7/25/02                                                                                                                |
|      | mg/L  | 12.50                      | 11.84                                        | 94                                                                                                                                                                              | 90 - 110                                                                        | 7/25/02                                                                                                                |
|      | Flag  | Flag Units<br>mg/L<br>mg/L | Flag Units Corc.<br>mg/L 12.50<br>mg/L 12.50 | CCVs         CCVs           True         Found           Flag         Units         Conc.           mg/L         12.50         11.63           mg/L         12.50         11.84 | CCVsCCVsCCVsTrueFoundPercentFlagUnitsConc.Conc.mg/L12.5011.6393mg/L12.5011.8494 | CCVsCCVsCCVsPercentTrueFoundPercentRecoveryFlagUnitsConc.Conc.Recoverymg/L12.5011.639390 - 110mg/L12.5011.849490 - 110 |

(60<sup>1</sup>/173 29 30 3 • ere ere 14 Si's, S 93

| Pageof    | 155 McCutcheon,Suite H CHAIN-OF-CUSTODY AND ANALYSIS REQUEST | <b>nalySiS</b> , <b>Inc.</b> Tel (915) 585-343<br>Fax (915) 585-4944<br>1 (888) 588-343<br>1 (888) 588-343 | Phone # 505-476 - 3488 ANALYSIS REQUEST | Fax #:<br>でにrice or specify memod No:)<br>「          |                                          |                                                    |                            | OF HOBPS N.H. M. C. C. C. C. C.            | Volume/Amou<br>Nolume/Amou<br>Nolume/Amou<br>Nolume/Amou<br>Nolume/Amou<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolume<br>Nolum | $ 1_{02} \times 1_{0} \times 1_{0$ | × ×             | K: X.          | · X            |                |                  |  |  | eived by: Date: Time: LAB USE REMARKS:<br>MARKS: ONLY ONLY       | eived by: Date: Time: Intect Y / N | Headspace Y/N  30 U/Y | eived at Laboratory by: Date: Time: Temp Check If Special Reporting Check If Special Reporting Limits Are Needed | Conditions listed on reverse side of C.O.C.            |
|-----------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------|------------------------------------------|----------------------------------------------------|----------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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|           | 155 McCutcher                                                | <b>Analysis</b> , <b>Inc.</b> Tel (915) 58.<br>Fax (915) 58.<br>1 (888) 589                                | Phone \$ 25-476 - 348(                  | 665 NN 88240                                         | ZEY TOHNSON                              | 00)                                                | GOODIN'IN PLANH I          | OF +101355 N.M.                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              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eceived at Laboratory by: Date: Time:<br>011114 Nulmanu 7/13/02 9:75                                             | d Conditions listed on reverse side of C.O.C.          |
| 2015+3-48 | 6701 Aberdeen Avenue, Ste. 9<br>Lubbock, Texas 79424         | Tel (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296                                               | Company Name: NM OCD                    | Address: (Street, City, Zip)<br>(625 W FRENCH DR 400 | Contact Person:<br>MARTYNE KIELING / LAI | Invoice to:<br>(If different from above) SANTA FE- | Project #: 2 -517 - 000051 | Project Location:<br>GOODUIN - 8 MILES _W" | LAB # FIELD CODE<br>(LAB USE)<br>ONLY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1 12 - ZOJEO Etsia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 44 07 1202 - 16 | SE - 2021EO 54 | 44 071202 - 36 | 47 071202 - 37 | 1 48 071202-38 N |  |  | Relinquished by: Date: 22 Time: A<br>F. J. Muy (C. 07. 12.0 2014 | Retinduistud by: Date: YTime: R    | The 742-02- 1620      | Relinquished by: Date: Time: A                                                                                   | Submittal of samples constitutes agreement to Terms an |

|                                       |                                                                       | raceAi                                              | NALYSIS.                                                     |                              |                                                |                               |
|---------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|------------------------------|------------------------------------------------|-------------------------------|
|                                       | 6701 Aberdeen Avenue, Suite 9<br>155 McCutcheon, Suite H              | Lubbock, Texas 79<br>El Paso, Texas 79<br>E-Mail: 1 | 424 800•378•1296<br>332 888•588•3443<br>ab@traceanalysis.com | 806•794•1296<br>915•585•3443 | FAX 806•794•12<br>FAX 915•585•49               | 298<br>944                    |
| Bill To:                              | OCD<br>1220 S. Saint Fra<br>Santa Fe, NM 87                           | ncis Dr.<br>505                                     |                                                              | <b>Inv</b>                   | oice #                                         | <b>53605</b><br>July 23, 2001 |
| Attn:                                 | Martyne Kieling                                                       |                                                     | 2 <sup>nd</sup> COPY                                         |                              | Order ID:                                      |                               |
| Project #:                            | 2-517-0000                                                            | 51 Goodwin Tre                                      | eating Plant                                                 |                              | # <b>.</b>                                     |                               |
| Project Nar                           | ne: Goodwin                                                           |                                                     | Р.                                                           | A. Number: 20                | 0-521-07-0249                                  | 97                            |
| Project Loc                           | ation: Redwood Ta                                                     | inks                                                |                                                              |                              | , ,, <u>,,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                               |
| Test                                  | Quantit                                                               | v Matrix                                            | De                                                           | scription                    | Price                                          | SubTotal                      |
| Heterotropl<br>Degrading<br>Degrading | nic Plate Count/Diesel<br>Bacteria/Heavy Oil<br>Bacteria/Chlorides An | alysis                                              |                                                              |                              | 1100                                           | \$259.20                      |
|                                       |                                                                       |                                                     |                                                              |                              |                                                |                               |

Payment Terms: Net 30 Days

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Total \$259.20

Director, Dr. Blair Leftwich

TraceAnalysis, Inc.

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6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

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Report Date: July 29, 2002Order Number: A020715082-517-000051Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

#### Summary Report

Report Date:

July 29, 2002

Order ID Number: A02071508

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

| Project Number:   | 2-517-000051              |
|-------------------|---------------------------|
| Project Name:     | Goodwin Treating Plant    |
| Project Location: | 8 Miles West of Hobbs, NM |

|        |             |        | Date    | Time  | $\mathbf{Date}$ |
|--------|-------------|--------|---------|-------|-----------------|
| Sample | Description | Matrix | Taken   | Taken | Received        |
| 201543 | 071202-21   | Soil   | 7/12/02 | 9:06  | 7/13/02         |
| 201544 | 071202-16   | Soil   | 7/12/02 | 9:18  | 7/13/02         |
| 201545 | 071202-35   | Soil   | 7/12/02 | 9:45  | 7/13/02         |
| 201546 | 071202-36   | Soil   | 7/12/02 | 10:00 | 7/13/02         |
| 201547 | 071202-37   | Soil   | 7/12/02 | 10:15 | 7/13/02         |
| 201548 | 071202-38   | Soil   | 7/12/02 | 10:56 | 7/13/02         |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     | ······································ |         |              | TPH DRO      | TPH GRO    |       |       |
|---------------------|----------------------------------------|---------|--------------|--------------|------------|-------|-------|
|                     | Benzene                                | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO   | GRO   |
| Sample - Field Code | (ppm)                                  | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm) | (ppm) |
| 201543 - 071202-21  | < 0.010                                | < 0.010 | < 0.010      | < 0.010      | <0.010     | <50.0 | <1.00 |
| 201544 - 071202-16  | < 0.010                                | <0.010  | <0.010       | 0.0107       | 0.0107     | <50.0 | <1    |
| 201545 - 071202-35  | < 0.010                                | < 0.010 | < 0.010      | < 0.010      | <0.010     | <50   | <1.00 |
| 201546 - 071202-36  | <0.010                                 | <0.010  | <0.010       | < 0.010      | <0.010     | <50.0 | <1    |
| 201547 - 071202-37  | < 0.010                                | <0.010  | < 0.010      | < 0.010      | <0.010     | <50.0 | <1    |
| 201548 - 071202-38  | <0.010                                 | <0.010  | <0.010       | <0.010       | <0.010     | <50.0 | <1    |

| Sample: 201 | 548 - 071202-38 |        |       |
|-------------|-----------------|--------|-------|
| Param       | Flag            | Result | Units |
| Chloride    | 1               | 1350   | mg/Kg |

<sup>1</sup>The matrix spike %EA = 95 and RPD = 0

This is only a summary. Please, refer to the complete report package for quality control data.

| ₹.  | <u> </u>        | \<br>                     |              |            |                        |               |             |                  |                 |                    | - <u></u> |          |            |         |        |                |        |                                          |               |               | -             |                                              |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
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| 1   |                 |                           |              |            |                        |               |             |                  |                 | PIOH               |           |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   | *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                      |
|     |                 |                           |              |            |                        | andard        | te mont     | ifferent         | b li əm         | iT bruorA muT      |           |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
| ď   | Ĕ               |                           |              | _          |                        |               |             |                  |                 |                    |           |          |            |         |        |                |        |                                          |               | ]             |               |                                              |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
|     | UES             | t the second              |              |            |                        |               |             |                  |                 |                    | <b>_</b>  |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
| e   | Ö               | $\sim$                    |              |            |                        |               |             |                  |                 |                    |           |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
| Pag | л<br>В<br>Н     | a                         |              |            |                        | <u></u>       |             |                  | JE.             | 29740              | ┼──       |          |            |         |        | بحز            |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   | ting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                      |
|     | YSI             | 2                         |              |            |                        |               |             |                  |                 | Hq ,SST ,DOE       |           |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   | Jepor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                      |
|     | NAL             | 5                         | ST           |            |                        |               |             |                  | 809/A1          | 808 sabicites      |           |          |            |         |        |                |        |                                          |               |               |               |                                              |                 |                                                                                                                                                                                                                                                   | scial F<br>eede                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                                    |
|     | ΡV              | S.                        | Ш<br>С<br>Ш  |            |                        |               |             |                  | 8               | 09/2808 s.80c      | <u> </u>  |          |            |         |        |                |        | $\mathbf{h}$                             |               | [-            |               |                                              | -               |                                                                                                                                                                                                                                                   | f Spe<br>Vre N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | m                                    |
|     | AN              | 6                         | REC<br>M     |            | -                      | ···           |             | 10C/95           | 10/ 85.         | 26.10V EMADE       |           |          |            |         |        |                |        | $\rightarrow$                            |               |               |               | ö                                            |                 |                                                                                                                                                                                                                                                   | mits /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8                                    |
|     | ργ              | ł                         | IS I         |            |                        |               |             |                  | 69/809          | IDE                | ' <br>    |          |            |         |        |                |        |                                          | $\rightarrow$ | 4             |               | ARK                                          | s<br>S          | 5                                                                                                                                                                                                                                                 | ĒĒ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 66                                   |
|     | STO             | *                         | LYS<br>LYS   | ิ<br>ร     |                        | _             |             |                  | S               | TCLP Pesticide     |           |          |            |         |        |                | -      |                                          |               |               |               | IEM                                          | 4               | <u>2</u>                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5                                    |
|     | ΰÇ              | с<br>С                    | NA           | 2          |                        |               |             |                  | <b>s</b> elits  | ICLP Semi Vol      | <u>.</u>  |          |            |         |        |                |        |                                          |               |               |               | <b>L</b>                                     | <b>.</b><br>Ref |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | #                                    |
|     | Ч<br>О́Н-       | Orde                      | ◄ ز          | 5          |                        | <u> </u>      |             |                  |                 | TCLP Volatiles     | ·         |          |            |         |        |                |        | -+                                       |               |               |               |                                              |                 | z                                                                                                                                                                                                                                                 | E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                      |
|     | Ż               | <b>BA</b>                 |              | <u> </u>   | 007/90                 | 09 6H         | 95 4d       | 10 b0 e          | 68 2A<br>8 2≜ 0 | PA SISTEM ISTO     | ·         |          |            |         |        |                |        |                                          |               |               |               | SN<br>BS≻                                    | z               | X                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4                                    |
|     | CH              |                           |              |            |                        |               |             |                  |                 | 20728 HA           | <br>      |          |            |         |        |                |        |                                          |               |               |               | л<br>ГС<br>В                                 | <b>`</b>        | - N                                                                                                                                                                                                                                               | N N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | - A                                  |
|     |                 |                           |              |            |                        | 02            | 27          | 930              | 900             | TX1/F8H Hd         | بر        | ×        | <b>'</b> × | ·×      | У.     | ×              |        |                                          |               |               |               | <b>₹</b> 0                                   |                 | pace                                                                                                                                                                                                                                              | `  Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>Sa<br>S                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | #                                    |
|     |                 |                           |              |            |                        | •             |             | •                | 25              | BTEX 80219/6       | 1-2       | Ľ        | -×         | ·×      | Ÿ      | $\dot{\times}$ |        |                                          |               |               |               |                                              | tact            | eads                                                                                                                                                                                                                                              | d<br>i-i-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | arrier                               |
|     |                 |                           |              |            |                        | r             | r           | r                | 205             | MTBE 8021B/6       |           | 80       |            | 0       | ک      | 9              |        |                                          |               |               |               |                                              | ्रद्            | ان <b>ت</b> ر<br>ا                                                                                                                                                                                                                                | <u>ک م</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ö                                    |
|     | Η               |                           |              |            |                        |               |             | 1                | LIN             | LIME               |           | 1:10     | بو<br>نې   | 0:0     | 1:0]   | [0:S           |        |                                          |               |               |               | . !                                          |                 |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
|     | , Suite<br>7993 | -3443<br>-4944<br>3443    |              |            |                        |               |             |                  | AMP             | <b>ЭТАС</b>        | 102       |          |            |         |        |                |        |                                          |               |               |               | N                                            |                 | 3                                                                                                                                                                                                                                                 | 28900)<br>838 <b>2</b> 84                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |
| I   | cheor<br>Texas  | ) 585<br>5) 585<br>588-   | 8            | :          |                        |               |             | $ \mathcal{A} $  | S               | 201                | ļē        |          |            |         |        | ~              |        |                                          |               |               | -             | · Ľ                                          |                 |                                                                                                                                                                                                                                                   | ž                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                      |
|     | AcCut<br>aso,   | i (915<br>x (91)<br>(888) | 5            |            |                        | l             |             | 5                | w               |                    |           |          |            |         |        | ~              |        | {                                        | -+            |               |               |                                              |                 | 1997 - 1997<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -<br>1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - | " ()<br>()                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |
|     | 155 I<br>EI F   | ₽°°-                      | 17           |            |                        |               | I           | <u>-</u>         | Èg              | CE                 |           |          |            |         |        |                |        |                                          |               |               |               | Ĕ X                                          | Ĩ               |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
|     |                 |                           | - 9J         |            |                        |               | Je<br>Je    | ~                |                 | HOBN               |           |          |            |         |        |                |        |                                          |               |               |               | ليم .                                        |                 |                                                                                                                                                                                                                                                   | and the second sec |                                      |
|     |                 | •                         | 5            |            | ļ                      |               | 2           | Ŝ∧.              | E E             | 'OS <sup>2</sup> H | 1         |          |            |         |        |                | N      |                                          |               | ,             |               | ä 2                                          | ë               | ×                                                                                                                                                                                                                                                 | ;;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0<br>0                               |
|     | (               | <b>D</b>                  | 12           |            |                        |               | le.         | Eng.             | ā               | <sup>\$</sup> ONH  |           |          |            |         |        |                |        | $\overline{)}$                           |               |               |               |                                              | Dat             |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                      |
|     |                 |                           | <b>ئ</b>     | 2          |                        |               | Z.N         | er Si            |                 | IOH                |           |          |            |         |        |                |        |                                          |               |               |               | $\sim$                                       | Ì.              |                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Side<br>CO                           |
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|     | 1               | ົ້                        | à            | 0          | ē                      |               | 12.0        | S -              | Î               |                    | <u>}</u>  |          |            |         |        |                |        |                                          | -             |               | +             |                                              |                 |                                                                                                                                                                                                                                                   | かん                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | eve<br>IGI                           |
|     | •               | S                         |              |            | 2                      |               | Ŭ           | 53               | MA              |                    |           |          |            |         |        |                |        |                                          | · ·           |               | +             | S.                                           |                 |                                                                                                                                                                                                                                                   | C ato                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ы<br>Б<br>Н<br>С<br>Н<br>С<br>Н<br>С |
|     |                 |                           |              | 57         | 7                      |               |             | R S              |                 | RATER<br>100       |           |          |            |         |        |                |        |                                          | +             | $\rightarrow$ | ++            | Na 1                                         |                 | ŀ                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | liste                                |
|     |                 |                           |              |            | ~                      | $f_{\lambda}$ |             | ゴ                |                 |                    | 2         |          |            |         |        |                | +      | ·                                        | +             |               | $\mathcal{H}$ | $\mathcal{Y}_{I}$ ă                          | ä               |                                                                                                                                                                                                                                                   | a<br>S at                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | tions                                |
|     |                 |                           |              | 35         | 5                      | 13            |             | H H              | tun             |                    | 10        |          |            |         |        | ~              |        |                                          |               |               |               | P K                                          | ived            |                                                                                                                                                                                                                                                   | ived<br>7/1/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ondi                                 |
|     |                 |                           |              | 8          | 2                      |               |             |                  | รย              | + CONTAINE         |           |          |            |         |        | 2              |        |                                          | 1             |               |               |                                              | Jece            |                                                                                                                                                                                                                                                   | Ĩ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | U<br>g                               |
|     |                 | e                         |              | Ľ          | 2                      | Li I          |             | 3                | ┝──             | ·                  | +         |          |            |         |        | -              |        |                                          |               |               |               | <u> </u>                                     | -<br>7          | 5                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ns a                                 |
|     |                 | Ŭ                         |              |            | $\left  \right\rangle$ | LL            |             |                  |                 |                    |           |          |            |         |        |                |        |                                          |               |               |               | ue:                                          | ä               | 2                                                                                                                                                                                                                                                 | :eu                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ten                                  |
|     |                 | n<br>N                    |              | Ŋ          | 3                      | 4             |             | N.               |                 | ш                  |           |          |            |         |        |                |        |                                          |               |               |               | È                                            |                 | 2                                                                                                                                                                                                                                                 | Ē                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 10<br>10                             |
|     | Ľ               |                           |              | A          | 2                      | [ <u>`</u> 2  | 15          | 1                |                 | Ī                  |           | 6        | ろ          | 9       | +      | 8              |        | $\setminus$                              |               |               |               | 2                                            |                 | .(                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | eme                                  |
|     |                 |                           | ิด           | Ĵ          |                        | 2             | Ìð          |                  |                 | P                  | N         | 3        | K          | m       | w      | h              |        |                                          | $\langle  $   |               |               | io ii                                        | ë               | 91                                                                                                                                                                                                                                                | ë                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | agre                                 |
| İ   | 6               |                           | ່ <u>ບ</u> ' |            | 1                      |               |             |                  |                 | FIE                |           |          |            | ۲.<br>۱ |        |                |        |                                          | N             |               | •             | Pa<br>L                                      | B ,             | $\zeta$                                                                                                                                                                                                                                           | Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | utes                                 |
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| 4   | an Av<br>Texa   | 5) 79<br>6) 79<br>1 378   | je<br>V      | St-        | تر بخ                  | m ab          | I<br>I<br>I | 186              |                 |                    | 16        | 50       | 0          | 5       | 64     | Co Co          |        |                                          |               |               | *             | ž J                                          | 1x              |                                                                                                                                                                                                                                                   | ž                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | mple                                 |
| ų,  | erdet<br>vock.  | 1 (80)<br>x (80)<br>(800) | Nan          | 25         | 400                    | <u>1</u>      | N           | Qati             |                 |                    | In        |          | 1          |         |        | 3              | Van Te |                                          | 200           |               |               |                                              |                 |                                                                                                                                                                                                                                                   | led t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | of sa                                |
| 151 | 1 Ab<br>Lubt    | Fa<br>1                   | oany         | is:<br>    | Č at b                 | ieren         | #<br>t      | C <sup>E</sup> I |                 |                    | 5         | 2        | 3          | 4       | 2      | 4              |        | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 |               |               |               | uist.                                        | R A             | J                                                                                                                                                                                                                                                 | lisint                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | nittal                               |
| 02  | 670             |                           | luo          | upp/       | Conté                  | f diff        | roje        | roje             |                 | ַם אַר             | 1à        | А,Ч<br>С |            |         |        |                |        |                                          |               |               |               | A de                                         | ŭija.           |                                                                                                                                                                                                                                                   | lein                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Subr                                 |
|     |                 |                           | $\sim$       | *          |                        |               | <u> </u>    | <u></u>          |                 |                    | 10        | 1.1.1.1  | أريم مسا   | 6.855   | in Sec | 1.2254         | 1      | E Mart                                   | n sull        | 1.12          | 17°0×         | і Ш.Х. V — — — — — — — — — — — — — — — — — — | ПШ              | 1 (                                                                                                                                                                                                                                               | u –                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1 47                                 |

| 6<br>11                                     | 701 Abrideen ve<br>55 McGitcheo, S      | enue, Suite 9 Lu<br>Suite H El        | ACEAN<br>bbock, Texas 7942<br>Paso, Texas 7993<br>E-Mail: lab | ALYSIS, INC           4         800•378•1296         806•794•129           2         888•588•3443         915•585•344           @traceanalysis.com         915•585•344 | 6 FAX 806 • 794 • 1296<br>3 FAX 915 • 585 • 494 | Conservation Div            |
|---------------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------|
| Bill To:                                    | <b>OCD</b><br>1220 S. Sa<br>Santa Fe, I | int Francis Dr<br>NM 87505            |                                                               | ln<br>I                                                                                                                                                                | <b>voice #</b><br>nvoice Date:                  | <b>53856</b><br>Jul 24, 200 |
| Attn:                                       | Martyne K                               | lieling                               |                                                               |                                                                                                                                                                        | Order ID:                                       | A0207182                    |
| Project #:<br>Project Name<br>Project Locat | :<br>on:                                | 2-517-0000<br>Goodwin T<br>8 Miles We | 51<br>Treating Plan<br>est of Hobbs,                          | t P.A. Number:<br>NM                                                                                                                                                   | 20-521-07-02                                    | 2497                        |
| Test                                        |                                         | Quantity                              | Matrix                                                        | Description                                                                                                                                                            | Price                                           | SubTotal                    |
| TPH DRO<br>BTEX/TPH GR                      | 0                                       | 9<br>9                                | Soil<br>Soil                                                  | 202021 - 202029<br>202021 - 202029                                                                                                                                     | \$40.00<br>\$60.00                              | \$360.00<br>\$540.00        |
| Payı                                        | ment Terms:                             | Net 30 Days                           |                                                               | _                                                                                                                                                                      | Total                                           | \$900.00                    |

Director, Dr. Blair Leftwich

OK to poj mj " 8- 19-02 TraceAnalysis, Inc.

6701 Serdeen Ave., Suite 9

Lubbock, T. 9424-1515

(806) 794-1296

Report Date: July 23, 2002Order Number: A02071823 2-517-000051 Goodwin Treating Plant Page Number: 1 of 1 8 Miles West of Hobbs, NM

# **Summary Report**

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240 Report Date: July 23, 2002

Order ID Number: A02071823

| Project Number:   | 2-517-000051                  |
|-------------------|-------------------------------|
| Project Name:     | <b>Goodwin Treating Plant</b> |
| Project Location: | 8 Miles West of Hobbs, NM     |

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 202021 | 71702-39    | Soil   | 7/17/02 | 9:15  | 7/18/02  |
| 202022 | 71702-40    | Soil   | 7/17/02 | 9:17  | 7/18/02  |
| 202023 | 71702-41    | Soil   | 7/17/02 | 9:20  | 7/18/02  |
| 202024 | 71702-42    | Soil   | 7/17/02 | 9:25  | 7/18/02  |
| 202025 | 71702-43    | Soil   | 7/17/02 | 9:30  | 7/18/02  |
| 202026 | 71702-44    | Soil   | 7/17/02 | 9:35  | 7/18/02  |
| 202027 | 71702-45    | Soil   | 7/17/02 | 9:40  | 7/18/02  |
| 202028 | 71702-46    | Soil   | 7/17/02 | 9:45  | 7/18/02  |
| 202029 | 71702-47    | Soil   | 7/17/02 | 9:50  | 7/18/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         |              |            | TPH DRO | TPH GRO |
|---------------------|---------|---------|--------------|--------------|------------|---------|---------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm)   |
| 202021 - 71702-39   | < 0.010 | < 0.010 | < 0.010      | 0.013        | 0.013      | <50.0   | <1.00   |
| 202022 - 71702-40   | < 0.010 | <0.010  | < 0.010      | <0.010       | < 0.010    | 50.9    | <1.00   |
| 202023 - 71702-41   | < 0.010 | < 0.010 | < 0.010      | <0.010       | < 0.010    | <50.0   | <1.00   |
| 202024 - 71702-42   | < 0.010 | <0.010  | < 0.010      | <0.010       | < 0.010    | <50.0   | <1.00   |
| 202025 - 71702-43   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0   | <1.00   |
| 202026 - 71702-44   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | <0.010     | <50.0   | <1.00   |
| 202027 - 71702-45   | <0.010  | <0.010  | < 0.010      | < 0.010      | <0.010     | <50.0   | <1.00   |
| 202028 - 71702-46   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | <0.010     | <50.0   | <1.00   |
| 202029 - 71702-47   | <0.010  | <0.010  | < 0.010      | <0.010       | <0.010     | <50.0   | <1.00   |

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H Lubbock, Texas 79424 El Paso, Texas 79922 E-Mail: lab@traceanalysis.com

### Analytical and Quality Control Report

Report Date:

July 23, 2002

Order ID Number: A02071823

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Project Number:2-517-000051Project Name:Goodwin Treating PlantProject Location:8 Miles West of Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 202021 | 71702-39    | Soil   | 7/17/02 | 9:15  | 7/18/02  |
| 202022 | 71702-40    | Soil   | 7/17/02 | 9:17  | 7/18/02  |
| 202023 | 71702-41    | Soil   | 7/17/02 | 9:20  | 7/18/02  |
| 202024 | 71702-42    | Soil   | 7/17/02 | 9:25  | 7/18/02  |
| 202025 | 71702-43    | Soil   | 7/17/02 | 9:30  | 7/18/02  |
| 202026 | 71702-44    | Soil   | 7/17/02 | 9:35  | 7/18/02  |
| 202027 | 71702-45    | Soil   | 7/17/02 | 9:40  | 7/18/02  |
| 202028 | 71702-46    | Soil   | 7/17/02 | 9:45  | 7/18/02  |
| 202029 | 71702-47    | Soil   | 7/17/02 | 9:50  | 7/18/02  |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

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Page Number: 2 of 16 8 Miles West of Hobbs, NM

### **Analytical Report**

| Sample:                                   | 202021                 | - 71702-39                         |                   |                               |                                                   |                                 |                                                           |
|-------------------------------------------|------------------------|------------------------------------|-------------------|-------------------------------|---------------------------------------------------|---------------------------------|-----------------------------------------------------------|
| Analysis:                                 | BTEX                   | Analytical Method:                 | S 8021B           | QC Batch:                     | QC22030                                           | Date Analyzed:                  | 7/19/02                                                   |
| Analyst:                                  | CG                     | Preparation Method                 | : S 5035          | Prep Batch:                   | PB20849                                           | Date Prepared:                  | 7/19/02                                                   |
| Param                                     |                        | Flag                               | Result            | Units                         | Dil                                               | ution                           | RDL                                                       |
| Benzene                                   |                        |                                    | < 0.010           | mg/Kg                         |                                                   | 10                              | 0.001                                                     |
| Toluene                                   |                        |                                    | < 0.010           | mg/Kg                         |                                                   | 10                              | 0.001                                                     |
| Ethylbenzer                               | ne                     |                                    | < 0.010           | mg/Kg                         |                                                   | 10                              | 0.001                                                     |
| M.P.O-Xvle                                | ene                    |                                    | 0.013             | mg/Kg                         |                                                   | 10                              | 0.001                                                     |
| Total BTE                                 | X                      |                                    | 0.013             | mg/Kg                         |                                                   | 10                              | 0.001                                                     |
|                                           |                        |                                    |                   | 8/ - 8                        |                                                   |                                 |                                                           |
|                                           |                        |                                    |                   |                               | Spike                                             | Percent                         | Recovery                                                  |
| Surrogate                                 | Flag                   | Result                             | Units             | Dilution                      | Amount                                            | Recovery                        | Limits                                                    |
| TFT                                       |                        | 0.644                              | mg/Kg             | 10                            | 1                                                 | 64                              | 70 - 130                                                  |
| 4-BFB                                     | 2                      | 0.669                              | mg/Kg             | 10                            | 1 -                                               | 66                              | 70 - 130                                                  |
| Sample:                                   | 202021                 | - 71702-39                         |                   |                               | 1 0 0 0 0 0 0 0                                   |                                 | - 10- 1                                                   |
| Analysis:                                 | TPH DRO                | Analytical Method                  | i: Mod. 8         | 015B QC Bate                  | ch: QC22093                                       | Date Analyzed:                  | 7/22/02                                                   |
| Analyst:                                  | MM                     | Preparation Methe                  | od: 3550 B        | Prep Bat                      | tch: PB20890                                      | Date Prepared:                  | 7/19/02                                                   |
| Param                                     | Flag                   | Result                             | U                 | nits                          | Dilution                                          |                                 | RDL                                                       |
| DRO                                       |                        | <50.0                              | mg                | /Kg                           | 1                                                 |                                 | 50                                                        |
|                                           |                        |                                    |                   |                               |                                                   |                                 |                                                           |
|                                           |                        |                                    |                   |                               | Spike                                             | Percent                         | Recovery                                                  |
| Surrogate                                 | Fla                    | ag Result                          | Units             | Dilution                      | Amount                                            | Recovery                        | Limits                                                    |
| n-Triaconta                               | ne                     | 178                                | mg/Kg             | 1                             | 150                                               | 118                             | 70 - 130                                                  |
| Sampla                                    | 202021                 | 71709 20                           |                   |                               |                                                   |                                 |                                                           |
| Analusia                                  |                        | - 11102-33<br>Appletical Math      | a. 9015D          | OC Detab                      | 0000001                                           | Data Analyzada                  | 7/10/09                                                   |
| Analysis:                                 | IPH GRO                | Analytical Metho                   | Da: 8015B         | QC Batch:                     | QC22031                                           | Date Analyzed:                  | 7/19/02                                                   |
| Analyst:                                  | CG                     | Preparation Met                    | hod: 5035         | Prep Batch:                   | : PB20849                                         | Date Prepared:                  | 7/19/02                                                   |
| č                                         |                        |                                    |                   |                               |                                                   |                                 |                                                           |
| Param                                     | Flag                   | Result                             | U                 | nits                          | Dilution                                          | *****                           | RDL                                                       |
| Param<br>GRO                              | Flag                   | Result<br><1.00                    | Ui<br>mg          | nits<br>/Kg                   | Dilution<br>10                                    |                                 | RDL<br>0.10                                               |
| Param<br>GRO                              | Flag                   | Result<br><1.00                    | Uı<br>mg          | nits<br>/Kg                   | Dilution<br>10<br>Spike                           | Percent                         | RDL<br>0.10                                               |
| Param<br>GRO                              | Flag                   | Result                             | Uı<br>mg<br>Units | nits<br>/Kg<br>Dilution       | Dilution<br>10<br>Spike                           | Percent                         | RDL<br>0.10<br>Recovery                                   |
| Param<br>GRO<br>Surrogate                 | Flag<br>Flag<br>3      | Result<br><1.00<br>Result          | Units             | nits<br>/Kg<br>Dilution       | Dilution<br>10<br>Spike<br>Amount                 | Percent<br>Recovery             | RDL<br>0.10<br>Recovery<br>Limits<br>70 120               |
| Param<br>GRO<br>Surrogate<br>TFT<br>4 BFP | Flag<br>Flag<br>3<br>4 | Result<br><1.00<br>Result<br>0.540 | Units<br>mg/Kg    | nits<br>/Kg<br>Dilution<br>10 | Dilution<br>10<br>Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>54<br>64 | RDL<br>0.10<br>Recovery<br>Limits<br>70 - 130<br>70 - 130 |

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Dat<br>2-517-00005                 | e: July 23, 2<br>51             | 2002                                                         | Order Num<br>Goodwin          | ber: A02071823<br>Freating Plant |                                        | Page Number: 3 of 16<br>8 Miles West of Hobbs, NM |                                |  |
|-------------------------------------------|---------------------------------|--------------------------------------------------------------|-------------------------------|----------------------------------|----------------------------------------|---------------------------------------------------|--------------------------------|--|
| Sample:<br>Analysis:<br>Analyst:          | <b>202022</b><br>BTEX<br>CG     | - 71702-40<br>Analytical Method:<br>Preparation Method       | S 8021B<br>l: S 5035          | QC Batch: .<br>Prep Batch:       | QC22030<br>PB20849                     | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02             |  |
| Param                                     |                                 | Flag                                                         | Result                        | Units                            | Di                                     | lution                                            | RDL                            |  |
| Benzene                                   | ······                          |                                                              | <0.010                        | mg/Kg                            |                                        | 10                                                | 0.001                          |  |
| Toluene                                   |                                 |                                                              | < 0.010                       | mg/Kg                            |                                        | 10                                                | 0.001                          |  |
| Ethylbenzer                               | ne                              |                                                              | < 0.010                       | m mg/Kg                          |                                        | 10                                                | 0.001                          |  |
| M,P,O-Xyle                                | ene                             |                                                              | <0.010                        | mg/Kg                            |                                        | 10                                                | 0.001                          |  |
| Total BTEX                                | ζ                               |                                                              | <0.010                        | mg/Kg                            | ·                                      | 10                                                | 0.001                          |  |
| <b>a</b>                                  |                                 |                                                              | <b>TT 1</b> .                 |                                  | Spike                                  | Percent                                           | Recovery                       |  |
| Surrogate                                 | Flag                            | Result                                                       | Units                         | Dilution                         | Amount                                 | Recovery                                          | Limits                         |  |
|                                           | 6                               | 0.675                                                        | mg/Kg                         | 10                               | 1                                      | 69<br>69                                          | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst:<br>Param | 202022<br>TPH DRO<br>MM<br>Flag | - 71702-40<br>Analytical Metho<br>Preparation Meth<br>Result | d: Mod. 8<br>10d: 3550 B<br>U | 015B QC Bate<br>Prep Bat         | h: QC22092<br>tch: PB20889<br>Dilution | 2 Date Analyzed:<br>Date Prepared:                | 7/22/02<br>7/19/02<br>RDL      |  |
| DRO                                       |                                 | 50.9                                                         | mg                            | c/Kg                             | 1                                      |                                                   | 50                             |  |
| Surrogate<br>n-Triaconta                  | Fla                             | ag Result<br>179                                             | Units<br>mg/Kg                | Dilution<br>1                    | Spike<br>Amount<br>150                 | Percent<br>Recovery<br>119                        | Recovery<br>Limits<br>70 - 130 |  |
| Sample:<br>Analysis:<br>Analyst:          | <b>202022</b><br>TPH GRO<br>CG  | - 71702-40<br>Analytical Meth<br>Preparation Met             | od: 8015E<br>thod: 5035       | B QC Batch:<br>Prep Batch:       | QC22031<br>: PB20849                   | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02             |  |
| Param                                     | Flag                            | Result                                                       | U                             | nits                             | Dilution                               |                                                   | RDL                            |  |
| GRO                                       |                                 | <1.00                                                        | mg                            | g/Kg                             | 10                                     |                                                   | 0.10                           |  |
| Surrogate                                 | Flag                            | Result                                                       | Units                         | Dilution                         | Spike<br>Amount                        | Percent<br>Recovery                               | Recovery<br>Limits             |  |
|                                           | ،<br>8                          | 0.570                                                        | mg/Kg                         | 10                               | 0.10                                   | 57<br>67                                          | 70 - 130                       |  |
| 4-DF D                                    |                                 | 0.073                                                        | шg/ ng                        | 10                               | 0.10                                   | U1                                                | 10 - 130                       |  |

| Sample,   | 202020 | - /1/04-41          |         |             |         |                |         |
|-----------|--------|---------------------|---------|-------------|---------|----------------|---------|
| Analysis: | BTEX   | Analytical Method:  | S 8021B | QC Batch:   | QC22030 | Date Analyzed: | 7/19/02 |
| Analyst:  | CG     | Preparation Method: | S 5035  | Prep Batch: | PB20849 | Date Prepared: | 7/19/02 |

<sup>5</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>7</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>8</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Date: July 23, 2002<br>2-517-000051 |                                  |                                                     | Order<br>Goo    | Number: A<br>dwin Treati | \02071823<br>ng Plant   | , 10 (11)                   | Page Num<br>8 Miles West of I         | ber: 4 of 16<br>Hobbs, NM |  |
|--------------------------------------------|----------------------------------|-----------------------------------------------------|-----------------|--------------------------|-------------------------|-----------------------------|---------------------------------------|---------------------------|--|
| Param                                      |                                  | Flag                                                | Result          | ;                        | Units                   | Dil                         | ution                                 | RDL                       |  |
| Benzene                                    |                                  | 0                                                   | <0.010          | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| Toluene                                    |                                  |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| Ethylbenzer                                | ne                               |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| M.P.O-Xvle                                 | ene                              |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| Total BTE                                  | X                                |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
|                                            |                                  |                                                     |                 |                          |                         |                             | · · · · · · · · · · · · · · · · · · · |                           |  |
| a .                                        |                                  |                                                     | ** •,           | וית                      |                         | Spike                       | Percent                               | Recovery                  |  |
| Surrogate                                  | Flag                             | Result                                              | Units           | Dil                      | ution                   | Amount                      | Recovery                              | Limits                    |  |
| TFT                                        |                                  | 0.765                                               | mg/Kg           |                          | 10                      | 1                           | 76                                    | 70 - 130                  |  |
| <u>4-BFB</u>                               |                                  | 0.771                                               | mg/Kg           |                          | 10                      | 1                           | 77                                    | 70 - 130                  |  |
| Sample:<br>Analysis:<br>Analyst:           | <b>202023 -</b><br>TPH DRO<br>MM | 71702-41<br>Analytical Metho<br>Preparation Met     | od: M<br>hod: 3 | lod. 8015B<br>550 B      | QC Bate<br>Prep Ba      | ch: QC22092<br>tch: PB20889 | Date Analyzed:<br>Date Prepared:      | 7/22/02<br>7/19/02        |  |
| j                                          |                                  |                                                     |                 |                          | <u>r</u>                | 54.4                        |                                       | .,,                       |  |
| Param                                      | Flag                             | Result                                              |                 | Units                    |                         | Dilution                    |                                       | <u>RDL</u>                |  |
| DRO                                        |                                  | <50.0                                               |                 | mg/Kg                    |                         | 1                           |                                       | <u>50</u>                 |  |
|                                            |                                  |                                                     |                 |                          |                         | Spike                       | Percent                               | Recovery                  |  |
| Surrogate                                  | Flag                             | g Result                                            | Uni             | ts L                     | Vilution                | Amount                      | Recovery                              | Limits                    |  |
| n-Triaconta                                | ne                               | 183                                                 | mg/l            | Kg                       | 1                       | 150                         | 122                                   | 70 - 130                  |  |
| Sample:<br>Analysis:<br>Analyst:           | <b>202023 -</b><br>TPH GRO<br>CG | <b>71702-41</b><br>Analytical Met<br>Preparation Me | hod:<br>ethod:  | 8015B (<br>5035 ]        | QC Batch:<br>Prep Batch | QC22031<br>: PB20849        | Date Analyzed:<br>Date Prepared:      | 7/19/02<br>7/19/02        |  |
| Param                                      | $\mathbf{Flag}$                  | Result                                              |                 | Units                    |                         | Dilution                    |                                       | $\mathbf{RDL}$            |  |
| GRO                                        |                                  | <1.00                                               |                 | mg/Kg                    | <u> </u>                | 10                          |                                       | 0.10                      |  |
| Surrogate                                  | Flag                             | Result                                              | Units           | Dil                      | ution                   | Spike<br>Amount             | Percent<br>Recovery                   | Recovery<br>Limits        |  |
|                                            |                                  | 1.01                                                | mg/rg           |                          | 10                      | 0.10                        | 101                                   | 70 - 130                  |  |
| <u>4-DF D</u>                              |                                  | 0.702                                               | ing/ Kg         |                          | 10                      | 0.10                        | 10                                    | 70 - 130                  |  |
| Sample:                                    | 202024 -                         | 71702-42                                            | . 58            | 191B ()                  | C Batch                 | 0022030                     | Data Analyzadi                        | 7/10/02                   |  |
| Analyst:                                   | CG I                             | Preparation Metho                                   | d: $S 50$       | )35 P.                   | rep Batch:              | PB20849                     | Date Prepared:                        | 7/19/02                   |  |
| Param                                      |                                  | Flag                                                | Result          | ;                        | Units                   | Dil                         | ution                                 | RDL                       |  |
| Benzene                                    |                                  |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| Toluene                                    |                                  |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| Ethylbenzer                                | ne                               |                                                     | < 0.010         | )                        | mg/Kg                   |                             | 10                                    | 0.001                     |  |
| •                                          |                                  |                                                     |                 |                          | _, _                    |                             |                                       |                           |  |
| M,P,O-Xyle                                 | ene                              |                                                     | < 0.010         | )                        | m mg/Kg                 |                             | 10                                    | 0.001                     |  |

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| Report Date: July 23, 2002<br>2-517-000051 |                                |                                                      | Order Nun<br>Goodwin                                 | aber: A02071823<br>Treating Plant |                               | Page Number: 5 of 16<br>8 Miles West of Hobbs, NM |                                |
|--------------------------------------------|--------------------------------|------------------------------------------------------|------------------------------------------------------|-----------------------------------|-------------------------------|---------------------------------------------------|--------------------------------|
| Surrogate                                  | Flag                           | Result                                               | Units                                                | Dilution                          | Spike<br>Amount               | Percent<br>Recovery                               | Recovery<br>Limits             |
| TFT                                        | 9<br>10                        | 0.685                                                | mg/Kg                                                | 10                                | 1                             | 68<br>60                                          | 70 - 130                       |
| 4-BFB                                      |                                | 0.009                                                | mg/ <u>kg</u>                                        | 10                                | 1                             | 00                                                | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst:           | <b>202024</b><br>TPH DRO<br>MM | - 71702-42<br>Analytical Meth<br>Preparation Me      | od: Mod. 3<br>thod: 3550 E                           | 8015B QC Ba<br>B Prep B           | tch: QC22092<br>atch: PB20889 | Date Analyzed:<br>Date Prepared:                  | 7/22/02<br>7/19/02             |
| Param                                      | Flag                           | Result                                               | τ                                                    | Inits                             | Dilution                      |                                                   | RDL                            |
| DRO                                        |                                | <50.0                                                | m                                                    | g/Kg                              | 1                             |                                                   | 50                             |
| Surrogate<br>n-Triaconta                   | Fl                             | ag Result<br>182                                     | Units<br>mg/Kg                                       | Dilution<br>1                     | Spike<br>Amount<br>150        | Percent<br>Recovery<br>121                        | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:           | <b>202024</b><br>TPH GRO<br>CG | - 71702-42<br>Analytical Me<br>Preparation M         | thod: 8015<br>lethod: 5035                           | B QC Batch<br>Prep Batch          | : QC22031<br>h: PB20849       | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02             |
| Param                                      | Flag                           | Result                                               | τ                                                    | Jnits                             | Dilution                      |                                                   | RDL                            |
| GRO                                        |                                | <1.00                                                | m                                                    | g/Kg                              | 10                            | ······································            | 0.10                           |
| Surrogate<br>TFT                           | Flag                           | Result<br>1.28                                       | Units<br>mg/Kg                                       | Dilution<br>10                    | Spike<br>Amount<br>0.10       | Percent<br>Recovery<br>128                        | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                                      | 11                             | 0.594                                                | mg/Kg                                                | 10                                | 0.10                          | 59                                                | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst:           | <b>202025</b><br>BTEX<br>CG    | - 71702-43<br>Analytical Method<br>Preparation Metho | $\begin{array}{llllllllllllllllllllllllllllllllllll$ | QC Batch:<br>Prep Batch           | QC22030<br>: PB20849          | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02             |
| Damana                                     |                                | El                                                   | Dervit                                               | TT                                | ויכו                          |                                                   | זרומ                           |
| Benzene                                    |                                | г на <u>д</u>                                        | <0.010                                               | Units                             | DII                           | 10                                                | 0.001                          |
| Toluene                                    |                                |                                                      | < 0.010                                              | mg/Kg                             |                               | 10                                                | 0.001                          |
| Ethylbenzer                                | ne                             |                                                      | < 0.010                                              | mg/Kg                             |                               | 10                                                | 0.001                          |
| M,P,O-Xyle                                 | ene                            |                                                      | < 0.010                                              | mg/Kg                             | :                             | 10                                                | 0.001                          |
| Total BTE                                  | <u>×</u>                       |                                                      | <0.010                                               | mg/Kg                             |                               | 10                                                | 0.001                          |
| Surrogate<br>TFT                           | Flag                           | Result<br>0.754                                      | Units<br>mg/Kg                                       | Dilution<br>10                    | Spike<br>Amount<br>1          | Percent<br>Recovery<br>75                         | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                                      |                                | 0.762                                                | mg/Kg                                                | 10                                | 1                             | 76                                                | 70 - 130                       |

<sup>9</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>10</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>11</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Dat<br>2-517-00005        | e: July 23, 2<br>51            | 2002                                                 | Order N<br>Goodw       | umber: A<br>in Treatin | 02071823<br>Ig Plant   |                           | Page Numl<br>8 Miles West of I   | per: 6 of 16<br>Hobbs, NM      |
|----------------------------------|--------------------------------|------------------------------------------------------|------------------------|------------------------|------------------------|---------------------------|----------------------------------|--------------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>202025</b><br>TPH DRO<br>MM | - 71702-43<br>Analytical Metho<br>Preparation Met    | od: Mod<br>hod: 3550   | . 8015B<br>B           | QC Batch<br>Prep Bate  | n: QC22092<br>ch: PB20889 | Date Analyzed:<br>Date Prepared: | 7/22/02<br>7/19/02             |
| Param                            | Flag                           | Result                                               |                        | Units                  | I                      | Dilution                  |                                  | RDL                            |
| DRO                              |                                | <50.0                                                |                        | mg/Kg                  |                        | 1                         |                                  | 50                             |
|                                  |                                |                                                      |                        |                        |                        |                           |                                  |                                |
| Surrogate                        | Fli                            | ag Result                                            | Units                  | Di                     | lution                 | Spike<br>Amount           | Percent<br>Recovery              | Recovery<br>Limits             |
| n-Triaconta                      | ne                             | 173                                                  | mg/Kg                  |                        | 1                      | 150                       | 115                              | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>202025</b><br>TPH GRO<br>CG | - 71702-43<br>Analytical Met<br>Preparation Me       | hod: 801<br>ethod: 503 | 15B Q<br>35 P          | C Batch:<br>rep Batch: | QC22031<br>PB20849        | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02             |
| Param                            | Flag                           | Result                                               |                        | Units                  | I                      | Dilution                  |                                  | RDL                            |
| GRO                              |                                | <1.00                                                |                        | mg/Kg                  |                        | 10                        |                                  | 0.10                           |
| Surrogate                        | Flag<br>12                     | Result                                               | Units<br>mg/Kg         | Dilu                   | tion                   | Spike<br>Amount           | Percent<br>Recovery<br>62        | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                            |                                | 0.74                                                 | mg/Kg                  | 1                      | 0                      | 0.10                      | 74                               | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>202026</b><br>BTEX<br>CG    | - 71702-44<br>Analytical Method<br>Preparation Metho | : S 8021<br>d: S 5035  | B QC<br>Pr             | C Batch:<br>ep Batch:  | QC22030<br>PB20849        | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02             |
| Param                            |                                | Flag                                                 | Result                 |                        | Units                  | Dilt                      | ution                            | RDL                            |
| Benzene                          |                                |                                                      | < 0.010                |                        | mg/Kg                  |                           | 10                               | 0.001                          |
| Toluene                          |                                |                                                      | < 0.010                |                        | mg/Kg                  |                           | 10                               | 0.001                          |
| Ethylbenzer                      | ne                             |                                                      | < 0.010                |                        | mg/Kg                  |                           | 10                               | 0.001                          |
| M,P,O-Xyle                       | ene                            |                                                      | < 0.010                |                        | mg/Kg                  | -                         | 10                               | 0.001                          |
| Total BTE                        | <u> </u>                       |                                                      | < 0.010                |                        | mg/Kg                  |                           | 10                               | 0.001                          |
|                                  |                                |                                                      |                        |                        |                        | Spike                     | Percent                          | Recovery                       |
| Surrogate                        | Flag                           | Result                                               | Units                  | Dilu                   | tion                   | Amount                    | Recovery                         | Limits                         |
|                                  |                                | 0.744                                                | mg/Kg                  | 1                      | 0                      | 1                         | 74                               | 70 - 130                       |
| Sample:<br>Analysis:             | <b>202026</b><br>TPH DRO       | - 71702-44<br>Analytical Metho                       | ng/ng                  | . 8015B                | QC Batch               | 1<br>n: QC22092           | Date Analyzed:                   | 7/22/02                        |
| Analyst:                         | MM                             | Preparation Met                                      | hod: 3550              | В                      | Prep Bat               | ch: PB20889               | Date Prepared:                   | 7/19/02                        |
|                                  |                                |                                                      |                        |                        |                        |                           | Cor                              | ntinued                        |

<sup>12</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Dat<br>2-517-00005                 | e: July 23, 20<br>51                     | 002                                                               | Order Numl<br>Goodwin 7          | ber: A02071823<br>Treating Plant |                                       | Page Numl<br>8 Miles West of I         | per: 7 of 16<br>Hobbs, NM                  |
|-------------------------------------------|------------------------------------------|-------------------------------------------------------------------|----------------------------------|----------------------------------|---------------------------------------|----------------------------------------|--------------------------------------------|
| Continue                                  | ed Sample:                               | 202026 Analysis:                                                  | TPH DRO                          |                                  |                                       |                                        |                                            |
| Param                                     | Flag                                     | Result                                                            | Ur                               | nits                             | Dilution                              | <u> </u>                               | RDL                                        |
| Param                                     | Flag                                     | Result                                                            | Ur                               | nits                             | Dilution                              |                                        | RDL                                        |
| DRO                                       |                                          | <50.0                                                             | mg                               | /Kg                              | 1                                     |                                        | 50                                         |
|                                           |                                          |                                                                   |                                  |                                  |                                       |                                        |                                            |
| Surrogate                                 | Fla                                      | a Bosult                                                          | Unite                            | Dilution                         | Spike<br>A mount                      | Percent                                | Recovery                                   |
| n-Triaconta                               | ne                                       | 188                                                               | mg/Kg                            | 1                                | 150                                   | 125                                    | 70 - 130                                   |
|                                           |                                          |                                                                   | 8/8                              |                                  |                                       |                                        |                                            |
| Sample:                                   | 202026 ·<br>TPH GRO                      | - 71702-44<br>Analytical Met                                      | hod: 8015B                       | OC Batch                         | QC22031                               | Date Analyzed:                         | 7/19/02                                    |
| Analyst:                                  | CG                                       | Preparation M                                                     | ethod: 5035                      | Prep Batch:                      | : PB20849                             | Date Prepared:                         | 7/19/02                                    |
| Param                                     | Flag                                     | Result                                                            | Ur                               | nits                             | Dilution                              |                                        | RDL                                        |
| GRO                                       |                                          | <1.00                                                             | mg                               | /Kg                              | 10                                    |                                        | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                 | Flag                                     | Result<br>1.16<br>0.709                                           | Units<br>mg/Kg<br>mg/Kg          | Dilution<br>10<br>10             | Spike<br>Amount<br>0.10<br>0.10       | Percent<br>Recovery<br>116<br>71       | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:          | <b>202027</b> -<br>BTEX<br>CG            | - 71702-45<br>Analytical Method<br>Preparation Metho              | : S $8021B$<br>od: S $5035$      | QC Batch:<br>Prep Batch:         | QC22030<br>PB20849                    | Date Analyzed:<br>Date Prepared:       | 7/19/02<br>7/19/02                         |
| Param                                     |                                          | Flag                                                              | Result                           | Units                            | L                                     | Dilution                               | RDL                                        |
| Benzene                                   |                                          |                                                                   | < 0.010                          | mg/Kg                            |                                       | 10                                     | 0.001                                      |
| Toluene                                   |                                          |                                                                   | <0.010                           | mg/Kg                            |                                       | 10                                     | 0.001                                      |
| Ethylbenzer                               | 1e                                       |                                                                   | <0.010                           | mg/Kg                            |                                       | 10                                     | 0.001                                      |
| Total BTEX                                | ζ                                        |                                                                   | <0.010                           | mg/Kg                            | <u></u>                               | 10                                     | 0.001                                      |
| S                                         | Ele a                                    | Densk                                                             | T                                | Dilution                         | Spike                                 | Percent                                | Recovery                                   |
| TFT                                       | <u>r lag</u>                             |                                                                   | mg/Kg                            |                                  |                                       | 88                                     | 70, 130                                    |
| 4-BFB                                     |                                          | 0.880                                                             | mg/Kg                            | 10                               | 1                                     | 91                                     | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>202027</b> -<br>TPH DRO<br>MM<br>Flag | - <b>71702-45</b><br>Analytical Meth<br>Preparation Met<br>Result | od: Mod. 80<br>hod: 3550 B<br>Ur | 015B QC Batc<br>Prep Bat<br>iits | ch: QC2209<br>tch: PB2088<br>Dilution | 92 Date Analyzed:<br>39 Date Prepared: | 7/22/02<br>7/19/02<br>RDL                  |
| DRO                                       |                                          | <50.0                                                             | ma                               | /Kσ                              |                                       |                                        | 50                                         |

| Report Dat<br>2-517-00005                          | e: July 23, 20                           | Order<br>Good                                                            | Number: A<br>dwin Treati             | 102071823<br>ng Plant                 |                                  | Page Numl<br>8 Miles West of I             | ber: 8 of 16<br>Hobbs, NM                   |                                            |
|----------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------|--------------------------------------|---------------------------------------|----------------------------------|--------------------------------------------|---------------------------------------------|--------------------------------------------|
| Surrogate                                          | Fla                                      | g Result                                                                 | Uni                                  | ts D                                  | ilution                          | Spike<br>Amount                            | Percent<br>Recovery                         | Recovery<br>Limits                         |
| n-Triaconta                                        | ne                                       | 175                                                                      | mg/l                                 | Kg                                    | 1                                | 150                                        | 117                                         | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param          | <b>202027</b> -<br>TPH GRO<br>CG<br>Flag | - <b>71702-45</b><br>Analytical Me<br>Preparation M<br>Result            | ethod:<br>Aethod:                    | 8015B (<br>5035 I<br>Units            | QC Batch:<br>Prep Batch          | QC22031<br>: PB20849<br>Dilution           | Date Analyzed:<br>Date Prepared:            | 7/19/02<br>7/19/02<br>RDL                  |
| GRO                                                |                                          | <1.00                                                                    | ·····                                | mg/Kg                                 |                                  | 10                                         |                                             | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                          | Flag                                     | Result<br>1.22<br>0.880                                                  | Units<br>mg/Kg<br>mg/Kg              | Dil                                   | ution<br>10<br>10                | Spike<br>Amount<br>0.10<br>0.10            | Percent<br>Recovery<br>122<br>88            | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:<br>Param          | <b>202028</b> -<br>BTEX<br>CG            | - <b>71702-46</b><br>Analytical Metho<br>Preparation Meth<br>Flag        | d: S 80<br>iod: S 50<br>Result       | )21B Q<br>)35 Pi                      | C Batch:<br>rep Batch:<br>Units  | QC22030<br>PB20849<br>D                    | Date Analyzed:<br>Date Prepared:<br>ilution | 7/19/02<br>7/19/02<br>RDL                  |
| Benzene                                            |                                          |                                                                          | < 0.010                              | )                                     | mg/Kg                            |                                            | 10                                          | 0.001                                      |
| Toluene<br>Ethylbenzer<br>M,P,O-Xyle<br>Total BTEX | ne<br>K                                  |                                                                          | <0.010<br><0.010<br><0.010<br><0.010 | )<br>)<br>)                           | mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg |                                            | 10<br>10<br>10<br>10                        | 0.001<br>0.001<br>0.001<br>0.001           |
| Surrogate<br>TFT<br>4-BFB                          | Flag                                     | Result<br>0.825<br>0.768                                                 | Units<br>mg/Kg<br>mg/Kg              | Dil                                   | ution<br>10<br>10                | Spike<br>Amount<br>1<br>1                  | Percent<br>Recovery<br>82<br>77             | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>DRO   | 202028 -<br>TPH DRO<br>MM<br>Flag        | - <b>71702-46</b><br>Analytical Met<br>Preparation Me<br>Result<br><50.0 | hod: M<br>ethod: 3                   | lod. 8015B<br>550 B<br>Units<br>mg/Kg | QC Bato<br>Prep Ba               | ch: QC2209<br>tch: PB2088<br>Dilution<br>1 | 2 Date Analyzed:<br>9 Date Prepared:        | 7/22/02<br>7/19/02<br>RDL<br>50            |
| Surrogate<br>n-Triacontar                          | Fla                                      | g Result<br>176                                                          | Uni<br>mg/l                          | ts D<br>Kg                            | ilution                          | Spike<br>Amount<br>150                     | Percent<br>Recovery<br>117                  | Recovery<br>Limits<br>70 - 130             |

| Report Dat<br>2-517-0000                  | e: July 23, 2<br>51                    | 002                                                        | Ord<br>Go      | er Numbe<br>odwin Tr       | er: A02071823<br>eating Plant |                                              | Page Number: 9 of 16<br>8 Miles West of Hobbs, NM |                           |
|-------------------------------------------|----------------------------------------|------------------------------------------------------------|----------------|----------------------------|-------------------------------|----------------------------------------------|---------------------------------------------------|---------------------------|
| Sample:<br>Analysis:<br>Analyst:          | <b>202028</b><br>TPH GRO<br>CG         | - 71702-46<br>Analytical Met<br>Preparation M              | hod:<br>ethod: | 8015B<br>5035              | QC Batch:<br>Prep Batch       | QC22031<br>: PB20849                         | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02        |
| Param                                     | Flag                                   | Result                                                     |                | Unit                       | ts                            | Dilution                                     |                                                   | RDL                       |
| GRO                                       |                                        | <1.00                                                      |                | mg/I                       | Χg                            | 10                                           |                                                   | 0.10                      |
|                                           |                                        | · · · · · · · · · · · · · · · · · · ·                      |                |                            |                               | <sup>*********************************</sup> |                                                   |                           |
| Surrogate                                 | Flag                                   | Result                                                     | Unit           | S                          | Dilution                      | Spike<br>Amount                              | Percent<br>Recovery                               | Recovery<br>Limits        |
| TFT                                       |                                        | 0.765                                                      | mg/K           | g                          | 10                            | 0.10                                         | 76                                                | 70 - 130                  |
| 4-BFB                                     |                                        | 0.729                                                      | mg/K           | Σg                         | 10                            | 0.10                                         | 73                                                | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst:          | <b>202029</b><br>BTEX<br>CG            | - 71702-47<br>Analytical Method<br>Preparation Metho       | : S<br>bd: S   | 8021B<br>5035              | QC Batch:<br>Prep Batch:      | QC22030<br>PB20849                           | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02        |
| Param                                     |                                        | $\mathbf{Flag}$                                            | Resu           | ılt                        | Units                         | Dil                                          | ition                                             | RDL                       |
| Benzene                                   |                                        | ······································                     | <0.0           | 10                         | mg/Kg                         |                                              | 10                                                | 0.001                     |
| Toluene                                   |                                        |                                                            | <0.02          | 10                         | mg/Kg                         |                                              | 10                                                | 0.001                     |
| Ethylbenzer                               | ne                                     |                                                            | <0.0           | 10                         | mg/Kg                         | -                                            | 10                                                | 0.001                     |
| M,P,O-Xyle                                | ene                                    |                                                            | <0.0           | 10                         | mg/Kg                         |                                              | 10                                                | 0.001                     |
| Total BTE                                 | <u> </u>                               |                                                            | <0.0           | 10                         | mg/Kg                         |                                              | 10                                                | 0.001                     |
| Surrogate                                 | Flag                                   | Result                                                     | Unit           | s                          | Dilution                      | Spike<br>Amount                              | Percent<br>Recovery                               | Recovery<br>Limits        |
| TFT                                       |                                        | 0.770                                                      | mg/K           | g                          | 10                            | 1                                            | 77                                                | 70 - 130                  |
| <u>4-BFB</u>                              |                                        | 0.821                                                      | mg/K           | g                          | 10                            | 1                                            | 82                                                | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>202029</b><br>TPH DRO<br>MM<br>Flag | - 71702-47<br>Analytical Meth<br>Preparation Met<br>Result | od:<br>hod:    | Mod. 801<br>3550 B<br>Unit | 5B QC Bate<br>Prep Ba         | ch: QC22092<br>tch: PB20889<br>Dilution      | Date Analyzed:<br>Date Prepared:                  | 7/22/02<br>7/19/02<br>RDL |
| DRO                                       | ·                                      | <50.0                                                      |                | mg/I                       | Kg                            | 1                                            |                                                   | 50                        |
| Surrogate                                 | FI                                     | or Bosult                                                  | TT,            | aite                       | Dilution                      | Spike<br>A mount                             | Percent                                           | Recovery                  |
| n-Triaconta                               |                                        | 181 181                                                    | 01             | /Ko                        | 1                             | 150                                          | 121                                               | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst:          | <b>202029</b><br>TPH GRO<br>CG         | - 71702-47<br>Analytical Met<br>Preparation M              | hod:<br>ethod: | 8015B<br>5035              | QC Batch:<br>Prep Batch       | QC22031<br>: PB20849                         | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02        |
| Param                                     | Flag                                   | Result                                                     |                | Unit                       | ts                            | Dilution                                     |                                                   | RDL                       |
| GRO                                       | 0                                      | <1.00                                                      |                | mg/I                       | Kg                            | 10                                           | ·/··· ································            | 0.10                      |

| Report Date: July 23, 2002 |      |        | Order Nu | mber: A0207182   | Page Number: 10 of 16     |                     |                    |
|----------------------------|------|--------|----------|------------------|---------------------------|---------------------|--------------------|
| 2-517-000051               |      |        | Goodwir  | n Treating Plant | 8 Miles West of Hobbs, NM |                     |                    |
| Surrogate                  | Flag | Result | Units    | Dilution         | Spike<br>Amount           | Percent<br>Recovery | Recovery<br>Limits |
| TFT                        | 13   | 0.656  | mg/Kg    | 10               | 0.10                      | 66                  | 70 - 130           |
| 4-BFB                      |      | 0.796  | mg/Kg    | 10               | 0.10                      | 80                  | 70 - 130           |

<sup>13</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.



Report Date: July 23, 2002 2-517-000051 Order Number: A02071823 Goodwin Treating Plant Page Number: 11 of 16 8 Miles West of Hobbs, NM

### Quality Control Report Method Blank

| Method B      | lank | QCBatch:                              | QC22030 |            |                 |                     |                      |
|---------------|------|---------------------------------------|---------|------------|-----------------|---------------------|----------------------|
|               |      |                                       |         |            |                 |                     | Reporting            |
| Param         |      | Flag                                  |         | Results    | Units           | 1                   | Limit                |
| Benzene       |      |                                       |         | <0.010     | mg/K            | g                   | 0.001                |
| Toluene       |      |                                       |         | < 0.010    | mg/K            | g                   | 0.001                |
| Ethylbenzene  |      |                                       |         | < 0.010    | mg/K            | g                   | 0.001                |
| M,P,O-Xylene  |      |                                       |         | <0.010     | mg/K            | g                   | 0.001                |
| Total BTEX    |      |                                       |         | < 0.010    | mg/K            | g                   | 0.001                |
|               |      | ~                                     |         |            |                 | ~                   |                      |
|               |      |                                       |         |            | Spike           | Percent             | Recovery             |
| Surrogate     | Flag | Result                                | Units   | Dilution   | Amount          | Recovery            | Limits               |
| TFT           |      | 0.998                                 | mg/Kg   | 10         | 1               | 100                 | 70 - 130             |
| 4-BFB         |      | 0.970                                 | mg/Kg   | 10         | 1               | 97                  | 70 - 130             |
| Method B      | lank | QCBatch:                              | QC22031 |            |                 |                     |                      |
|               |      |                                       |         |            |                 |                     | Departing            |
| Daram         |      | Flog                                  | Ros     | ulte       | Unite           |                     | Limit                |
|               |      | riag                                  | 1(65)   | <u></u>    | mg/Kg           |                     | 0.10                 |
| <u>GIIO</u>   |      | · · · · · · · · · · · · · · · · · · · | ·       | <u></u>    | ing/ing         |                     | 0.10                 |
| Surrogate     | Flag | Result                                | Units   | Dilution   | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits   |
| 1 PT<br>1-BFB |      | 0.950                                 | mg/Kg   | 10         | 0.10            | 05                  | 70 - 130<br>70 - 130 |
| Method B      | lank | QCBatch:                              | QC22092 |            |                 |                     |                      |
| D             |      |                                       |         | <b>1</b> . | <b>TT</b> •.    |                     | Reporting            |
| Param         |      | Flag                                  | Res     |            | Units           |                     | Limit                |
| DRO           |      |                                       | <:      | 0.0        | mg/Kg           |                     | 50                   |
| Surrogate     | Flag | Result                                | Units   | Dilution   | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits   |
| n-Triacontane |      | 153                                   | mg/Kg   | 1          | 150             | 102                 | 70 - 130             |
| Method B      | lank | QCBatch:                              | QC22093 |            |                 |                     |                      |
| D             |      |                                       |         | 1.         | <b>**</b> •.    |                     | Reporting            |
| Param         |      | Flag                                  | Res     | ults       | Units           |                     | Limit                |
| DKO           |      |                                       | <5      | 0.0        | mg/Kg           |                     | 50                   |

| Report Date: July 23, 2002<br>2-517-000051 |      |        | Order Num<br>Goodwin 7 | ber: A02071823<br>Freating Plant | Page Number: 12 of 16<br>8 Miles West of Hobbs, NM |                     |                    |
|--------------------------------------------|------|--------|------------------------|----------------------------------|----------------------------------------------------|---------------------|--------------------|
| Surrogate                                  | Flag | Result | Units                  | Dilution                         | Spike<br>Amount                                    | Percent<br>Recovery | Recovery<br>Limits |
| n-Triacontane                              |      | 167    | mg/Kg                  | 1                                | 150                                                | 111                 | 70 - 130           |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

QC22030

Laboratory Control Spikes QCBatch:

| Param        | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|---------------|----------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| MTBE         | 1.03          | 1.04           | mg/Kg | 10   | 1                        | < 0.010          | 103   | 0   | 70 - 130       | 20           |
| Benzene      | 1.02          | 1.03           | mg/Kg | 10   | 1                        | < 0.010          | 102   | 0   | 70 - 130       | 20           |
| Toluene      | 1.01          | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 0   | 70 - 130       | 20           |
| Ethylbenzene | 1.01          | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 0   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.92          | 2.96           | mg/Kg | 10   | 3                        | < 0.010          | 97    | 1   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | LCS<br>Result | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|---------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 0.932         | 0.95                                                            | mg/Kg | 10       | 1               | 93           | 95            | 70 - 130           |
| 4-BFB     | 0.944         | 0.963                                                           | mg/Kg | 10       | 1               | 94           | 96            | 70 - 130           |

Laboratory Control Spikes

QCBatch: QC22031

|       |        |        |       |      | Spike  |        |       |     |               |       |
|-------|--------|--------|-------|------|--------|--------|-------|-----|---------------|-------|
|       | LCS    | LCSD   |       |      | Amount | Matrix |       |     | $\% { m Rec}$ | RPD   |
| Param | Result | Result | Units | Dil. | Added  | Result | % Rec | RPD | Limit         | Limit |
| GRO   | 9.26   | 10.2   | mg/Kg | 10   | 1      | <1     | 93    | 9   | 80 - 120      | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | LCS    | LCSD   |       |          | Spike  | LCS           | LCSD  | Recovery |
|-----------|--------|--------|-------|----------|--------|---------------|-------|----------|
| Surrogate | Result | Result | Units | Dilution | Amount | $\% { m Rec}$ | % Rec | Limits   |
| TFT       | 0.903  | 0.931  | mg/Kg | 10       | 0.10   | 90            | 93    | 70 - 130 |
| 4-BFB     | 0.931  | 0.950  | mg/Kg | 10       | 0.10   | 93            | 95    | 70 - 130 |

Laboratory Control Spikes QCBatch: QC22092

|       |        |        |       |      | Spike  |        |               |     |               |       |
|-------|--------|--------|-------|------|--------|--------|---------------|-----|---------------|-------|
|       | LCS    | LCSD   |       |      | Amount | Matrix |               |     | $\% { m Rec}$ | RPD   |
| Param | Result | Result | Units | Dil. | Added  | Result | $\% { m Rec}$ | RPD | Limit         | Limit |
| DRO   | 308    | 309    | mg/Kg | 1    | 250    | < 50.0 | 123           | 0   | 70 - 130      | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Report Date: July 23, 2002<br>2-517-000051 |               |               |                | Order Number: A02071823<br>Goodwin Treating Plant |                 |                 |                     | Page Number: 13 of 16<br>8 Miles West of Hobbs, NM |                   |                    |  |
|--------------------------------------------|---------------|---------------|----------------|---------------------------------------------------|-----------------|-----------------|---------------------|----------------------------------------------------|-------------------|--------------------|--|
| Surrogate                                  | 9             | LCS<br>Result | LCSD<br>Result | Units                                             | Dilution        | Spike<br>Amour  | ıt 9                | LCS<br>% Rec                                       | LCSD<br>% Rec     | Recovery<br>Limits |  |
| Surrogate                                  | 9             | LCS<br>Result | LCSD<br>Result | Units                                             | Dilution        | Spike<br>Amour  | ıt 9                | LCS<br>% Rec                                       | LCSD<br>% Rec     | Recovery<br>Limits |  |
| n-Triacon                                  | itane         | 164           | 166            | mg/Kg                                             | 1               | 150             |                     | 109                                                | 111               | 70 - 130           |  |
| Labora                                     | atory Co      | ontrol Sp     | oikes          | QCBatch:                                          | QC22093         |                 |                     |                                                    |                   |                    |  |
|                                            | LCS           | LCSD          |                |                                                   | Spike<br>Amount | Matrix          |                     |                                                    | % Rec             | RPD                |  |
| Param<br>DRO                               | Result<br>281 | Result<br>283 | Units<br>mg/Kg | Dil1                                              | Added<br>250    | Result<br><50.0 | <u>% Rec</u><br>112 | RPD<br>1                                           | Limit<br>70 - 130 | Limit<br>20        |  |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD              |       |          | Spike  | LCS           | LCSD              | Recovery |
|---------------|--------|-------------------|-------|----------|--------|---------------|-------------------|----------|
| Surrogate     | Result | $\mathbf{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% \ \text{Rec}$ | Limits   |
| n-Triacontane | 162    | 161               | mg/Kg | 1        | 150    | 108           | 107               | 70 - 130 |

# Quality Control Report Matrix Spikes and Duplicate Spikes

| Watrix Spikes QCBatch: QC2203 | Matrix | Spikes | QCBatch: | QC22030 |
|-------------------------------|--------|--------|----------|---------|
|-------------------------------|--------|--------|----------|---------|

|              |        |        |       |      | Spike  |         |       |     |               |       |
|--------------|--------|--------|-------|------|--------|---------|-------|-----|---------------|-------|
|              | MS     | MSD    |       |      | Amount | Matrix  |       |     | $\% { m Rec}$ | RPD   |
| Param        | Result | Result | Units | Dil. | Added  | Result  | % Rec | RPD | Limit         | Limit |
| Benzene      | 0.928  | 0.855  | mg/Kg | 10   | 1      | < 0.010 | 92    | 8   | 70 - 130      | 20    |
| Toluene      | 0.922  | 0.856  | mg/Kg | 10   | 1      | < 0.010 | 92    | 7   | 70 - 130      | 20    |
| Ethylbenzene | 0.93   | 0.865  | mg/Kg | 10   | 1      | < 0.010 | 93    | 7   | 70 - 130      | 20    |
| M,P,O-Xylene | 2.67   | 2.48   | mg/Kg | 10   | 3      | < 0.010 | 89    | 7   | 70 - 130      | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | MS     | MSD    |                  |          | Spike  | MS            | MSD           | Recovery |
|-----------|--------|--------|------------------|----------|--------|---------------|---------------|----------|
| Surrogate | Result | Result | $\mathbf{Units}$ | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | 0.841  | 0.809  | mg/Kg            | 10       | 1      | 84            | 80            | 70 - 130 |
| 4-BFB     | 0.886  | 0.857  | mg/Kg            | 10       | 1      | 88            | 85            | 70 - 130 |

#### Matrix Spikes QCBatch:

| MS MSD Amount Matrix % Rec<br>Param Result Result Units Dil. Added Result % Rec RPD Limit |       |             |               |       |
|-------------------------------------------------------------------------------------------|-------|-------------|---------------|-------|
| Param Result Result Units Dil. Added Result % Rec RPD Limit                               |       | % Rec RPD   | $\% { m Rec}$ | RPD   |
|                                                                                           | Param | Limit Limit | RPD Limit     | Limit |
| GRO = 6.77 = 9.18 mg/Kg = 10 = 1 < 1.00 = 68 = 30 = 80 - 120                              | GRO   | 80 - 120 20 | 30 80 - 120   | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

QC22031

| Report D<br>2-517-000                                                       | ate: July<br>0051                                   | 23, 2002                                                                       |                                                                                      | Order I<br>Goody                                               | Number: A02<br>win Treating                                                  | 071823<br>Plant                                                                         |                                                                  | 8 Mil               | Page Numbe<br>les West of F                                                | r: 14 of 16<br>lobbs, NM                                                   |
|-----------------------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|
|                                                                             | Ν                                                   | 1S                                                                             | MSD                                                                                  |                                                                |                                                                              | Spike                                                                                   | MS                                                               |                     | MSD                                                                        | Recovery                                                                   |
| Surrogate                                                                   | Re                                                  | sult                                                                           | Result                                                                               | Units                                                          | Dilution                                                                     | Amount                                                                                  | % Re                                                             | ec                  | % Rec                                                                      | Limits                                                                     |
| TFT                                                                         | 14-(                                                | ).548                                                                          | 0.846                                                                                | mg/Kg                                                          | 10                                                                           | 0.10                                                                                    | 55                                                               |                     | 85                                                                         | 70 - 130                                                                   |
| 4-BFB                                                                       | 0.'                                                 | 712                                                                            | 0.763                                                                                | mg/Kg                                                          | 10                                                                           | 0.10                                                                                    | 71                                                               | <u> </u>            | 76                                                                         | 70 - 130                                                                   |
| Matrix                                                                      | Spikes                                              | C                                                                              | QCBatch:                                                                             | QC22092                                                        |                                                                              |                                                                                         |                                                                  |                     | ·                                                                          |                                                                            |
|                                                                             |                                                     |                                                                                |                                                                                      |                                                                | Spike                                                                        |                                                                                         |                                                                  |                     |                                                                            |                                                                            |
|                                                                             | MS                                                  | MSD                                                                            | ,                                                                                    |                                                                | Amount                                                                       | Matrix                                                                                  |                                                                  |                     | % Bec                                                                      | RPD                                                                        |
| Param                                                                       | Result                                              | Resul                                                                          | ,<br>t Unit:                                                                         | s Dil                                                          | Added                                                                        | Result                                                                                  | % Rec                                                            | RPD                 | Limit                                                                      | Limit                                                                      |
| DRO                                                                         | 15 3300                                             | 16 339                                                                         | $\frac{1}{80} m\sigma/k$                                                             | σ 10                                                           | 250                                                                          | 4430                                                                                    | -451                                                             | -7                  | 70 - 130                                                                   | 20                                                                         |
| 0                                                                           | ·                                                   | MS                                                                             | MSD                                                                                  | TT - 14 -                                                      | D'1-4                                                                        | Spike                                                                                   | MS                                                               | }                   | MSD                                                                        | Recovery                                                                   |
| Surrogate<br>n-Triacon                                                      | tane                                                | MS<br>Result<br>640                                                            | MSD<br>Result<br>609                                                                 | Units<br>mg/Kg                                                 | Dilution<br>10                                                               | Spike<br>Amoun<br>150                                                                   | MS<br>t % R<br>427                                               | ec                  | MSD<br>% Rec<br>406                                                        | Recovery<br>Limits<br>70 - 130                                             |
| Surrogate<br>n-Triacon<br>Matrix                                            | tane<br>Spikes                                      | MS<br>Result<br>640<br>C                                                       | MSD<br>Result<br>609<br>QCBatch:                                                     | Units<br>mg/Kg<br>QC22093                                      | Dilution<br>10                                                               | Spike<br>Amoun<br>150                                                                   | MS<br>t % R<br>427                                               | ec                  | MSD<br>% Rec<br>406                                                        | Recovery<br>Limits<br>70 - 130                                             |
| Surrogate<br>n-Triacon<br>Matrix                                            | tane<br>Spikes                                      | MS<br>Result<br>640                                                            | MSD<br>Result<br>609<br>QCBatch:                                                     | Units<br>mg/Kg<br>QC22093                                      | Dilution<br>10<br>Spike                                                      | Spike<br>Amoun<br>150                                                                   | MS<br>t % R<br>427                                               | ec                  | MSD<br><u>% Rec</u><br>406                                                 | Recovery<br>Limits<br>70 - 130                                             |
| Surrogate<br>n-Triacon<br>Matrix                                            | tane<br>Spikes<br>MS                                | MS<br>Result<br>640<br>C<br>MSD                                                | MSD<br>Result<br>609<br>QCBatch:                                                     | Units<br>mg/Kg<br>QC22093                                      | Dilution<br>10<br>Spike<br>Amount                                            | Spike<br>Amoun<br>150<br>Matrix                                                         | MS<br>t % R<br>427                                               | ec                  | MSD<br><u>% Rec</u><br>406<br>% Rec                                        | Recovery<br>Limits<br>70 - 130<br>RPD                                      |
| Surrogate<br>n-Triacon<br>Matrix<br>Param                                   | tane<br>Spikes<br>MS<br>Result                      | MS<br>Result<br>640<br>C<br>MSD<br>Result                                      | MSD<br>Result<br>609<br>QCBatch:<br>Units                                            | Units<br>mg/Kg<br>QC22093<br>Dil.                              | Dilution<br>10<br>Spike<br>Amount<br>Added                                   | Spike<br>Amount<br>150<br>Matrix<br>Result                                              | MS<br><u>t % R</u><br>427<br>% Rec                               | RPD                 | MSD<br>% Rec<br>406<br>% Rec<br>Limit                                      | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit                             |
| Surrogate<br>n-Triacon<br>Matrix<br>Param<br>DRO                            | tane<br>Spikes<br>MS<br>Result<br>313               | MS<br>Result<br>640<br>C<br>MSD<br>Result<br>313                               | MSD<br>Result<br>609<br>QCBatch:<br>Units<br>mg/Kg                                   | Units<br>mg/Kg<br>QC22093<br>Dil.<br>1                         | Dilution<br>10<br>Spike<br>Amount<br>Added<br>250                            | Spike<br>Amount<br>150<br>Matrix<br>Result<br><50.0                                     | MS<br>t % R<br>427<br>% Rec<br>125                               | RPD<br>0            | MSD<br>% Rec<br>406<br>% Rec<br>Limit<br>70 - 130                          | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit<br>20                       |
| Surrogate<br>n-Triacon<br>Matrix<br>Param<br>DRO<br>Percent re              | tane<br>Spikes<br>MS<br>Result<br>313<br>ecovery is | MS<br>Result<br>640<br>C<br>MSD<br>Result<br>313<br>based on t                 | MSD<br>Result<br>609<br>QCBatch:<br>Units<br>mg/Kg<br>the spike res                  | Units<br>mg/Kg<br>QC22093<br>Dil.<br>1<br>ult. RPD is          | Dilution<br>10<br>Spike<br>Amount<br>Added<br>250<br>based on th             | Spike<br>Amount<br>150<br>Matrix<br>Result<br><50.0<br>e spike and s                    | MS<br>t % R<br>427<br>% Rec<br>125<br>wpike duplic               | RPD<br>0<br>ate res | MSD<br>% Rec<br>406<br>% Rec<br>Limit<br>70 - 130                          | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit<br>20                       |
| Surrogate<br>n-Triacon<br>Matrix<br>Param<br>DRO<br>Percent re              | tane<br>Spikes<br>MS<br>Result<br>313<br>ecovery is | MS<br>Result<br>640<br>C<br>MSD<br>Result<br>313<br>based on t<br>MS           | MSD<br>Result<br>609<br>QCBatch:<br>Units<br>mg/Kg<br>the spike res<br>MSD           | Units<br>mg/Kg<br>QC22093<br>Dil.<br>1<br>ult. RPD is          | Dilution<br>10<br>Spike<br>Amount<br>Added<br>250<br>based on th             | Spike<br>Amount<br>150<br>Matrix<br>Result<br><50.0<br>e spike and s<br>Spike           | MS<br>t % R<br>427<br>% Rec<br>125<br>spike duplic<br>MS         | RPD<br>0<br>ate res | MSD<br>% Rec<br>406<br>% Rec<br>Limit<br>70 - 130<br>sult.<br>MSD          | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit<br>20<br>Recovery           |
| Surrogate<br>n-Triacon<br>Matrix<br>Param<br>DRO<br>Percent re<br>Surrogate | tane<br>Spikes<br>MS<br>Result<br>313<br>ecovery is | MS<br>Result<br>640<br>C<br>MSD<br>Result<br>313<br>based on t<br>MS<br>Result | MSD<br>Result<br>609<br>QCBatch:<br>Units<br>mg/Kg<br>the spike res<br>MSD<br>Result | Units<br>mg/Kg<br>QC22093<br>Dil.<br>1<br>ult. RPD is<br>Units | Dilution<br>10<br>Spike<br>Amount<br>Added<br>250<br>based on th<br>Dilution | Spike<br>Amount<br>150<br>Matrix<br>Result<br><50.0<br>e spike and s<br>Spike<br>Amount | MS<br>t % R<br>427<br>% Rec<br>125<br>pike duplic<br>MS<br>t % R | RPD<br>0<br>ate res | MSD<br>% Rec<br>406<br>% Rec<br>Limit<br>70 - 130<br>wult.<br>MSD<br>% Rec | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit<br>20<br>Recovery<br>Limits |

# Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC22030

|              |                 |                  | CCVs<br>True           | CCVs<br>Found          | CCVs<br>Percent | Percent<br>Recovery | Date     |
|--------------|-----------------|------------------|------------------------|------------------------|-----------------|---------------------|----------|
| Param        | $\mathbf{Flag}$ | $\mathbf{Units}$ | $\operatorname{Conc.}$ | $\operatorname{Conc.}$ | Recovery        | Limits              | Analyzed |
| MTBE         |                 | mg/L             | 0.10                   | 0.0976                 | 98              | 85 - 115            | 7/19/02  |
| Benzene      |                 | mg/L             | 0.10                   | 0.0989                 | 99              | 85 - 115            | 7/19/02  |
| Toluene      |                 | mg/L             | 0.10                   | 0.100                  | 100             | 85 - 115            | 7/19/02  |
| Ethylbenzene |                 | mg/L             | 0.10                   | 0.101                  | 101             | 85 - 115            | 7/19/02  |
| M,P,O-Xylene |                 | mg/L             | 0.30                   | 0.281                  | 94              | 85 - 115            | 7/19/02  |

<sup>14</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>15</sup>MS and MSD out of recovery limits due to peak interference. LCS and LCSD show the process is in control. <sup>16</sup>MS and MSD out of recovery limits due to peak interference. LCS and LCSD show the process is in control.

| Report Date: 2-517-000051 | July 2   | 3, 2002  |              | Order Nur<br>Goodwin          | mber: A020718<br>1 Treating Plan | 23<br>ht        | Page Nur<br>8 Miles West | mber: 15 of 16<br>of Hobbs, NM |
|---------------------------|----------|----------|--------------|-------------------------------|----------------------------------|-----------------|--------------------------|--------------------------------|
| CCV (2)                   |          | QCBatch: | QC2          | 22030                         |                                  |                 |                          |                                |
|                           |          |          |              | CCVs                          | CCVs                             | CCVs            | Percent                  |                                |
|                           |          |          |              | True                          | Found                            | Percent         | Recovery                 | Date                           |
| Param                     |          | Flag     | Units        | Conc.                         | Conc.                            | Recovery        | Limits                   | Analyzed                       |
| MTBE                      |          |          | mg/L         | 0.10                          | 0.102                            | 102             | 85 - 115                 | 7/19/02                        |
| Benzene                   |          |          | mg/L         | 0.10                          | 0.0993                           | 99              | 85 - 115                 | 7/19/02                        |
| Toluene                   |          |          | mg/L         | 0.10                          | 0.0984                           | 98              | 85 - 115                 | 7/19/02                        |
| Ethylbenzene              |          |          | mg/L         | 0.10                          | 0.0969                           | 96              | 85 - 115                 | 7/19/02                        |
| M,P,O-Xylene              | <u>.</u> | <u></u>  | mg/L         | 0.30                          | 0.2803                           | 93              | 85 - 115                 | 7/19/02                        |
| ICV (1)                   |          | QCBatch: | QC2          | 2030                          |                                  |                 |                          |                                |
|                           |          |          |              | OCV.                          | COVe                             | COVe            | Democrat                 |                                |
|                           |          |          |              | True                          | Found                            | Porcont         | Percent                  | Deta                           |
| Porom                     |          | Flag     | Unita        | Conc                          | Cone                             | Bocovory        | Limite                   | Analyzod                       |
|                           |          | 1. tag   | mg/I         | 0.10                          | 0.104                            | 104             | 85 - 115                 | 7/10/02                        |
| Renzene                   |          |          | mg/L<br>mg/L | 0.10                          | 0.104                            | 102             | 85 - 115                 | 7/19/02                        |
| Toluene                   |          |          | mg/L<br>mg/L | 0.10                          | 0.102                            | 102             | 85 - 115                 | $\frac{7}{19}$                 |
| Ethylbenzene              |          |          | mg/L         | 0.10                          | 0.101                            | 100             | 85 - 115                 | 7/19/02                        |
| M.P.O-Xylene              | ,        |          | mg/L         | 0.30                          | 0.293                            | 98              | 85 - 115                 | 7/19/02                        |
| CCV (1)                   | Flog     | QCBatch: | QC2          | 22031<br>CCVs<br>True<br>Conc | CCVs<br>Found                    | CCVs<br>Percent | Percent<br>Recovery      | Date                           |
| $\frac{1}{CRO}$           | riag     |          | .s<br>       | <u></u>                       | 0.051                            | Q5              | 85 115                   | $\frac{7/10}{202}$             |
| CCV (2)                   |          | QCBatch  | : QC2        | 22031<br>CCVs                 | CCVs                             | $\rm CCVs$      | Percent                  |                                |
|                           |          |          |              | True                          | Found                            | Percent         | Recovery                 | Date                           |
| Param                     | Flag     | Unit     | .s           | Conc.                         | Conc.                            | Recovery        | Limits                   | Analyzed                       |
| GRO                       |          | mg/H     | ζg           | 1                             | 0.999                            | 99              | 85 - 115                 | 7/19/02                        |
| ICV (1)                   |          | QCBatch: | QC22         | 2031<br>CCVs                  | CCVs                             | CCVs            | Percent                  |                                |
| -                         |          |          |              | True                          | Found                            | Percent         | Recovery                 | Date                           |
| Param                     | Flag     | Unit     | S            | Conc.                         | Conc.                            | Recovery        | Limits                   | Analyzed                       |
|                           |          | mg/k     | ( m          | 1                             | 0.907                            | 90              | 85 - 115                 | 7/19/02                        |

ì

CCV (1) QCBatch: QC22092

| Report Date:<br>2-517-000051 | July 23 | 3, 2002        | Order N<br>Goodw                        | umber: A02071<br>vin Treating Pla | 823<br>unt                         | Page Nu<br>8 Miles West                   | mber: 16 of 16<br>of Hobbs, NM |
|------------------------------|---------|----------------|-----------------------------------------|-----------------------------------|------------------------------------|-------------------------------------------|--------------------------------|
| Param                        | Flag    | Units          | CCVs<br>True<br>Conc.                   | CCVs<br>Found<br>Conc.            | CCVs<br>Percent<br>Recovery        | Percent<br>Recovery<br>Limits             | Date<br>Analyzed               |
| DRO                          |         | mg/Kg          | 250                                     | 278                               | 111                                | 75 - 125                                  | 7/22/02                        |
| CCV (2)                      |         | QCBatch:       | QC22092                                 |                                   |                                    |                                           |                                |
| Param<br>DRO                 | Flag    | Units<br>mg/Kg | CCVs<br>True<br>Conc.<br>250            | CCVs<br>Found<br>Conc.<br>292     | CCVs<br>Percent<br>Recovery<br>116 | Percent<br>Recovery<br>Limits<br>75 - 125 | Date<br>Analyzed<br>7/22/02    |
| CCV (3)                      |         | QCBatch:       | QC22092                                 | CCVs                              | CCVs                               | Percent                                   |                                |
|                              |         |                | True                                    | Found                             | Percent                            | Recovery                                  | Date                           |
| Param                        | Flag    | Units          | Conc.                                   | Conc.                             | Recovery                           | Limits                                    | Analyzed                       |
| DRO                          |         | mg/Kg          | 250                                     | 287                               | 114                                | 75 - 125                                  | 7/22/02                        |
| ICV (1)                      | Flag    | QCBatch:       | QC22092<br>CCVs<br>True<br>Conc.<br>250 | CCVs<br>Found<br>Conc.            | CCVs<br>Percent<br>Recovery        | Percent<br>Recovery<br>Limits             | Date<br>Analyzed               |
| CCV (1)                      |         | QCBatch:       | QC22093<br>CCVs                         | CCVs                              | CCVs                               | Percent                                   | 1/22/02                        |
| -                            |         |                | True                                    | Found                             | Percent                            | Recovery                                  | Date                           |
| Param                        | Flag    | Units          | Conc.                                   | Conc.                             | Recovery                           | Limits 75 105                             | Analyzed                       |
| ICV (1)                      |         | QCBatch:       | QC22093<br>CCVs<br>True                 | CCVs<br>Found                     | CCVs<br>Percent                    | Percent<br>Recovery                       | Date                           |
| Param                        | Flag    | Units          | Conc.                                   | Conc.                             | Recovery                           | Limits                                    | Analyzed                       |
| DRO                          |         | mg/Kg          | 250                                     | 270                               | 108                                | 75 - 125                                  | 7/22/02                        |

|

| 6701 Aberdeen Avenue. St                                                              | e. 9                                    |            |                |            |         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      | 155 N        | IcCutcheon,S                                                         | uite H                  |               |            | CHA                |               |           | ISTC       |               | AND        | ANA               | TASI           | S RE( | DES          |     |             |
|---------------------------------------------------------------------------------------|-----------------------------------------|------------|----------------|------------|---------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------|--------------|----------------------------------------------------------------------|-------------------------|---------------|------------|--------------------|---------------|-----------|------------|---------------|------------|-------------------|----------------|-------|--------------|-----|-------------|
| Lubbock, Texas 79424<br>Tel (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296  | Trac                                    | ce         | <b>N</b> n:    | aly        | ٧Si     | S.         | In                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>.</b>       |      | ш<br>Те<br>е | 'aso, Texas 7{<br>  (915) 585-34<br>  (915) 585-44<br>  (888) 588-34 | 9932<br>43<br>344<br>13 |               |            |                    | AB O          | rder II   | #          | 8             | 30         | Ē                 | R X            | A     |              |     |             |
| Company Name:                                                                         | 000                                     |            |                |            |         | Pho        | in the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se | 1<br>2         | 2    | M            | 488                                                                  |                         |               | l          |                    |               | AN,       | ALYS       | IS R          | EQU        | EST               |                |       |              |     |             |
| Address: (Street, Ci                                                                  | ty, Zip)                                |            |                | 177        | ر<br>ب  | Fax        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              |                                                                      |                         | _             | ¥ <u>a</u> |                    |               | – (Circle | or S<br>–  | pecity        | Meth       | ON _              |                | _     | _            | _   |             |
| Contact Person:                                                                       | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 2          | 1              | 001        | 2       | Ĩ          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 110            |      | -<br>-       |                                                                      |                         |               | 0          | 2 002/             |               |           |            |               |            |                   |                |       |              |     | <del></del> |
| Invoice to:                                                                           | X X Elix                                | 5          |                |            |         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              |                                                                      |                         |               | • ₩3       | 80109              | 6             |           |            |               |            |                   |                |       |              |     | qsrd        |
| (If different from above)                                                             |                                         |            |                |            |         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              |                                                                      |                         |               | 9          | -H 9               | iH əs         |           |            |               |            |                   |                |       |              |     | ueta        |
| Project #:                                                                            | .0005/                                  |            |                |            |         | 01         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                | 500  | י של בי      | えい                                                                   |                         |               | _51        | 75 Yd              | S dq 1        |           |            |               | 9          |                   |                |       |              |     | mont        |
| Project Location:                                                                     | LEST OF                                 | 404        | 65             |            |         | San        | npler Si                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | gnatur<br>S    | ie S |              | Xee                                                                  | .5                      |               | 08         | 04.04              |               |           |            | 4             | 00(95      |                   |                |       |              |     | tierent     |
| - <u>2</u> 64 5                                                                       |                                         |            | tur            |            | Ň       | ATRIX      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Ba –           | SERV | VATIVI       | E SAN                                                                | IPLING                  | 205           | 900<br>70  | <u>∝</u> Я 2Α      | ea sA t       | selite    | S          | <b>79/809</b> | 28.10      | 809/A<br>803/A    |                |       |              |     | ib îi ərr   |
| -<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br>-<br> | FIELD CODE                              |            |                | L RAT      | <b></b> | DGE        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0 <sup>°</sup> | н    |              | Э.<br>                                                               | 3                       | E 80518/6     | 1200 V     | 00728<br>Metals An | gA slateM c   | Volatifes | Pesticide: | NS VOI 826    | V .ime2 2N | 909/2808 s'       | Hq ,2ST ,      |       |              |     | Around Tin  |
|                                                                                       |                                         |            | лол<br>)) # со | TAW        | lios    | การ<br>มเง | нсі                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ONH            | NaC  |              | TAG                                                                  | IMIT                    | BTM<br>MTB    | HGT        | HAq                |               |           |            | BCI           | ย่าง       | Pesti<br>PCB      | BOD            |       |              | _   |             |
| LOCIT 16000                                                                           | 129                                     |            | 1 4 0          | 2          | ×       |            | $\neg$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |      |              | 2,                                                                   | 21915                   |               | X          |                    |               |           |            |               |            |                   |                |       |              |     | -           |
| 23 71702                                                                              | - 40                                    | -          | 1 40           | 7          | X       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 1/2                                                                  | 2187                    | ~ `           | X<br>X     |                    |               |           |            |               |            |                   |                |       |              |     |             |
| 23 71702                                                                              | - 41                                    |            | 1 40           | <u>م</u>   | ×       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 212                                                                  | 429×                    |               | XX         |                    |               |           |            |               |            |                   |                |       |              |     |             |
| 40212 he                                                                              | イカー                                     |            | [<br>_ 10      | イ          | ×       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 218                                                                  | كدوي                    | ,<br>,        | くく         |                    |               |           |            |               |            |                   |                |       |              |     |             |
| 20212                                                                                 | -43                                     |            | 1 46           | 2          | X       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 92/2                                                                 | 1930                    | ~             | ×          |                    |               |           |            |               |            |                   |                |       |              |     |             |
| 24 71702.                                                                             | - 44                                    |            | 1 40           | 4          | ×       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 2/2                                                                  | 4935                    | ·×            | ×          |                    |               |           |            |               |            |                   |                |       |              |     |             |
| - TOZIL 6                                                                             | - 45                                    |            | 1 40           | 4          | ×       |            | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |      |              | X12                                                                  | x 9 6                   | -~            | メ          |                    |               |           |            |               |            |                   |                |       |              |     |             |
| - 7120r.                                                                              | - 46                                    |            | 1 40           | 2          | ×       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | 2/2                                                                  | 2+6-                    |               | XX         |                    |               |           |            |               |            |                   |                |       |              |     | )           |
| 24 71702.                                                                             | - 4 2                                   |            | 2              | う          | ×       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              | ズン                                                                   | 9537                    | •             | X          |                    |               |           |            |               |            |                   |                |       |              |     |             |
|                                                                                       |                                         |            |                |            |         |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              |                                                                      |                         |               |            |                    |               |           |            |               |            |                   |                |       |              |     |             |
| Relinquished by:                                                                      | Date: Time                              |            | Received       |            |         |            | -  `                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Date           | ]/   | Time         |                                                                      | _                       |               | <b>Z</b>   |                    |               |           | REM        | ARKS          | <u> </u>   | - '               | - 30           |       | -  ¥<br>v  - | - 2 | -  ¥        |
| Ame Zullio                                                                            | SI TOKIC.                               | <i>4</i> 0 |                |            | /       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |      |              |                                                                      |                         |               | U          | NL)                | <u> </u>      |           |            | v .           | ي د<br>د   | Ĵ                 |                |       |              |     | <b>)</b>    |
| Relinquished by:                                                                      | Date: Time                              |            | Received       | :Aq-       | ,       |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date           |      | Time         |                                                                      |                         | Intac<br>Heac | t<br>Ispac | <u>, y</u>         | 2<br> <br>  > |           | <b>b</b>   | 5<br>0 0      | 2 1        | 2 K               | í,             | Ś     | シュ           |     |             |
| Relinquished by:                                                                      | Date: Time                              | <u></u>    | teceived       |            |         | Na k       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date           | 1-1  |              | 0)                                                                   | $\mathbf{z}$            | E III         | in Re      | ,<br>Iew           | NK            | °         |            | ٿ ڻ           | eck If (   | Special<br>e Need | l Report<br>ed | gnii  |              |     |             |
| Submittal of samples const                                                            | itutes agreement to T                   | erms al    | d Condit       | tions list |         | Levers     | ie side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | of C.O         | U U  |              | -<br>-<br>-                                                          | 1                       | Carri         | er #       | IN.                | 4 W           | 9         | 6          | à             | L          | Ó                 | -///           | *     |              |     |             |
|                                                                                       |                                         |            |                |            | Ģ       | NIGIN,     | AL CO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ۲Y             |      | :            |                                                                      |                         |               |            |                    |               |           |            | ŀ             |            |                   |                |       |              |     |             |

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| 6<br>1                      | 7 Abergeen Avenue, Suite 9<br>5 McCurcheon, Suite H  | Lubbock, Texas 794<br>El Paso, Texas 799<br>E-Mail: Ia | VALYSIS, INC.           24         800•378•1296           32         888•588•3443           b@traceanalysis.com | FAX <b>285 • 2015 •</b> 585 • 49 | <b>B U 2002</b><br>vental Bureau<br>Vation Division<br>44 |
|-----------------------------|------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------|
| Bill To:                    | OCD<br>1220 S. Saint Francis D<br>Santa Fe, NM 87505 | )r.                                                    | lnv<br>Inv                                                                                                      | oice #                           | <b>53855</b><br>Jul 24, 2002                              |
| Attn:                       | Martyne Kieling                                      |                                                        |                                                                                                                 | Order ID:                        | A02071822                                                 |
| Project #:<br>Project Name: | 2-517-000<br>OCD Goc                                 | 0051<br>dwin Treating                                  | Plant P.A. Numbe                                                                                                | er: 20-521-0                     | 0702497                                                   |
| Project Locatio             | n: 8 Miles W                                         | est of Hobbs,                                          | Гх                                                                                                              | -<br>-                           |                                                           |
| ſest                        | Quantity                                             | Matrix                                                 | Description                                                                                                     | Price                            | SubTotal                                                  |
| IPH DRO<br>BTEX / TPH GRO   | ) 10<br>) 10                                         | Soil<br>Soil                                           | 202011 - 202020<br>202011 - 202020                                                                              | \$40.00<br>\$60.00               | \$400.00<br>\$600.00                                      |
|                             |                                                      |                                                        |                                                                                                                 |                                  |                                                           |

Director, Dr. Blair Leftwich

on to pay myn 8-19-02 TraceAnalysis, Inc.

6701 Verdeen Ave., Suite 9

Lubbock, T 9424-1515

(806) 794-1296

Report Date: July 23, 2002Order Number: A020718222-517-000051OCD Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs,Tx.

### Summary Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

ļ.

Report Date: July 2

July 23, 2002

Order ID Number: A02071822

| Project Number:   | 2-517-000051               |
|-------------------|----------------------------|
| Project Name:     | OCD Goodwin Treating Plant |
| Project Location: | 8 Miles West of Hobbs, Tx. |

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 202011 | B-71702-1   | Soil   | 7/17/02 | 12:40 | 7/18/02  |
| 202012 | B-71702-2   | Soil   | 7/17/02 | 12:44 | 7/18/02  |
| 202013 | B-71702-3   | Soil   | 7/17/02 | 12:46 | 7/18/02  |
| 202014 | B-71702-4   | Soil   | 7/17/02 | 12:50 | 7/18/02  |
| 202015 | B-71702-5   | Soil   | 7/17/02 | 13:00 | 7/18/02  |
| 202016 | B-71702-6   | Soil   | 7/17/02 | 13:10 | 7/18/02  |
| 202017 | B-71706-7   | Soil   | 7/17/02 | 13:15 | 7/18/02  |
| 202018 | B-71702-8   | Soil   | 7/17/02 | 13:20 | 7/18/02  |
| 202019 | B-71702-9   | Soil   | 7/17/02 | 13:25 | 7/18/02  |
| 202020 | B-71702-10  | Soil   | 7/17/02 | 13:30 | 7/18/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         |              |            | TPH DRO | TPH GRO |
|---------------------|---------|---------|--------------|--------------|------------|---------|---------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm)   |
| 202011 - B-71702-1  | < 0.010 | 0.0461  | 0.173        | 0.446        | 0.665      | 4430    | 40.1    |
| 202012 - B-71702-2  | < 0.010 | 0.0123  | 0.0658       | 0.293        | 0.371      | 5000    | 32      |
| 202013 - B-71702-3  | < 0.010 | 0.0585  | 0.058        | 0.215        | 0.332      | 4490    | 18.6    |
| 202014 - B-71702-4  | 0.356   | 0.953   | 1.83         | 6.21         | 9.35       | 3390    | 183     |
| 202015 - B-71702-5  | 0.0556  | 0.0465  | 0.264        | 0.429        | 0.795      | 5140    | 39.9    |
| 202016 - B-71702-6  | < 0.010 | 0.0213  | 0.0694       | 0.157        | 0.248      | 2730    | 24.1    |
| 202017 - B-71706-7  | <0.010  | 0.0202  | 0.042        | 0.0978       | 0.160      | 2410    | 16.3    |
| 202018 - B-71702-8  | <0.010  | 0.0733  | 0.460        | 1.25         | 1.78       | 2870    | 56.3    |
| 202019 - B-71702-9  | 0.666   | 0.637   | 2.06         | 4.74         | 8.10       | 3170    | 124     |
| 202020 - B-71702-10 | <0.010  | 0.0146  | 0.130        | 0.584        | 0.729      | 3040    | 55.3    |

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79932 888•588•3443 E-Mail: lab@traceanalysis.com

6 806•794•1296 3 915•585•3443

FAX 806•794•1298 FAX 915•585•4944

### Analytical and Quality Control Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240 Report Date:

July 23, 2002

Order ID Number: A02071822

Project Number:2-517-000051Project Name:OCD Goodwin Treating PlantProject Location:8 Miles West of Hobbs,Tx.

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 202011 | B-71702-1   | Soil   | 7/17/02 | 12:40 | 7/18/02  |
| 202012 | B-71702-2   | Soil   | 7/17/02 | 12:44 | 7/18/02  |
| 202013 | B-71702-3   | Soil   | 7/17/02 | 12:46 | 7/18/02  |
| 202014 | B-71702-4   | Soil   | 7/17/02 | 12:50 | 7/18/02  |
| 202015 | B-71702-5   | Soil   | 7/17/02 | 13:00 | 7/18/02  |
| 202016 | B-71702-6   | Soil   | 7/17/02 | 13:10 | 7/18/02  |
| 202017 | B-71706-7   | Soil   | 7/17/02 | 13:15 | 7/18/02  |
| 202018 | B-71702-8   | Soil   | 7/17/02 | 13:20 | 7/18/02  |
| 202019 | B-71702-9   | Soil   | 7/17/02 | 13:25 | 7/18/02  |
| 202020 | B-71702-10  | Soil   | 7/17/02 | 13:30 | 7/18/02  |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Report Date: July 23, 2002 2-517-000051

Order Number: A02071822 OCD Goodwin Treating Plant

Page Number: 2 of 16 8 Miles West of Hobbs, Tx.

### **Analytical Report**

| Analysis:<br>Analyst: | BTEX<br>CG | Analytical Method:<br>Preparation Method | S 8021B<br>S 5035 | QC Batch:<br>Prep Batch: | QC22030<br>PB20849 | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02 |
|-----------------------|------------|------------------------------------------|-------------------|--------------------------|--------------------|----------------------------------|--------------------|
| Param                 |            | Flag                                     | Result            | Units                    | Ľ                  | vilution                         | RDL                |
| Benzene               |            |                                          | < 0.010           | mg/Kg                    | · <u>··</u>        | 10                               | 0.001              |
| Toluene               |            |                                          | 0.0461            | mg/Kg                    |                    | 10                               | 0.001              |
| Ethylbenze            | ne         |                                          | 0.173             | mg/Kg                    |                    | 10                               | 0.001              |
| M,P,O-Xyl             | ene        |                                          | 0.446             | mg/Kg                    |                    | 10                               | 0.001              |
| Total BTE             | Х          |                                          | 0.665             | mg/Kg                    |                    | 10                               | 0.001              |

|           |      |                   |       |          | Spike  | Percent  | Recovery |
|-----------|------|-------------------|-------|----------|--------|----------|----------|
| Surrogate | Flag | $\mathbf{Result}$ | Units | Dilution | Amount | Recovery | Limits   |
| TFT       |      | 0.890             | mg/Kg | 10       | 1      | 89       | 70 - 130 |
| 4-BFB     | 1    | 1.39              | mg/Kg | 10       | 1      | 139      | 70 - 130 |

#### Sample: 202011 - B-71702-1

| Analysis:<br>Analyst: | TPH DRO<br>MM | Analytical Method:<br>Preparation Method: | Mod. 8015B<br>3550 B | QC Batch:<br>Prep Batch: | QC22092<br>PB20889 | Date Analyzed:<br>Date Prepared: | 7/22/02<br>7/19/02 |
|-----------------------|---------------|-------------------------------------------|----------------------|--------------------------|--------------------|----------------------------------|--------------------|
| Param                 | Flag          | Result                                    | Units                | Dilu                     | tion .             |                                  | RDL                |
| DRO                   |               | 4430                                      | mg/Kg                | 1                        | 0                  |                                  | 50                 |
|                       |               |                                           |                      |                          |                    |                                  |                    |

|               |                 |                         |                  |          | $\mathbf{Spike}$ | Percent  | Recovery |
|---------------|-----------------|-------------------------|------------------|----------|------------------|----------|----------|
| Surrogate     | $\mathbf{Flag}$ | $\operatorname{Result}$ | $\mathbf{Units}$ | Dilution | Amount           | Recovery | Limits   |
| n-Triacontane | 2               | 900                     | mg/Kg            | 10       | 150              | 600      | 70 - 130 |

#### Sample: 202011 - B-71702-1

| Analysis: | TPH GRO         | Analytical Method:  | 8015B | QC Batch:   | QC22031  | Date Analyzed: | 7/19/02 |
|-----------|-----------------|---------------------|-------|-------------|----------|----------------|---------|
| Analyst:  | CG              | Preparation Method: | 5035  | Prep Batch: | PB20849  | Date Prepared: | 7/19/02 |
|           |                 |                     |       |             |          |                |         |
| Param     | $\mathbf{Flag}$ | $\mathbf{Result}$   | Units | Ľ           | Dilution |                | RDL     |
| GRO       |                 | 40.1                | mg/Kg | г.<br>5     | 10       |                | 0.10    |
| ·····     |                 |                     |       |             |          |                |         |

| Surrogate | Flag | Result | Units | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
|-----------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| TFT       |      | 0.719  | mg/Kg | 10       | 0.10            | 72                  | 70 - 130           |
| 4-BFB     | 3    | 1.74   | mg/Kg | 10       | 0.10            | 175                 | 70 - 130           |

<sup>1</sup>High surrogate recovery due to peak interference. <sup>2</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>3</sup>High surrogate recovery due to peak interference.
| Report Dat<br>2-517-00005        | ce: July 23, 200<br>51            | 02                                                           | Order Num<br>OCD Goodw | ber: A02071822<br>in Treating Plan | t                  | Page Numb<br>8 Miles West of     | per: 3 of 16<br>Hobbs,Tx. |
|----------------------------------|-----------------------------------|--------------------------------------------------------------|------------------------|------------------------------------|--------------------|----------------------------------|---------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>202012 -</b><br>BTEX A<br>CG F | <b>B-71702-2</b><br>Analytical Method:<br>Preparation Method | S 8021B<br>: S 5035    | QC Batch:<br>Prep Batch:           | QC22030<br>PB20849 | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02        |
| Param                            |                                   | Flag                                                         | Result                 | Units                              | Dilu               | ition                            | RDL                       |
| Benzene                          |                                   |                                                              | < 0.010                | mg/Kg                              |                    | 10                               | 0.001                     |
| Toluene                          |                                   |                                                              | 0.0123                 | mg/Kg                              | 1                  | 10                               | 0.001                     |
| Ethylbenzer                      | ne                                |                                                              | 0.0658                 | mg/Kg                              | ]                  | 10                               | 0.001                     |
| M,P,O-Xyle                       | ene                               |                                                              | 0.293                  | mg/Kg                              | 1                  | 10                               | 0.001                     |
| Total BTE                        | <u>x</u>                          | 48/2 1927                                                    | 0.371                  | mg/Kg                              | 1                  | 10                               | 0.001                     |
|                                  |                                   |                                                              |                        |                                    |                    |                                  |                           |
| 0                                | 171                               |                                                              | TT '4                  |                                    | Spike              | Percent                          | Recovery                  |
| Surrogate                        | Flag                              | Result                                                       | Units                  | Dilution                           | Amount             | 106                              | $\frac{1111115}{70, 120}$ |
|                                  |                                   | 1.00                                                         | mg/Kg                  | 10                                 | 1                  | 100                              | 70 - 130                  |
| 4-DF D                           | <u> </u>                          | 1.90                                                         | iiig/ Kg               | 10                                 | 1                  |                                  | 10 - 130                  |
| Sample:                          | 202012 -                          | B-71702-2                                                    |                        |                                    |                    |                                  |                           |
| Analysis:                        | TPH DRO                           | Analytical Metho                                             | d: Mod. 80             | 015B QC Bate                       | h: QC22092         | Date Analyzed:                   | 7/22/02                   |
| Analyst:                         | MM                                | Preparation Meth                                             | od: 3550 B             | Prep Bat                           | ch: PB20889        | Date Prepared:                   | 7/19/02                   |
| Param                            | Flag                              | Result                                                       | Ur                     | nits                               | Dilution           |                                  | RDL                       |
| DRO                              |                                   | 5000                                                         | mg                     | /Kg                                | 10                 |                                  | 50                        |
|                                  |                                   |                                                              |                        |                                    |                    |                                  |                           |
|                                  |                                   |                                                              |                        |                                    |                    | _                                |                           |
| <b>a</b> ,                       |                                   |                                                              | <b></b>                |                                    | Spike              | Percent                          | Recovery                  |
| Surrogate                        | Flag                              | ; Result                                                     | Units                  | Dilution                           | Amount             | Recovery                         | Limits                    |
| n-Iriaconta                      | ne                                | 1050                                                         | mg/Kg                  | 10                                 | 150                | 700                              | 70 - 130                  |
| Sample:                          | 202012 -                          | B-71702-2                                                    |                        |                                    |                    |                                  |                           |
| Analysis:                        | TPH GRO                           | Analytical Meth                                              | od: 8015B              | QC Batch:                          | QC22031            | Date Analyzed:                   | 7/19/02                   |
| Analyst:                         | CG                                | Preparation Met                                              | hod: 5035              | Prep Batch:                        | PB20849            | Date Prepared:                   | 7/19/02                   |
| Porom                            | Flor                              | Popult                                                       | ΙŢ                     | vite                               | Dilution           |                                  | זרוק                      |
| $\frac{1}{\text{GRO}}$           | Iag                               |                                                              | 01                     | /Ka                                | 10                 |                                  | 0.10                      |
|                                  |                                   |                                                              | ing,                   | / ng                               | 10                 | <u>_</u>                         | 0.10                      |
| <b>a</b>                         |                                   |                                                              |                        |                                    | Spike              | Percent                          | Recovery                  |
| Surrogate                        | Flag                              | Result                                                       | Units                  | Dilution                           | Amount             | Recovery                         | Limits                    |
| TFT<br>A DED                     | 5                                 | 0.881                                                        | mg/Kg                  | 10                                 | 0.10               | 88                               | 70 - 130                  |
| 4-BFB                            |                                   | 2.35                                                         | mg/Kg                  | 10                                 | 0.10               | 235                              | /0 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>202013 -</b><br>BTEX A<br>CG F | <b>B-71702-3</b><br>Analytical Method:<br>Preparation Method | S 8021B<br>: S 5035    | QC Batch:<br>Prep Batch:           | QC22030<br>PB20849 | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02        |

<sup>4</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>5</sup>High surrogate recovery due to peak interference.

| Report Dat<br>2-517-0000                  | te: July 23, 2<br>51                   | 2002                                                     | Order Num<br>OCD Goodw     | ber: A02071822<br>vin Treating Plan | ıt                               | Page Numl<br>8 Miles West of     | per: 4 of 16<br>Hobbs,Tx.                  |
|-------------------------------------------|----------------------------------------|----------------------------------------------------------|----------------------------|-------------------------------------|----------------------------------|----------------------------------|--------------------------------------------|
| Param                                     |                                        | Flag                                                     | Result                     | Units                               | Dila                             | ition                            | RDL                                        |
| Renzene                                   |                                        | 1 105                                                    |                            | mg/Kg                               |                                  | 10                               | 0.001                                      |
| Toluene                                   |                                        |                                                          | 0.0585                     | mg/Kg                               | 1                                | 10                               | 0.001                                      |
| Ethylbenzo                                | no                                     |                                                          | 0.0000                     | mg/Kg                               | -                                | 10                               | 0.001                                      |
| M P O <sub>-</sub> Xyle                   |                                        |                                                          | 0.000                      | mg/Kg                               | 1                                | 10                               | 0.001                                      |
| Total BTE                                 | X                                      |                                                          | 0.210                      | mg/Kg                               | 1                                | 10                               | 0.001                                      |
|                                           |                                        |                                                          | 0.002                      |                                     |                                  |                                  |                                            |
|                                           |                                        |                                                          |                            |                                     | Spike                            | Percent                          | Recovery                                   |
| Surrogate                                 | Flag                                   | Result                                                   | Units                      | Dilution                            | Amount                           | Recovery                         | Limits                                     |
| TFT                                       |                                        | 1.09                                                     | mg/Kg                      | 10                                  | 1                                | 109                              | 70 - 130                                   |
| <u>4-BFB</u>                              |                                        | 1.15                                                     | mg/Kg                      | 10                                  | 1                                | 115                              | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:          | <b>202013</b><br>TPH DRO<br>MM         | - <b>B-71702-3</b><br>Analytical Meth<br>Preparation Met | od: Mod. 8<br>bod: 3550 B  | 015B QC Bate<br>Prep Ba             | ch: QC22092<br>tch: PB20889      | Date Analyzed:<br>Date Prepared: | 7/22/02<br>7/19/02                         |
| Param                                     | Flag                                   | Result                                                   | U                          | nits                                | Dilution                         |                                  | RDL                                        |
| DRO                                       |                                        | 4490                                                     | mg                         | /Kg                                 | 10                               |                                  | 50                                         |
| Surrogate<br>n-Triaconta                  | Fla                                    | ag Result<br>6 838                                       | Units<br>mg/Kg             | Dilution<br>10                      | Amount<br>150                    | Recovery<br>558                  | Limits<br>70 - 130                         |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>202013</b><br>TPH GRO<br>CG<br>Flag | - B-71702-3<br>Analytical Met<br>Preparation M<br>Besult | thod: 8015B<br>ethod: 5035 | 3 QC Batch:<br>Prep Batch           | QC22031<br>: PB20849<br>Dilution | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02<br>BDL                  |
| GRO                                       | 1 lag                                  | 186                                                      | mg                         | /Ka                                 | 10                               |                                  | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                 | Flag<br>7                              | Result<br>0.920<br>1.79                                  | Units<br>mg/Kg<br>mg/Kg    | Dilution<br>10<br>10                | Spike<br>Amount<br>0.10<br>0.10  | Percent<br>Recovery<br>92<br>179 | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:          | <b>202014</b><br>BTEX<br>CG            | - B-71702-4<br>Analytical Method<br>Preparation Metho    | l: S 8021B<br>od: S 5035   | QC Batch:<br>Prep Batch:            | QC22030<br>PB20849               | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02                         |
| Faram<br>Bongong                          |                                        | r lag                                                    | Kesult                     | Units                               |                                  |                                  |                                            |
| Toluono                                   |                                        |                                                          | 0.390                      | mg/Kg                               | 2                                | 0                                | 0.001                                      |
| Ethvihenzo                                | 10                                     |                                                          | 0.800<br>1.82              | mg/Kg                               |                                  | 0                                | 0.001                                      |
| <u></u>                                   |                                        |                                                          | 1.00                       | mg/ ng                              | ۷                                | v                                | 0.001                                      |

Continued ...

<sup>6</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>7</sup>High surrogate recovery due to peak interference.

| <u> </u>                                                                                   | uly 23, 20                            | 002                                                            | Order Nun<br>OCD Goodw                       | ber: A02071822<br>vin Treating Plan       | Page Number: 5 of 16<br>8 Miles West of Hobbs,Tx. |                                  |                                            |
|--------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------|----------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------|--------------------------------------------|
| Continued                                                                                  | Sample:                               | 202014 Analysis:                                               | BTEX                                         |                                           |                                                   |                                  |                                            |
| Param                                                                                      | •                                     | Flag                                                           | Result                                       | Units                                     | Dilu                                              | tion                             | $\mathbf{RDL}$                             |
| M,P,O-Xylene                                                                               |                                       | ······································                         | 6.21                                         | mg/Kg                                     | 2                                                 | 0                                | 0.001                                      |
| Total BTEX                                                                                 |                                       |                                                                | 9.35                                         | mg/Kg                                     | 2                                                 | 0                                | 0.001                                      |
|                                                                                            |                                       |                                                                |                                              |                                           |                                                   |                                  |                                            |
|                                                                                            |                                       |                                                                |                                              |                                           | Spike                                             | Percent                          | Recoverv                                   |
| Surrogate                                                                                  | Flag                                  | Result                                                         | Units                                        | Dilution                                  | Amount                                            | Recoverv                         | Limits                                     |
| TFT                                                                                        |                                       | 0.924                                                          | mg/Kg                                        | 20                                        | 1                                                 | 92                               | 70 - 130                                   |
| 4-BFB                                                                                      | 8                                     | 2.06                                                           | mg/Kg                                        | 20                                        | 1                                                 | 206                              | 70 - 130                                   |
| Sample: 2<br>Analysis: TH                                                                  | <b>02014</b> -<br>PH DRO              | B-71702-4<br>Analytical Metho                                  | od: Mod. 8                                   | 015B QC Bate                              | ch: QC22092                                       | Date Analyzed:                   | 7/22/02                                    |
| Analyst: MI                                                                                | M ,                                   | Preparation Met                                                | hod: 3550 B                                  | Prep Ba                                   | tch: PB20889                                      | Date Prepared:                   | 7/19/02                                    |
| Param                                                                                      | Flag                                  | Result                                                         | U                                            | nits                                      | Dilution                                          |                                  | RDL                                        |
| DRO                                                                                        | Ŭ                                     | 3390                                                           | mg                                           | g/Kg                                      | 10                                                |                                  | 50                                         |
| Surrogate                                                                                  | Flag                                  | g Result                                                       | Units                                        | Dilution                                  | Spike<br>Amount                                   | Percent<br>Recovery              | Recovery<br>Limits                         |
| n-macontane                                                                                |                                       | 005                                                            | mg/Kg                                        | 10                                        | 100                                               | 402                              | 70 - 130                                   |
| Sample: 2<br>Analysis: TF<br>Analyst: CC<br>Param                                          | <b>02014 -</b><br>PH GRO<br>G<br>Flag | <b>B-71702-4</b><br>Analytical Met<br>Preparation Me<br>Result | hod: 8015E<br>ethod: 5035<br>U               | B QC Batch:<br>Prep Batch:<br>nits        | QC22031<br>: PB20849<br>Dilution                  | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02<br>RDL                  |
| GRO                                                                                        | 0                                     | 183                                                            |                                              | -/Kσ                                      | 20                                                |                                  | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                                                                  | Flag<br>10                            | Result<br>0.986<br>5.66                                        | Units<br>mg/Kg<br>mg/Kg                      | Dilution<br>20<br>20                      | Spike<br>Amount<br>0.10<br>0.10                   | Percent<br>Recovery<br>99<br>566 | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample: 2                                                                                  | 02015 -<br>TEX                        | <b>B-71702-5</b><br>Analytical Method<br>Preparation Metho     | : S 8021B<br>d: S 5035                       | QC Batch:<br>Prep Batch:                  | QC22030<br>PB20849                                | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02                         |
| Analysis: B1<br>Analyst: CC                                                                |                                       |                                                                |                                              |                                           |                                                   |                                  |                                            |
| Analysis: B1<br>Analyst: CC<br>Param                                                       | -                                     | Flag                                                           | Result                                       | $\mathbf{Units}$                          | Dilu                                              | tion                             | RDL                                        |
| Analysis: BT<br>Analyst: CC<br>Param<br>Benzene                                            |                                       | Flag                                                           | Result<br>0.0556                             | Units<br>mg/Kg                            | Dilu<br>2                                         | tion<br>0                        | RDL<br>0.001                               |
| Analysis: BT<br>Analyst: CC<br>Param<br>Benzene<br>Toluene                                 |                                       | Flag                                                           | Result<br>0.0556<br>0.0465                   | Units<br>mg/Kg<br>mg/Kg                   | Dilu<br>2<br>2                                    | tion<br>0<br>0                   | RDL<br>0.001<br>0.001                      |
| Analysis: BT<br>Analysi: CC<br>Param<br>Benzene<br>Toluene<br>Ethylbenzene                 |                                       | Flag                                                           | Result<br>0.0556<br>0.0465<br>0.264          | Units<br>mg/Kg<br>mg/Kg<br>mg/Kg          | Dilu<br>2<br>2<br>2                               | tion<br>0<br>0<br>0              | RDL<br>0.001<br>0.001<br>0.001             |
| Analysis: BT<br>Analyst: CC<br>Param<br>Benzene<br>Toluene<br>Ethylbenzene<br>M,P,O-Xylene |                                       | Flag                                                           | Result<br>0.0556<br>0.0465<br>0.264<br>0.429 | Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg | Dilu<br>2<br>2<br>2<br>2<br>2                     | tion<br>0<br>0<br>0<br>0         | RDL<br>0.001<br>0.001<br>0.001<br>0.001    |

<sup>8</sup>High surrogate recovery due to peak interference. <sup>9</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>10</sup>High surrogate recovery due to peak interference.

| Report Dat<br>2-517-00005        | Report Date: July 23, 2002<br>2-517-000051 |                                                        |                                 | nber: A02071822<br>vin Treating Plar | nt                          | Page Number: 6 of 16<br>8 Miles West of Hobbs,Tx. |                           |
|----------------------------------|--------------------------------------------|--------------------------------------------------------|---------------------------------|--------------------------------------|-----------------------------|---------------------------------------------------|---------------------------|
| Surrogate                        | Flag                                       | Result                                                 | Units                           | Dilution                             | Spike<br>Amount             | Percent<br>Recovery                               | Recovery<br>Limits        |
| TFT                              |                                            | 0.889                                                  | mg/Kg                           | 20                                   | 1                           | 89                                                | 70 - 130                  |
| 4-BFB                            |                                            | 1.34                                                   | mg/Kg                           | 20                                   | 1                           | 134                                               | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>202015</b><br>TPH DRO<br>MM             | - <b>B-71702-5</b><br>Analytical Met<br>Preparation Me | hod: Mod. 8<br>ethod: 3550 B    | 3015B QC Bate<br>Prep Ba             | ch: QC22092<br>tch: PB20889 | Date Analyzed:<br>Date Prepared:                  | 7/22/02<br>7/19/02        |
| Param                            | Flag                                       | Result                                                 | ; U                             | nits                                 | Dilution                    |                                                   | RDL                       |
| DRO                              | 0                                          | 5140                                                   | m                               | g/Kg                                 | 10                          |                                                   | 50                        |
| Surrogate                        | Fla                                        | ag Result                                              | Units                           | Dilution                             | Spike<br>Amount             | Percent<br>Recovery                               | Recovery<br>Limits        |
| n-Triaconta                      | le 1                                       | <sup>2</sup> 749                                       | mg/Kg                           | 10                                   | 150                         | 499                                               | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>202015</b><br>TPH GRO<br>CG             | - B-71702-5<br>Analytical Me<br>Preparation M          | ethod: 80151<br>Aethod: 5035    | 3 QC Batch:<br>Prep Batch            | QC22031<br>: PB20849        | Date Analyzed:<br>Date Prepared:                  | 7/19/02<br>7/19/02        |
| Param                            | Flag                                       | Result                                                 | U U                             | nits                                 | Dilution                    |                                                   | RDL                       |
| GRO                              |                                            | 39.9                                                   | m                               | g/Kg                                 | 20                          |                                                   | 0.10                      |
| Sumorata                         |                                            | Degult                                                 | TT-:+-                          | Dilution                             | Spike                       | Percent                                           | Recovery                  |
| TET                              | r lag                                      |                                                        |                                 |                                      |                             | 102                                               | 70 120                    |
| 4-RFR                            | 13                                         | 1.03                                                   | mg/Kg                           | 20                                   | 0.10                        | 105                                               | 70 - 130<br>70 - 130      |
| Sample:                          | 202016                                     | - B-71702-6                                            | d. <u><u><u>S</u> 2021</u>B</u> | OC Botch:                            | 00220020                    | Data Analyzadı                                    | 7/10/09                   |
| Analyst:                         | CG                                         | Preparation Meth                                       | nod: S 50321D                   | Prep Batch:                          | PB20849                     | Date Prepared:                                    | 7/19/02                   |
| Param                            |                                            | Flag                                                   | Result                          | Units                                | Dil                         | ution                                             | RDL                       |
| Benzene                          |                                            |                                                        | < 0.010                         | mg/Kg                                |                             | 10                                                | 0.001                     |
| Toluene                          |                                            |                                                        | 0.0213                          | mg/Kg                                |                             | 10                                                | 0.001                     |
| Ethylbenzer                      | e                                          |                                                        | 0.0694                          | mg/Kg                                |                             | 10                                                | 0.001                     |
| M.P.O-Xvle                       | ne                                         |                                                        | 0.157                           | mg/Kg                                |                             | 10                                                | 0.001                     |
| Total BTEX                       | -                                          |                                                        | 0.248                           | mg/Kg                                |                             | 10                                                | 0.001                     |
|                                  |                                            |                                                        |                                 |                                      | Spike                       | Percent                                           | Becoveru                  |
| Surrogate                        | Flag                                       | Recult                                                 | Units                           | Dilution                             | Amount                      | Recovery                                          | Limite                    |
| TFT                              |                                            | <u> </u>                                               | mg/Kg                           | 10                                   | 1                           | 60                                                | $\frac{111115}{70 - 130}$ |
|                                  |                                            |                                                        |                                 |                                      | <b>.</b>                    | · Cor                                             | ntinued                   |

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<sup>11</sup>High surrogate recovery due to peak interference.
 <sup>12</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.
 <sup>13</sup>High surrogate recovery due to peak interference.
 <sup>14</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Date<br>2-517-00005                                                                                                      | e: July 23, 2<br>1             | 2002                                                                             | Order Num<br>OCD Goodw                                                                                                                                  | iber: A02071822<br>in Treating Plan                                                                    | ıt                                                          | Page Number: 7 of 16<br>8 Miles West of Hobbs,Tx.                                              |                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Surrogate                                                                                                                       | Flag                           | Result                                                                           | Units                                                                                                                                                   | Dilution                                                                                               | Spike<br>Amount                                             | Percent<br>Recovery                                                                            | Recovery<br>Limits                                                                                       |
| 4-BFB                                                                                                                           |                                | 0.996                                                                            | mg/Kg                                                                                                                                                   | 10                                                                                                     | 1                                                           | 100                                                                                            | 70 - 130                                                                                                 |
| Sample:<br>Analysis:<br>Analyst:                                                                                                | <b>202016</b><br>TPH DRO<br>MM | - B-71702-6<br>Analytical Metho<br>Preparation Met                               | od: Mod. 8<br>hod: 3550 B                                                                                                                               | 015B QC Batc<br>Prep Ba                                                                                | ch: QC22092<br>tch: PB20889                                 | Date Analyzed:<br>Date Prepared:                                                               | 7/22/02<br>7/19/02                                                                                       |
| D                                                                                                                               | El                             | Decult                                                                           | TT.                                                                                                                                                     | nita                                                                                                   | Dilution                                                    |                                                                                                | BDI                                                                                                      |
| Param                                                                                                                           | Flag                           | Result                                                                           |                                                                                                                                                         |                                                                                                        |                                                             |                                                                                                | <u>F0</u>                                                                                                |
| DRO                                                                                                                             |                                | 2730                                                                             | mg                                                                                                                                                      | /Kg                                                                                                    | 10                                                          |                                                                                                |                                                                                                          |
| Surrogate<br>n-Triacontar                                                                                                       | Fla                            | ag Result<br><sup>15</sup> 558                                                   | Units<br>mg/Kg                                                                                                                                          | Dilution<br>10                                                                                         | Spike<br>Amount<br>150                                      | Percent<br>Recovery<br>372                                                                     | Recovery<br>Limits<br>70 - 130                                                                           |
| Sample:<br>Analysis:<br>Analyst:                                                                                                | <b>202016</b><br>TPH GRO<br>CG | - B-71702-6<br>Analytical Met<br>Preparation Me                                  | hod: 8015B<br>ethod: 5035<br>                                                                                                                           | GC Batch:<br>Prep Batch                                                                                | QC22031<br>: PB20849                                        | Date Analyzed:<br>Date Prepared:                                                               | 7/19/02<br>7/19/02                                                                                       |
| Param                                                                                                                           | Flag                           | Result                                                                           | U                                                                                                                                                       | nits                                                                                                   | Dilution                                                    |                                                                                                | RDL                                                                                                      |
| GRO                                                                                                                             |                                | 24.1                                                                             | mg                                                                                                                                                      | ;/Kg                                                                                                   | 10                                                          | <u> </u>                                                                                       | 0.10                                                                                                     |
| Surrogate<br>TFT<br>4-BFB                                                                                                       | Flag                           | Result<br>0.744<br>1.10                                                          | Units<br>mg/Kg<br>mg/Kg                                                                                                                                 | Dilution<br>10                                                                                         | Spike<br>Amount<br>0.10                                     | Percent<br>Recovery<br>74                                                                      | Recovery<br>Limits<br>70 - 130<br>70 - 130                                                               |
|                                                                                                                                 |                                |                                                                                  |                                                                                                                                                         | 10                                                                                                     | 0.10                                                        | 110                                                                                            | 10 - 100                                                                                                 |
| Sample:<br>Analysis:<br>Analyst:                                                                                                | <b>202017</b><br>BTEX<br>CG    | - <b>B-71706-7</b><br>Analytical Method<br>Preparation Metho                     | : S 8021B<br>d: S 5035                                                                                                                                  | QC Batch:<br>Prep Batch:                                                                               | 0.10<br>QC22030<br>PB20849                                  | Date Analyzed:<br>Date Prepared:                                                               | 7/19/02<br>7/19/02                                                                                       |
| Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                       | <b>202017</b><br>BTEX<br>CG    | - <b>B-71706-7</b><br>Analytical Method<br>Preparation Metho<br>Flag             | : S 8021B<br>d: S 5035<br>Result                                                                                                                        | QC Batch:<br>Prep Batch:<br>Units                                                                      | 0.10<br>QC22030<br>PB20849<br>Dilt                          | Date Analyzed:<br>Date Prepared:<br>ution                                                      | 7/19/02<br>7/19/02<br>RDL                                                                                |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene                                                                            | <b>202017</b><br>BTEX<br>CG    | - <b>B-71706-7</b><br>Analytical Method<br>Preparation Metho<br>Flag             | : S 8021B<br>.d: S 5035<br><u>Result</u><br><0.010                                                                                                      | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg                                                             | 0.10<br>QC22030<br>PB20849<br>Dilu                          | Date Analyzed:<br>Date Prepared:<br>ution                                                      | 7/19/02<br>7/19/02<br>                                                                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene                                                                 | <b>202017</b><br>BTEX<br>CG    | - B-71706-7<br>Analytical Method<br>Preparation Metho<br>Flag                    | : S 8021B<br>:d: S 5035<br>Result<br><0.010<br>0.0202                                                                                                   | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg                                                    | 0.10<br>QC22030<br>PB20849<br>Dilu                          | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10                                          | 7/19/02<br>7/19/02<br><u>RDL</u><br>0.001<br>0.001                                                       |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene<br>Ethylbenzen                                                  | <b>202017</b><br>BTEX<br>CG    | - <b>B-71706-7</b><br>Analytical Method<br>Preparation Metho<br>Flag             | $\begin{array}{c} : & S \ 8021B \\ \text{id:} & S \ 5035 \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ \hline \\ $ | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg<br>mg/Kg                                           | 0.10<br>QC22030<br>PB20849<br>Dil                           | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10<br>10                                    | 7/19/02<br>7/19/02<br><u>RDL</u><br>0.001<br>0.001<br>0.001                                              |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene<br>Ethylbenzen<br>M,P,O-Xvler                                   | 202017<br>BTEX<br>CG           | - B-71706-7<br>Analytical Method<br>Preparation Metho<br>Flag                    | : S 8021B<br>d: S 5035<br><u>Result</u><br><0.010<br>0.0202<br>0.042<br>0.0978                                                                          | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg                                  | 0.10<br>QC22030<br>PB20849<br>Dil                           | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10<br>10                                    | 7/19/02<br>7/19/02<br>RDL<br>0.001<br>0.001<br>0.001<br>0.001                                            |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene<br>Ethylbenzen<br>M,P,O-Xylen<br>Total BTEX                     | 202017<br>BTEX<br>CG           | - B-71706-7<br>Analytical Method<br>Preparation Metho<br>Flag                    | : S 8021B<br>id: S 5035<br>Result<br><0.010<br>0.0202<br>0.042<br>0.0978<br>0.160                                                                       | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg                         | 0.10<br>QC22030<br>PB20849<br>Dilt                          | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10<br>10<br>10<br>10                        | 7/19/02<br>7/19/02<br>RDL<br>0.001<br>0.001<br>0.001<br>0.001<br>0.001                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene<br>Ethylbenzen<br>M,P,O-Xylen<br>Total BTEX                     | 202017<br>BTEX<br>CG           | - B-71706-7<br>Analytical Method<br>Preparation Metho<br>Flag<br>Result          | : S 8021B<br>d: S 5035<br>Result<br><0.010<br>0.0202<br>0.042<br>0.0978<br>0.160<br>Units                                                               | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg                         | 0.10<br>QC22030<br>PB20849<br>Dil<br>Dil<br>Spike<br>Amount | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10<br>10<br>10<br>10<br>Percent<br>Recovery | 7/19/02<br>7/19/02<br>RDL<br>0.001<br>0.001<br>0.001<br>0.001<br>0.001<br>Recovery<br>Limits             |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene<br>Ethylbenzen<br>M,P,O-Xylen<br>Total BTEX<br>Surrogate<br>TFT | 202017<br>BTEX<br>CG           | - B-71706-7<br>Analytical Method<br>Preparation Metho<br>Flag<br>Result<br>0.892 | : S 8021B<br>d: S 5035<br>Result<br><0.010<br>0.0202<br>0.042<br>0.0978<br>0.160<br>Units<br>mg/Kg                                                      | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>10 | 0.10<br>QC22030<br>PB20849<br>Dilt<br>Spike<br>Amount<br>1  | Date Analyzed:<br>Date Prepared:<br>ution<br>10<br>10<br>10<br>10<br>10<br>10<br>20<br>89      | 7/19/02<br>7/19/02<br>RDL<br>0.001<br>0.001<br>0.001<br>0.001<br>0.001<br>Recovery<br>Limits<br>70 - 130 |

<sup>15</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.

story minute due to peak interference. Lob, 104, and 004 show the proces

| Report Dat<br>2-517-00005        | e: July 23, 2<br>51            | 2002                                                      | Orde<br>OCD (           | r Number: A<br>Goodwin Tre | 02071822<br>ating Plan   | t                                     | Page Numb<br>8 Miles West of          | er: 8 of 16<br>Hobbs,Tx.                   |
|----------------------------------|--------------------------------|-----------------------------------------------------------|-------------------------|----------------------------|--------------------------|---------------------------------------|---------------------------------------|--------------------------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>202017</b><br>TPH DRO<br>MM | - B-71706-7<br>Analytical Metho<br>Preparation Met        | od: M<br>hod: 3         | fod. 8015B<br>550 B        | QC Batcl<br>Prep Bat     | h: QC22092<br>ch: PB20889             | Date Analyzed:<br>Date Prepared:      | 7/22/02<br>7/19/02                         |
| Param                            | Flag                           | Result                                                    |                         | Units                      | ]                        | Dilution                              |                                       | RDL                                        |
| DRO                              |                                | 2410                                                      |                         | mg/Kg                      |                          | 10                                    | · · · · · · · · · · · · · · · · · · · | 50                                         |
| Surrogate<br>n-Triaconta         | Fla<br>ne 1                    | ag Result<br>6 601                                        | Uni<br>mg/              | ts D<br>Kg                 | lution<br>10             | Spike<br>Amount<br>150                | Percent<br>Recovery<br>400            | Recovery<br>Limits<br>70 - 130             |
| Sample:<br>Analysis:<br>Analyst: | <b>202017</b><br>TPH GRO<br>CG | - B-71706-7<br>Analytical Met<br>Preparation M            | bod:<br>ethod:          | 8015B C<br>5035 F          | 9C Batch:<br>Trep Batch: | QC22031<br>PB20849                    | Date Analyzed:<br>Date Prepared:      | 7/19/02<br>7/19/02                         |
| Param                            | Flag                           | Result                                                    |                         | Units                      | ]                        | Dilution                              |                                       | RDL                                        |
| GRO                              |                                | 16.3                                                      |                         | mg/Kg                      |                          | 10                                    |                                       | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB        | Flag<br>17                     | Result<br>0.856<br>1.62                                   | Units<br>mg/Kg<br>mg/Kg | Dilu<br>; 1<br>; 1         | ution<br>0<br>0          | Spike<br>Amount<br>0.10<br>0.10       | Percent<br>Recovery<br>86<br>162      | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>202018</b><br>BTEX<br>CG    | - B-71702-8<br>Analytical Method<br>Preparation Metho     | l: S 80<br>od: S 50     | 021B Q0<br>035 Pr          | C Batch:<br>ep Batch:    | QC22030<br>PB20849                    | Date Analyzed:<br>Date Prepared:      | 7/19/02<br>7/19/02                         |
| Param                            |                                | Flag                                                      | Result                  | t                          | Units                    | $\operatorname{Dil}^{1}$              | ution                                 | RDL                                        |
| Benzene                          |                                |                                                           | < 0.010                 | )                          | mg/Kg                    | · · · · · · · · · · · · · · · · · · · | 10                                    | 0.001                                      |
| Toluene                          |                                |                                                           | 0.0733                  | 3                          | mg/Kg                    |                                       | 10                                    | 0.001                                      |
| Ethylbenzer                      | ne                             |                                                           | 0.46                    | )                          | mg/Kg                    |                                       | 10                                    | 0.001                                      |
| Total BTE                        | ά<br>ζ                         |                                                           | 1.20                    | 2                          | mg/Kg                    |                                       | 10                                    | 0.001                                      |
| Surrogate<br>TFT<br>4-BFB        | Flag                           | Result<br>0.797<br>0.836                                  | Units<br>mg/Kg<br>mg/Kg | <br>5<br>5                 | ntion<br>0<br>0          | Spike<br>Amount<br>1<br>1             | Percent<br>Recovery<br>80<br>84       | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>202018</b><br>TPH DRO<br>MM | - <b>B-71702-8</b><br>Analytical Metho<br>Preparation Met | od: M<br>bod: 3         | fod. 8015B<br>550 B        | QC Batc<br>Prep Bat      | h: QC22092<br>ch: PB20889             | Date Analyzed:<br>Date Prepared:      | 7/22/02<br>7/19/02                         |

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<sup>&</sup>lt;sup>16</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>17</sup>High surrogate recovery due to peak interference.

| Report Dat<br>2-517-0000         | ce: July 23, 2<br>51           | 2002                                                         | Order Num<br>OCD Goodw  | ber: A02071822<br>in Treating Plar | nt                        | Page Number: 9 of 16<br>8 Miles West of Hobbs,Tx.           |                                |  |
|----------------------------------|--------------------------------|--------------------------------------------------------------|-------------------------|------------------------------------|---------------------------|-------------------------------------------------------------|--------------------------------|--|
| Param                            | Flag                           | Result                                                       | Ur                      | nits                               | Dilution                  |                                                             | RDL                            |  |
| DRO                              |                                | 2870                                                         | mg                      | /Kg                                | 10                        |                                                             | 50                             |  |
| Surrogate<br>n-Triaconta         | Fla<br>ne 1                    | ag Result<br><sup>8</sup> 562                                | Units<br>mg/Kg          | Dilution<br>10                     | Spike<br>Amount<br>150    | Percent<br>Recovery<br>374                                  | Recovery<br>Limits<br>70 - 130 |  |
| Sample:<br>Analysis:<br>Analyst: | <b>202018</b><br>TPH GRO<br>CG | - B-71702-8<br>Analytical Metho<br>Preparation Meth          | od: 8015B               | QC Batch:<br>Prep Batch            | QC22031<br>• PB20849      | Date Analyzed:<br>Date Prepared:                            | 7/19/02<br>7/19/02             |  |
| Param                            | Flag                           | Result                                                       | Ur                      | nits                               | Dilution                  |                                                             | RDL                            |  |
| GRO                              | <u>v</u>                       | 56.3                                                         | mg                      | /Kg                                | 10                        | ********                                                    | 0.10                           |  |
| Surrogate                        | Flag                           | Result                                                       | Units                   | Dilution                           | Spike<br>Amount           | Percent<br>Recovery                                         | Recovery<br>Limits             |  |
| TFT                              |                                | 0.813 r                                                      | ng/Kg                   | 10                                 | 0.10                      | 81                                                          | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>202019</b><br>BTEX<br>CG    | - B-71702-9<br>Analytical Method:<br>Preparation Method:     | S 8021B<br>S 5035       | QC Batch:<br>Prep Batch:           | QC22030<br>PB20849        | Date Analyzed:<br>Date Prepared:                            | 7/19/02 $7/19/02$              |  |
| Param                            | •••                            | Flag                                                         | Result                  | Units                              | Dil                       | ution                                                       | RDL                            |  |
| Benzene                          |                                | <u> </u>                                                     | 0.666                   | mg/Kg                              |                           | 10                                                          | 0.001                          |  |
| Toluene                          |                                |                                                              | 0.637                   | mg/Kg                              |                           | 10                                                          | 0.001                          |  |
| Ethylbenze                       | ne                             |                                                              | 2.06                    | m mg/Kg                            |                           | 10                                                          | 0.001                          |  |
| M,P,O-Xyle                       | ene                            |                                                              | 4.74                    | mg/Kg                              |                           | 10                                                          | 0.001                          |  |
| Total BTE                        | X                              |                                                              | 8.10                    | mg/Kg                              |                           | 10                                                          | 0.001                          |  |
| Surrogate                        | $\mathbf{F}\mathbf{lag}$       | Result                                                       | Units                   | Dilution                           | Spike<br>Amount           | Percent<br>Recovery                                         | Recovery<br>Limits             |  |
| TFT                              |                                | 0.960 r                                                      | ng/Kg                   | 10                                 | 1                         | 96                                                          | 70 - 130                       |  |
| <u>4-BFB</u>                     |                                | 1.26 r                                                       | ng/Kg                   | 10                                 | . 1                       | 126                                                         | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>202019</b><br>TPH DRO<br>MM | - <b>B-71702-9</b><br>Analytical Method<br>Preparation Metho | l: Mod. 8<br>od: 3550 B | 015B QC Bate<br>Prep Ba            | ch: QC2209<br>tch: PB2088 | <ul><li>2 Date Analyzed:</li><li>9 Date Prepared:</li></ul> | 7/22/02 $7/19/02$              |  |
| Param                            | Flag                           | Result                                                       | Uı                      | nits                               | Dilution                  |                                                             | RDL                            |  |
| DRO                              |                                | 3170                                                         | mg                      | /Kg                                | 10                        | ···                                                         | 50                             |  |

<sup>18</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.

| Report Dat<br>2-517-00005                                | e: July 23, 20<br>51                     | 02                                                                        | Order Num<br>OCD Goodw                       | ber: A02071822<br>in Treating Plan        | ıt                                            | Page Numb<br>8 Miles West of       | Page Number: 10 of 16<br>8 Miles West of Hobbs,Tx. |  |  |
|----------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|-----------------------------------------------|------------------------------------|----------------------------------------------------|--|--|
| Surrogate                                                | Flag                                     | g Result                                                                  | Units                                        | Dilution                                  | Spike<br>Amount                               | Percent<br>Recovery                | Recovery<br>Limits                                 |  |  |
| n-Triaconta                                              | ne <sup>19</sup>                         | 637                                                                       | mg/Kg                                        | 10                                        | 150                                           | 424                                | 70 - 130                                           |  |  |
| Sample:<br>Analysis:<br>Analyst:<br>Param                | <b>202019 -</b><br>TPH GRO<br>CG<br>Flag | <b>B-71702-9</b><br>Analytical Met<br>Preparation M<br>Result             | bod: 8015B<br>ethod: 5035<br>Ui              | QC Batch:<br>Prep Batch<br>nits           | QC22031<br>: PB20849<br>Dilution              | Date Analyzed:<br>Date Prepared:   | 7/19/02<br>7/19/02<br>RDL                          |  |  |
| GRO                                                      |                                          | 124                                                                       | mg                                           | /Kg                                       | 10                                            |                                    | 0.10                                               |  |  |
| Surrogate                                                | - Flag<br>20                             | Result<br>0.623                                                           | Units<br>mg/Kg                               | Dilution<br>10                            | Spike<br>Amount<br>0.10                       | Percent<br>Recovery<br>62          | Recovery<br>Limits<br>70 - 130                     |  |  |
| 4-BFB                                                    | 21                                       | 4.27                                                                      | mg/Kg                                        | 10                                        | 0.10                                          | 427                                | 70 - 130                                           |  |  |
| Param<br>Benzene<br>Toluene<br>Ethylbenzer<br>M P Q-Xyle | ne                                       | Flag                                                                      | Result<br><0.010<br>0.0146<br>0.130<br>0.584 | Units<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg | Dil                                           | ution<br>10<br>10<br>10<br>10      | RDL<br>0.001<br>0.001<br>0.001<br>0.001            |  |  |
| Total BTEX                                               | ne<br>K                                  |                                                                           | 0.584<br>0.729                               | mg/Kg<br>mg/Kg                            |                                               | 10                                 | 0.001                                              |  |  |
| Surrogate<br>TFT<br>4-BFB                                | Flag                                     | Result<br>0.928<br>0.743                                                  | Units<br>mg/Kg<br>mg/Kg                      | Dilution<br>10 •<br>10                    | Spike<br>Amount<br>1<br>1                     | Percent<br>Recovery<br>93<br>74    | Recovery<br>Limits<br>70 - 130<br>70 - 130         |  |  |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>DRO         | <b>202020 -</b><br>TPH DRO<br>MM<br>Flag | <b>B-71702-10</b><br>Analytical Meth<br>Preparation Met<br>Result<br>3040 | od: Mod. 8<br>hod: 3550 B<br>Un<br>mg        | 015B QC Bato<br>Prep Ba<br>nits<br>/Kg    | ch: QC22092<br>tch: PB20889<br>Dilution<br>10 | 2 Date Analyzed:<br>Date Prepared: | 7/22/02<br>7/19/02<br>RDL<br>50                    |  |  |
| Surrogate<br>n-Triacontar                                | Flag<br>ne 22                            | g Result                                                                  | Units<br>mg/Kg                               | Dilution<br>10                            | Spike<br>Amount<br>150                        | Percent<br>Recovery<br>402         | Recovery<br>Limits<br>70 - 130                     |  |  |

<sup>19</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control. <sup>20</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>21</sup>High surrogate recovery due to peak interference. <sup>22</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.

| Report Dat<br>2-517-0000         | Report Date: July 23, 2002<br>2-517-000051            |                                                                |              | er Numbe<br>Goodwin | Page Number: 11 of 16<br>8 Miles West of Hobbs,Tx. |                    |                                  |                      |
|----------------------------------|-------------------------------------------------------|----------------------------------------------------------------|--------------|---------------------|----------------------------------------------------|--------------------|----------------------------------|----------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>202020 -</b><br>TPH GRO<br>CG                      | <b>B-71702-10</b><br>Analytical Method:<br>Preparation Method: |              | 8015B<br>5035       | QC Batch:<br>Prep Batch:                           | QC22031<br>PB20849 | Date Analyzed:<br>Date Prepared: | 7/19/02<br>7/19/02   |
| Param                            | Flag                                                  | Result                                                         |              | Units               | s I                                                | Dilution           |                                  | RDL                  |
| GRO                              | ······································                | 55.3                                                           |              | mg/K                | g                                                  | 10                 | ····                             | 0.10                 |
| Surrogate                        | Flag                                                  | Result                                                         | Units        | . ]                 | Dilution                                           | Spike<br>Amount    | Percent<br>Recovery              | Recovery<br>Limits   |
| TFT<br>4-BFB                     | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ |                                                                | mg/K<br>mg/K | g<br>g              | 10<br>10                                           | 0.10<br>0.10       | 72<br>261                        | 70 - 130<br>70 - 130 |

Order Number: A02071822 OCD Goodwin Treating Plant Page Number: 12 of 16 8 Miles West of Hobbs,Tx.

### Quality Control Report Method Blank

| Method Bla    | $\mathbf{n}\mathbf{k}$ | QCBatch:                                     | QC22030                                |            |              |          |           |
|---------------|------------------------|----------------------------------------------|----------------------------------------|------------|--------------|----------|-----------|
|               |                        |                                              |                                        |            |              |          | Reporting |
| Param         |                        | Flag                                         |                                        | Results    | Units        | 3        | Limit     |
| Benzene       |                        |                                              |                                        | < 0.010    | mg/K         | g        | 0.001     |
| Toluene       |                        |                                              |                                        | < 0.010    | mg/K         | g        | 0.001     |
| Ethylbenzene  |                        |                                              |                                        | < 0.010    | mg/K         | g        | 0.001     |
| M,P,O-Xylene  |                        |                                              |                                        | < 0.010    | mg/K         | g        | 0.001     |
| Total BTEX    |                        |                                              |                                        | <0.010     | mg/K         | g        | 0.001     |
|               |                        |                                              |                                        |            |              |          |           |
|               |                        |                                              |                                        |            | Spike        | Percent  | Recovery  |
| Surrogate     | Flag                   | Result                                       | Units                                  | Dilution   | Amount       | Recovery | Limits    |
| TFT           |                        | 0.998                                        | mg/Kg                                  | 10         | 1            | 100      | 70 - 130  |
| 4-BFB         | 1.01112010-1           | 0.970                                        | mg/Kg                                  | 10         | 1            | 97       | 70 - 130  |
| Method Bla    | nk                     | QCBatch:                                     | QC22031                                |            |              |          |           |
|               |                        | <b>~</b> ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | <b>v</b>                               |            |              |          |           |
| D             |                        |                                              | 5                                      | <b>1</b> . | <b>TT</b> •. |          | Reporting |
| Param         |                        | Flag                                         | Res                                    |            | Units        |          | Limit     |
| GRU           |                        |                                              | ······································ | <1         | mg/Kg        |          | 0.10      |
|               |                        |                                              |                                        |            |              |          |           |
| C             | 171                    | D 14                                         | TT*4                                   |            | Spike        | Percent  | Recovery  |
| Surrogate     | Flag                   | Result                                       | Units                                  | Dilution   | Amount       | Recovery |           |
|               |                        | 0.938                                        | mg/Kg                                  | 10         | 0.10         | 94<br>05 | 70 - 130  |
| 4-DI D        |                        | 0.504                                        | mg/ Kg                                 |            | 0.10         |          | 10-10     |
| Method Bla    | nk                     | QCBatch:                                     | QC22092                                |            |              |          |           |
| _             |                        |                                              |                                        |            |              |          | Reporting |
| Param         |                        | Flag                                         | Res                                    | ults       | Units        |          | Limit     |
| DRO           | •=                     |                                              |                                        | 50.0       | mg/Kg        | - ALAN   | 50        |
|               |                        |                                              |                                        |            | Cmiles       | Danaant  | Deserve   |
| Surrogate     | Flag                   | Result                                       | Units                                  | Dilution   | Amount       | Recoverv | Limits    |
| n-Triacontana | 0                      | 153                                          | mg/Kg                                  | 1          | 150          | 102      | 70 - 130  |

# Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes



Order Number: A02071822 OCD Goodwin Treating Plant Page Number: 13 of 16 8 Miles West of Hobbs,Tx.

| Param        | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|---------------|----------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| MTBE         | 1.03          | 1.04           | mg/Kg | 10   | 1                        | < 0.010          | 103   | 0   | 70 - 130       | 20           |
| Benzene      | 1.02          | 1.03           | mg/Kg | 10   | 1                        | < 0.010          | 102   | 0   | 70 - 130       | 20           |
| Toluene      | 1.01          | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 0   | 70 - 130       | 20           |
| Ethylbenzene | 1.01          | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 0   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.92          | 2.96           | mg/Kg | 10   | 3                        | <0.010           | 97    | 1   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| <b>C</b>  | LCS    | LCSD   | TT    | Dilution | Spike  | LCS   | LCSD  | Recovery |
|-----------|--------|--------|-------|----------|--------|-------|-------|----------|
| Surrogate | Result | Result | Units | Dilution | Amount | % Rec | % Rec | Limits   |
| TFT       | 0.932  | 0.95   | mg/Kg | 10       | 1      | 93    | 95    | 70 - 130 |
| 4-BFB     | 0.944  | 0.963  | mg/Kg | 10       | 1      | 94    | 96    | 70 - 130 |

Laboratory Control Spikes

QCBatch: QC22031

|       |                   |        |       |      | Spike  |        |       |     |                  |       |
|-------|-------------------|--------|-------|------|--------|--------|-------|-----|------------------|-------|
|       | LCS               | LCSD   |       |      | Amount | Matrix |       |     | $\% { m Rec}$    | RPD   |
| Param | $\mathbf{Result}$ | Result | Units | Dil. | Added  | Result | % Rec | RPD | $\mathbf{Limit}$ | Limit |
| GRO   | 9.26              | 10.2   | mg/Kg | 10   | 1      | <1     | 93    | 9   | 80 - 120         | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | LCS    | LCSD              |       |          | Spike  | LCS                 | LCSD  | Recovery |
|-----------|--------|-------------------|-------|----------|--------|---------------------|-------|----------|
| Surrogate | Result | $\mathbf{Result}$ | Units | Dilution | Amount | $\% \ \mathrm{Rec}$ | % Rec | Limits   |
| TFT       | 0.903  | 0.931             | mg/Kg | 10       | 0.10   | 90                  | 93    | 70 - 130 |
| 4-BFB     | 0.931  | 0.950             | mg/Kg | 10       | 0.10   | 93                  | 95    | 70 - 130 |

Laboratory Control Spikes QCBatch:

|       |                   |        |       |      | Spike  |                   |       |     |          |                  |
|-------|-------------------|--------|-------|------|--------|-------------------|-------|-----|----------|------------------|
|       | LCS               | LCSD   |       |      | Amount | Matrix            |       |     | % Rec    | RPD              |
| Param | $\mathbf{Result}$ | Result | Units | Dil. | Added  | $\mathbf{Result}$ | % Rec | RPD | Limit    | $\mathbf{Limit}$ |
| DRO   | 308               | 309    | mg/Kg | 1    | 250    | <50.0             | 123   | 0   | 70 - 130 | 20               |

QC22092

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate     | LCS<br>Result | LCSD<br>Besult | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|---------------|---------------|----------------|-------|----------|-----------------|--------------|---------------|--------------------|
| n-Triacontane | 164           | 166            | mg/Kg | 1        | 150             | 109          | 111           | 70 - 130           |

# Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes

QCBatch: QC22030



Order Number: A02071822 OCD Goodwin Treating Plant

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| Param        | MS<br>Result | MSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|--------------|---------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| Benzene      | 0.928        | 0.855         | mg/Kg | 10   | 1                        | < 0.010          | 92    | 8   | 70 - 130       | 20           |
| Toluene      | 0.922        | 0.856         | mg/Kg | 10   | 1                        | < 0.010          | 92    | 7   | 70 - 130       | 20           |
| Ethylbenzene | 0.93         | 0.865         | mg/Kg | 10   | 1                        | < 0.010          | 93    | 7   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.67         | 2.48          | mg/Kg | 10   | 3                        | < 0.010          | 89    | 7   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | MS                      | MSD               |                  |          | Spike  | MS            | MSD           | Recovery |
|-----------|-------------------------|-------------------|------------------|----------|--------|---------------|---------------|----------|
| Surrogate | $\operatorname{Result}$ | $\mathbf{Result}$ | $\mathbf{Units}$ | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | 0.841                   | 0.809             | mg/Kg            | 10       | 1      | 84            | 80            | 70 - 130 |
| 4-BFB     | 0.886                   | 0.857             | mg/Kg            | 10       | 1      | 88            | 85            | 70 - 130 |

Matrix Spikes QCBatch: QC22031

|       |        |        |                  |      | Spike  |                         |               |     |                        |                        |
|-------|--------|--------|------------------|------|--------|-------------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD    |                  |      | Amount | Matrix                  |               |     | $\% { m Rec}$          | RPD                    |
| Param | Result | Result | $\mathbf{Units}$ | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 6.77   | 9.18   | mg/Kg            | 10   | 1      | <1.00                   | 68            | 30  | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|                           | $\mathbf{MS}$ | MSD               |                  |          | Spike                   | MS            | MSD   | Recovery |
|---------------------------|---------------|-------------------|------------------|----------|-------------------------|---------------|-------|----------|
| Surrogate                 | Result        | $\mathbf{Result}$ | $\mathbf{Units}$ | Dilution | $\operatorname{Amount}$ | $\% { m Rec}$ | % Rec | Limits   |
| $\overline{\mathrm{TFT}}$ | $^{24}$ 0.548 | 0.846             | mg/Kg            | 10       | 0.10                    | 55            | 85    | 70 - 130 |
| 4-BFB                     | 0.712         | 0.763             | mg/Kg            | 10       | 0.10                    | 71            | 76    | 70 - 130 |

Matrix Spikes QCBatch: QC22092

|       |                    |                    |       |      | Spike  |        |               |     |               |       |
|-------|--------------------|--------------------|-------|------|--------|--------|---------------|-----|---------------|-------|
|       | MS                 | MSD                |       |      | Amount | Matrix |               |     | $\% { m Rec}$ | RPD   |
| Param | Result             | $\mathbf{Result}$  | Units | Dil. | Added  | Result | $\% { m Rec}$ | RPD | Limit         | Limit |
| DRO   | <sup>25</sup> 3300 | <sup>26</sup> 3380 | mg/Kg | 10   | 250    | 4430   | -451          | -7  | 70 - 130      | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate     | ${ m MS} { m Result}$ | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units   | Dilution | Spike<br>Amount | ${ m MS}$ ${ m Rec}$ | MSD<br>% Rec | Recovery<br>Limits |
|---------------|-----------------------|-------------------------------------------------------------|---------|----------|-----------------|----------------------|--------------|--------------------|
| n-Triacontane | 640                   | 609                                                         | m mg/Kg | 10       | 150             | 427                  | 406          | 70 - 130           |

## Quality Control Report Continuing Calibration Verification Standards

<sup>24</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>25</sup>MS and MSD out of recovery limits due to peak interference. LCS and LCSD show the process is in control.

<sup>26</sup>MS and MSD out of recovery limits due to peak interference. LCS and LCSD show the process is in control.



Page Number: 15 of 16 8 Miles West of Hobbs, Tx.

#### CCV (1) QC22030 QCBatch:

| Param        | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L  | 0.10                  | 0.0976                 | 98                          | 85 - 115                      | 7/19/02          |
| Benzene      |      | mg/L  | 0.10                  | 0.0989                 | 99                          | 85 - 115                      | 7/19/02          |
| Toluene      |      | mg/L  | 0.10                  | 0.100                  | 100                         | 85 - 115                      | 7/19/02          |
| Ethylbenzene |      | mg/L  | 0.10                  | 0.101                  | 101                         | 85 - 115                      | 7/19/02          |
| M,P,O-Xylene |      | mg/L  | 0.30                  | 0.281                  | 94                          | 85 - 115                      | 7/19/02          |

CCV (2)

2-517-000051

QCBatch: QC22030

|              |      |                 | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|--------------|------|-----------------|-----------------|-----------------|-----------------|----------|----------|
|              |      |                 | True '          | Found           | Percent         | Recovery | Date     |
| Param        | Flag | Units           | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L            | 0.10            | 0.102           | 102             | 85 - 115 | 7/19/02  |
| Benzene      |      | mg/L            | 0.10            | 0.0993          | 99              | 85 - 115 | 7/19/02  |
| Toluene      |      | mg/L            | 0.10            | 0.0984          | 98              | 85 - 115 | 7/19/02  |
| Ethylbenzene |      | $\mathrm{mg/L}$ | 0.10            | 0.0969          | 96              | 85 - 115 | 7/19/02  |
| M,P,O-Xylene |      | $\mathrm{mg/L}$ | 0.30            | 0.2803          | 93              | 85 - 115 | 7/19/02  |

#### ICV (1) QCBatch: QC22030

|              |      |                  | $\mathbf{CCVs}$ | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent  |          |
|--------------|------|------------------|-----------------|-----------------|-----------------|----------|----------|
|              |      |                  | True            | Found           | Percent         | Recovery | Date     |
| Param        | Flag | $\mathbf{Units}$ | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L             | 0.10            | 0.104           | 104             | 85 - 115 | 7/19/02  |
| Benzene      |      | $\mathrm{mg/L}$  | 0.10            | 0.102           | 102             | 85 - 115 | 7/19/02  |
| Toluene      |      | mg/L             | 0.10            | 0.100           | 100             | 85 - 115 | 7/19/02  |
| Ethylbenzene |      | mg/L             | 0.10            | 0.101           | 101             | 85 - 115 | 7/19/02  |
| M,P,O-Xylene |      | $\mathrm{mg/L}$  | 0.30            | 0.293           | 98              | 85 - 115 | 7/19/02  |

# CCV (1)

QCBatch: QC22031

|       |                 |                  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent  |          |
|-------|-----------------|------------------|-----------------|-----------------|-----------------|----------|----------|
|       |                 |                  | True            | Found           | Percent         | Recovery | Date     |
| Param | $\mathbf{Flag}$ | $\mathbf{Units}$ | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| GRO   |                 | mg/Kg            | 1               | 0.951           | 95              | 85 - 115 | 7/19/02  |

#### CCV (2) QCBatch: QC22031

|       |                 |       | CCVs<br>True | CCVs<br>Found | CCVs<br>Percent | $\begin{array}{c} \operatorname{Percent} \\ \operatorname{Recovery} \end{array}$ | Date     |
|-------|-----------------|-------|--------------|---------------|-----------------|----------------------------------------------------------------------------------|----------|
| Param | $\mathbf{Flag}$ | Units | Conc.        | Conc.         | Recovery        | Limits                                                                           | Analyzed |
| GRO   |                 | mg/Kg | 1            | 0.999         | 99              | 85 - 115                                                                         | 7/19/02  |

| Report Date: July 23, 2002<br>2-517-000051 |       | Order I<br>OCD Go | Number: A0207<br>odwin Treating | Page Number: 16 of 16<br>8 Miles West of Hobbs,Tx. |                             |                     |                  |
|--------------------------------------------|-------|-------------------|---------------------------------|----------------------------------------------------|-----------------------------|---------------------|------------------|
| ICV (1)                                    |       | QCBatch:          | QC22031                         |                                                    |                             |                     |                  |
| Danam                                      | Elo a | Ti-:+-            | CCVs<br>True                    | CCVs<br>Found                                      | CCVs<br>Percent             | Percent<br>Recovery | Date             |
| GRO                                        | r lag | mg/Kg             | 1                               | 0.907                                              | 90                          | 85 - 115            | 7/19/02          |
| CCV (1)                                    |       | QCBatch:          | QC22092                         |                                                    |                             |                     |                  |
| D                                          |       | <b>TT</b> •.      | CCVs<br>True                    | CCVs<br>Found                                      | CCVs<br>Percent             | Percent<br>Recovery | Date             |
| DRO                                        | Flag  | mg/Kg             | 250                             | 278                                                | 111                         | 75 - 125            | 7/22/02          |
| CCV (2)                                    |       | QCBatch:          | QC22092                         |                                                    |                             |                     |                  |
| Damam                                      | Flor  | TT-:4-            | CCVs<br>True                    | CCVs<br>Found                                      | CCVs<br>Percent             | Percent<br>Recovery | Date             |
| DRO                                        | riag  | mg/Kg             | 250                             | <u>292</u>                                         | 116                         | 75 - 125            | 7/22/02          |
| CCV (3)                                    |       | QCBatch:          | QC22092                         |                                                    |                             |                     |                  |
| Param                                      | Flag  | Unite             | CCVs<br>True<br>Conc            | CCVs<br>Found<br>Cone                              | CCVs<br>Percent<br>Recovery | Percent<br>Recovery | Date             |
| DRO                                        | riag  | mg/Kg             | 250                             | 287                                                | 114                         | 75 - 125            | 7/22/02          |
| ICV (1)                                    |       | QCBatch:          | QC22092                         |                                                    |                             |                     |                  |
| Dorom                                      | Die - | ŦT *4             | CCVs<br>True                    | CCVs<br>Found                                      | CCVs<br>Percent             | Percent<br>Recovery | Date             |
| DRO                                        | riag  | mg/Kg             | 250                             | 275                                                | 110                         | 75 - 125            | Analyzed 7/22/02 |

рюн TIZHE Turn Around Time if different from standard ç 5 チャチー 327 ・ 5121 CHAIN-OF-CUSTODY AND ANALYSIS REQUEST Also Fax Result 6 Page\_ Check If Special Reporting Limits Are Needed Anabrika + DON Forveld Hq ,2ST ,0OB 822-111 (Circle or Specify Method No.) 803/A1808 sabioitea9 **ANALYSIS REQUEST** 809/Z808 S.80c Semi. Vol. 8270C/625 SW/09 REMARKS: GC/MS Vol. 8260B/624 4 IJЯ 603 TCLP Pesticides LAB Order ID #\_ TCLP Semi Volatiles o TCLP Volatiles Z ≻ ≻ Carrier # TN/M TD Log-in Review WA LAB USE ONLY TCLP Metais Ag As Ba Cd Cr Pb Se Hg R N N Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7 PAH 8270C Headspace Temp 2 ×× ·XX U 0¥9 5198 <u>×</u> × × × 7PH 418.1/TX1005 × × 12 X X ドメ Intact BTEX 80218/602 × 80218/602 **B8TM** 7124 136 0751 32×2 27 m 133 2.1/2 1300 977 m222 377 - 12 017 Mary 871 311.2 80 22 11- 124 SAMPLING **JMIT** 155 McCutcheon, Suite H El Paso, Texas 79932 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 D:01 CO-3/-L **<u><b>ЭТА**</u> r'mpoos PRESERVATIVE NONE Time: Time: Time - 3488 ice e METHOD ICE HOPN Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. Sampler Signature <sup>2</sup>OS<sup>2</sup>H Date: Date: Date: **FraceAnalysis, Inc.** 505.476 <sup>6</sup>ONH Project Name: 0 2 0 **ORIGINAL COPY** ſ ICH Phone #: 82240 more SLUDGE MATRIX oratory/b) ЯIA SOIF メメ × HODDS NM × × イス ×  $\succ$ RETAN Ta Received by Received by: Received at inuomA\amuloV **\$ CONTAINERS** 4000 925 N. FRENCL DR. Time: Time: Time: Kcling 5 FIELD CODE 7 7021-6 50 0/1 S 8-71102-2 20 251700005 J 5-1 2 8-21202-8-71702-6-20715-8 8-71702--20212-١ Date: Date: Date: -70212-9 (Street, City, Zip) 8-71702 20117-8 20212-9 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 ひょじょ Martine 0 CV (If different from above) Relinguished by: Ś Company Name: oject Location Contact Person: Relinquished by: Relinquished by: WW 8miles ae m LAB USE) 3 1 110Car 2 てり Invoice to: 1 **AB** # Project #: Vddress:

202011-202020

|                                                                                                  |                                           |                                                                 |                                                                      |                                                                                                                                                               |                                                                      | ECEIVED<br>B 0 2002                                     |
|--------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------|
|                                                                                                  | 701 Alerdeen Aver<br>55 Matutcheon, St    | nue, Suite 9 Lu<br>uite H El                                    | AC CAT<br>ubbock, Texas 7942<br>Paso, Texas 7993<br>E-Mail: Ial      | VAL/1010, LINCA         24       800•378•1296       806•794•129         82       888•588•3443       915•585•344         9@traceanalysis.com       915•585•344 | JMLJULLUJ <b>OIIJÓGH</b><br>36 FAX 806●794●129<br>43 FAX 915●585●494 | servation Divisio<br>8<br>4                             |
| Bill To:                                                                                         | <b>OCD</b><br>1220 S. Sain<br>Santa Fe, N | nt Francis Dr.<br>M 87505                                       | •                                                                    | in <sup>.</sup>                                                                                                                                               | <b>VOICE #</b><br>Invoice Date:                                      | <b>5358</b><br>Jui 9, 200                               |
|                                                                                                  |                                           | <b>`</b>                                                        |                                                                      |                                                                                                                                                               | Order ID:                                                            | A0207032                                                |
| Attn:                                                                                            | Wayne Pric                                |                                                                 |                                                                      |                                                                                                                                                               |                                                                      |                                                         |
| Attn:<br>Project #:<br>Project Nam                                                               | Wayne Pric                                | 2-517-0000<br>OCD Good                                          | 51<br>win Treating                                                   | P.A. Num<br>Plant                                                                                                                                             | ber: 20-521-(                                                        | 07-02497                                                |
| Attn:<br>Project #:<br>Project Nam<br>Project Loca                                               | wayne Pric                                | 2-517-0000<br>OCD Good<br>8 Miles We                            | 51<br>win Treating<br>st of Hobbs,                                   | P.A. Num<br>Plant<br>Tx.                                                                                                                                      | ber: 20-521-(                                                        | 07-02497                                                |
| Attn:<br>Project #:<br>Project Nam<br>Project Loca<br>Test                                       | Wayne Pric                                | 2-517-0000<br>OCD Good<br>8 Miles We<br>Quantity                | 51<br>win Treating<br>st of Hobbs,<br>Matrix                         | P.A. Num<br>Plant<br>Tx.<br>Description                                                                                                                       | ber: 20-521-(<br>Price                                               | 07-02497<br>SubTotal                                    |
| Attn:<br>Project #:<br>Project Nam<br>Project Loca<br>Test<br>TPH DRO<br>Chloride<br>BTEX/TPH GR | wayne Pric                                | 2-517-0000<br>OCD Good<br>8 Miles We<br>Quantity<br>9<br>2<br>9 | 51<br>win Treating<br>st of Hobbs,<br>Matrix<br>Soil<br>Soil<br>Soil | P.A. Num<br>Plant<br>Tx.<br>Description<br>200775 - 200783<br>200777 - 200782<br>200775 - 200783                                                              | ber: 20-521-0<br>Price<br>\$40.00<br>\$15.00<br>\$60.00              | 07-02497<br>SubTotal<br>\$360.00<br>\$30.00<br>\$540.00 |

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Director, Dr. Blair Leftwich

9k to pay myn 8-19-02 TraceAnalysis, Inc.

6701 Verdeen Ave., Suite 9

Lubbock, T 9424-1515

(806) 794-1296

Report Date: July 23, 2002 Order Number: A02070327 2-517-000051 OCD Goodwin Treating Plant Page Number: 1 of 2 8 Miles West of Hobbs,Tx.

## Summary Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240 Report Date: July 23, 2002

Order ID Number: A02070327

| Project Number:   | 2-517-000051               |
|-------------------|----------------------------|
| Project Name:     | OCD Goodwin Treating Plant |
| Project Location: | 8 Miles West of Hobbs, Tx. |

|        |             |        | Date   | Time  | Date     |
|--------|-------------|--------|--------|-------|----------|
| Sample | Description | Matrix | Taken  | Taken | Received |
| 200775 | 070202-26   | Soil   | 7/2/02 | 10:05 | 7/3/02   |
| 200776 | 070202-27   | Soil   | 7/2/02 | 10:07 | 7/3/02   |
| 200777 | 070202-28   | Soil   | 7/2/02 | 10:10 | 7/3/02   |
| 200778 | 070202-29   | Soil   | 7/2/02 | 10:18 | 7/3/02   |
| 200779 | 070202-30   | Soil   | 7/2/02 | 11:00 | 7/3/02   |
| 200780 | 070202-31   | Soil   | 7/2/02 | 11:08 | 7/3/02   |
| 200781 | 070202-32   | Soil   | 7/2/02 | 11:06 | 7/3/02   |
| 200782 | 070202-33   | Soil   | 7/2/02 | 10:36 | 7/3/02   |
| 200783 | 070202-34   | Soil   | 7/2/02 | 11:10 | 7/3/02   |

0 This report consists of a total of 2 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         |              |            | TPH DRO | TPH GRO |
|---------------------|---------|---------|--------------|--------------|------------|---------|---------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm)   |
| 200775 - 070202-26  | < 0.010 | < 0.010 | < 0.010      | <0.010       | <0.010     | <50.0   | <1.00   |
| 200776 - 070202-27  | <0.010  | < 0.010 | <0.010       | <0.010       | <0.010     | 91.9    | <1.00   |
| 200777 - 070202-28  | < 0.010 | <0.010  | <0.010       | <0.010       | <0.010     | 66.3    | <1.00   |
| 200778 - 070202-29  | < 0.010 | <0.010  | <0.010       | < 0.010      | <0.010     | 144     | <1.00   |
| 200779 - 070202-30  | <0.010  | <0.010  | <0.010       | <0.010       | <0.010     | 224     | <1.00   |
| 200780 - 070202-31  | < 0.010 | < 0.010 | < 0.010      | <0.010       | <0.010     | 120     | <1.00   |
| 200781 - 070202-32  | < 0.010 | <0.010  | < 0.010      | < 0.010      | <0.010     | 102     | <1.00   |
| 200782 - 070202-33  | <0.010  | <0.010  | <0.010       | < 0.010      | <0.010     | <50.0   | <1.00   |
| 200783 - 070202-34  | < 0.010 | <0.010  | <0.010       | <0.010       | <0.010     | <50.0   | <1.00   |

#### Sample: 200777 - 070202-28

| Param    | Flag | Result | Units |
|----------|------|--------|-------|
| Chloride |      | 3120   | mg/Kg |

This is only a summary. Please, refer to the complete report package for quality control data.

| TraceAnalysis, Inc.                     | 6701 Perdeen Ave., Suite 9                                | Lubbock, T 9424-1515 | (806) 794-1296                                    |
|-----------------------------------------|-----------------------------------------------------------|----------------------|---------------------------------------------------|
| Report Date: July 23, 2<br>2-517-000051 | 002 Order Number: A02070327<br>OCD Goodwin Treating Plant | 8                    | Page Number: 2 of 2<br>3 Miles West of Hobbs, Tx. |
| Sample: 200782 -                        | 070202-33                                                 |                      |                                                   |
| Param                                   | Flag                                                      | Result               | Units                                             |
| Chloride                                |                                                           | 3290                 | mg/Kg                                             |

806 • 794 • 1296 Lubbock, Texas 79424 800•378•1296 FAX 806 • 794 • 1298 6701 Aberdeen Avenue, Suite 9 915•585•3443

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El Paso, Texas 79932 E-Mail: lab@traceanalysis.com

888•588•3443

FAX 915•585•4944

# Analytical and Quality Control Report

Martyne Kieling **OCD** Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Report Date:

July 23, 2002

Order ID Number: A02070327

**Project Number:** 2-517-000051 **OCD** Goodwin Treating Plant Project Name: Project Location: 8 Miles West of Hobbs, Tx.

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date   | Time  | Date     |
|--------|-------------|--------|--------|-------|----------|
| Sample | Description | Matrix | Taken  | Taken | Received |
| 200775 | 070202-26   | Soil   | 7/2/02 | 10:05 | 7/3/02   |
| 200776 | 070202-27   | Soil   | 7/2/02 | 10:07 | 7/3/02   |
| 200777 | 070202-28   | Soil   | 7/2/02 | 10:10 | 7/3/02   |
| 200778 | 070202-29   | Soil   | 7/2/02 | 10:18 | 7/3/02   |
| 200779 | 070202-30   | Soil   | 7/2/02 | 11:00 | 7/3/02   |
| 200780 | 070202-31   | Soil   | 7/2/02 | 11:08 | 7/3/02   |
| 200781 | 070202-32   | Soil   | 7/2/02 | 11:06 | 7/3/02   |
| 200782 | 070202-33   | Soil   | 7/2/02 | 10:36 | 7/3/02   |
| 200783 | 070202-34   | Soil   | 7/2/02 | 11:10 | 7/3/02   |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 16 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

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Order Number: A02070327 OCD Goodwin Treating Plant Page Number: 2 of 16 8 Miles West of Hobbs,Tx.

# **Analytical Report**

| Sample:<br>Analysis:<br>Analyst: | 200775<br>BTEX<br>DN           | - 070202-26<br>Analytical Method:<br>Preparation Method: | S 8021B<br>S 5035    | QC Batch:<br>Prep Batch:   | QC21578<br>PB20461        | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02                           |
|----------------------------------|--------------------------------|----------------------------------------------------------|----------------------|----------------------------|---------------------------|----------------------------------|--------------------------------------------|
| Param                            |                                | Flag                                                     | Result               | Units                      | Dilu                      | ition                            | RDL                                        |
| Benzene                          |                                | <                                                        | 0.010                | mg/Kg                      | 1                         | 0                                | 0.001                                      |
| Toluene                          |                                | <                                                        | 0.010                | mg/Kg                      | 1                         | 0                                | 0.001                                      |
| Ethylbenzer                      | ne                             | <                                                        | 0.010                | 8/8<br>mg/Kg               | 1                         | 0                                | 0.001                                      |
| M.P.O-Xvle                       | ne                             |                                                          | 0.010                | mg/Kg                      | 1                         | 0                                | 0.001                                      |
| Total BTE                        | ζ                              | <                                                        | (0.010               | mg/Kg                      | 1                         | .0                               | 0.001                                      |
|                                  |                                |                                                          |                      |                            | 0.3                       | Dest                             | D                                          |
| ~                                |                                |                                                          | <b>.</b> .,          | T211 / 1                   | Spike                     | Percent                          | Recovery                                   |
| Surrogate                        | Flag                           | Result                                                   | Jnits                | Dilution                   | Amount                    | Recovery                         | Limits                                     |
| TFT                              |                                | 0.0981 m                                                 | g/Kg                 | 10                         | 1                         | 98                               | 70 - 130                                   |
| 4-BFB                            |                                | <u>0.0906</u> m                                          | g/Kg                 | 10                         | 1                         | 90                               | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst: | <b>200775</b><br>TPH DRO<br>MM | - 070202-26<br>Analytical Method:<br>Preparation Method  | Mod. 8<br>d: 3550 B  | 015B QC Batcl<br>Prep Bat  | h: QC21812<br>ch: PB20657 | Date Analyzed:<br>Date Prepared: | 7/11/02<br>7/8/02                          |
| Param                            | Flag                           | Result                                                   | U                    | nits ]                     | Dilution                  |                                  | RDL                                        |
| DRO                              |                                | <50.0                                                    | mg                   | <u> </u>                   | 1                         |                                  | 50                                         |
| Surrogate<br>n-Triaconta         | Fla                            | ag Result<br>156                                         | Units<br>mg/Kg       | Dilution<br>1              | Spike<br>Amount<br>150    | Percent<br>Recovery<br>104       | Recovery<br>Limits<br>70 - 130             |
| Sample:<br>Analysis:<br>Analyst: | <b>200775</b><br>TPH GRO<br>DN | - 070202-26<br>Analytical Metho<br>Preparation Meth      | d: 8015H<br>od: 5035 | B QC Batch:<br>Prep Batch: | QC21579<br>: PB20461      | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02                           |
| Param                            | Flag                           | Result                                                   | U                    |                            | Dilution                  |                                  | RDL                                        |
| GRO                              |                                | <1.00                                                    | mg                   | 5/Kg                       | 10                        | IV                               | 0.10                                       |
| Surrogate<br>TFT                 | Flag                           | Result (<br>1.04 m<br>0.831 m                            | Jnits<br>g/Kg        | Dilution<br>10             | Spike<br>Amount<br>0.10   | Percent<br>Recovery<br>104<br>83 | Recovery<br>Limits<br>70 - 130<br>70 - 130 |

Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21578Date Analyzed:7/2/02Analyst:DNPreparation Method:S 5035Prep Batch:PB20461Date Prepared:7/2/02

| Report Da<br>2-517-0000          | te: July 23, 200<br>51           | 02                                                | Order<br>OCD G      | Number: A<br>loodwin Tre | .02070327<br>ating Plant |                         | Page Number: 3 of 16<br>8 Miles West of Hobbs,Tx |                    |  |
|----------------------------------|----------------------------------|---------------------------------------------------|---------------------|--------------------------|--------------------------|-------------------------|--------------------------------------------------|--------------------|--|
| Param                            |                                  | Flag                                              | Result              |                          | Units                    | Dilu                    | tion                                             | RDL                |  |
| Benzene                          |                                  |                                                   | < 0.010             |                          | mg/Kg                    | 1                       | 0                                                | 0.001              |  |
| Foluene                          |                                  |                                                   | < 0.010             |                          | mg/Kg                    | 1                       | 0                                                | 0.001              |  |
| Ethylbenze                       | ne                               |                                                   | < 0.010             |                          | m mg/Kg                  | 1                       | 0                                                | 0.001              |  |
| M,P,O-Xyle                       | ene                              |                                                   | < 0.010             |                          | mg/Kg                    | 1                       | 0                                                | 0.001              |  |
| Total BTE                        | <u>X</u>                         |                                                   | < 0.010             | <br>                     | mg/Kg                    | 1                       | 0                                                | 0.001              |  |
| ,                                |                                  |                                                   |                     |                          |                          | Spike                   | Percent                                          | Recovery           |  |
| Surrogate                        | Flag                             | Result                                            | Units               | Dilu                     | tion                     | Amount                  | Recovery                                         | Limits             |  |
| <u>rft</u>                       | 8                                | 0.0894                                            | mg/Kg               | 1                        | 0                        | 1                       | 89                                               | 70 - 130           |  |
| 4-BFB                            |                                  | 0.0825                                            | mg/Kg               | 1                        | 0                        | 1                       | 82                                               | 70 - 130           |  |
|                                  | <b></b>                          |                                                   |                     |                          |                          |                         |                                                  |                    |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200776 -</b><br>TPH DRO<br>MM | 070202-27<br>Analytical Met<br>Preparation Me     | hod: M<br>ethod: 35 | od. 8015B<br>550 B       | QC Batch<br>Prep Batc    | : QC21812<br>h: PB20657 | Date Analyzed:<br>Date Prepared:                 | 7/11/02<br>7/8/02  |  |
| Param                            | Flag                             | Result                                            | t                   | Units                    | D                        | ilution                 |                                                  | RDL                |  |
| DRO                              |                                  | 91.9                                              | )                   | mg/Kg                    |                          | 1                       |                                                  | 50                 |  |
| _                                |                                  |                                                   |                     |                          |                          |                         |                                                  |                    |  |
|                                  |                                  |                                                   |                     |                          |                          | Spike                   | Percent                                          | Recovery           |  |
| Surrogate                        | Flag                             | Result                                            | Uni                 | ts Di                    | lution                   | Amount                  | Recovery                                         | Limits             |  |
| 1-Triaconta                      | ine                              | 157                                               | mg/l                | Kg                       | 1                        | 150                     | 105                                              | 70 - 130           |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200776 -</b><br>TPH GRO<br>DN | <b>070202-27</b><br>Analytical M<br>Preparation I | ethod:<br>Method:   | 8015B C<br>5035 F        | QC Batch:<br>Prep Batch: | QC21579<br>PB20461      | Date Analyzed:<br>Date Prepared:                 | 7/2/02<br>7/2/02   |  |
| Param                            | Flag                             | Result                                            | t                   | Units                    | D                        | ilution                 |                                                  | RDL                |  |
| GRO                              | <u> </u>                         | <1.00                                             | )                   | mg/Kg                    |                          | 10                      |                                                  | 0.10               |  |
| Surrogate                        | Flag                             | Result                                            | Units               | Dilu                     | tion                     | Spike<br>Amount         | Percent<br>Recovery                              | Recovery<br>Limits |  |
| TFT                              |                                  | 0.849                                             | mg/Kg               | 1                        | 0                        | 0.10                    | 84                                               | 70 - 130           |  |
|                                  |                                  | 0.745                                             | mø/Kø               | 1                        | 0                        | 0.10                    | 74                                               | 70 - 130           |  |

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| Analyst:   | DILA<br>DN | Preparation N | Method: S 5035 | Prep Batch: | PB20461 | Date Prepared: | 7/2/02 |
|------------|------------|---------------|----------------|-------------|---------|----------------|--------|
| Param      |            | Flag          | Result         | Units       | Di      | lution         | RDL    |
| Benzene    |            |               | < 0.010        | mg/Kg       |         | 10             | 0.001  |
| Toluene    |            |               | < 0.010        | mg/Kg       |         | 10             | 0.001  |
| Ethylbenze | ne         |               | < 0.010        | m mg/Kg     |         | 10             | 0.001  |
| M,P,O-Xyle | ene        |               | < 0.010        | mg/Kg       |         | 10             | 0.001  |
| Total BTE  | X          | <u></u>       | < 0.010        | mg/Kg       |         | 10             | 0.001  |

| Report Dat<br>2-517-0000         | e: July 23, 2<br>51            | 002                                             | Order<br>OCD G        | Number:<br>loodwin Ti | A02070327<br>reating Pla | nt                      | Page Num<br>8 Miles West of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ber: 4 of 16<br>Hobbs,Tx.      |
|----------------------------------|--------------------------------|-------------------------------------------------|-----------------------|-----------------------|--------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|                                  |                                | D                                               | TT. */-               | D.,                   | ······                   | Spike                   | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recovery                       |
| Surrogate                        | Flag                           | Result                                          | Units                 | D1                    | lution                   | Amount                  | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Limits                         |
|                                  |                                | 0.917                                           | mg/Kg                 |                       | 10                       | 1                       | 91                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 70 - 130                       |
| <u>4-BFB</u>                     |                                | 0.858                                           | mg/Kg                 |                       | 10                       | 1                       | <u>80</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 70 - 130                       |
| Sample:<br>Analysis:             | <b>200777</b><br>Ion Chroma    | - 070202-28<br>atography (IC) An                | alytical M            | lethod:               | E 300.0 QC               | C Batch: Q              | C22085 Date Analyze                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | d: 7/19/02                     |
| Analyst:                         | JSW                            | Pre                                             | eparation 1           | Method:               | N/A Pre                  | ep Batch: PI            | 320883 Date Prepare                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | d: 7/19/02                     |
| Param                            | Flag                           | Result                                          | Uni                   | ts                    | Dilution                 |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RDL                            |
| Chloride                         |                                | 3120                                            | mg/l                  | Kg                    | 500                      |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1                              |
| Sample:<br>Analysis:<br>Analyst: | <b>200777</b><br>TPH DRO<br>MM | - 070202-28<br>Analytical Met<br>Preparation Me | hod: M<br>ethod: 35   | od. 8015B<br>50 B     | QC Bat<br>Prep Ba        | ch: QC218<br>           | 12 Date Analyzed:<br>57 Date Prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7/11/02<br>7/8/02              |
| Param                            | Flag                           | Result                                          |                       | Units                 |                          | Dilution                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RDL                            |
| DRO                              |                                | 66.3                                            |                       | mg/Kg                 |                          | 1                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 50                             |
| Surrogate<br>n-Triaconta         | Fla                            | ng Result<br>156                                | Unit<br>mg/F          | s I<br>(g             | Dilution                 | Spike<br>Amount<br>150  | Percent<br>Recovery<br>104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>200777</b><br>TPH GRO<br>DN | - 070202-28<br>Analytical Me<br>Preparation M   | ethod: {<br>Aethod: { | 8015B<br>5035         | QC Batch:<br>Prep Batch  | c QC21579<br>h: PB20461 | Date Analyzed:<br>Date Prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7/2/02<br>7/2/02               |
| Param                            | Flag                           | Result                                          |                       | Units                 |                          | Dilution                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RDI.                           |
| GRO                              | 1 105                          | <1.00                                           |                       | mg/Kg                 |                          | 10                      | the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s | 0.10                           |
|                                  |                                |                                                 |                       |                       |                          | Spike                   | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Recovery                       |
| Surrogate                        | Flag                           | Result                                          | Units                 | Di                    | lution                   | Amount                  | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Limits                         |
| TFT                              |                                | 1.24                                            | mg/Kg                 |                       | 10                       | 0.10                    | 124                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 70 - 130                       |
| <u>4-BFB</u>                     | <u> </u>                       | 0.798                                           | mg/Kg                 |                       | 10                       | 0.10                    | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 70 - 130                       |
| Sample:<br>Analysis:             | 200778<br>BTEX                 | - 070202-29<br>Analytical Metho                 | d: S 80               | )21B (                | QC Batch:                | QC21578                 | Date Analyzed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7/2/02                         |
| Analyst:                         | DN                             | Preparation Meth                                | 10 <b>a:</b> S 50     | 135 I                 | rep Batch                | : PB20461               | Date Prepared:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7/2/02                         |
| Param                            |                                | Flag                                            | Result                |                       | Units                    | D                       | vilution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RDL                            |
| Benzene                          |                                | <u>_</u>                                        | < 0.010               |                       | mg/Kg                    |                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001                          |
| Toluene                          |                                |                                                 | < 0.010               |                       | mg/Kg                    |                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001                          |
| Ethylbenzer                      | ne                             |                                                 | < 0.010               |                       | mg/Kg                    |                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001                          |
| M,P,O-Xyle                       | ne                             |                                                 | < 0.010               |                       | mg/Kg                    |                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001                          |
| Total BTEX                       | 2                              |                                                 | < 0.010               |                       | mg/Kg                    |                         | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.001                          |

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| Report Dat<br>2-517-00003        | te: July 23, 2<br>51           |                                                     | Order Number: A02070327Page Number: 5 of 1OCD Goodwin Treating Plant8 Miles West of Hobbs, T |                         | per: 5 of 16<br>Hobbs,Tx.      |                                           |                                |
|----------------------------------|--------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------|-------------------------|--------------------------------|-------------------------------------------|--------------------------------|
| Surrogate                        | Flag                           | Result                                              | Units                                                                                        | Dilution                | Spike<br>Amount                | Percent<br>Recovery                       | Recovery<br>Limits             |
| TFT                              |                                | 0.933                                               | mg/Kg                                                                                        | 10                      | 1                              | 93                                        | 70 - 130                       |
| 4-BFB                            |                                | 0.864                                               | mg/Kg                                                                                        | 10                      | 1                              | 86                                        | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>200778</b><br>TPH DRO<br>MM | - 070202-29<br>Analytical Met<br>Preparation M      | hod: Mod.<br>ethod: 3550 E                                                                   | 8015B QC Ba<br>B Prep B | tch: QC21812<br>Satch: PB20657 | Date Analyzed:<br>Date Prepared:          | 7/11/02<br>7/8/02              |
| Danam                            | Flor                           | Docul                                               | + т                                                                                          | Inita                   | Dilution                       |                                           | זחק                            |
|                                  | r lag                          |                                                     | <u> </u>                                                                                     | g/Kg                    | 1                              |                                           | <u>50</u>                      |
|                                  | <u></u>                        | 144                                                 | ±                                                                                            | g/Kg                    | <b>.1</b>                      | , , <u>, , , , , , , , , , , , , , , </u> |                                |
|                                  |                                | Demili                                              | TT 14-                                                                                       | D:1                     | Spike                          | Percent                                   | Recovery                       |
| Surrogate                        | <u>F 18</u>                    | ig nesuit                                           |                                                                                              |                         |                                | 114                                       | $-\frac{1100}{70}$             |
| Sample:                          | 200778                         | - 070202-29                                         |                                                                                              |                         |                                |                                           |                                |
| Analysis:<br>Analyst:            | TPH GRO<br>DN                  | Analytical M<br>Preparation                         | ethod: 8015<br>Method: 5035                                                                  | B QC Batcl<br>Prep Bat  | n: QC21579<br>ch: PB20461      | Date Analyzed:<br>Date Prepared:          | 7/2/02<br>7/2/02               |
| Param                            | Flag                           | Resul                                               | t T                                                                                          | Jnits                   | Dilution                       |                                           | RDL                            |
| GRO                              |                                | <1.00                                               | ) m                                                                                          | g/Kg                    | 10                             |                                           | 0.10                           |
|                                  |                                |                                                     |                                                                                              |                         |                                |                                           |                                |
| Surrogate                        | Flag                           | $\operatorname{Result}$                             | Units                                                                                        | Dilution                | Spike<br>Amount                | Percent<br>Recovery                       | Recovery<br>Limits             |
| TFT                              | <u>~</u>                       | 0.89                                                | mg/Kg                                                                                        | 10                      | 0.10                           | 89                                        | 70 - 130                       |
| 4-BFB                            |                                | 0.803                                               | mg/Kg                                                                                        | 10                      | 0.10                           | 80                                        | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>200779</b><br>BTEX<br>DN    | - 070202-30<br>Analytical Methor<br>Preparation Met | od: S 8021B<br>hod: S 5035                                                                   | QC Batch:<br>Prep Batcl | QC21578<br>h: PB20461          | Date Analyzed:<br>Date Prepared:          | 7/2/02<br>7/2/02               |
| Param                            |                                | Flag                                                | Result                                                                                       | Units                   | Dil                            | ution                                     | RDL                            |
| Benzene                          |                                | <u> </u>                                            | < 0.010                                                                                      | mg/Kg                   |                                | 10                                        | 0.001                          |
| Toluene                          |                                |                                                     | < 0.010                                                                                      | mg/Kg                   | ;                              | 10                                        | 0.001                          |
| Ethylbenzer                      | ne                             |                                                     | < 0.010                                                                                      | mg/Kg                   |                                | 10                                        | 0.001                          |
| M,P,O-Xyle                       | ene                            |                                                     | < 0.010                                                                                      | m mg/Kg                 |                                | 10                                        | 0.001                          |
| Total BTEX                       | Κ                              |                                                     | <0.010                                                                                       | mg/Kg                   |                                | 10                                        | 0.001                          |
| Surrogate<br>TFT                 | Flag                           | Result                                              | Units<br>mg/Kg                                                                               | Dilution<br>10          | Spike<br>Amount<br>1           | Percent<br>Recovery<br>81                 | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                            | 1                              | 0.676                                               | mg/Kg                                                                                        | 10                      | 1                              | 67                                        | 70 - 130                       |

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<sup>1</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Report Dat<br>2-517-00005                                     | e: July 23, 2<br>51                   | 002                                                 | Oro                                                   | ler Number: A<br>Goodwin Tre     | A02070327<br>eating Plant                 |                           | Page Numl<br>8 Miles West of     | per: 6 of 16<br>Hobbs,Tx.                                                         |
|---------------------------------------------------------------|---------------------------------------|-----------------------------------------------------|-------------------------------------------------------|----------------------------------|-------------------------------------------|---------------------------|----------------------------------|-----------------------------------------------------------------------------------|
| Sample:<br>Analysis:<br>Analyst:                              | 200779<br>TPH DRO<br>MM               | - 070202-30<br>Analytical Meth<br>Preparation Me    | nod:<br>ethod:                                        | Mod. 8015B<br>3550 B             | QC Batch<br>Prep Batc                     | : QC21812<br>h: PB20657   | Date Analyzed:<br>Date Prepared: | 7/11/02<br>7/8/02                                                                 |
| Param                                                         | Flag                                  | Result                                              |                                                       | Units                            | E                                         | Dilution                  |                                  | RDL                                                                               |
| DRO                                                           | · · · · · · · · · · · · · · · · · · · | 224                                                 |                                                       | mg/Kg                            | ·                                         | 1                         |                                  | 50                                                                                |
| Surrogate<br>n-Triaconta                                      | Fla<br>ne                             | ng Result<br>167                                    | U<br>mg                                               | nits D<br>;/Kg                   | ilution<br>1                              | Spike<br>Amount<br>150    | Percent<br>Recovery<br>111       | Recovery<br>Limits<br>70 - 130                                                    |
| Sample:<br>Analysis:<br>Analyst:                              | <b>200779</b><br>TPH GRO<br>DN        | - 070202-30<br>Analytical Me<br>Preparation M       | ethod:<br>Aethod:                                     | 8015B (<br>5035 ]                | QC Batch:<br>Prep Batch:                  | QC21579<br>PB20461        | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02                                                                  |
| Param                                                         | Flag                                  | Result                                              | <u> </u>                                              | Units                            | E                                         | Dilution                  |                                  | RDL                                                                               |
| GRO                                                           |                                       | <1.00                                               |                                                       | mg/Kg                            |                                           | 10                        |                                  | 0.10                                                                              |
| Surrogate                                                     | Flag                                  | Result                                              | Unit                                                  | s Dilu                           | ition                                     | Spike<br>Amount           | Percent<br>Recovery              | Recovery<br>Limits                                                                |
| IFI<br>4 DED                                                  | 2                                     | 0.707                                               | mg/r                                                  | لا روم<br>الم                    |                                           | 0.10                      | (0<br>60                         | 70 - 130<br>70 - 120                                                              |
| 4-DF D                                                        |                                       | 0.008                                               | ing/r                                                 | \g                               | .0                                        | 0.10                      | 00                               | 70 - 130                                                                          |
| Sample:<br>Analysis:<br>Analyst:                              | <b>200780</b><br>BTEX<br>DN           | - 070202-31<br>Analytical Metho<br>Preparation Meth | d: S<br>10d: S                                        | 8021B Q<br>50 <b>3</b> 5 P       | C Batch:<br>rep Batch:                    | QC21578<br>PB20461        | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02                                                                  |
| Param                                                         |                                       | Flag                                                | Res                                                   | ult                              | Units                                     | Dil                       | ution                            | RDL                                                                               |
| Benzene<br>Toluene<br>Ethylbenzer<br>M,P,O-Xyle<br>Total BTEX | ne<br>me<br>K                         |                                                     | < 0.0 < 0.0 < 0.0 < 0.0 < 0.0 < 0.0 < 0.0 < 0.0 < 0.0 | 10<br>10<br>10<br>10<br>10<br>10 | mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg |                           | 10<br>10<br>10<br>10<br>10       | $\begin{array}{c} 0.001 \\ 0.001 \\ 0.001 \\ 0.001 \\ 0.001 \\ 0.001 \end{array}$ |
| Surrogate<br>TFT<br>4-BFB                                     | Flag3                                 | Result<br>0.733<br>0.683                            | Unit<br>mg/F<br>mg/F                                  | s Dilt<br>(g 1<br>(g 1           | ution<br>0                                | Spike<br>Amount<br>1<br>1 | Percent<br>Recovery<br>73<br>68  | Recovery<br>Limits<br>70 - 130<br>70 - 130                                        |
| Sample:<br>Analysis:<br>Analyst:                              | <b>200780</b><br>TPH DRO<br>MM        | - 070202-31<br>Analytical Meth<br>Preparation Me    | hod:<br>hthod:                                        | Mod. 8015B<br>3550 B             | QC Batch<br>Prep Batc                     | : QC21812<br>h: PB20657   | Date Analyzed:<br>Date Prepared: | 7/11/02<br>7/8/02                                                                 |

<sup>&</sup>lt;sup>2</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control. <sup>3</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Report Dat<br>2-517-0000         | te: July 23, 2<br>51           | 2002                                                 | Order Num<br>OCD Goodw    | ber: A02070327<br>vin Treating Plan | ıt                        | Page Num<br>8 Miles West of                                  | ber: 7 of 16<br>Hobbs,Tx. |
|----------------------------------|--------------------------------|------------------------------------------------------|---------------------------|-------------------------------------|---------------------------|--------------------------------------------------------------|---------------------------|
| Param                            | Flag                           | Result                                               | U                         | nits                                | Dilution                  |                                                              | RDL                       |
| DRO                              |                                | 120                                                  | mg                        | /Kg                                 | 1                         |                                                              | 50                        |
|                                  | , <u></u>                      |                                                      |                           | <u></u>                             | ~                         |                                                              |                           |
| C                                | E                              | n Decult                                             | I Inita                   | Dilution                            | Spike                     | Percent                                                      | Recovery                  |
| Surrogate                        | F 18                           | ig nesun                                             |                           | Dilution                            |                           | 100                                                          | 70 120                    |
| II-IIIacoma                      |                                | 103                                                  |                           | <b>I</b>                            | 100                       | 109                                                          | 70 - 130                  |
| Sample:                          | 200780                         | - 070202-31                                          |                           |                                     |                           |                                                              |                           |
| Analysis:                        | TPH GRO                        | Analytical Me                                        | thod: 8015E               | 3 QC Batch:                         | QC21579                   | Date Analyzed:                                               | 7/2/02                    |
| Analyst:                         | DN                             | Preparation M                                        | lethod: 5035              | Prep Batch                          | n: PB20461                | Date Prepared:                                               | 7/2/02                    |
| Param                            | Flag                           | Result                                               | U                         | nits                                | Dilution                  |                                                              | RDL                       |
| GRO                              |                                | <1.00                                                | mg                        | ;/Kg                                | 10                        | <u></u>                                                      | 0.10                      |
|                                  |                                |                                                      |                           |                                     | Smileo                    | Domont                                                       | Decouver                  |
| Surrogata                        | Flog                           | Regult                                               | Unite                     | Dilution                            | Amount                    | Recovery                                                     | Limits                    |
| TET                              | riag                           | 1 10                                                 | mg/Kg                     | 10                                  |                           | 110                                                          | 70 130                    |
| 1 BFB                            | 4                              | 1.19                                                 | mg/Kg                     | 10                                  | 0.10                      | 62                                                           | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>200781</b><br>BTEX<br>DN    | - 070202-32<br>Analytical Method<br>Preparation Meth | l: S 8021B<br>od: S 5035  | QC Batch:<br>Prep Batch:            | QC21578<br>PB20461        | Date Analyzed:<br>Date Prepared:                             | 7/2/02<br>7/2/02          |
| Param                            |                                | Flag                                                 | Result                    | Units                               | D                         | ilution                                                      | RDL                       |
| Benzene                          |                                |                                                      | < 0.010                   | mg/Kg                               |                           | 10                                                           | 0.001                     |
| Toluene                          |                                |                                                      | <0.010                    | mg/Kg                               |                           | 10                                                           | 0.001                     |
| Ethylbenze                       | ne                             |                                                      | < 0.010                   | mg/Kg                               |                           | 10                                                           | 0.001                     |
| M,P,O-Xyle                       | ene                            |                                                      | < 0.010                   | mg/Kg                               |                           | 10                                                           | 0.001                     |
| Total BTE                        | <u> </u>                       |                                                      | <0.010                    | mg/Kg                               |                           | 10                                                           | 0.001                     |
| Surrogate                        | Flag                           | Result                                               | Units                     | Dilution                            | Spike<br>Amount           | Percent<br>Recovery                                          | Recovery<br>Limits        |
| TFT                              |                                | 0.908                                                | mg/Kg                     | 10                                  | 1                         | 90                                                           | 70 - 130                  |
| 4-BFB                            |                                | 0.831                                                | mg/Kg                     | 10                                  | 1                         | 83                                                           | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>200781</b><br>TPH DRO<br>MM | - 070202-32<br>Analytical Meth<br>Preparation Met    | od: Mod. 8<br>hod: 3550 B | 015B QC Bate<br>Prep Ba             | ch: QC2181<br>tch: PB2065 | <ol> <li>Date Analyzed:</li> <li>7 Date Prepared:</li> </ol> | 7/11/02<br>7/8/02         |
| Param                            | Flag                           | Result                                               | U                         | nits                                | Dilution                  |                                                              | RDL                       |
| DRO                              | 8                              | 102                                                  |                           | ·/Kø                                | 1                         |                                                              | 50                        |

<sup>4</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Surrogate<br>n-Triacontar<br>Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO<br>Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analysis:<br>Analysis:<br>Param | Fla<br>200781 -<br>TPH GRO<br>DN<br>Flag<br>Flag<br>200782 - | g Result<br>157<br>- 070202-32<br>Analytical Me<br>Preparation M<br>Result<br><1.00<br>Result<br>0.859<br>0.768 | Units<br>mg/Kg<br>thod: 8015B<br>tethod: 5035<br>Un<br>mg/<br>Units<br>mg/Kg | Dilution<br>1<br>QC Batch:<br>Prep Batch:<br>its I<br>Kg<br>Dilution | Spike<br>Amount<br>150<br>QC21579<br>PB20461<br>Dilution<br>10<br>Spike | Percent<br>Recovery<br>105<br>Date Analyzed:<br>Date Prepared:<br>Percent | Recovery<br>Limits<br>70 - 130<br>7/2/02<br>7/2/02<br>RDL<br>0.10<br>Recovery |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| n-Triacontar<br>Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO<br>Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analysis:<br>Analyst:<br>Param               | ne<br>200781 -<br>TPH GRO<br>DN<br>Flag<br>Flag<br>200782 -  | 157<br>- 070202-32<br>Analytical Me<br>Preparation M<br>Result<br><1.00<br>Result<br>0.859<br>0.768             | mg/Kg<br>thod: 8015B<br>tethod: 5035<br>Un<br>mg/<br>Units<br>mg/Kg          | 1<br>QC Batch:<br>Prep Batch:<br>its I<br>Kg<br>Dilution             | 150<br>QC21579<br>PB20461<br>Dilution<br>10<br>Spike                    | 105<br>Date Analyzed:<br>Date Prepared:<br>Percent                        | 70 - 130<br>7/2/02<br>7/2/02<br>RDL<br>0.10<br>Recovery                       |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO<br>Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analysis:<br>Param                                           | 200781 -<br>TPH GRO<br>DN<br>Flag<br>Flag<br>200782 -        | - 070202-32<br>Analytical Me<br>Preparation M<br>Result<br><1.00<br>Result<br>0.859<br>0.768                    | thod: 8015B<br>tethod: 5035<br>Un<br>mg/<br>Units<br>mg/Kg                   | QC Batch:<br>Prep Batch:<br>its I<br>Kg<br>Dilution                  | QC21579<br>PB20461<br>Dilution<br>10<br>Spike                           | Date Analyzed:<br>Date Prepared:<br>Percent                               | 7/2/02<br>7/2/02<br>RDL<br>0.10<br>Recovery                                   |
| Param<br>GRO<br>Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analysis:<br>Param                                                                               | Flag<br>Flag                                                 | Result<br><1.00<br>Result<br>0.859<br>0.768                                                                     | Units<br>mg/Kg                                                               | its I<br>'Kg<br>Dilution                                             | Dilution<br>10<br>Spike                                                 | Percent                                                                   | RDL<br>0.10<br>Recovery                                                       |
| Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                | Flag                                                         | Result<br>0.859<br>0.768                                                                                        | Units<br>mg/Kg                                                               | Dilution                                                             | 10<br>Spike                                                             | Percent                                                                   | 0.10<br>Recovery                                                              |
| Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                | Flag                                                         | Result<br>0.859<br>0.768                                                                                        | Units<br>mg/Kg                                                               | Dilution                                                             | Spike                                                                   | Percent                                                                   | Recovery                                                                      |
| Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                | Flag                                                         | Result<br>0.859<br>0.768                                                                                        | Units<br>mg/Kg                                                               | Dilution                                                             | Spike                                                                   | Percent                                                                   | Recovery                                                                      |
| Surrogate<br>TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                | Flag                                                         | Result           0.859           0.768                                                                          | Units<br>mg/Kg                                                               | Dilution                                                             | •                                                                       |                                                                           |                                                                               |
| TFT<br>4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                             | 200782                                                       | 0.859<br>0.768                                                                                                  | mg/Kg                                                                        |                                                                      | Amount                                                                  | Recovery                                                                  | Limits                                                                        |
| 4-BFB<br>Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                                    | 200782                                                       | 0.768                                                                                                           |                                                                              | 10                                                                   | 0.10                                                                    | 85                                                                        | 70 - 130                                                                      |
| Sample:<br>Analysis:<br>Analyst:<br>Param                                                                                                                             | 200782 -                                                     |                                                                                                                 | _mg/Kg                                                                       | 10                                                                   | 0.10                                                                    | 76                                                                        | 70 - 130                                                                      |
| 1 aram                                                                                                                                                                | BTEX<br>DN                                                   | - 070202-33<br>Analytical Method<br>Preparation Metho<br>Elag                                                   | l: S 8021B<br>od: S 5035<br>Besult                                           | QC Batch:<br>Prep Batch:<br>Units                                    | QC21578<br>PB20461                                                      | Date Analyzed:<br>Date Prepared:<br>ilution                               | 7/2/02<br>7/2/02<br>BDL                                                       |
| Benzene                                                                                                                                                               |                                                              | 1 lag                                                                                                           | <0.010                                                                       | mg/Kg                                                                |                                                                         | 10                                                                        | 0.001                                                                         |
| Toluene                                                                                                                                                               |                                                              |                                                                                                                 | <0.010                                                                       | mg/Kg                                                                |                                                                         | 10                                                                        | 0.001                                                                         |
| Ethylbenzen                                                                                                                                                           | 1e                                                           |                                                                                                                 | <0.010                                                                       | mg/Kg                                                                |                                                                         | 10                                                                        | 0.001                                                                         |
| M P O Xvlor                                                                                                                                                           | no                                                           |                                                                                                                 | <0.010                                                                       | mg/Kg                                                                |                                                                         | 10                                                                        | 0.001                                                                         |
| Total BTEX                                                                                                                                                            | 5                                                            |                                                                                                                 | < 0.010                                                                      | mg/Kg                                                                |                                                                         | 10                                                                        | 0.001                                                                         |
|                                                                                                                                                                       |                                                              | 10                                                                                                              |                                                                              |                                                                      | Spike                                                                   | Percent                                                                   | Recovery                                                                      |
| Surrogate                                                                                                                                                             | Flag                                                         | Result                                                                                                          | Units                                                                        | Dilution                                                             | Amount                                                                  | Recovery                                                                  | Limits                                                                        |
| TFT<br>A DDD                                                                                                                                                          |                                                              | 0.904                                                                                                           | mg/Kg                                                                        | 10                                                                   | 1                                                                       | 90                                                                        | 70 - 130                                                                      |
| Sample:<br>Analysis:<br>Analyst:                                                                                                                                      | 200782 -<br>Ion Chroma<br>JSW                                | - 070202-33<br>tography (IC) Ana<br>Pre                                                                         | lytical Method                                                               | E 300.0 QC<br>d: N/A Prep                                            | Batch: QC<br>9 Batch: PB                                                | C22085 Date Analyze<br>20883 Date Prepare                                 | d: 7/19/02<br>d: 7/19/02                                                      |
| Param                                                                                                                                                                 | Flag                                                         | Result                                                                                                          | Units                                                                        | Dilution                                                             |                                                                         |                                                                           | $\mathbf{RDL}$                                                                |
| Chloride                                                                                                                                                              | 0                                                            | 3290                                                                                                            | mg/Kg                                                                        | 500                                                                  |                                                                         |                                                                           | 1                                                                             |
| Sample:<br>Analysis:<br>Analyst:                                                                                                                                      | <b>200782</b> -<br>TPH DRO<br>MM                             | - <b>070202-33</b><br>Analytical Meth<br>Preparation Met                                                        | od: Mod. 80<br>.hod: 3550 B                                                  | 15B QC Batcl<br>Prep Bat                                             | h: QC2181<br>ch: PB2065                                                 | <ol> <li>Date Analyzed:</li> <li>7 Date Prepared:</li> </ol>              | 7/11/02<br>7/8/02                                                             |
| Param                                                                                                                                                                 | Flag                                                         | Result                                                                                                          | Un                                                                           | its I                                                                | Dilution                                                                |                                                                           | RDL                                                                           |
| DRO                                                                                                                                                                   |                                                              | <50.0                                                                                                           |                                                                              | /Ka                                                                  | 1                                                                       | ······································                                    | 50                                                                            |

| Report Dat<br>2-517-0000         | ce: July 23, 2<br>51                   | 002                                                 | Orde<br>OCD (      | r Number<br>Goodwin 7 | : A02070327<br>Freating Plan | t                    | Page Num<br>8 Miles West of      | ber: 9 of 16<br>Hobbs,Tx. |
|----------------------------------|----------------------------------------|-----------------------------------------------------|--------------------|-----------------------|------------------------------|----------------------|----------------------------------|---------------------------|
| Surrogate                        | Fla                                    | g Result                                            | Uni                | ts                    | Dilution                     | Spike<br>Amount      | Percent<br>Recovery              | Recovery<br>Limits        |
| n-Triaconta                      | ne                                     | 162                                                 | mg/                | Kg                    | 1                            | 150                  | 108                              | 70 - 130                  |
| Sample                           | 200782                                 | - 070202-33                                         |                    |                       |                              |                      |                                  |                           |
| Analysis:<br>Analyst:            | TPH GRO<br>DN                          | Analytical Me<br>Preparation M                      | ethod:<br>Iethod:  | 8015B<br>5035         | QC Batch:<br>Prep Batch      | QC21579<br>: PB20461 | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02          |
| Param                            | Flag                                   | Result                                              |                    | Units                 | ]                            | Dilution             |                                  | RDL                       |
| GRO                              |                                        | <1.00                                               |                    | mg/Kg                 | <u></u>                      | 10                   |                                  | 0.10                      |
|                                  |                                        |                                                     |                    |                       |                              | Spike                | Percent                          | Recovery                  |
| Surrogate                        | Flag                                   | Result                                              | Units              | • L                   | 10                           | Amount               | Recovery                         | Limits                    |
| 1 F I                            |                                        | 0.859                                               | mg/Kg              |                       | 10                           | 0.10                 | 80<br>75                         | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>200783</b><br>BTEX<br>DN            | - 070202-34<br>Analytical Metho<br>Preparation Meth | d: S 8<br>.od: S 5 | 021B<br>035           | QC Batch:<br>Prep Batch:     | QC21578<br>PB20461   | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02          |
| Param                            |                                        | Flag                                                | Result             | t                     | Units                        | Di                   | lution                           | RDL                       |
| Benzene                          | ······································ |                                                     | < 0.010            | )                     | mg/Kg                        |                      | 10                               | 0.001                     |
| Toluene                          |                                        |                                                     | <0.010             | )                     | m mg/Kg                      |                      | 10                               | 0.001                     |
| Ethylbenzei                      | ne                                     |                                                     | <0.010             | )                     | mg/Kg                        |                      | 10                               | 0.001                     |
| M,P,O-Xyle                       | ene                                    |                                                     | < 0.010            | )                     | mg/Kg                        |                      | 10                               | 0.001                     |
| Total BTE2                       | <u> </u>                               | 91.4                                                | <0.010             | )                     | mg/Kg                        |                      | 10                               | 0.001                     |
| Surrogate                        | Flag                                   | Result                                              | Units              | Γ                     | Dilution                     | Spike<br>Amount      | Percent<br>Recovery              | Recovery<br>Limits        |
| TFT                              |                                        | 0.790                                               | mg/Kg              |                       | 10                           | 1                    | 79                               | 70 - 130                  |
| 4-BFB                            |                                        | 0.740                                               | mg/Kg              | •<br>•                | 10                           | 1                    | 74                               | 70 - 130                  |
| Sample:                          | 200783                                 | - 070202-34                                         | od: M              | Ind 8015              | B OC Bate                    | h. OC2181            | 2 Date Analyzed                  | 7/11/09                   |
| Analyst:                         | MM                                     | Preparation Me                                      | thod: 3            | 550 B                 | Prep Bat                     | ch: $PB2065'$        | 7 Date Prepared:                 | 7/8/02                    |
| Param                            | Flag                                   | Result                                              |                    | Units                 | ]                            | Dilution             |                                  | RDL                       |
| DRO                              |                                        | <50.0                                               |                    | mg/Kg                 | 5                            | 1                    |                                  | 50                        |
|                                  |                                        |                                                     |                    |                       |                              | <b>C</b>             | D                                |                           |
| C                                | ייז                                    |                                                     | TT. •              | 4-                    | Dilation                     | Spike                | Percent                          | Recovery                  |
| Surrogate                        | <u> </u>                               | g Kesult                                            | Uni                | ls<br>Ka              | Juiution 1                   | Amount               | 101                              | Timits                    |
| n- maconta                       |                                        | 101                                                 | mg/                | ng                    | 1                            | 190                  | 101                              | 10 - 130                  |

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| Report Dat<br>2-517-0000         | ce: July 23, 2002<br>51            | Order Number: A02070327<br>OCD Goodwin Treating Plant |                |               |                          |                                 | Page Number: 10 of<br>8 Miles West of Hobbs,7 |                                            |
|----------------------------------|------------------------------------|-------------------------------------------------------|----------------|---------------|--------------------------|---------------------------------|-----------------------------------------------|--------------------------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>200783 - 0</b><br>TPH GRO<br>DN | 70202-34<br>Analytical Metl<br>Preparation Me         | hod:<br>ethod: | 8015B<br>5035 | QC Batch:<br>Prep Batch: | QC21579<br>PB20461              | Date Analyzed:<br>Date Prepared:              | 7/2/02<br>7/2/02                           |
| Param                            | Flag                               | Result                                                |                | Units         | D                        | ilution                         |                                               | RDL                                        |
| GRO                              |                                    | <1.00                                                 |                | mg/Kg         |                          | 10                              |                                               | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB        | Flag5                              | Result<br>1.08<br>0.688                               | Units<br>mg/Kg | D             | ilution<br>10<br>10      | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>108<br>68              | Recovery<br>Limits<br>70 - 130<br>70 - 130 |

<sup>5</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

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## Quality Control Report Method Blank

| Method 1      | Blank | QCBatch: | QC21578                                      |                   |        |          |           |
|---------------|-------|----------|----------------------------------------------|-------------------|--------|----------|-----------|
| Danam         |       | Flog     |                                              | Doulta            | Unite  |          | Reporting |
| Banzana       |       | <u> </u> | <u>.                                    </u> | $\frac{1}{20000}$ |        | 5<br>    |           |
| Toluene       |       |          |                                              | <0.010            | mg/K   | ່ອ<br>ອ  | 0.001     |
| Ethylbenzene  |       |          |                                              | <0.010            | mg/K   | e<br>g   | 0.001     |
| M.P.O-Xvlen   | e     |          |                                              | <0.010            | mg/K   | g        | 0.001     |
| Total BTEX    | ~     |          |                                              | < 0.01            | mg/K   | g        | 0.001     |
|               |       |          |                                              |                   |        |          |           |
|               |       |          |                                              |                   | Spike  | Percent  | Recovery  |
| Surrogate     | Flag  | Result   | Units                                        | Dilution          | Amount | Recovery | Limits    |
| TFT           |       | 1.04     | mg/Kg                                        | 10                | 1      | 104      | 70 - 130  |
| 4-BFB         |       | 0.961    | mg/Kg                                        | 10                | 11     | 96       | 70 - 130  |
|               |       |          |                                              | ۱.                |        |          |           |
| Method 1      | Blank | QCBatch: | QC21579                                      |                   |        |          |           |
|               | ,     |          |                                              |                   |        |          | Reporting |
| Param         |       | Flag     | Res                                          | ults              | Units  |          | Limit     |
| GRO           |       |          |                                              | <1                | mg/Kg  |          | 0.10      |
|               |       |          |                                              |                   |        |          |           |
|               |       |          |                                              |                   | Spike  | Percent  | Recovery  |
| Surrogate     | Flag  | Result   | Units                                        | Dilution          | Amount | Recovery | Limits    |
| TFT           |       | 1.14     | mg/Kg                                        | 10                | 0.10   | 114      | 70 - 130  |
| <u>4-BFB</u>  |       | 0.927    | mg/Kg                                        | 10                | 0.10   | 93       | 70 - 130  |
| Method 1      | Blank | QCBatch: | QC21812                                      |                   |        |          |           |
| Damana        |       | The st   | Dee                                          |                   | TTm:4a |          | Reporting |
| DRO           |       | riag     |                                              | 100               | mg/Kg  |          | <u> </u>  |
|               | ····· |          |                                              |                   | m6/m6  |          |           |
|               |       |          |                                              |                   | Spike  | Percent  | Recovery  |
| Surrogate     | Flag  | Result   | Units                                        | Dilution          | Amount | Recovery | Limits    |
| n-Triacontane | 9     | 159      | mg/Kg                                        | 1                 | 150    | 106      | 70 - 130  |
| Method I      | Blank | QCBatch: | QC22085                                      |                   |        |          |           |
|               |       |          |                                              |                   |        |          | Reporting |
| Param         |       | Flag     | Re                                           | sults             | Units  |          | Limit     |
| Chloride      |       |          | 1                                            | 6.10              | mg/Kg  |          | 1         |

#### Quality Control Report Lab Control Spikes and Duplicate Spikes

| Laboratory   | Laboratory Control Spikes |                | QCBatch: |      | QC21578                  |                  |       |     |                |              |
|--------------|---------------------------|----------------|----------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| Param        | LCS<br>Result             | LCSD<br>Result | Units    | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
| MTBE         | 1.02                      | 1.02           | mg/Kg    | 10   | 1                        | < 0.010          | 102   | 0   | 70 - 130       | 20           |
| Benzene      | 1.01                      | 1.02           | mg/Kg    | 10   | 1                        | < 0.010          | 101   | 1   | 70 - 130       | 20           |
| Toluene      | 0.994                     | 1.00           | mg/Kg    | 10   | 1                        | < 0.010          | 99    | 1   | 70 - 130       | 20           |
| Ethylbenzene | 0.988                     | 0.998          | mg/Kg    | 10   | 1                        | <0.010           | 98    | 1   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.87                      | 2.90           | mg/Kg    | 10   | 3                        | <0.010           | 95    | 1   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | LCS    | LCSD   |       |          | Spike  | LCS           | LCSD          | Recovery |
|-----------|--------|--------|-------|----------|--------|---------------|---------------|----------|
| Surrogate | Result | Result | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | 0.987  | 1.00   | mg/Kg | 10       | 1      | 98            | 100           | 70 - 130 |
| 4-BFB     | 0.950  | 0.966  | mg/Kg | 10       | 1      | 95            | 96            | 70 - 130 |

Laboratory Control Spikes

QCBatch: QC21579

|       |        |                   |       |      | Spike  |        |                   |     |               |                        |
|-------|--------|-------------------|-------|------|--------|--------|-------------------|-----|---------------|------------------------|
|       | LCS    | LCSD              |       |      | Amount | Matrix |                   |     | $\% { m Rec}$ | RPD                    |
| Param | Result | $\mathbf{Result}$ | Units | Dil. | Added  | Result | $\% \ \text{Rec}$ | RPD | Limit         | $\operatorname{Limit}$ |
| GRO   | 11     | 9.39              | mg/Kg | 10   | 1      | <1     | 110               | 15  | 80 - 120      | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | LCS<br>Result | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|---------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 1.14          | 0.92                                                            | mg/Kg | 10       | 0.10            | 114          | 92            | 70 - 130           |
| 4-BFB     | 0.98          | 0.972                                                           | mg/Kg | 10       | 0.10            | 98           | 97            | 70 - 130           |

Laboratory Control Spikes QCBatch: Q

CBatch: QC21812

|       |        |        |       |      | Spike  |        |       |                      |               |                        |
|-------|--------|--------|-------|------|--------|--------|-------|----------------------|---------------|------------------------|
|       | LCS    | LCSD   |       |      | Amount | Matrix |       |                      | $\% { m Rec}$ | RPD                    |
| Param | Result | Result | Units | Dil. | Added  | Result | % Rec | $\operatorname{RPD}$ | Limit         | $\operatorname{Limit}$ |
| DRO   | 245    | 255    | mg/Kg | 1    | 250    | <50.0  | 98    | 4                    | 70 - 130      | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| <b>a</b>      | LCS    | LCSD   | <b>TT t</b> . |          | Spike  |       | LCSD  | Recovery |
|---------------|--------|--------|---------------|----------|--------|-------|-------|----------|
| Surrogate     | Result | Result | Units         | Dilution | Amount | % Rec | % Rec | Limits   |
| n-Triacontane | 155    | 150    | mg/Kg         | 1        | 150    | 103   | 100   | 70 - 130 |

Laboratory Control Spikes



Page Number: 13 of 16 8 Miles West of Hobbs,Tx.

07 D

| Param     | LCS<br>Result      | LCSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|-----------|--------------------|----------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| Chloride  | <sup>6</sup> 27.32 | 27.26          | mg/Kg | 1    | 12.50                    | 16.10            | 218   | 0   | 90 - 110       | 20           |
| Fluoride  | 2.47               | 2.45           | mg/Kg | 1    | 2.50                     | 0.41             | 98    | 0   | 90 - 110       | 20           |
| Nitrate-N | 2.50               | 2.51           | mg/Kg | 1    | 2.50                     | 0.24             | 100   | 0   | 90 - 110       | 20           |
| Sulfate   | <sup>7</sup> 26.40 | 26.23          | mg/Kg | 1    | 12.50                    | 14.82            | 211   | 0   | 90 - 110       | 20           |

Order Number: A02070327

OCD Goodwin Treating Plant

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes QCBatch:

Report Date: July 23, 2002

2-517-000051

Spike MS MSD Amount Matrix

QC21578

|              | MS     | MSD    |       |      | Amount | Matrix            |       |                      | % Rec            | RPD                    |
|--------------|--------|--------|-------|------|--------|-------------------|-------|----------------------|------------------|------------------------|
| Param        | Result | Result | Units | Dil. | Added  | $\mathbf{Result}$ | % Rec | $\operatorname{RPD}$ | $\mathbf{Limit}$ | $\operatorname{Limit}$ |
| Benzene      | 0.862  | 0.880  | mg/Kg | 10   | 1      | < 0.010           | 86    | 2                    | 70 - 130         | 20                     |
| Toluene      | 0.860  | 0.878  | mg/Kg | 10   | 1      | < 0.010           | 86    | 2                    | 70 - 130         | 20                     |
| Ethylbenzene | 0.866  | 0.888  | mg/Kg | 10   | 1      | < 0.010           | 86    | 2                    | 70 - 130         | 20                     |
| M,P,O-Xylene | 2.49   | 2.56   | mg/Kg | 10   | 3      | < 0.010           | 83    | 3                    | 70 - 130         | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | MS     | MSD               |       |          | Spike  | MS            | MSD           | Recovery |
|-----------|--------|-------------------|-------|----------|--------|---------------|---------------|----------|
| Surrogate | Result | $\mathbf{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | 0.852  | 0.871             | mg/Kg | 10       | 1      | 85            | 87            | 70 - 130 |
| 4-BFB     | 0.728  | 0.816             | mg/Kg | 10       | 1      | 72            | 81            | 70 - 130 |

#### Matrix Spikes QCBatch: QC21579

|       |        |        |       |      | Spike  |                   |               |     |                        |                        |
|-------|--------|--------|-------|------|--------|-------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD    |       |      | Amount | Matrix            |               |     | $\% { m Rec}$          | RPD                    |
| Param | Result | Result | Units | Dil. | Added  | $\mathbf{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 9.65   | 9.99   | mg/Kg | 10   | 1      | <1.00             | 96            | 3   | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | ${ m MS} { m Result}$ | MSD<br>Result | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|-----------|-----------------------|---------------|-------|----------|-----------------|-------------|--------------|--------------------|
| TFT       | 0.989                 | 1.03          | mg/Kg | 10       | 0.10            | 98          | 103          | 70 - 130           |
| 4-BFB     | 0.832                 | 0.861         | mg/Kg | 10       | 0.10            | 83          | 86           | 70 - 130           |

#### Matrix Spikes QCBatch: QC21812

<sup>&</sup>lt;sup>6</sup>The soil blank is 16.10. This makes the %EA = 90

 $<sup>^7\</sup>mathrm{The}$  soil blank is 14.82. This makes the  $\%\mathrm{EA}=93$ 

Report Date: July 23, 2002 Order Number: A02070327 Page Number: 14 of 16 2-517-000051 OCD Goodwin Treating Plant 8 Miles West of Hobbs, Tx. Spike MS MSD % Rec RPD Amount Matrix Param RPD Units Dil. Added % Rec Limit Limit Result Result Result DRO 330 8 316 250 144  $\overline{74}$ 70 - 130  $\overline{20}$ mg/Kg 1 7

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Sumorata      | MS<br>Bosult | MSD<br>Bogult | Thita | Dilution  | Spike<br>A mount | MS<br>% Poo | MSD<br>% Boo | Recovery |
|---------------|--------------|---------------|-------|-----------|------------------|-------------|--------------|----------|
| Surrogate     | nesuit       | nesun         | Omts  | Diffution | Amount           | 70 nec      | 70 nec       | Linus    |
| n-Triacontane | 159          | 163           | mg/Kg | 1         | 150              | 106         | 109          | 70 - 130 |

Matrix Spikes QCBatch: QC22085

|          |        |                         |       |      | Spike  |                         |               |     |               |                        |
|----------|--------|-------------------------|-------|------|--------|-------------------------|---------------|-----|---------------|------------------------|
|          | MS     | MSD                     |       |      | Amount | Matrix                  |               |     | $\% { m Rec}$ | $\operatorname{RPD}$   |
| Param    | Result | $\operatorname{Result}$ | Units | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD | Limit         | $\operatorname{Limit}$ |
| Chloride | 8943   |                         | mg/Kg | 500  | 6.25   | 3290                    | 141           |     | 35 - 144      |                        |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

### Quality Control Report Continuing Calibration Verification Standards

CCV (1)

QCBatch: QC21578

|              |      |                  | CCVs  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |  |
|--------------|------|------------------|-------|-----------------|-----------------|----------|----------|--|
|              |      |                  | True  | Found           | Percent         | Recovery | Date     |  |
| Param        | Flag | $\mathbf{Units}$ | Conc. | Conc.           | Recovery        | Limits   | Analyzed |  |
| MTBE         |      | mg/L             | 0.10  | 0.0953          | 95              | 85 - 115 | 7/2/02   |  |
| Benzene      |      | mg/L             | 0.10  | 0.105           | 105             | 85 - 115 | 7/2/02   |  |
| Toluene      |      | mg/L             | 0.10  | 0.103           | 103             | 85 - 115 | 7/2/02   |  |
| Ethylbenzene |      | mg/L             | 0.10  | 0.103           | 103             | 85 - 115 | 7/2/02   |  |
| M,P,O-Xylene |      | $\mathrm{mg/L}$  | 0.30  | 0.2977          | 99              | 85 - 115 | 7/2/02   |  |

CCV (2)

QCBatch: QC21578

|              |      |                  | CCVs<br>True | CCVs<br>Found | $\operatorname{CCVs}$ Percent | Percent<br>Recovery | Date     |
|--------------|------|------------------|--------------|---------------|-------------------------------|---------------------|----------|
| Param        | Flag | $\mathbf{Units}$ | Conc.        | Conc.         | Recovery                      | Limits              | Analyzed |
| MTBE         |      | mg/L             | 0.10         | 0.102         | 102                           | 85 - 115            | 7/2/02   |
| Benzene      |      | mg/L             | 0.10         | 0.102         | 102                           | 85 - 115            | 7/2/02   |
| Toluene      |      | mg/L             | 0.10         | 0.101         | 101                           | 85 - 115            | 7/2/02   |
| Ethylbenzene |      | mg/L             | 0.10         | 0.101         | 101                           | 85 - 115            | 7/2/02   |
| M,P,O-Xylene |      | $\mathrm{mg/L}$  | 0.30         | 0.2923        | 97                            | 85 - 115            | 7/2/02   |

<sup>8</sup>MSD out of recovery limits due to matrix interference. LCS and LCSD show the process is in control.

| Report Date: July 23, 2002<br>2-517-000051 |            |          |           | Order Nu<br>OCD Good                                          | mber: A020703<br>Iwin Treating I | Page Number: 15 of 16<br>8 Miles West of Hobbs,Tx.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |           |
|--------------------------------------------|------------|----------|-----------|---------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------|
| ICV (1)                                    |            | QCBatch: | QC2       | 1578                                                          |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            |          |           | $\begin{array}{c} \mathrm{CCVs} \\ \mathrm{True} \end{array}$ | CCVs<br>Found                    | CCVs<br>Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Percent<br>Recovery  | Date      |
| Param                                      |            | Flag     | Units     | Conc.                                                         | Conc.                            | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limits               | Analyzed  |
| MTBE                                       |            |          | mg/L      | 0.10                                                          | 0.102                            | 102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 85 - 115             | 7/2/02    |
| Benzene                                    |            |          | mg/L      | 0.10                                                          | 0.102                            | 102                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 85 - 115             | 7/2/02    |
| Toluene                                    |            |          | mg/L      | 0.10                                                          | 0.0999                           | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 80 - 110<br>95 - 115 | 7/2/02    |
| Ethylbenzene                               |            |          | mg/L      | 0.10                                                          | 0.0969                           | 99                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 00 - 110<br>85 115   | 7/2/02    |
| M,P,O-Aylene                               |            |          | mg/L      | 0.30                                                          | 0.288                            | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 00 - 110             | 1/2/02    |
| CCV (1)                                    |            | QCBatch: | QC        | 21579                                                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            |          |           | CCVs                                                          | CCVe                             | CCVe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Percent              |           |
|                                            |            |          |           | True                                                          | Found                            | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recovery             | Date      |
| Param                                      | Flag       | Unit     | s         | Conc                                                          | Conc                             | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limits               | Analyzed  |
| GRO                                        | 1 105      | mg/k     |           | 1                                                             | 0.978                            | 97                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 85 - 115             | 7/2/02    |
|                                            |            |          | -0        |                                                               |                                  | - 16 16 19 10 10 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |           |
| CCV (2)                                    |            | QCBatch: | QC        | 21579                                                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            |          |           | CCVs                                                          | CCVs                             | CCVs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Percent              | -         |
| Ð                                          | -          |          |           | True                                                          | Found                            | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recovery             | Date      |
| Param                                      | Flag       | Unit     | S         | Conc.                                                         | Conc.                            | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limits               | Analyzed  |
| GRO                                        |            | mg/r     | <u>vg</u> | 1                                                             | 0.887                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 85 - 115             | (/2/02    |
| ICV (1)                                    |            | QCBatch: | QC2       | 21579                                                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            |          |           | CCVs                                                          | CCVs                             | CCVs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Percent              |           |
| _                                          |            | •        |           | True                                                          | Found                            | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recovery             | Date      |
| Param                                      | Flag       | Unit     | s         | Conc.                                                         | Conc.                            | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limits               | Analyzed  |
| GRO                                        | <u>, ,</u> | mg/ł     | (g        | 1                                                             | 1.04                             | 104                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 85 - 115             | 7/2/02    |
| CCV (1)                                    |            | QCBatch: | QC        | 21812                                                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            |          |           | CCVs                                                          | CCVs                             | CCVs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Percent              |           |
|                                            |            |          |           | True                                                          | Found                            | Percent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Recoverv             | Date      |
| Param                                      | Flag       | Unit     | s         | Conc.                                                         | Conc.                            | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Limits               | Analyzed  |
| DRO                                        | 0          | mg/k     | ζg        | 250                                                           | 265                              | 106                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 75 - 125             | 7/11/02   |
|                                            |            |          | <u> </u>  |                                                               |                                  | Mark Hamman Processing of the Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second Second S |                      |           |
| CCV (2)                                    |            | QCBatch: | 00        | 21812                                                         |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |           |
|                                            |            | -        |           |                                                               |                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ······               | Continued |

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| Report Date: July 23, 2002<br>2-517-000051 |      |                  | Order N<br>OCD Goo | umber: A0207<br>odwin Treating | Page Number: 16 of 16<br>8 Miles West of Hobbs,Tx. |          |          |
|--------------------------------------------|------|------------------|--------------------|--------------------------------|----------------------------------------------------|----------|----------|
| Continue                                   | d    |                  |                    |                                |                                                    |          |          |
|                                            |      |                  | CCVs               | $\mathbf{CCVs}$                | $\mathrm{CCVs}$                                    | Percent  |          |
|                                            |      |                  | True               | Found                          | Percent                                            | Recovery | Date     |
| Param                                      | Flag | Units            | Conc.              | Conc.                          | Recovery                                           | Limits   | Analyzed |
|                                            |      | •                | $\rm CCVs$         | CCVs                           | $\rm CCVs$                                         | Percent  |          |
|                                            |      |                  | True               | Found                          | Percent                                            | Recovery | Date     |
| Param                                      | Flag | $\mathbf{Units}$ | Conc.              | Conc.                          | Recovery                                           | Limits   | Analyzed |
| DRO                                        |      | mg/Kg            | 250                | 253                            | 101                                                | 75 - 125 | 7/11/02  |
| ICV (1)                                    |      | QCBatch: Q       | C21812             |                                |                                                    |          |          |
|                                            |      |                  | CCVs               | CCVs                           | CCVs                                               | Percent  |          |
|                                            |      |                  | True               | Found                          | Percent                                            | Recovery | Date     |
| Param                                      | Flag | Units            | Conc.              | Conc.                          | Recovery                                           | Limits   | Analyzed |
| DRO                                        |      | mg/Kg            | 250                | 247                            | 99                                                 | 75 - 125 | 7/11/02  |

# CCV (1) QCBatch: QC22085

| Param     | Flag | Units | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|-----------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| Chloride  |      | mg/L  | 12.50                 | 11.70                  | 93                          | 90 - 110                      | 7/19/02          |
| Fluoride  |      | mg/L  | 2.50                  | 2.26                   | 90                          | 90 - 110                      | 7/19/02          |
| Nitrate-N |      | mg/L  | 2.50                  | 2.31                   | 92                          | 90 - 110                      | 7/19/02          |
| Sulfate   |      | mg/L  | 12.50                 | 12.4                   | 99                          | 90 - 110                      | 7/19/02          |

ICV (1) QCBatch:

tch: QC22085

|           |      |                  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |            |
|-----------|------|------------------|-----------------|-----------------|-----------------|----------|------------|
|           |      |                  | True            | Found           | Percent         | Recovery | Date       |
| Param     | Flag | $\mathbf{Units}$ | Conc.           | Conc.           | Recovery        | Limits   | ' Analyzed |
| Chloride  |      | mg/L             | 12.50           | 11.47           | 91              | 90 - 110 | 7/19/02    |
| Fluoride  |      | mg/L             | 2.50            | 2.29            | 91              | 90 - 110 | 7/19/02    |
| Nitrate-N |      | mg/L             | 2.50            | 2.26            | 90              | 90 - 110 | 7/19/02    |
| Sulfate   |      | mg/L             | 12.50           | 12.29           | 98              | 90 - 110 | 7/19/02    |

Ironmen FA OIP Conservation Division FAX 915 • 585 • 4944 806 • 794 • 1296 Lubbock, Texas 79424 800•378•1296 6701 Aberdeen Avenue, S hite 9 915•585•3443 888•588•3443 155 McCutcheon, Suite H El Paso, Texas 79932 E-Mail: lab@traceanalysis.com Invoice # 53276 Bill To: OCD 1220 S. Saint Francis Dr. Invoice Date: Jul 22, 2002 Santa Fe, NM 87505 Order ID: A02061403 Attn: Martyne Kieling 2nd COPY Project #: **Goodwin Treating Plant** P.A. Number: 20-521-07-02497 Project Name: Goodwin **Project Location: Redwood Tanks** Test Quantity Matrix Description Price SubTotal **TPH DRO** 199295 - 199298 \$40.00 \$160.00 Soil 4

Payment Terms: Net 30 Days

4

Soil

Total \$400.00

\$240.00

\$60.00

RECEIVED

199295 - 199298

Director, Dr. Blair Leftwich

0k to pry mj k 8-19-02

BTEX/TPH GRO


TraceAnalysis, Inc.

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Lubbock, TX 79424-1515

(806) 794-1296

| Report Date: June | 18, 2002Order | Number: A02061403 |  |
|-------------------|---------------|-------------------|--|
| Goodwin Treating  | Plant         | Goodwin           |  |

Page Number: 1 of 1 **Redwood Tanks** 

June 18, 2002

# **Summary Report**

## RECEIVED

JUN 2 4 2002 Martyne Kieling OCD 1220 S. Saint Francis Dr. Santa Fe, NM 87505

Environmental Bureau Oil Conservation Division

Order ID Number: A02061403

Report Date:

Project Number: Goodwin Treating Plant Project Name: Goodwin Project Location: Redwood Tanks

|        |             |        | Date    | Time  | Date     |  |
|--------|-------------|--------|---------|-------|----------|--|
| Sample | Description | Matrix | Taken   | Taken | Received |  |
| 199295 | 061002-09   | Soil   | 6/10/02 | 9:15  | 6/14/02  |  |
| 199296 | 061002-10   | Soil   | 6/10/02 | 9:18  | 6/14/02  |  |
| 199297 | 061002-11   | Soil   | 6/10/02 | 9:25  | 6/14/02  |  |
| 199298 | 061002-12   | Soil   | 6/10/02 | 9:28  | 6/14/02  |  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | TPH DRO      | TPH GRO      |            |       |       |
|---------------------|---------|---------|--------------|--------------|------------|-------|-------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO   | GRO   |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm) | (ppm) |
| 199295 - 061002-09  | < 0.010 | 0.014   | 0.0107       | 0.0117       | 0.0364     | 64.7  | <1    |
| 199296 - 061002-10  | < 0.010 | < 0.010 | 0.0102       | 0.0104       | 0.0206     | <50.0 | <1    |
| 199297 - 061002-11  | < 0.010 | < 0.010 | < 0.010      | <0.010       | <0.010     | 57.2  | <1    |
| 199298 - 061002-12  | < 0.010 | < 0.010 | < 0.010      | <0.010       | <0.010     | <50.0 | <1    |

This is only a summary. Please, refer to the complete report package for quality control data.

6701 Aberdeen Avenue, Suite 9 155 McCutcheon, Suite H Lubbock, Texas 79424 800•378•1296 El Paso, Texas 79932 888•588•3443 E-Mail: lab@traceanalysis.com 806•794•1296 FAX 915•585•3443 FAX

96FAX 806•794•129813FAX 915•585•4944

## Analytical and Quality Control Report

Martyne Kieling OCD 1220 S. Saint Francis Dr. Santa Fe, NM 87505 Report Date:

June 18, 2002

Order ID Number: A02061403

Project Number:Goodwin Treating PlantProject Name:GoodwinProject Location:Redwood Tanks

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 199295 | 061002-09   | Soil   | 6/10/02 | 9:15  | 6/14/02  |
| 199296 | 061002-10   | Soil   | 6/10/02 | 9:18  | 6/14/02  |
| 199297 | 061002-11   | Soil   | 6/10/02 | 9:25  | 6/14/02  |
| 199298 | 061002-12   | Soil   | 6/10/02 | 9:28  | 6/14/02  |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 10 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director



Report Date: June 18, 2002 Goodwin Treating Plant

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Analyst:

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Preparation Method: S 5035

Order Number: A02061403 Goodwin Page Number: 2 of 10 Redwood Tanks

## **Analytical Report**

| Sample:                          | 199295                         | - 061002-09                                       |                         |                         |                       |                                  |                    |
|----------------------------------|--------------------------------|---------------------------------------------------|-------------------------|-------------------------|-----------------------|----------------------------------|--------------------|
| Analysis:                        | BTEX                           | Analytical Method:                                | S 8021B                 | QC Batch:               | QC21110               | Date Analyzed:                   | 6/17/02            |
| Analyst:                         | CG                             | Preparation Method                                | l: S 5035               | Prep Batch:             | PB20089               | Date Prepared:                   | 6/17/02            |
| Daram                            |                                | Flog                                              | Rosult                  | Unite                   | Dil                   | ution                            | RDI.               |
| Panzono                          |                                | r lag                                             |                         | mg/Kg                   | D                     | 10                               | 0.001              |
| Toluono                          |                                |                                                   | 0.010                   | mg/Kg                   | -                     | 10                               | 0.001              |
| Fthylhongor                      |                                |                                                   | 0.014                   | mg/Kg                   |                       | 10                               | 0.001              |
| M P O Yvlo                       | ne                             |                                                   | 0.0107                  | mg/Kg                   | -                     | 10                               | 0.001              |
| Total BTE                        | ζ                              |                                                   | 0.0364                  | mg/Kg                   |                       | 10                               | 0.001              |
|                                  |                                |                                                   |                         |                         |                       |                                  |                    |
|                                  |                                |                                                   |                         |                         | Spike                 | Percent                          | Recovery           |
| Surrogate                        | Flag                           | Result                                            | Units                   | Dilution                | Amount                | Recovery                         | Limits             |
| $\mathbf{TFT}$                   |                                | 0.990                                             | mg/Kg                   | 10                      | 1                     | 99                               | 70 - 130           |
| 4-BFB                            |                                | 0.930                                             | mg/Kg                   | 10                      | 1                     | 93                               | 70 - 130           |
| Sample:<br>Analysis:             | <b>199295</b><br>TPH DRO       | - 061002-09<br>Analytical Metho                   | d: Mod. 8               | 015B QC Bate            | ch: QC21067           | Date Analyzed:                   | 6/14/02            |
| Analyst:                         | MM                             | Preparation Meth                                  | od: 3550 B              | Prep Ba                 | tch: PB20064          | Date Prepared:                   | 6/14/02            |
| 11101900                         |                                | r reparation motion                               |                         | , 1 rop 20              |                       |                                  | -,,                |
| Param                            | Flag                           | Result                                            | U                       | nits                    | Dilution              |                                  | RDL                |
| DRO                              |                                | 64.7                                              | mg                      | /Kg                     | 1                     |                                  | 50                 |
|                                  |                                |                                                   |                         |                         | Spike                 | Percent                          | Recovery           |
| Surrogate                        | Fl                             | ag Result                                         | Units                   | Dilution                | Amount                | Recovery                         | Limits             |
| n-Triaconta                      | ne                             | 138                                               | mg/Kg                   | 1                       | 150                   | 92                               | 70 - 130           |
| Sample:<br>Analysis:<br>Analyst: | <b>199295</b><br>TPH GRO<br>CG | - 061002-09<br>Analytical Meth<br>Preparation Met | od: 8015B<br>thod: 5035 | QC Batch:<br>Prep Batch | QC21111<br>:: PB20089 | Date Analyzed:<br>Date Prepared: | 6/17/02<br>6/17/02 |
| Param                            | Flag                           | Result                                            | U                       | nits                    | Dilution              |                                  | RDL                |
| GRO                              |                                | <1                                                | mg                      | ;/Kg                    | 10                    |                                  | 0.10               |
|                                  |                                |                                                   |                         |                         | Spike                 | Percent                          | Recovery           |
| Surrogate                        | Flag                           | Result                                            | Units                   | Dilution                | Amount                | Recovery                         | Limits             |
| TFT                              |                                | 0.818                                             | mg/Kg                   | 10                      | 0.10                  | 82                               | 70 - 130           |
| 4-BFB                            |                                | 0.843                                             | mg/Kg                   | 10                      | 0.10                  | 84                               | 70 - 130           |
| Sample:<br>Analysis:             | <b>199296</b><br>BTEX          | <b>- 061002-10</b><br>Analytical Method:          | S 8021B                 | QC Batch:               | QC21110               | Date Analyzed:                   | 6/17/02            |

Prep Batch: PB20089

Date Prepared:

6/17/02



| Report Day<br>Goodwin T                                         | te: June 18, 2<br>Treating Plant         | <b>002</b>                                                        | Order N                                  | umber: A020614<br>Goodwin                  | 03                               | Page Num<br>Redv                                | ber: 3 of 10<br>wood Tanks         |
|-----------------------------------------------------------------|------------------------------------------|-------------------------------------------------------------------|------------------------------------------|--------------------------------------------|----------------------------------|-------------------------------------------------|------------------------------------|
| Param                                                           |                                          | Flag                                                              | Result                                   | Units                                      | Dil                              | ution                                           | RDL                                |
| Benzene                                                         |                                          |                                                                   | < 0.010                                  | mg/Kg                                      | · · · · · ·                      | 10                                              | 0.001                              |
| Toluene                                                         |                                          |                                                                   | < 0.010                                  | mg/Kg                                      |                                  | 10                                              | 0.001                              |
| Ethylbenze                                                      | ne                                       |                                                                   | 0.0102                                   | mg/Kg                                      | -                                | 10                                              | 0.001                              |
| M.P.O-Xyle                                                      | ene                                      |                                                                   | 0.0104                                   | mg/Kg                                      |                                  | 10                                              | 0.001                              |
| Total BTE                                                       | X                                        |                                                                   | 0.0206                                   | mg/Kg                                      |                                  | 10                                              | 0.001                              |
|                                                                 |                                          |                                                                   | <u></u>                                  |                                            |                                  |                                                 |                                    |
| Surrogate                                                       | Flag                                     | Result                                                            | Units                                    | Dilution                                   | Spike<br>Amount                  | Percent<br>Recovery                             | Recovery<br>Limits                 |
| TFT                                                             |                                          | 1.02                                                              | mg/Kg                                    | 10                                         | 1                                | 102                                             | 70 - 130                           |
| <u>4-BFB</u>                                                    |                                          | 0.938                                                             | mg/Kg                                    | 10                                         | 1                                | 94                                              | 70 - 130                           |
| Sample:<br>Analysis:<br>Analyst:                                | <b>199296</b> ·<br>TPH DRO<br>MM         | - 061002-10<br>Analytical Metho<br>Preparation Meth               | d: Mod. 80<br>aod: 3550 B                | 015B QC Bate<br>Prep Ba                    | ch: QC21067<br>tch: PB20064      | Date Analyzed:<br>Date Prepared:                | 6/14/02<br>6/14/02                 |
| Param                                                           | Flag                                     | Result                                                            | U1                                       | nits                                       | Dilution                         |                                                 | RDL                                |
| DRO                                                             |                                          | <50.0                                                             | mg                                       | /Kg                                        | 1                                |                                                 | 50                                 |
| Surrogate                                                       | Fla                                      | g Result                                                          | Units                                    | Dilution                                   | Spike<br>Amount                  | Percent<br>Recovery                             | Recovery<br>Limits                 |
| II-Inaconta                                                     | ine                                      | 130                                                               | mg/Kg                                    | 1                                          | 100                              | 90                                              | 70 - 130                           |
| Sample:<br>Analysis:<br>Analyst:<br>Param                       | <b>199296</b> -<br>TPH GRO<br>CG<br>Flag | - <b>061002-10</b><br>Analytical Meth<br>Preparation Me<br>Result | od: 8015B<br>thod: 5035<br>Uı            | QC Batch:<br>Prep Batch<br>nits            | QC21111<br>: PB20089<br>Dilution | Date Analyzed:<br>Date Prepared:                | 6/17/02<br>6/17/02<br>RDL          |
| GRO                                                             |                                          | <1                                                                | mg                                       | /Kg                                        | 10                               |                                                 | 0.10                               |
| Surrogate<br>TFT                                                | Flag                                     | Result<br>0.822                                                   | Units<br>mg/Kg                           | Dilution<br>10                             | Spike<br>Amount<br>0.10          | Percent<br>Recovery<br>82                       | Recovery<br>Limits<br>70 - 130     |
| 4-BFB                                                           |                                          | 0.846                                                             | mg/Kg                                    | 10                                         | 0.10                             | 85                                              | 70 - 130                           |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>Benzene<br>Toluene | <b>199297</b> -<br>BTEX<br>CG            | - 061002-11<br>Analytical Method:<br>Preparation Method<br>Flag   | S 8021B<br>d: S 5035<br>Result<br><0.010 | QC Batch:<br>Prep Batch:<br>Units<br>mg/Kg | QC21110<br>PB20089<br>Dil        | Date Analyzed:<br>Date Prepared:<br>ution<br>10 | 6/17/02<br>6/17/02<br>RDL<br>0.001 |
| Fthellower                                                      | <b>n</b>                                 | *                                                                 | < 0.010                                  | mg/Kg                                      |                                  | 10                                              | 0.001                              |
| LINVIDENZE                                                      | ne                                       |                                                                   | <0.010                                   | mg/Kg                                      |                                  | 10                                              | 0.001                              |
| WI, P, U-Ayle                                                   | ene                                      |                                                                   | <0.010                                   | mg/Kg                                      |                                  | 10                                              | 100.0                              |
| TOTAL BIE                                                       | Δ                                        |                                                                   | <0.010                                   | mg/Kg                                      |                                  | 10                                              | 0.001                              |

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| Report Date: June 18, 2002<br>Goodwin Treating Plant |                                |                                               | Order N                     | umber: A02061<br>Goodwin | Page Number: 4 of 10<br>Redwood Tanks |                                  |                    |
|------------------------------------------------------|--------------------------------|-----------------------------------------------|-----------------------------|--------------------------|---------------------------------------|----------------------------------|--------------------|
| Surrogate                                            | Flag                           | Result                                        | Units                       | Dilution                 | Spike<br>Amount                       | Percent<br>Recovery              | Recovery<br>Limits |
| TFT                                                  |                                | 0.992                                         | mg/Kg                       | 10                       | 1                                     | 99                               | 70 - 130           |
| 4-BFB                                                |                                | 0.952                                         | mg/Kg                       | 10                       | 1                                     | 95                               | 70 - 130           |
|                                                      |                                |                                               |                             |                          |                                       |                                  |                    |
| Sample:                                              | 199297                         | - 061002-11                                   |                             |                          |                                       |                                  |                    |
| Analysis:                                            | TPH DRO                        | Analytical Metl                               | hod: Mod. 8                 | 015B QC Ba               | tch: QC21067                          | ' Date Analyzed:                 | 6/14/02            |
| Analyst:                                             | MM                             | Preparation Me                                | ethod: 3550 B               | Prep B                   | atch: PB20064                         | Date Prepared:                   | 6/14/02            |
| Param                                                | Flag                           | Result                                        | U                           | nits                     | Dilution                              |                                  | RDL                |
| DRO                                                  |                                | 57.2                                          | mg                          | ç/Kg                     | 1                                     |                                  | 50                 |
| Surrogate                                            | Fla                            | ag Result                                     | Units                       | Dilution                 | Spike<br>Amount                       | Percent<br>Recovery              | Recovery<br>Limits |
| n-Triaconta                                          | ne                             | 132                                           | mg/Kg                       | 1                        | 150                                   | 88                               | 70 - 130           |
| Sample:<br>Analysis:<br>Analyst:                     | <b>199297</b><br>TPH GRO<br>CG | - 061002-11<br>Analytical Me<br>Preparation M | thod: 8015E<br>fethod: 5035 | 3 QC Batch<br>Prep Batc  | : QC21111<br>h: PB20089               | Date Analyzed:<br>Date Prepared: | 6/17/02<br>6/17/02 |
| Param                                                | Flag                           | $\operatorname{Result}$                       | U                           | nits                     | Dilution                              |                                  | RDL                |
| GRO                                                  |                                | <1                                            | mg                          | g/Kg                     | 10                                    |                                  | 0.10               |
| Surrogate                                            | Flag                           | Result                                        | Units                       | Dilution                 | Spike<br>Amount                       | Percent<br>Recovery              | Recovery<br>Limits |
| TFT                                                  |                                | 0.828                                         | mg/Kg                       | 10                       | 0.10                                  | 83                               | 70 - 130           |
| 4-BFB                                                |                                | 0.845                                         | mg/Kg                       | 10                       | 0.10                                  | 84                               | 70 - 130           |
| Sample:                                              | 199298                         | - 061002-12                                   |                             |                          |                                       |                                  |                    |
| Analysis:                                            | BTEX                           | Analytical Metho                              | d: S 8021B                  | QC Batch:                | QC21110                               | Date Analyzed:                   | 6/17/02            |
| Analyst:                                             | $\mathbf{CG}$                  | Preparation Meth                              | od: S 5035                  | Prep Batch               | : PB20089                             | Date Prepared:                   | 6/17/02            |
| Param                                                |                                | Flag                                          | Result                      | Units                    | Dil                                   | ution                            | RDL                |
| Benzene                                              | <u> </u>                       |                                               | < 0.010                     | mg/Kg                    |                                       | 10                               | 0.001              |
| Toluene                                              |                                |                                               | < 0.010                     | mg/Kg                    |                                       | 10                               | 0.001              |
| Ethylbenzer                                          | ne                             |                                               | < 0.010                     | mg/Kg                    |                                       | 10                               | 0.001              |
| M,P,O-Xyle                                           | ne                             |                                               | < 0.010                     | mg/Kg                    |                                       | 10                               | 0.001              |
| Total BTE                                            | ζ                              |                                               | <0.010                      | mg/Kg                    |                                       | 10                               | 0.001              |
|                                                      |                                |                                               |                             |                          | Spike                                 | Percent                          | Recovery           |

|           |                 |        |       |          | Spike  | Percent  | Recovery |
|-----------|-----------------|--------|-------|----------|--------|----------|----------|
| Surrogate | $\mathbf{Flag}$ | Result | Units | Dilution | Amount | Recovery | Limits   |
| TFT       |                 | 0.960  | mg/Kg | 10       | 1      | 96       | 70 - 130 |
| 4-BFB     |                 | 0.922  | mg/Kg | 10       | 1      | 92       | 70 - 130 |

| Report Date: June 18, 2002<br>Goodwin Treating Plant |                                  |                                                          | C              | rder Nun)<br>G     | nber: A020614<br>oodwin | 03          |                       | Page Number: 5 of 10<br>Redwood Tanks |                                |
|------------------------------------------------------|----------------------------------|----------------------------------------------------------|----------------|--------------------|-------------------------|-------------|-----------------------|---------------------------------------|--------------------------------|
| Sample:<br>Analysis:<br>Analyst:                     | <b>199298 -</b><br>TPH DRO<br>MM | <b>061002-12</b><br>Analytical Metho<br>Preparation Meth | d: ]<br>10d: 3 | Mod. 801<br>3550 B | 5B QC Bate<br>Prep Ba   | ch:<br>tch: | QC21067<br>PB20064    | Date Analyzed:<br>Date Prepared:      | 6/14/02<br>6/14/02             |
| Param                                                | Flag                             | Result                                                   |                | Unit               | s                       | Dilut       | ion                   |                                       | RDL                            |
| DRO                                                  |                                  | <50.0                                                    |                | mg/F               | ζg                      | 1           |                       |                                       | 50                             |
| Surrogate<br>n-Triaconta                             | Flag<br>ne                       | ; Result<br>144                                          | Ur<br>mg,      | nits<br>/Kg        | Dilution<br>1           | A           | Spike<br>mount<br>150 | Percent<br>Recovery<br>96             | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:                     | <b>199298 -</b><br>TPH GRO<br>CG | <b>061002-12</b><br>Analytical Meth<br>Preparation Me    | nod:<br>thod:  | 8015B<br>5035      | QC Batch:<br>Prep Batch | Q(<br>: PH  | C21111<br>320089      | Date Analyzed:<br>Date Prepared:      | 6/17/02 $6/17/02$              |
| Param                                                | Flag                             | Result                                                   |                | Unit               | S                       | Dilut       | ion                   |                                       | RDL                            |
| GRO                                                  |                                  | <1                                                       |                | mg/k               | g                       | 10          |                       |                                       | 0.10                           |
| Surrogate                                            | Flag                             | Result                                                   | Units          | 3                  | Dilution                | Sj<br>An    | pike<br>nount         | Percent<br>Recovery                   | Recovery<br>Limits             |
| 4-BFB                                                |                                  | 0.798<br>0.823                                           | mg/K<br>mg/K   | g                  | 10<br>10                | 0<br>0      | .10<br>.10            | 80<br>82                              | 70 - 130<br>70 - 130           |

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Report Date: June 18, 2002 Goodwin Treating Plant Order Number: A02061403 Goodwin Page Number: 6 of 10 Redwood Tanks

#### Quality Control Report Method Blank

| Method B                   | lank | QCBatch:      | QC21067        |                    |                        |                           |                                |
|----------------------------|------|---------------|----------------|--------------------|------------------------|---------------------------|--------------------------------|
| Param                      | ]    | Flag          | Res            | ults               | Units                  |                           | Reporting<br>Limit             |
| DRO                        |      | <5            | 50.0           | mg/Kg              |                        | 50                        |                                |
| Surrogate<br>n-Triacontane | Flag | Result<br>139 | Units<br>mg/Kg | Dilution<br>1      | Spike<br>Amount<br>150 | Percent<br>Recovery<br>92 | Recovery<br>Limits<br>70 - 130 |
| Method B                   | lank | QCBatch:      | QC21110        |                    |                        |                           |                                |
| D                          |      | T.I.          |                | Darrita            | TT:4.                  |                           | Reporting                      |
| Bonzono                    |      | Flag          |                | $\frac{1}{20.010}$ | Units                  | а<br>                     |                                |
| Toluene                    |      |               |                | <0.010             | mg/K                   | Б<br>or                   | 0.001                          |
| Ethylbenzene               |      |               |                | <0.010             | mg/K                   | o<br>g                    | 0.001                          |
| M.P.O-Xvlene               |      |               |                | <0.010             | mg/K                   | o<br>o                    | 0.001                          |
| Total BTEX                 |      |               |                | <0.010             | mg/K                   | g                         | 0.001                          |
|                            |      |               |                |                    | Spike                  | Percent                   | Recovery                       |
| Surrogate                  | Flag | Result        | Units          | Dilution           | Amount                 | Recovery                  | Limits                         |
| TFT                        |      | 1.13          | mg/Kg          | 10                 | 1                      | 113                       | 70 - 130                       |
| <u>4-BFB</u>               |      | 1.03          | mg/Kg          | 10                 | 1                      | 103                       | 70 - 130                       |
| Method B                   | lank | QCBatch:      | QC21111        |                    |                        |                           |                                |
| Param                      | -    | Flag          | Res            | ults               | Units                  |                           | Reporting<br>Limit             |
| GRO                        |      |               |                | <1                 | mg/Kg                  |                           | 0.10                           |
|                            |      |               |                |                    | Spike                  | Percent                   | Recoverv                       |
| Surrogate                  | Flag | Result        | Units          | Dilution           | Amount                 | Recovery                  | Limits                         |
| TFT                        |      | 1.08          | mg/Kg          | 10                 | 0.10                   | 108                       | 70 - 130                       |
| 4-BFB                      |      | 0.937         | mg/Kg          | 10                 | 0.10                   | 94                        | 70 - 130                       |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes



| Report Date: J<br>Goodwin Treat | une 18, 2<br>ing Plant | 002         |       | Or   | der Number:<br>Goodw     | A02061403<br>vin |       | Page Number: 7<br>Redwood 7 |                |              |
|---------------------------------|------------------------|-------------|-------|------|--------------------------|------------------|-------|-----------------------------|----------------|--------------|
| LC:<br>Param Resu               | 5 LC<br>llt Re         | CSD<br>sult | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD                         | % Rec<br>Limit | RPD<br>Limit |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD   |       |          | Spike  | LCS   | LCSD  | Recovery |
|---------------|--------|--------|-------|----------|--------|-------|-------|----------|
| Surrogate     | Result | Result | Units | Dilution | Amount | % Rec | % Rec | Limits   |
| n-Triacontane | 136    | 133    | mg/Kg | 1        | 150    | 90    | 88    | 70 - 130 |

QC21110

Laboratory Control Spikes QCBatch:

| Param        | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|---------------|----------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| MTBE         | 1.01          | 1.13           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 11  | 70 - 130       | 20           |
| Benzene      | 1.03          | 1.05           | mg/Kg | 10   | 1                        | < 0.010          | 103   | 1   | 70 - 130       | 20           |
| Toluene      | 1             | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 100   | 1   | 70 - 130       | 20           |
| Ethylbenzene | 1.01          | 1.02           | mg/Kg | 10   | 1                        | < 0.010          | 101   | 0   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.92          | 2.96           | mg/Kg | 10   | 3                        | < 0.010          | 97    | 1   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | LCS<br>Result | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|---------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 1.13          | 1.13                                                            | mg/Kg | 10       | 1               | 113          | 113           | 70 - 130           |
| 4-BFB     | 1.04          | 1.06                                                            | mg/Kg | 10       | 1               | 104          | 106           | 70 - 130           |

Laboratory Control Spikes QCBatch: QC21111

|       |        |        |                  |      | Spike  |        |               |     |               |       |
|-------|--------|--------|------------------|------|--------|--------|---------------|-----|---------------|-------|
|       | LCS    | LCSD   |                  |      | Amount | Matrix |               |     | $\% { m Rec}$ | RPD   |
| Param | Result | Result | $\mathbf{Units}$ | Dil. | Added  | Result | $\% { m Rec}$ | RPD | Limit         | Limit |
| GRO   | 9.5    | 9.55   | mg/Kg            | 10   | 1      | <1     | 95            | 0   | 80 - 120      | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | LCS<br>Result | $\begin{array}{c} { m LCSD} \\ { m Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | $\begin{array}{c} { m LCSD} \\ { m \% \ Rec} \end{array}$ | Recovery<br>Limits |
|-----------|---------------|---------------------------------------------------------|-------|----------|-----------------|--------------|-----------------------------------------------------------|--------------------|
| TFT       | 0.978         | 0.958                                                   | mg/Kg | 10       | 0.10            | 98           | 96                                                        | 70 - 130           |
| 4-BFB     | 1.01          | 0.987                                                   | mg/Kg | 10       | 0.10            | 101          | 99                                                        | 70 - 130           |

#### Quality Control Report Matrix Spikes and Duplicate Spikes

Matrix Spikes



| Report 1<br>Goodwin | Date: June<br>n Treating I | 18, 2002<br>Plant |       | Or   | der Number:<br>Goodw     | A02061403<br>vin |       |     | r: 8 of 10<br>od Tanks |              |
|---------------------|----------------------------|-------------------|-------|------|--------------------------|------------------|-------|-----|------------------------|--------------|
| Param               | MS<br>Result               | MSD<br>Result     | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit         | RPD<br>Limit |
| DRO                 | 209                        | 197               | mg/Kg | 1    | 250                      | <50.0            | 83    | 5   | 70 - 130               | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | MS                | MSD               |                  |          | Spike  | MS    | MSD   | Recovery |
|---------------|-------------------|-------------------|------------------|----------|--------|-------|-------|----------|
| Surrogate     | $\mathbf{Result}$ | $\mathbf{Result}$ | $\mathbf{Units}$ | Dilution | Amount | % Rec | % Rec | Limits   |
| n-Triacontane | 127               | 127               | mg/Kg            | 1        | 150    | 84    | 84    | 70 - 130 |

#### Matrix Spikes QCBatch: QC21110

i

| Param        | ${ m MS} { m Result}$ | MSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|-----------------------|---------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| Benzene      | 0.99                  | 0.919         | mg/Kg | 10   | 1                        | < 0.010          | 99    | 7   | 70 - 130       | 20           |
| Toluene      | 0.986                 | 0.911         | mg/Kg | 10   | 1                        | 0.014            | 97    | 8   | 70 - 130       | 20           |
| Ethylbenzene | 0.992                 | 0.92          | mg/Kg | 10   | 1                        | 0.0107           | 98    | 7   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.88                  | 2.66          | mg/Kg | 10   | 3                        | 0.0117           | 95    | 7   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | MS                | MSD               |                  |          | Spike  | $\mathbf{MS}$ | MSD           | Recovery          |
|-----------|-------------------|-------------------|------------------|----------|--------|---------------|---------------|-------------------|
| Surrogate | $\mathbf{Result}$ | $\mathbf{Result}$ | $\mathbf{Units}$ | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | $\mathbf{Limits}$ |
| TFT       | 1.05              | 0.972             | mg/Kg            | 10       | 1      | 105           | 97            | 70 - 130          |
| 4-BFB     | 1.02              | 0.936             | mg/Kg            | 10       | 1      | 102           | 93            | 70 - 130          |

#### Matrix Spikes QCBatch: QC21111

|       |        |        |                  |      | Spike  |        |       |     |                  |                        |
|-------|--------|--------|------------------|------|--------|--------|-------|-----|------------------|------------------------|
|       | MS     | MSD    |                  |      | Amount | Matrix |       |     | $\% { m Rec}$    | RPD                    |
| Param | Result | Result | $\mathbf{Units}$ | Dil. | Added  | Result | % Rec | RPD | $\mathbf{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 11.1   | 8.8    | mg/Kg            | 10   | 1      | <1     | 111   | 23  | 80 - 120         | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | MS<br>Result | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|-----------|--------------|-------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|--------------------|
| TFT       | 1.14         | 0.832                                                       | mg/Kg | 10       | 0.10            | 114         | 83           | 70 - 130           |
| 4-BFB     | 0.876        | 0.888                                                       | mg/Kg | 10       | 0.10            | 88          | 89           | 70 - 130           |

#### Quality Control Report Continuing Calibration Verification Standards

CCV (1)

| Report Date:<br>Goodwin Tre | June 1<br>ating F | .8, 2002<br>Plant |               | Order                 | Number: A020<br>Goodwin | Page Number: 9 of 10<br>Redwood Tanks |                                  |                    |
|-----------------------------|-------------------|-------------------|---------------|-----------------------|-------------------------|---------------------------------------|----------------------------------|--------------------|
| Param                       | Flag              | U                 | nits          | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.  | CCVs<br>Percent<br>Recovery           | Percent<br>Recovery<br>Limits    | Date<br>Analyzed   |
| DRO                         |                   | mg                | /Kg           | 250                   | 245                     | 98                                    | 75 - 125                         | 6/14/02            |
| ICV (1)                     |                   | QCBatch           | n: QC2        | 1067<br>CCVs          | CCVs                    | CCVs                                  | Percent                          |                    |
|                             |                   |                   |               | True                  | Found                   | Percent                               | Recovery                         | Date               |
| Param                       | Flag              | U                 | nits          | Conc.                 | Conc.                   | Recovery                              | Limits                           | Analyzed           |
| DRO                         |                   | mg                | /Kg           | 250                   | 220                     | 88                                    | 75 - 125                         | 6/14/02            |
| CCV (1)                     |                   | QCBate            | ch: QC        | 21110                 |                         |                                       |                                  |                    |
|                             |                   |                   |               | CCVs                  | CCVs                    | CCVs                                  | Percent                          |                    |
| Danam                       |                   | El. a             | II            | True                  | Found                   | Percent                               | Limita                           | Date               |
| Param<br>MTRF               |                   | Flag              | Units<br>mg/I | <u> </u>              | 0.103                   | 103                                   | $\frac{\text{Limits}}{85 - 115}$ | Analyzed           |
| Renzene                     |                   |                   | mg/L          | 0.10                  | 0.103                   | 103                                   | 85 - 115                         | 6/17/02            |
| Toluene                     |                   |                   | mg/L          | 0.10                  | 0.0996                  | 99                                    | 85 - 115                         | 6/17/02            |
| Ethylbenzene                |                   |                   | mg/L          | 0.10                  | 0.101                   | 101                                   | 85 - 115                         | $\frac{6}{17}$     |
| M,P,O-Xylene                | 9                 |                   | mg/L          | 0.30                  | 0.293                   | 97                                    | 85 - 115                         | 6/17/02            |
| CCV (2)                     |                   | QCBate            | ch: QC        | 21110<br>CCVs<br>True | CCVs<br>Found           | CCVs<br>Percent                       | Percent<br>Recovery              | Date               |
| Param                       |                   | Flag              | Units         | Conc.                 | Conc.                   | Recovery                              | Limits                           | Analyzed           |
| MTBE                        |                   |                   | mg/L          | 0.10                  | 0.106                   | 106                                   | 85 - 115                         | 6/17/02            |
| Benzene                     |                   |                   | mg/L          | 0.10                  | 0.104                   | 104                                   | 85 - 115                         | 6/17/02            |
| Toluene                     |                   |                   | mg/L          | 0.10                  | 0.109                   | 109                                   | 85 - 115                         | 6/17/02            |
| M P O-Xylone                |                   |                   | mg/L<br>mg/I  | 0.10                  | 0.101                   | 101                                   | 85 - 115<br>85 - 115             | 6/17/02            |
| ICV (1)                     |                   | QCBatch           | n: QC2        | 1110                  |                         |                                       |                                  |                    |
|                             |                   |                   |               | $\mathrm{CCVs}$       | $\mathbf{CCVs}$         | $\mathbf{CCVs}$                       | Percent                          |                    |
| -                           |                   |                   |               | True                  | Found                   | Percent                               | Recovery                         | Date               |
| Param                       |                   | Flag              | Units         | Conc.                 | Conc.                   | Recovery                              | Limits                           | Analyzed           |
| MTBE                        |                   |                   | mg/L          | 0.10                  | 0.0975                  | 98                                    | 85 - 115                         | 6/17/02            |
| Denzene                     |                   |                   | mg/L          | 0.10                  | 0.104                   | 104                                   | 85 - 115                         | 6/17/02            |
| Ethylbenzene                |                   |                   | mg/L          | 0.10                  | 0.101                   | 101                                   | 00 - 110<br>85 - 115             | 0/17/02<br>6/17/09 |
| M,P,O-Xylene                | •                 |                   | mg/L          | 0.30                  | 0.295                   | 98                                    | 85 - 115                         | 6/17/02            |

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| Report Date:<br>Goodwin Tre | June 1<br>ating P | 8, 2002<br>lant | Orde                  | r Number: A020<br>Goodwin | 061403                      | Page Number:<br>Redwoo        |                  |  |
|-----------------------------|-------------------|-----------------|-----------------------|---------------------------|-----------------------------|-------------------------------|------------------|--|
| CCV (1)                     |                   | QCBatch:        | QC21111               |                           |                             |                               |                  |  |
| Param                       | Flag              | Units           | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc.    | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |  |
| GRO                         |                   | mg/Kg           | 1                     | 1.14                      | 114                         | 85 - 115                      | 6/17/02          |  |
| ICV (1)                     |                   | QCBatch:        | QC21111               |                           |                             |                               |                  |  |

| True Found Percent Recover                   | <b>D</b> ( |
|----------------------------------------------|------------|
|                                              | y Date     |
| Param Flag Units Conc. Conc. Recovery Limits | Analyzed   |
| GRO mg/Kg 1 0.946 94 85 - 11                 | 5 6/17/02  |

| ן<br>ן | ۲ <b>د</b>        | <b>t</b> .                  |             |             |        |                  |                        |             |                   | рюн                |             |             |      |        |      |                    |   |          |                      | ·····        |                                         | E.                                                                   |
|--------|-------------------|-----------------------------|-------------|-------------|--------|------------------|------------------------|-------------|-------------------|--------------------|-------------|-------------|------|--------|------|--------------------|---|----------|----------------------|--------------|-----------------------------------------|----------------------------------------------------------------------|
|        |                   |                             |             |             |        | andard           | ats mo                 | it trenetti | ib ti əm          | Turn Around Ti     |             |             |      |        |      |                    |   |          |                      |              |                                         | 63.                                                                  |
| 5      | SΤ                |                             |             |             |        |                  |                        |             |                   |                    |             | -           |      |        |      |                    |   |          |                      |              |                                         | 66~1                                                                 |
| -      | NE:               |                             |             | <del></del> |        |                  |                        |             |                   |                    |             |             |      | {      |      |                    |   |          | $\left\{ - \right\}$ |              |                                         | 2.                                                                   |
| 2      | REG               |                             |             |             |        |                  |                        |             |                   |                    |             |             |      |        | +    |                    |   |          |                      |              |                                         | 162                                                                  |
| -      | SIS               | M                           |             |             |        |                  |                        |             |                   |                    |             |             | _    |        |      |                    |   |          |                      |              |                                         | orting<br>H                                                          |
|        | ALY               | 5                           | L           | ; —         |        |                  |                        |             |                   | Hq ,2ST ,0O8       |             |             |      |        |      |                    |   |          |                      |              |                                         | ded ded                                                              |
|        | AN                | 12                          | <b>IESI</b> |             |        |                  | . <u> </u>             |             | 8<br>808\A1       | PCB's 8082/60      |             |             |      |        |      |                    |   |          |                      |              |                                         | s Nee                                                                |
|        | ND                | 201                         | EQU         |             |        | ·                |                        | 929/002     | Vol. 82           | GC/MS Semi.        |             |             |      |        |      |                    |   |          |                      |              | 6                                       | its And                                                              |
|        | DY ا              | A                           | S R         |             |        |                  |                        | 4           | <u>29/809</u>     | CC/WE API 85       |             |             |      |        |      |                    |   |          |                      |              | <i>в</i>                                | Č Ľč                                                                 |
|        | STO               |                             | -YSI        | 5 —         |        |                  |                        |             | S                 | TCLP Pesticide     |             | •           |      |        |      |                    |   |          |                      |              |                                         |                                                                      |
|        | cus               | Ð                           | NAI         |             |        |                  |                        |             | səlits            | TCLP Semi Vo       |             |             |      |        |      |                    |   |          |                      | <b>c</b>     |                                         |                                                                      |
|        | ЧŎ<br>Ч           | Orde                        | ₹ ت         | <u> </u>    |        |                  |                        |             |                   | TCLP Volatiles     |             |             |      |        |      |                    |   |          |                      |              | z                                       | 23                                                                   |
|        | AIN               | LAB                         |             | 7.0         | 08/20  | Hu 601           | <u>95 49</u><br>1 98 0 | Cd Cr P     | 68 2A  <br>я 2A 0 | TCLP Metals Ag     |             |             |      |        |      |                    |   |          |                      | S.≻.         | z >                                     | <b>N</b>                                                             |
|        | CH                |                             |             |             |        |                  | $\sim$                 |             | <u> </u>          | PAH 8270C          |             |             |      |        |      |                    |   |          |                      | Щ<br>М<br>Д  | ð,                                      |                                                                      |
|        |                   | • .                         |             | 9 <u>44</u> | ' ମ    | 19               | $\sub$                 | 108         | ) 900             | TPH 418.1/TX1      | >           | $\mathbf{}$ | 1    | ~      |      |                    |   |          |                      | ₹°           | lspace                                  | er #                                                                 |
|        |                   |                             |             |             |        |                  |                        |             | 205               | WTBE 80218/0       | -           |             |      |        |      |                    |   |          |                      |              | Intac<br>Heac                           | Temp<br>Log-i<br>Carri                                               |
|        |                   |                             |             |             |        |                  |                        | 1           | УV<br>V           | TIME               | 915         | 5.8         | 925  | 928    | 138  | ¥                  |   |          |                      |              |                                         | J                                                                    |
|        | suite F<br>9932   | 443<br>944<br>43            |             |             | ļ      |                  |                        | 1           | MPLI              |                    | 0<br>7<br>8 | 0           | 0    | 0      | 13   | 5                  |   |          |                      |              |                                         | E E                                                                  |
|        | heon,9<br>exas 7  | 585-3<br>585-4<br>588-34    |             |             |        |                  |                        |             | SAI               | <u> </u>           | <b>G</b> ho | 6/10        | 5    | L ho   | 21/2 | 6 mg               |   |          |                      | \<br>\       | N<br>M                                  | 2 P                                                                  |
|        | cCutcl<br>aso, Te | (915)<br>: (915)<br>(888) ! | 88          |             |        |                  | 4                      |             |                   |                    |             |             |      |        |      |                    |   |          |                      |              | ôó                                      | ्रं है                                                               |
|        | 155 M<br>El P.    | - Fau                       | 34          |             |        |                  | ٩                      | 4           |                   |                    |             | 、           |      | _      | +    | $\left\{ \right\}$ |   |          |                      |              | Time                                    |                                                                      |
|        |                   |                             | 6 -         |             |        |                  |                        |             | ERV               | HOPN               | 3           |             | 3    | -      | 1    |                    |   |          |                      | 2            | 5                                       | 2-2-                                                                 |
|        |                   | •                           | 47          | Q           |        |                  |                        |             | MES               | °OS <sup>ℤ</sup> H |             |             |      |        |      |                    |   |          |                      | 10 in        | 0<br>0                                  | 10.0                                                                 |
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|        | , (<br>, •,       |                             | -           | ي چ         |        |                  | -3                     | ຶ           | IATR              | AIA                |             |             |      |        |      | -++                |   |          |                      | J'r          | 3                                       |                                                                      |
|        |                   |                             |             | <u>8</u>    |        |                  |                        |             | 2                 | OIL                | 2           | 2           | 7    | 2      | N    | 4                  |   |          |                      | 45           | 2                                       | PLC oration                                                          |
|        |                   |                             |             | 100         |        | [                | ĺ                      |             | ļ                 | RATAW              |             |             |      |        |      | _                  |   | <u> </u> |                      | ×V ×         | <del>کر</del> ا                         |                                                                      |
|        |                   | וק                          |             |             |        |                  |                        |             | ıun               | omA\əmuloV         | 402         | 402         | 40 z | 402    | 30   | 40.2               |   |          | 1                    |              | p S                                     | <b>J</b><br>L<br>L<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I<br>I |
|        |                   |                             |             | v           |        | ļ                | 1                      |             | รษะ               | # CONTAINE         |             | ~           | -    |        | 4    | 1                  |   |          |                      |              |                                         | d Co                                                                 |
|        |                   | E /                         |             | 12          |        |                  |                        | Įξ          | <u> </u>          |                    |             |             |      |        | ╶╌╉┼ |                    |   |          |                      |              | 14 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |                                                                      |
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|        |                   |                             |             | K X         | 212    |                  | 3                      | 000         |                   | Щ.                 |             |             |      |        | -+   | ψ                  |   |          | F                    | 102          | که ۴                                    | Tir<br>(S)                                                           |
|        | Ĕ                 |                             | C 0         | 6           | વા     |                  | 13                     | X           |                   | сор                | 0           |             |      |        | đ    | k                  | ſ |          |                      |              | 62                                      | )<br>/0 2<br>reem                                                    |
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|        | ste. 9<br>4       |                             |             | z, ≯        | 25     | 1                |                        | 30          |                   | Ē                  | 4           | ۱<br>اد     | -    | 1      | b    | ۱،<br>ار           |   |          |                      | - 13         | Ľ,                                      | titute                                                               |
|        | 7942 <sup>,</sup> | 1296<br>1298<br>296         | Z           | , c         | T',    | (e)              |                        | 7 2 4       |                   |                    | 0           | 500         | 902  | 4      | ð    | S                  |   |          |                      | 4            | 1 de                                    | B                                                                    |
|        | Aver<br>exas      | 794-<br>794-<br>378-1       | 2 ،         | 2.5         | AR.    | abo              |                        |             | ļ                 |                    | 26          | 1919        | 610  | 610    | 1    | PT9                |   |          |                      | . J          |                                         | The second                                                           |
|        | rdeer<br>ock, T   | 806)<br>800) ;              | Name        | 16          | N Sol  | fom 1            |                        | i tion      | <u> </u>          |                    |             | 0           | 0    | ō      | •    | 0                  |   |          |                      |              | A P                                     | t sam                                                                |
|        | 1 Abe<br>Lubb     | Fax<br>1 (                  | hua         | :ss:        | ict Pe | e to:<br>erent   | ۲<br>#                 | 2 T         |                   | USE<br>ILV         | 29.         | 96          | 97   | 98     |      | Ē,                 |   |          |                      |              | Lish                                    | luishe<br>ittal o                                                    |
|        | 670               |                             | шo          | Addre       | Conta  | nvoic<br>If diff | <sup>b</sup> rojet     | njeć        |                   | A B A              | 199.        |             |      | i angi |      |                    |   |          |                      |              | feling N                                | Subm                                                                 |

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|                        | 6701 Aberdeen Ave<br>155 McCutcheon, S  | enue, Suite 9 Lu<br>Suite H El | ubbock, Texas 7942<br>Paso, Texas 7993<br>E-Mail: lab | 4 800•378•1296 806•794<br>2 888•588•3443 915•58<br>@traceanalysis.com | I●1296 FAX 806●794●129<br>5●3443 FAX 915●585●494 | 18<br> 4                    |
|------------------------|-----------------------------------------|--------------------------------|-------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------|-----------------------------|
| Bill To:               | <b>OCD</b><br>1220 S. Sa<br>Santa Fe, N | int Francis Dr.<br>IM 87505    |                                                       |                                                                       | Invoice #                                        | <b>53218</b><br>Jul 23, 200 |
| Attn:                  | Martyne K                               | ieling                         | 2nd COI                                               | ΡΥ                                                                    | Order ID:                                        | A0206101                    |
| Project #:             |                                         | 2-517-0000                     | 51                                                    | · · · ·                                                               |                                                  |                             |
| Project Nam            | e:<br>tion:                             | Goodwin T<br>8 Miles We        | reating Plant<br>st of Hobbs, I                       | NM                                                                    | -                                                |                             |
| Test                   |                                         | Quantity                       | Matrix                                                | Description                                                           | Price                                            | SubTotal                    |
| TPH DRO<br>BTEX/TPH GR | 0                                       | 8<br>8                         | Soil<br>Soil                                          | 198916 - 198923<br>198916 - 198923                                    | \$40.00<br>\$60.00                               | \$320.00<br>\$480.00        |
| Pay                    | ment Terms:                             | Net 30 Days                    |                                                       |                                                                       | Total                                            | \$800.00                    |

Director, Dr. Blair Leftwich

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Lubbock, TX 19424-1515

Report Date:

Order ID Number: A02061012

(806) 794-1296

June 19, 2002

Report Date: June 19, 2002Order Number: A020610122-517-000051Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

## Summary Report

#### RECEIVED

## JUN 2 4 2002

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Environmental Bureau Oil Conservation Division

Project Number:2-517-000051Project Name:Goodwin Treating PlantProject Location:8 Miles West of Hobbs, NM

|        |             |        | Date   | Time  | Date     |
|--------|-------------|--------|--------|-------|----------|
| Sample | Description | Matrix | Taken  | Taken | Received |
| 198916 | 060502-01   | Soil   | 6/5/02 | 8:45  | 6/8/02   |
| 198917 | 060502-02   | Soil   | 6/5/02 | 10:40 | 6/8/02   |
| 198918 | 060502-03   | Soil   | 6/5/02 | 12:10 | 6/8/02   |
| 198919 | 060502-04   | Soil   | 6/5/02 | 13:30 | 6/8/02   |
| 198920 | 060502-05   | Soil   | 6/7/02 | 8:25  | 6/8/02   |
| 198921 | 060502-06   | Soil   | 6/7/02 | 8:30  | 6/8/02   |
| 198922 | 060502-07   | Soil   | 6/7/02 | 9:25  | 6/8/02   |
| 198923 | 060502-08   | Soil   | 6/7/02 | 9:35  | 6/8/02   |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     | TPH DRO | TPH GRO |
|---------------------|---------|---------|
|                     | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   |
| 198916 - 060502-01  | <50.0   | <1      |
| 198917 - 060502-02  | 171     | 12.7    |
| 198918 - 060502-03  | 122     | 2.86    |
| 198919 - 060502-04  | <50.0   | <1      |
| 198920 - 060502-05  | <50.0   | <1      |
| 198921 - 060502-06  | 59.4    | <1      |
| 198922 - 060502-07  | <50.0   | <1      |
| 198923 - 060502-08  | <50.0   | <1      |

806 • 794 • 1296 FAX 806 • 794 • 1298 Lubbock, Texas 79424 800 • 378 • 1296 6701 Aberdeen Avenue, Suite 9

155 McCutcheon, Suite H

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## Analytical and Quality Control Report

Martyne Kieling **OCD** Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Report Date:

June 19, 2002

Order ID Number: A02061012

**Project Number:** 2-517-000051 Goodwin Treating Plant **Project** Name: Project Location: 8 Miles West of Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date   | Time  | Date     |
|--------|-------------|--------|--------|-------|----------|
| Sample | Description | Matrix | Taken  | Taken | Received |
| 198916 | 060502-01   | Soil   | 6/5/02 | 8:45  | 6/8/02   |
| 198917 | 060502-02   | Soil   | 6/5/02 | 10:40 | 6/8/02   |
| 198918 | 060502-03   | Soil   | 6/5/02 | 12:10 | 6/8/02   |
| 198919 | 060502-04   | Soil   | 6/5/02 | 13:30 | 6/8/02   |
| 198920 | 060502-05   | Soil   | 6/7/02 | 8:25  | 6/8/02   |
| 198921 | 060502-06   | Soil   | 6/7/02 | 8:30  | 6/8/02   |
| 198922 | 060502-07   | Soil   | 6/7/02 | 9:25  | 6/8/02   |
| 198923 | 060502-08   | Soil   | 6/7/02 | 9:35  | 6/8/02   |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 9 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Report Date: June 19, 2002 2-517-000051

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# Analytical Report

| Sample:      | 198916 -              | 060502-01               |                                       |              |             |                |                                  |
|--------------|-----------------------|-------------------------|---------------------------------------|--------------|-------------|----------------|----------------------------------|
| Analysis:    | TPH DRO               | Analytical Method       | : Mod. 801                            | 5B QC Batch  | n: QC21017  | Date Analyzed: | 6/12/02                          |
| Analyst:     | MM                    | Preparation Metho       | od: 3550 B                            | Prep Bate    | ch: PB20017 | Date Prepared: | 6/12/02                          |
| Param        | Flag                  | Result                  | Unit                                  | s I          | Dilution    |                | RDL                              |
| DRO          | 0                     | < 50.0                  | mg/k                                  | ζσ           | 1           |                | 50                               |
| <u></u>      |                       |                         |                                       | -0           |             |                |                                  |
|              |                       |                         |                                       |              | <b>G U</b>  | <b>D</b>       | Ð                                |
| Surrogate    | Flag                  | Result                  | Unite                                 | Dilution     | Spike       | Percent        | Recovery<br>Limits               |
| n Trisconts  | no                    | <u>, nesuit</u>         | mg/Kg                                 | 1            |             | 102            | 70 130                           |
|              |                       | 204                     |                                       | <u>1</u>     |             | 102            | 10 - 100                         |
| Sample       | 108016                | 060502 01               |                                       |              |             |                |                                  |
| Analysis:    | 190910 -<br>ТРН СВО   | Analytical Mathe        | d. 8015B                              | OC Batch     | 0C21158     | Date Analyzed  | 6/18/02                          |
| Analysis.    | CG                    | Preparation Meth        | hod: 5035                             | Pren Batch   | PR20133     | Date Prepared: | 6/18/02                          |
| rinary 50.   | eu                    | 1 reparation men        | 104. 0000                             | r tep Baten. | 1 020100    | Date Freparea. | 0/10/02                          |
| Param        | $\operatorname{Flag}$ | $\operatorname{Result}$ | Unit                                  | s I          | Dilution    |                | RDL                              |
| GRO          |                       | <1                      | mg/I                                  | Хg           | 10          |                | 0.10                             |
|              |                       |                         |                                       |              | 0.11        | <b>D</b>       | D                                |
| C            | <b>T</b> 21           | D1+                     | <b>T</b> T*4 .                        | D'1 (:       | Spike       | Percent        | Recovery                         |
| Surrogate    | Flag                  | Result                  | Units                                 | Dilution     | Amount      | Recovery       | Limits                           |
|              |                       | 0.889 1                 | ng/Kg                                 | 10           | 0.10        | 89             | 70 - 130<br>70 - 120             |
| <u>4-DFD</u> | <u></u>               | 0.04 1                  | ng/ ng                                | 10           | 0.10        |                | 10 - 150                         |
|              |                       |                         |                                       |              |             |                |                                  |
| Sample:      | 198917 -              | 060502-02               | ,                                     |              |             |                |                                  |
| Analysis:    | TPH DRO               | Analytical Method       | l: Mod. 801                           | 5B QC Batch  | h: QC21017  | Date Analyzed: | 6/12/02                          |
| Analyst:     | MM                    | Preparation Metho       | od: 3550 B                            | Prep Bat     | ch: PB20017 | Date Prepared: | 6/12/02                          |
| Param        | $\operatorname{Flag}$ | $\operatorname{Result}$ | Unit                                  | ts I         | Dilution    |                | RDL                              |
| DRO          |                       | 171                     | mg/I                                  | Kg           | 1           |                | 50                               |
|              |                       |                         | · · · · · · · · · · · · · · · · · · · |              |             |                |                                  |
|              |                       |                         |                                       |              | Spike       | Percent        | Recoverv                         |
| Surrogate    | Flag                  | g Result                | Units                                 | Dilution     | Amount      | Recovery       | Limits                           |
| n-Triaconta  | ine                   | 214                     | mg/Kg                                 | 1            | 150         | 107            | 70 - 130                         |
|              |                       |                         |                                       |              |             |                | ,, <u></u> , <u></u> , <u></u> , |
| Sample:      | 198917 -              | 060502-02               |                                       |              |             |                | - 1 - 1 -                        |
| Analysis:    | TPH GRO               | Analytical Metho        | od: 8015B                             | QC Batch:    | QC21158     | Date Analyzed: | 6/18/02                          |
| Analyst:     | CG                    | Preparation Met         | hod: 5035                             | Prep Batch:  | PB20133     | Date Prepared: | 6/18/02                          |
| Param        | $\operatorname{Flag}$ | Result                  | Unit                                  | ts ]         | Dilution    |                | RDL                              |
| GRO          |                       | 12.7                    | mg/l                                  | Κσ           | 10          |                | 0.10                             |

| Report Dat<br>2-517-00005                 | e: June 19, 200<br>51                    | 02                                                               | Order Nu<br>Goodwir     | mber: A0206<br>n Treating Pla | 1012<br>ant                                    | Page Nun<br>8 Miles West of I    | ber: 3 of 9<br>Hobbs, NM       |
|-------------------------------------------|------------------------------------------|------------------------------------------------------------------|-------------------------|-------------------------------|------------------------------------------------|----------------------------------|--------------------------------|
| Surrogate                                 | Flag                                     | Result                                                           | Units                   | Dilution                      | Spike<br>Amount                                | Percent<br>Recovery              | Recovery<br>Limits             |
| 4-BFB                                     |                                          | 1.04<br>• 1.1                                                    | mg/Kg<br>mg/Kg          | 10                            | 0.10                                           | 104<br>110                       | 70 - 130<br>70 - 130           |
| Sample:<br>Analysis:<br>Analyst:          | <b>198918 -</b><br>TPH DRO<br>MM         | <b>060502-03</b><br>Analytical Meth<br>Preparation Met           | od: Mod.<br>bod: $3550$ | 8015B QC<br>B Pre             | Batch: QC21017<br>p Batch: PB20017             | Date Analyzed:<br>Date Prepared: | 6/12/02<br>6/12/02             |
| Param                                     | Flag                                     | Result                                                           | -                       | Units                         | Dilution                                       |                                  | RDL                            |
| DRO                                       |                                          | 122                                                              | n                       | ng/Kg                         | 1                                              |                                  | 50                             |
| Surrogate<br>n-Triaconta                  | Flag<br>ne                               | Result<br>208                                                    | Units<br>mg/Kg          | Dilution<br>1                 | Spike<br>n Amount<br>150                       | Percent<br>Recovery<br>104       | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:          | <b>198918 -</b><br>TPH GRO<br>CG         | <b>060502-03</b><br>Analytical Met<br>Preparation M              | bod: 801<br>ethod: 503  | 5B QC Ba<br>5 Prep F          | atch: QC21158<br>Batch: PB20133                | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02             |
| Param                                     | Flag                                     | Result                                                           |                         | Units                         | Dilution                                       |                                  | RDL                            |
| GRO                                       |                                          | 2.86                                                             | n                       | ng/Kg                         | 10                                             |                                  | 0.10                           |
| Surrogate                                 | Flag                                     | Result                                                           | Units                   | Dilution                      | Spike<br>Amount                                | Percent<br>Recovery              | Recovery<br>Limits             |
| TFT<br>4-RFR                              |                                          | 0.899                                                            | mg/Kg<br>mg/Kg          | 10<br>10                      | $\begin{array}{c} 0.10 \\ 0.10 \end{array}$    | 90<br>89                         | 70 - 130<br>70 - 130           |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>198919 -</b><br>TPH DRO<br>MM<br>Flag | <b>060502-04</b><br>Analytical Meth<br>Preparation Met<br>Result | od: Mod.<br>thod: 3550  | 8015B QC<br>B Pre<br>Units    | Batch: QC21017<br>p Batch: PB20017<br>Dilution | Date Analyzed:<br>Date Prepared: | 6/12/02<br>6/12/02<br>RDL      |
| DRO                                       | ······                                   | <50.0                                                            | <u> </u>                | ng/Kg                         | 1                                              |                                  | 50                             |
| Surrogate<br>n-Triaconta                  | Flag                                     | Result<br>204                                                    | Units<br>mg/Kg          | Dilutio<br>1                  | Spike<br>n Amount<br>150                       | Percent<br>Recovery<br>102       | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:          | <b>198919 -</b><br>TPH GRO<br>CG         | <b>060502-04</b><br>Analytical Mer<br>Preparation M              | thod: 801<br>ethod: 503 | 5B QC Ba<br>5 · Prep I        | atch: QC21158<br>Batch: PB20133                | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02             |

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| Report Dat<br>2-517-00005        | e: June 19, 20<br>1              | 02                                                     | Order I<br>Good                                               | Number: A<br>win Treatir | 02061012<br>1g Plant | 2             |                                       | Page Num<br>8 Miles West of H    | ber: 4 of 9<br>lobbs, NM       |
|----------------------------------|----------------------------------|--------------------------------------------------------|---------------------------------------------------------------|--------------------------|----------------------|---------------|---------------------------------------|----------------------------------|--------------------------------|
| Param                            | Flag                             | Result                                                 |                                                               | Units                    |                      | Dilut         | tion                                  |                                  | RDL                            |
| GRO                              | 8                                | <1                                                     |                                                               | mg/Kg                    |                      | 1(            | )                                     |                                  | 0.10                           |
|                                  |                                  |                                                        |                                                               |                          |                      | s             | pike                                  | Percent                          | Recovery                       |
| Surrogate                        | Flag                             | $\operatorname{Result}$                                | Units                                                         | Dilu                     | tion                 | An            | nount                                 | Recovery                         | Limits                         |
| $\overline{\mathrm{TFT}}$        |                                  | 0.773                                                  | mg/Kg                                                         | 1                        | 0                    | (             | ).10                                  | 77                               | 70 - 130                       |
| 4-BFB                            |                                  | 0.759                                                  | mg/Kg                                                         | 1                        | 0                    | (             | ).10                                  | 76                               | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>198920 -</b><br>TPH DRO<br>MM | <b>060502-05</b><br>Analytical Meth<br>Preparation Met | od: Mo<br>hod: 355                                            | od. 8015B<br>50 B        | QC Ba<br>Prep B      | tch:<br>atch: | QC21017<br>PB20017                    | Date Analyzed:<br>Date Prepared: | 6/12/02<br>6/12/02             |
| Param                            | Flag                             | Result                                                 |                                                               | Units                    |                      | Dilu          | tion                                  |                                  | RDL                            |
| DRO                              |                                  | <50.0                                                  |                                                               | mg/Kg                    | · ·······            | 1             | · · · · · · · · · · · · · · · · · · · |                                  | 50                             |
| Surrogate                        | Flag                             | ; Result                                               | Units<br>mg/K                                                 | s Di                     | lution               | A             | Spike<br>mount                        | Percent<br>Recovery<br>104       | Recovery<br>Limits<br>70 - 130 |
|                                  | iic                              | 200                                                    | 111 <u>6</u> /11                                              | 5                        | +                    |               |                                       | 104                              |                                |
| Sample:<br>Analysis:<br>Analyst: | <b>198920 -</b><br>TPH GRO<br>CG | <b>060502-05</b><br>Analytical Met<br>Preparation M    | thod: 8<br>ethod: 5                                           | 015B G<br>035 P          | )C Batch<br>rep Batc | : Q<br>h: P   | C21158<br>B20133                      | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02             |
| Param                            | Flag                             | $\operatorname{Result}$                                |                                                               | Units                    |                      | Dilu          | tion                                  |                                  | RDL                            |
| GRO                              |                                  | <1                                                     |                                                               | mg/Kg                    |                      | 10            | 0                                     |                                  | 0.10                           |
| Surrogate<br>TFT                 | Flag                             | Result                                                 | Units<br>mg/Kg                                                | Dilu<br>1                | ution                | S<br>Ar       | pike<br>nount<br>0.10                 | Percent<br>Recovery<br>80        | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                            | ····· ··· <u>·</u> ···           | 0.801                                                  | mg/Kg                                                         | 1                        | .0                   |               | 0.10                                  | 80                               | 70 - 130                       |
| Sample:                          | 198921 -                         | 060502-06                                              |                                                               |                          |                      |               |                                       |                                  |                                |
| Analysis:                        | TPH DRO                          | Analytical Meth                                        | od: Mo                                                        | od. 8015B                | QC Ba                | tch:          | QC21017                               | Date Analyzed:                   | 6/12/02                        |
| Analyst:                         | MM                               | Preparation Me                                         | thod: $35$                                                    | 50 B                     | Prep B               | atch:         | PB20017                               | Date Prepared:                   | 6/12/02                        |
| Param                            | Flag                             | Result                                                 |                                                               | Units                    |                      | Dilu          | tion                                  |                                  | RDL                            |
| DRO                              |                                  | 59.4                                                   |                                                               | mg/Kg                    |                      | 1             | Ļ                                     |                                  | 50                             |
|                                  |                                  |                                                        |                                                               |                          |                      |               | a                                     |                                  |                                |
| Sumorata                         | <b>1</b> -1-                     | D14                                                    | <b>T T :</b> 4                                                | , r                      | 1                    |               | Spike                                 | Percent                          | Kecovery                       |
| n-Triaconta                      | r lag                            | <u>2 nesuit</u><br>202                                 | $\frac{0 \text{ m} \text{ t}}{\text{m} \sigma / \mathcal{V}}$ | s D                      | 1                    | P             | 150                                   | 104                              | $\frac{1111115}{70 - 130}$     |
|                                  |                                  | 200                                                    |                                                               | 0                        | -                    |               | 100                                   | 101                              | 10 100                         |

| Report Dat<br>2-517-00005        | e: June 19, 20<br>51             | 02 (                                                                | Order Numb<br>Goodwin T | er: A02061012<br>reating Plant | 2                               | Page Num<br>8 Miles West of H    | ber: 5 of 9<br>lobbs, NM                   |
|----------------------------------|----------------------------------|---------------------------------------------------------------------|-------------------------|--------------------------------|---------------------------------|----------------------------------|--------------------------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>198921 -</b><br>TPH GRO<br>CG | 060502-06<br>Analytical Method<br>Preparation Metho                 | l: 8015B<br>od: 5035    | QC Batch<br>Prep Batc          | : QC21158<br>h: PB20133         | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02                         |
| Param                            | Flag                             | Result                                                              | Un                      | its                            | Dilution                        |                                  | RDL                                        |
| GRO                              | 0                                | <1                                                                  | mg/                     | Kg                             | 10                              |                                  | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB        | Flag<br>1                        | Result         U           1.21         m           0.659         m | Jnits<br>g/Kg<br>g/Kg   | Dilution<br>10<br>10           | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>121<br>66 | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>198922 -</b><br>TPH DRO<br>MM | <b>060502-07</b><br>Analytical Method:<br>Preparation Method        | Mod. 80<br>d: 3550 B    | 15B QC Ba<br>Prep B            | tch: QC21017<br>atch: PB20017   | Date Analyzed:<br>Date Prepared: | 6/12/02<br>6/12/02                         |
| Param                            | Flag                             | Result                                                              | Un                      | its                            | Dilution                        |                                  | RDL                                        |
| DRO                              |                                  | <50.0                                                               | mg <sub>/</sub>         | ′Kg                            | 1                               | ·                                | 50                                         |
| Surrogate<br>n-Triaconta         | Flag                             | g Result<br>207                                                     | Units<br>mg/Kg          | Dilution<br>1                  | Spike<br>Amount<br>150          | Percent<br>Recovery<br>103       | Recovery<br>Limits<br>70 - 130             |
| Sample:<br>Analysis:<br>Analyst: | <b>198922 -</b><br>TPH GRO<br>CG | <b>060502-07</b><br>Analytical Method<br>Preparation Meth           | d: 8015B<br>od: 5035    | QC Batch<br>Prep Batc          | : QC21158<br>h: PB20133         | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02                         |
| Param                            | Flag                             | Result                                                              | Un                      | its                            | Dilution                        |                                  | RDL                                        |
| GRO                              |                                  | <1                                                                  | mg,                     | /Kg                            | 10                              |                                  | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB        | Flag<br>2<br>3                   | Result         U           0.462         m           .453         m | Units<br>ng/Kg<br>ng/Kg | Dilution<br>10<br>10           | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>46<br>45  | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>198923 -</b><br>TPH DRO<br>MM | <b>060502-08</b><br>Analytical Method:<br>Preparation Method        | Mod. 80<br>d: 3550 B    | )15B QC Ba<br>Prep E           | atch: QC21017<br>Batch: PB20017 | Date Analyzed:<br>Date Prepared: | 6/12/02<br>6/12/02                         |
| raram<br>DRO                     | Flag                             | <50.0                                                               | Ur                      | nts<br>/Kg                     | 1                               |                                  | 50 KDL                                     |

<sup>1</sup>Low surrogate recovery due to matrix interference. ICV, CCV, LCS, LCSD show the method to be in control. <sup>2</sup>Low surrogate recovery due to matrix interference. ICV, CCV, LCS, LCSD show the method to be in control. <sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV, LCS, LCSD show the method to be in control.

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|----------------------------------|------------------------------------|-----------------------------------------------------------|---------------------------|--------------------------------|--------------------------------------------------|----------------------------------|--------------------|
| Surrogate                        | Flag                               | Result                                                    | Units                     | Dilution                       | Spike<br>Amount                                  | Percent<br>Recovery              | Recovery<br>Limits |
| n-Triaconta                      | ne                                 | 206                                                       | mg/Kg                     | 1                              | 150                                              | 103                              | 70 - 130           |
| Sample:<br>Analysis:<br>Analyst: | <b>198923 - (</b><br>TPH GRO<br>CG | 0 <b>60502-08</b><br>Analytical Metho<br>Preparation Meth | d: 8015B<br>aod: 5035     | QC Batch:<br>Prep Batch:       | QC21158<br>PB20133                               | Date Analyzed:<br>Date Prepared: | 6/18/02<br>6/18/02 |
| Param                            | Flag                               | Result                                                    | Uni                       | ts I                           | Dilution                                         |                                  | RDL                |
| GRO                              |                                    | <1                                                        | mg/l                      | Kg                             | 10                                               |                                  | 0.10               |
| S                                |                                    | ,<br>Damilt                                               | T                         | Dilution                       | Spike                                            | Percent                          | Recovery           |
| Surrogate                        | Flag                               | Kesult                                                    |                           | Dilution                       | Amount                                           | Recovery                         |                    |
|                                  |                                    | 0.715 n                                                   | ng/Kg                     | 10                             | 0.10                                             | . (1                             | 70 - 130           |
| 4-Dr D                           |                                    | U.(15 n                                                   | ig/ng                     | 10                             | 0.10                                             | (1                               | 10 - 130           |

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#### Quality Control Report Method Blank

| Method Bl     | ank  | QCBatch: | QC21017         |          |                 |                     |                    |
|---------------|------|----------|-----------------|----------|-----------------|---------------------|--------------------|
| Param         | T    | Flag     | Resu            | lts      | Units           |                     | Reporting<br>Limit |
| DRO           |      |          | <50             | ).0      | mg/Kg           |                     | 50                 |
| Surrogate     | Flag | Result   | Units           | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
| n-Triacontane |      | 203      | mg/Kg           | 1        | 150             | 101                 | 70 - 130           |
| Method B      | lank | QCBatch: | QC21158<br>Resu | lts      | Units           |                     | Reporting<br>Limit |
| GRO           |      |          |                 | <1       | mg/Kg           |                     | 0.10               |
| Surrogate     | Flag | Result   | Units           | Dilution | Spike<br>Amount | Percent<br>Recovery | Recovery<br>Limits |
| TFT           |      | 0.105    | mg/Kg           | 10       | 0.10            | 105                 | 70 - 130           |
| <u>4-BFB</u>  |      | 0.0927   | mg/Kg           | 10       | 0.10            | 92                  | 70 - 130           |

### Quality Control Report Lab Control Spikes and Duplicate Spikes

Laboratory Control Spikes

QCBatch: QC21017

|       | LCS    | LCSD   |       |      | Amount | Matrix |       |     | % Rec    | RPD   |
|-------|--------|--------|-------|------|--------|--------|-------|-----|----------|-------|
| Param | Result | Result | Units | Dil. | Added  | Result | % Rec | RPD | Limit    | Limit |
| DRO   | 297    | 289    | mg/Kg | 1    | 250    | <50.0  | 118   | 2   | 70 - 130 | 20    |

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Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD   |       |          | Spike  | LCS           | LCSD          | Recovery |
|---------------|--------|--------|-------|----------|--------|---------------|---------------|----------|
| Surrogate     | Result | Result | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| n-Triacontane | 205    | 203    | mg/Kg | 1        | 150    | 102           | 101           | 70 - 130 |

Laboratory Control Spikes

Report Date: June 19, 2002 Order Number: A02061012 Page Number: 8 of 9 2-517-000051 Goodwin Treating Plant 8 Miles West of Hobbs, NM ... Continued Spike LCS % Rec RPD LCSD Amount Matrix RPD Param Result Result Units Dil. Added Result % Rec Limit Limit Spike LCS LCSD % Rec RPD Amount Matrix Result Result Units Dil. Added  $\% \ {\rm Rec}$ RPD Limit Limit Param Result GRO 1.12 10 1 92 19 80 - 120 20 < 1 mg/Kg <1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | LCS    | LCSD              |       |          | Spike  | LCS           | LCSD  | Recovery          |
|-----------|--------|-------------------|-------|----------|--------|---------------|-------|-------------------|
| Surrogate | Result | $\mathbf{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | % Rec | $\mathbf{Limits}$ |
| TFT       | 0.0968 | 0.115             | mg/Kg | 10       | 0.10   | 96            | 115   | 70 - 130          |
| 4-BFB     | 0.101  | 0.101             | mg/Kg | 10       | 0.10   | 101           | 101   | 70 - 130          |

#### Quality Control Report Matrix Spikes and Duplicate Spikes

| IS<br>sult | $\mathop{\mathrm{MSD}} olimits$ | Units                           | Dil.                                        | Spike<br>Amount<br>Added                           | Matrix<br>Result                                                             | % Rec                                                                                     | RPD                                                                                                 | % Rec<br>Limit                                                                                                             | RPD<br>Limit                                                                              |
|------------|---------------------------------|---------------------------------|---------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 69         | 272                             | mg/Kg                           | 1                                           | 250                                                | <50.0                                                                        | 107                                                                                       | 1                                                                                                   | 70 - 130                                                                                                                   | 20                                                                                        |
|            | IS<br>sult<br>69                | IS MSD<br>sult Result<br>69 272 | IS MSD<br>sult Result Units<br>69 272 mg/Kg | IS MSD<br>sult Result Units Dil.<br>69 272 mg/Kg 1 | Spike<br>IS MSD Amount<br>sult Result Units Dil. Added<br>69 272 mg/Kg 1 250 | Spike<br>Amount Matrix<br>sult Result Units Dil. Added Result<br>69 272 mg/Kg 1 250 <50.0 | Spike<br>Amount Matrix<br>sult Result Units Dil. Added Result % Rec<br>69 272 mg/Kg 1 250 <50.0 107 | Spike<br>Amount Matrix<br><u>sult Result Units Dil. Added Result % Rec RPD</u><br><u>69 272 mg/Kg 1 250 &lt;50.0 107 1</u> | SpikeISMSDAmountMatrix% RecsultResultUnitsDil.AddedResult% RecRPDLimit69272mg/Kg1250<50.0 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | $\mathbf{MS}$ | MSD                     |       |          | Spike  | MS            | MSD           | Recovery |
|---------------|---------------|-------------------------|-------|----------|--------|---------------|---------------|----------|
| Surrogate     | Result        | $\operatorname{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| n-Triacontane | 197           | 199                     | mg/Kg | 1        | 150    | 98            | 99            | 70 - 130 |

Matrix Spikes QCBatch: QC21158

|       |        |        |                  |      | Spike  |                         |               |     |                        |                        |
|-------|--------|--------|------------------|------|--------|-------------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD    |                  |      | Amount | Matrix                  |               |     | $\% { m Rec}$          | $\operatorname{RPD}$   |
| Param | Result | Result | $\mathbf{Units}$ | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 8.12   | 11.8   | mg/Kg            | 10   | 1      | <1                      | 81            | 36  | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | ${ m MS} { m Result}$ | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|-----------|-----------------------|-------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|--------------------|
| TFT       | 1.21                  | 1.04                                                        | mg/Kg | 10       | 0.10            | 121         | 104          | 70 - 130           |
| 4-BFB     | 0.901                 | 1.1                                                         | mg/Kg | 10       | 0.10            | 90          | 110          | 70 - 130           |

### Quality Control Report Continuing Calibration Verification Standards

| Report Date: 2-517-000051 | June 1 | 9, 2002   | Order N<br>Goodw | umber: A02061<br>in Treating Pla | 012<br>.nt      | Page N<br>8 Miles West | Number: 9 of 9<br>of Hobbs, NM |
|---------------------------|--------|-----------|------------------|----------------------------------|-----------------|------------------------|--------------------------------|
| CCV (1)                   |        | QCBatch:  | QC21017          |                                  |                 |                        |                                |
|                           |        |           | CCVs             | CCVs                             | CCVs            | Percent                |                                |
| 5                         |        | <b>**</b> | True             | Found                            | Percent         | Recovery               | Date                           |
| Param                     | Flag   | Units     | Conc.            | Conc.                            | Recovery        | Limits                 | Analyzed                       |
| DRO                       |        | mg/Kg     | 250              | 287                              | 115             | 75 - 125               | 6/12/02                        |
| CCV (2)                   |        | QCBatch:  | QC21017          |                                  |                 |                        |                                |
|                           |        |           | $\mathrm{CCVs}$  | $\mathrm{CCVs}$                  | $\mathrm{CCVs}$ | Percent                |                                |
|                           |        |           | True             | Found                            | Percent         | Recovery               | Date                           |
| Param                     | Flag   | Units     | Conc.            | Conc.                            | Recovery        | Limits                 | Analyzed                       |
| DRO                       |        | mg/Kg     | 250              | 290                              | 116             | 75 - 125               | 6/12/02                        |
| ICV (1)                   |        | QCBatch:  | QC21017          |                                  |                 |                        |                                |
|                           |        |           | $\mathrm{CCVs}$  | CCVs                             | CCVs            | Percent                |                                |
|                           |        |           | True             | Found                            | Percent         | Recovery               | Date                           |
| Param                     | Flag   | Units     | Conc.            | Conc.                            | Recovery        | Limits                 | Analyzed                       |
| DRO                       |        | mg/Kg     | 250              | 286                              | 114             | 75 - 125               | 6/12/02                        |
| CCV (1)                   |        | QCBatch:  | QC21158          |                                  |                 |                        | ·                              |
|                           |        |           | $\mathrm{CCVs}$  | CCVs                             | $\mathrm{CCVs}$ | Percent                |                                |
|                           |        |           | True             | Found                            | Percent         | Recovery               | Date                           |
| Param                     | Flag   | Units     | Conc.            | Conc.                            | Recovery        | Limits                 | Analyzed                       |
| GRO                       |        | mg/Kg     | 1                | 0.939                            | 93              | 85 - 115               | 6/18/02                        |
| ICV (1)                   |        | QCBatch:  | QC21158          |                                  |                 |                        |                                |
|                           |        |           | CCVs             | CCVs                             | CCVs            | Percent                |                                |
|                           |        |           | True             | Found                            | Percent         | Recovery               | Date                           |
| Param                     | Flag   | Units     | Conc.            | Conc.                            | Recovery        | Limits                 | Analyzed                       |
| GRO                       |        | mg/Kg     | 1                | 0.903                            | 90              | 85 - 115               | 6/18/02                        |

| B     TraceAnaly:       CCD     A.Zip       A.Zip     K.Inturke       A.Zip     MM       A.Zip     Hele                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Avenue, Ste. 9<br>Trass 79424<br>1794-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-1296<br>378-12 | 155 McCutcheon, Suite H CHAIN-OF-CUSTODY AND ANALYSIS REQUEST | SIS, INC. Tel (915) 585-343<br>Fax (915) 585-4944<br>1 (888) 588-343<br>LAB Order ID # ACDOMOL D | Phone #:<br>505 476-3488 | Eax #: 505 - 393 - 0720 | 3/200. |       | 6н (<br>9 бн |                 | Sampler Signature: | MATRIX PRESERVATIVE SAMPLING 005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 2<br>005 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| Productore     TraceAnalysis, Inc.     Tsmcoute       Product     Takentalysis, Inc.     Tsmcoute       Product     Productore     Farmer       Actor     Jobds, MA     SB146       Mark Kielu     Productione     Farmer       Actor     Jobds, MA     SB146       Mark Kielu     Productione     Farmer       Actor     Jobds, MA     SB146       Mark Kielu     Productione       Actor     Jobds, MA       SB146     Mark Mainer       Mark Kielu     Samer       Actor     Samer       Actor     Samer       Mark Kielu     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Samer       Actor     Actor       Actor     Actor       Actor     Actor       Actor     Actor       Actor                                                                                                                                                                    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| B     TraceAnalys       OCD     Na       Na     Kläuluk       Na     Kuoluk       Na     Kuoluk       Na     Ka       Na     Ka       Na     Ka       Na     Ka       Na     Ka                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Advenue. 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                                  | 6                                                             |                                                                                                  | 000                      | y, Zip)<br>2 C J C H    | 2      | NE NI |              | 120000          | WESS OF            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       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|                        | THULLUL                                                  | RACEAN                                                 | VALYSIS, INC                                                                  |                                            |                             |
|------------------------|----------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------|-----------------------------|
|                        | 6701 Aberdeen Avenue, Suite 9<br>155 McCutcheon, Suite H | Lubbock, Texas 794<br>El Paso, Texas 799<br>E-Mail: la | 24 800•378•1296 806•794•1<br>32 888•588•3443 915•585•3<br>b@traceanalysis.com | 296 FAX 806●794●129<br>443 FAX 915●585●494 | 8<br>4                      |
| Bill To:               | OCD<br>1220 S. Saint Francis<br>Santa Fe, NM 87505       | Dr.                                                    | lı                                                                            | <b>nvoice #</b><br>Invoice Date:           | <b>53276</b><br>Jun 19, 200 |
| Attn:                  | Martyne Kieling                                          |                                                        | · · · · · ·                                                                   | Order ID:                                  | A02061403                   |
| Project #:             | Goodw                                                    | in Treating Plar                                       | nt                                                                            |                                            |                             |
| Project Name           | e: Goodw                                                 | in                                                     | P.A. Number:                                                                  | 20-521-07-024                              | 97                          |
| Project Loca           | tion: Redwo                                              | od Tanks                                               |                                                                               |                                            |                             |
| Test                   | Quantit                                                  | y Matrix                                               | Description                                                                   | Price                                      | SubTotal                    |
| TPH DRO<br>BTEX/TPH GI | 4<br>RO 4                                                | Soil<br>Soil                                           | 199295 - 199298<br>199295 - 199298                                            | \$40.00<br>\$60.00                         | \$160.00<br>\$240.00        |
| Pay                    | ment Terms: Net 30 Da                                    | ys                                                     |                                                                               | Total                                      | \$400.00                    |
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Director, Dr. Blair Leftwich

7-24-02 Mjn ok to ?")

|                                                           | 111111111TR                                                                 | ACEAN                                                    | VALYSIS, II                                                         | NC                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 6701 A<br>155 Ma                                          | berdeen Avenue, Suite 9 1<br>Cutcheon, Suite H I                            | ubbock, Texas 7942<br>El Paso, Texas 7993<br>E-Mail: lat | 24 800•378•1296 806•<br>32 888•588•3443 915•<br>o@traceanalysis.com | 794 • 1296 FAX 806 • 794 • 585 • 3443 FAX 915 • 585 • | • 1298<br>• 4944                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Bill To: OC                                               | D<br>20 S. Saint Francis                                                    | s Dr.                                                    |                                                                     | Invoice #                                             | 53605                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sa<br>Attn: Ma                                            | nta Fe, NM 87505                                                            | 5                                                        |                                                                     | Invoice Date:<br>Order ID:                            | July 09, 2001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Project #:<br>Project Name:<br>Project Location:          | 2-517-000051<br>Goodwin<br>Redwood Tanks                                    | Goodwin Treat                                            | ting Plant<br>P. A. Nur                                             | nber: 20-521-07-024                                   | 97                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Test                                                      | Quantity                                                                    | Matrix                                                   | Descriptio                                                          | on Price                                              | SubTotal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Heterotrophic Pla<br>Degrading Bacter<br>Degrading Bacter | te Count/Diesel<br>ia/Heavy Oil<br>ia/Chlorides Analy<br>Payment Terms: Net | sis<br>30 Days                                           | BA                                                                  | 7210168L9540012<br>Tot                                | \$259.20<br>516 17 18 19 30 21 23 24<br>99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 99 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 00<br>9 4 90 0000000000 |
| or to P                                                   | ny Nurtyn Kielin<br>7 - 22 - 02                                             | Director                                                 | , Dr. Blair Leftwich                                                |                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

### BioLogic Resources, LLC 6950 SW Juniper Terrace Beaverton, OR 97008 Phone 503.720.3876 Fax 503.646.5322

For: Trace Analysis 6701 Aberdeen Ave., Suite 9 Lubbock, TX 79424

Received: 06.13.02 Tested: 06.13.02 Completed: 06.23.02

| Lab # | Sample                                           | Heterotrophic<br>Plate Count<br>CFU/g | Diesel Degrading<br>Bacteria<br>CFU/g | Heavy Oil Degrading<br>Bacteria<br>CFU/g | Chlorides<br>mg/kg |
|-------|--------------------------------------------------|---------------------------------------|---------------------------------------|------------------------------------------|--------------------|
| TA001 | Goodwin Plant<br>061002 – Comp 1<br>6-11-02 0938 | 9.1 x 10 <sup>6</sup>                 | 7.1 x 10 <sup>6</sup>                 | 6.7 x 10 <sup>6</sup>                    | 3,900              |
| TA002 | Goodwin Plant<br>061002 – Comp 2<br>6-11-02 0945 | 5.6 x 10 <sup>7</sup>                 | 4.5 x 10 <sup>6</sup>                 | 2.7 x 10 <sup>6</sup>                    | 2,900              |

Project #: 2-517-000051 NMOCD via AMEC Earth & Environmental

- Samples were run in strict accordance with the following methodologies:
   1. Heterotrophic Plate Count: Standard Methods for the Examination of Water and Wastewater, 20<sup>th</sup> Edition, Method 9215B
  - Diesel and Heavy Oil Degrading Bacteria: Manual of Environmental Microbiolog Edition, Chapter 84 89107
  - 3. Chlorides: Halogens by Ion Chromatography, Method SW9056

Kim W. Hutchinson Microbiologist/Principal

|                      |                                    |          |               |          | IBIO   | gue    |                  |             | in ti an    |                                 |         |       |        |        |              |          |         |          |                 |               |                |                  |           |                 |                     |            |
|----------------------|------------------------------------|----------|---------------|----------|--------|--------|------------------|-------------|-------------|---------------------------------|---------|-------|--------|--------|--------------|----------|---------|----------|-----------------|---------------|----------------|------------------|-----------|-----------------|---------------------|------------|
| SТ                   |                                    |          |               |          |        |        |                  |             |             |                                 |         |       |        |        |              |          |         |          |                 |               |                | -                |           |                 |                     |            |
| GUE                  |                                    |          |               |          |        |        |                  |             | · · · ·     |                                 |         |       |        |        |              |          |         |          |                 |               |                |                  |           |                 |                     |            |
| IS RE                |                                    |          |               |          |        |        |                  |             |             |                                 |         |       |        |        | -            |          |         |          |                 |               |                |                  |           |                 | ting                |            |
| ALYS                 | 403                                |          | <br>          |          |        |        |                  |             |             | Hq .SST ,GOB                    |         |       |        |        |              |          |         |          |                 |               |                |                  |           |                 | l Repor<br>led      |            |
| D AN                 | 1 2                                | UES      |               |          |        |        |                  |             | 808\4       | PCB's 8082/608                  |         |       |        |        |              |          |         |          | <br>            |               |                |                  |           |                 | Specia<br>re Need   | V          |
| Y AN                 | 102.6                              | REQ      |               |          |        |        |                  | 0C\952<br>4 | 29/809      | GC/W2 26WJ: N                   |         |       |        | _      |              |          |         |          |                 |               |                | ŝ                | FIO       |                 | Check II<br>imits A |            |
| TOD                  | 7                                  | YSIS     | nade          |          |        |        |                  |             | s           | RCI<br>FCI<br>FCI<br>FCI<br>FCI |         |       |        |        |              |          |         |          |                 |               |                | MARK             | 5         |                 |                     |            |
| SUD-                 | ler ID 1                           | ANAL     |               |          |        |        |                  |             | səlite      | TCLP Semi Vol                   |         |       |        |        |              |          |         |          |                 |               |                |                  |           | <b>メ</b><br> 感点 | <b>.</b> 12 1       | <u>ا</u> م |
| IN-OF                | AB Orc                             | - C      | _  بر<br>     |          |        | бн (   | es dq            | L Cd Cr     | 68 SA (     | TCLP Metals Ac                  |         |       |        |        |              |          |         |          |                 |               |                | Ш                |           | N /             | Yu                  |            |
| CHA                  | n Sec                              |          | <u></u>       | 1,200    | 80109  | ĎН     | əs qa            | Cd Cr I     | 68 2A       | PAH 8270C                       |         |       |        |        |              |          |         |          |                 |               |                | З<br>N<br>N<br>N | Š         |                 | iew /               |            |
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|                      |                                    |          |               | <u>r</u> |        |        |                  |             | 05          | MTBE 80218/6                    |         |       | 5      | - 90   | (-00         | -        |         |          |                 |               |                |                  | Inta      | Hea             | မြို့မြို           |            |
| uite H<br>9932       | 143<br>944<br>43                   |          |               |          |        |        |                  |             | APLING      |                                 | 51 0 de | 160 3 | 240 TO | 12 092 | 62 013       | 91 09 45 |         |          |                 |               |                |                  |           |                 |                     | 4          |
| tcheon,S<br>Texas 79 | 5) 585-34<br>5) 585-4<br>1) 588-34 | *0       |               |          |        |        | ŕ                |             | SAN         | DATE                            | d hal   | 6110  | ctiol. | 6 10.  | 6/10         | 6/14     |         |          |                 |               |                | ١.               |           | 30              | 5                   |            |
| 55 McCu<br>El Paso,  | Tel (91<br>Fax (91<br>1 (886       | 18       |               |          |        |        | PLAN             |             | L.          | NONE                            |         |       |        |        |              |          |         |          |                 |               |                | ie:<br>So        | me:       | õ               | me:<br>G            | いたので       |
| ¥ -                  |                                    | 1        |               |          |        |        | 2                |             | THOD        | ICE<br>N <sup>g</sup> OH        | >       | 7     | 7      | 2      | Y            | 1        |         |          |                 |               |                | ゴム               | μ         | Ą               |                     | 職に         |
|                      | •                                  | 47.      | 2             |          |        |        | 1741             |             | RESE        | <sup>2</sup> OS <sup>2</sup> H  |         |       |        |        |              |          |         |          |                 |               |                | ite:<br>1/0:     | te:       | 0               | te:<br> 4_5         | 「「「「「「」」」  |
| . (                  | nc                                 | 2        | 528           |          |        |        | Name:            | Signe       |             | HNO <sup>3</sup><br>HCI         |         |       |        |        |              |          |         |          |                 |               |                |                  | ۾<br>ا    | 2/12            |                     | 行法主義       |
| )=                   |                                    | Tone #   |               |          |        |        | oject I<br>b w J | mpler       |             |                                 |         |       |        |        |              |          |         |          | <del>18 1</del> | 7:0           | <u>e .</u>     |                  |           | بور<br>ح        | -1                  | No. Walk   |
| ;<br>•               | <b>S</b>                           | đ        | ۲ آ           |          | -      |        | 200 P            | S S         | ATRI        | AIR<br>BOULIS                   |         |       |        |        |              |          |         |          | Gij             | 0             |                | l'a              |           | R               | λq λι               | Ĩ<br>1     |
| i                    | <b>VS</b>                          |          | 805           |          |        |        |                  |             | ∑           |                                 | 5       | 2     | 2      | 2      | 2            | Å        |         | <b>~</b> | 2               |               | 20             | $\mathcal{Q}$    |           | Re              | borate              | <u>}</u>   |
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|                      | <b>N</b> n                         |          | Ņ             |          |        |        |                  |             | SH          | # CONTAINE                      | 7       | 1 40  | 1 4    | 1 4    | 4            | 3        |         | , e      |                 | - 26          |                | eceive           | eceive    | J               | aceive              | Ş          |
|                      | e A                                |          | DRII          |          |        |        |                  | ž           | -           |                                 |         |       |        |        |              |          |         |          |                 | <u></u>       | ·              |                  | Ē         | -2              | 4 ()<br>()          |            |
| i<br>I               | ac                                 |          | X             |          | V<br>Y | ļ      |                  | 805         |             |                                 |         |       |        |        |              | 4        |         |          |                 |               |                | Time:<br>S       | Time:     | \$! 30          | Time:               | )          |
| F                    |                                    | 0        | 2             |          | 121    |        | 2                | 1 X         |             | CODE                            | 6       |       |        |        | q            | 4        |         |          |                 |               |                | ~                |           | 5               |                     | 5          |
| •                    |                                    | Õ        | Zip)<br>FR    |          | Y      |        | 204              | 05          |             | IELD                            | Ň       | 10    | 11     | 5      | j<br>J       | Ş        |         |          |                 |               |                | Date:            | Jate:     | 6/13            | Date:               | 2          |
| e, Ste. (<br>424     | 96<br>98<br>6                      | ۲        | Çity.<br>∠    |          | 410    |        | 000              | 265         |             | HL .                            | 5       | 1     | 1      | ו<br>ל | 60           | 1        |         |          |                 |               |                |                  |           | A               |                     | 判と         |
| Avenue<br>sxas 79    | 794-12<br>794-12<br>78-129         | <u>ک</u> | Street<br>2 S |          | L L    | above  | 11.              | 6           |             |                                 | 610     | 610   | 0015   | 001:   | 075          | 100      |         |          |                 |               |                | 6                |           | R               |                     | ろう         |
| erdeen<br>ock, Te    | (806)<br>(806)<br>(800) 3          | Name:    | ) <b>9</b>    | Brson:   | Ĩ      | from   | 2 1              | cation:     |             |                                 | 5       | Ö     | 06     | 06     | $\mathbf{q}$ | 6        | Statute | 1441.20  |                 | 1             | and the second | ivd be           | ind by    | U.              |                     | JAN .      |
| 1 Ab                 | Far<br>1                           | pany     | ess:          | act P    | ce to: | ferent | ;;<br>;;;        | S Lo        |             | HB #                            | 129     | 9,6   | 97     | 96     |              |          |         |          |                 |               |                | uishi            | )<br>lish | g.              | uishe               | \$         |

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| E<br>1                    | 701 Aberdeen Av<br>55 McCutcheon,        | renue, Suite 9 I<br>Suite H F           | ubbock, Texas 79424<br>El Paso, Texas 79932<br>E-Mail: lab@ | 800+378+1296 806+79<br>888+588+3443 915+58<br>9traceanalysis.com | 14•1296 FAX 806•794•1298<br>15•3443 FAX 915•585•4944 | 3                    |
|---------------------------|------------------------------------------|-----------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------------------|----------------------|
| Bill To:                  | <b>OCD</b><br>1220 S. Sai<br>Santa Fe, N | nt Francis Dr.<br>IM 87505              |                                                             |                                                                  | Invoice #                                            | 53564<br>Jul 8, 2002 |
| Attn:                     | Wayne Pric                               | Ce ···································· |                                                             |                                                                  | Order ID:                                            | A02062616            |
| Project #:                |                                          | 2-517-0000                              | 51                                                          |                                                                  |                                                      |                      |
| Project Name:             |                                          | Goodwin T                               | reating Plant                                               | P.A. Number:                                                     | 20-521-07-02497                                      |                      |
| Project Locatio           | יחכ:                                     | 8 Miles We                              | st of Hobbs, N                                              | М                                                                | ·                                                    |                      |
| Test                      |                                          | Quantity                                | Matrix                                                      | Description                                                      | Price                                                | SubTotal             |
| TPH DRO<br>BTEX / ÎPH GRO | ).                                       | 12<br>12                                | Soil<br>Soil                                                | 200156 - 200167<br>200156 - 200167                               | \$40.00<br>\$60.00                                   | \$480.00<br>\$720.00 |
| Pavn                      | nent Terms:                              | Net 30 Davs                             |                                                             |                                                                  | Total                                                | \$1 200 00           |

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Director, Dr. Blair Leftwich

GK to pay Martya Kieling 7-22-02

TraceAnalysis, Inc.

Martyne Kieling

F

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 9, 2002Order Number: A02062616 2-517-000051 Goodwin Treating Plant Page Number: 1 of 1 8 Miles West of Hobbs, NM

## **Summary Report**

Report Date: July 9, 2002

Order ID Number: A02062616

OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

| Project Number:   | 2-517-000051              |
|-------------------|---------------------------|
| Project Name:     | Goodwin Treating Plant    |
| Project Location: | 8 Miles West of Hobbs, NM |

|        |             |        | Date    | $\mathbf{Time}$ | $\operatorname{Date}$ |
|--------|-------------|--------|---------|-----------------|-----------------------|
| Sample | Description | Matrix | Taken   | Taken           | Received              |
| 200156 | 062502-1    | Soil   | 6/25/02 | 10:50           | 6/26/02               |
| 200157 | 062502-2    | Soil   | 6/25/02 | 10:54           | 6/26/02               |
| 200158 | 062502-3    | Soil   | 6/25/02 | 11:00           | 6/26/02               |
| 200159 | 062502-4    | Soil   | 6/25/02 | 11:04           | 6/26/02               |
| 200160 | 062502-5    | Soil   | 6/25/02 | 11:10           | 6/26/02               |
| 200161 | 062502-6    | Soil   | 6/25/02 | 11:14           | 6/26/02               |
| 200162 | 062502-7    | Soil   | 6/25/02 | 11:17           | 6/26/02               |
| 200163 | 062502-8    | Soil   | 6/25/02 | 11:20           | 6/26/02               |
| 200164 | 062502-24   | Soil   | 6/25/02 | 12:30           | 6/26/02               |
| 200165 | 062502-22   | Soil   | 6/25/02 | 12:17           | 6/26/02               |
| 200166 | 062502-23   | Soil   | 6/25/02 | 12:20           | 6/26/02               |
| 200167 | 062502-25   | Soil   | 6/25/02 | 15:20           | 6/26/02               |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         | · · · · · · · · · · · · · · · · · · · |            | TPH DRO | TPH GRO |
|---------------------|---------|---------|--------------|---------------------------------------|------------|---------|---------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene                          | Total BTEX | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)                                 | (ppm)      | (ppm)   | (ppm)   |
| 200156 - 062502-1   | < 0.010 | 0.126   | 0.0364       | 0.032                                 | 0.194      | <50.0   | 1.23    |
| 200157 - 062502-2   | < 0.010 | < 0.010 | < 0.010      | 0.0172                                | 0.0172     | 125     | 1.55    |
| 200158 - 062502-3   | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | <0.010     | <50.0   | <1      |
| 200159 - 062502-4   | < 0.010 | < 0.010 | <0.010       | < 0.010                               | <0.010     | < 50.0  | <1      |
| 200160 - 062502-5   | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | <0.010     | <50.0   | <1      |
| 200161 - 062502-6   | <0.010  | < 0.010 | < 0.010      | < 0.010                               | <0.010     | <50.0   | <1      |
| 200162 - 062502-7   | <0.010  | < 0.010 | < 0.010      | < 0.010                               | <0.010     | <50.0   | <1      |
| 200163 - 062502-8   | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | <50.0   | <1      |
| 200164 - 062502-24  | < 0.010 | < 0.010 | 0.0104       | 0.0109                                | 0.0213     | <50.0   | <1      |
| 200165 - 062502-22  | <0.010  | < 0.010 | < 0.010      | 0.0104                                | 0.0104     | <50.0   | <1      |
| 200166 - 062502-23  | < 0.010 | <0.010  | 0.0104       | 0.012                                 | 0.0224     | < 50.0  | <1      |
| 200167 - 062502-25  | < 0.010 | <0.010  | < 0.010      | <0.010                                | < 0.010    | <50.0   | <1      |

рюн per martyne, run BTEK, 2 163-566-890-3 Turn Around Time if different from standard CHAIN-OF-CUSTODY AND ANALYSIS REQUEST Page\_ Inenced Check If Special Reporting Limits Are Needed JIGFK Hq , SST , GOB (Circle or Specify Method No.) Pesticides 8081A/608 **ANALYSIS REQUEST** Q PCB's 8082/608 GC/MS Semi. Vol. 8270C/625 くして GC/MS Vol. 8260B/624 **REMARKS**: IJЯ LAB Order ID # TCLP Pesticides TCLP Semi Volatiles Ľ TCLP Volatiles 3 N / X TCLP Metals Ag As Ba Cd Cr Pb Se Hg LAB USE **ONLY** V N 7.005/80103 gH sS dd rJ bD s8 sA gA sisteM istol J V Log-in Review PAH 8270C Headspace \_ メント 1004050 WSIOS X X TPH 418.1/TX1005 Carrier # -) Temp\_ 2 7 X J T B 80218/602 Intact 80518/602 **38TM** 6/2/02 1120 4 2902 1050 129021054 Hill zalat Part in the 12500-1230 SAMPLING 6/202 1100 12 miley 4159a 1117 St. IDANE **JMIT** 129/2 1110 G\$ \$ 02(21) 155 McCutcheon, Suite H El Paso, Texas 79932 З О Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443 2001 540 ዎ **TA**d 505-476-348 5.9 NONE Time: Time: Ξ Ξ retur PRESERVATIV 102 2 METHOD SO 7 7 7 7  $\widetilde{\gamma}$ HOBN 88240 <u>Urochuin In</u> Sampler Signatures Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 22/9 'OS<sup>z</sup>H Date: Date: TraceAnalysis, Inc. <sup>€</sup>ONH Project Name: ORIGINAL COPY IDH Phone #: Fax #: 22 SLUDGE MATRIX Received at Laboratory ЯΙΑ JIOS 1 40 hhs RETAW オペ ceived by: Received by: 402 402 402 402 202 402 Z 407 462 605 403 tnuomA\smuloV (Street, City, Zip) 1625 N. French Drive ζ # CONTAINERS 7 Ś Kipling 140 221830 meles West of Hobb Time: ime: 2-517-00005 FIELD CODE 6-52-9 Jun elus Martyne VMOCD 64 062502-23 762502-22 Date: Date: 3 Date: N 062502-4 42-205290 H 062502-6 51 062502 -١ 63 062502-8 062502-7 თ 200154 062502 6701 Aberdeen Avenue, Ste. 062502-5 062502 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296 (If different from above) ションションオ Company Name: Contact Person: Project Location: Relinquished by: lelinquished by: Relinquished by: 50 3 S (LAB USE) Š. 0 Invoice to: Project #: Address:

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Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 9, 2002Order Number: A020626162-517-000051Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

## **Summary Report**

Report Date: July 9, 2002

U,

Order ID Number: A02062616

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

| Project Number:   | 2-517-000051              |
|-------------------|---------------------------|
| Project Name:     | Goodwin Treating Plant    |
| Project Location: | 8 Miles West of Hobbs, NM |

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 200156 | 062502-1    | Soil   | 6/25/02 | 10:50 | 6/26/02  |
| 200157 | 062502-2    | Soil   | 6/25/02 | 10:54 | 6/26/02  |
| 200158 | 062502-3    | Soil   | 6/25/02 | 11:00 | 6/26/02  |
| 200159 | 062502-4    | Soil   | 6/25/02 | 11:04 | 6/26/02  |
| 200160 | 062502-5    | Soil   | 6/25/02 | 11:10 | 6/26/02  |
| 200161 | 062502-6    | Soil   | 6/25/02 | 11:14 | 6/26/02  |
| 200162 | 062502-7    | Soil   | 6/25/02 | 11:17 | 6/26/02  |
| 200163 | 062502-8    | Soil   | 6/25/02 | 11:20 | 6/26/02  |
| 200164 | 062502-24   | Soil   | 6/25/02 | 12:30 | 6/26/02  |
| 200165 | 062502-22   | Soil   | 6/25/02 | 12:17 | 6/26/02  |
| 200166 | 062502-23   | Soil   | 6/25/02 | 12:20 | 6/26/02  |
| 200167 | 062502-25   | Soil   | 6/25/02 | 15:20 | 6/26/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | DTEV         |              |            | ATTDU DDO            |                                  |
|---------------------|---------|---------|--------------|--------------|------------|----------------------|----------------------------------|
|                     |         |         | DIDA         | -            |            | WILL IL DUO          | IFII GRO                         |
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO 🔪                | GRO                              |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)                | .∖ (ppm)                         |
| 200156 - 062502-1   | < 0.010 | 0.126   | 0.0364       | 0.032        | 0.194      | \$\$\$0.0            | 1.23                             |
| 200157 - 062502-2   | < 0.010 | < 0.010 | < 0.010      | 0.0172       | 0.0172 🌂   | 125                  | 1.55                             |
| 200158 - 062502-3   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | <0.010     | <u> </u>             | <1                               |
| 200159 - 062502-4   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | 5 <50.9              | $\left  \frac{N}{C} \right  < 1$ |
| 200160 - 062502-5   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <b>√</b> <50.0       | <i>[5]</i> / <1                  |
| 200161 - 062502-6   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50.0                | 1> /ب                            |
| 200162 - 062502-7   | < 0.010 | < 0.010 | < 0.010      | < 0.010      | <0.010     | ران 50. <u>0</u> <50 | <1                               |
| 200163 - 062502-8   | <0.010  | < 0.010 | < 0.010      | < 0.010      | <0.010     | - 12<50.0            | <1                               |
| 200164 - 062502-24  | < 0.010 | < 0.010 | 0.0104       | 0.0109       | 0.0213     | <50.0                | <1                               |
| 200165 - 062502-22  | < 0.010 | < 0.010 | < 0.010      | 0.0104       | 0.0104     | <50.0                | <1                               |
| 200166 - 062502-23  | < 0.010 | < 0.010 | 0.0104       | 0.012        | 0.0224     | <50.0                | <1                               |
| 200167 - 062502-25  | < 0.010 | < 0.010 | <0.010       | < 0.010      | < 0.010    | <50.0                | <1                               |

This is only a summary. Please, refer to the complete report package for quality control data.

FAX 806 • 794 • 1298 806 • 794 • 1296 800 • 378 • 1296 6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424

155 McCutcheon, Suite H

888•588•3443 El Paso, Texas 79932 E-Mail: lab@traceanalysis.com

915•585•3443

FAX 915•585•4944

## Analytical and Quality Control Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Report Date:

July 8, 2002

Order ID Number: A02062616

**Project Number:** 2-517-000051 **Project Name: Goodwin Treating Plant** Project Location: 8 Miles West of Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |                         | Date    | Time  | Date     |
|--------|-------------|-------------------------|---------|-------|----------|
| Sample | Description | $\operatorname{Matrix}$ | Taken   | Taken | Received |
| 200156 | 062502-1    | Soil                    | 6/25/02 | 10:50 | 6/26/02  |
| 200157 | 062502-2    | Soil                    | 6/25/02 | 10:54 | 6/26/02  |
| 200158 | 062502-3    | Soil                    | 6/25/02 | 11:00 | 6/26/02  |
| 200159 | 062502-4    | Soil                    | 6/25/02 | 11:04 | 6/26/02  |
| 200160 | 062502-5    | Soil                    | 6/25/02 | 11:10 | 6/26/02  |
| 200161 | 062502-6    | Soil                    | 6/25/02 | 11:14 | 6/26/02  |
| 200162 | 062502-7    | Soil                    | 6/25/02 | 11:17 | 6/26/02  |
| 200163 | 062502-8    | Soil                    | 6/25/02 | 11:20 | 6/26/02  |
| 200164 | 062502-24   | Soil                    | 6/25/02 | 12:30 | 6/26/02  |
| 200165 | 062502-22   | Soil                    | 6/25/02 | 12:17 | 6/26/02  |
| 200166 | 062502-23   | Soil                    | 6/25/02 | 12:20 | 6/26/02  |
| 200167 | 062502-25   | Soil                    | 6/25/02 | 15:20 | 6/26/02  |

161718 These results represent only the samples received in the laboratory. The Quality Control Reports's generated on batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) were analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) is analytical batch(es) in which your sample(s) in which your sample(s) is analytical batch(es) in which your sample(s) in which your sample(s) is analytical batch(es) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) in which your sample(s) Note: the RDL is equal to MQL for all organic analytes including TPH. The test results contained within this report meet all requirements of LAC 33:I unless otherwise not

This report consists of a total of 21 pages and shall not be reproduced except in its entirety including the chain of (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

(J)

Report Date: July 9, 2002 2-517-000051

## **Analytical Report**

| Sample:                                                              | 200156                                  | - 062502-1                                                                          |                                                          |                                                               |                                                                                    |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analysis:                                                            | BTEX                                    | Analytical Method:                                                                  | S 8021B                                                  | QC Batch:                                                     | QC21385                                                                            | Date Analyzed:                                                                                                                        | 6/26/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Analyst:                                                             | CG                                      | Preparation Method                                                                  | : S 5035                                                 | Prep Batch:                                                   | PB20317                                                                            | Date Prepared:                                                                                                                        | 6/25/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Param                                                                |                                         | Flag                                                                                | Result                                                   | Units                                                         | D                                                                                  | ilution                                                                                                                               | RDL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Benzene                                                              |                                         |                                                                                     | < 0.010                                                  | mg/Kg                                                         |                                                                                    | 10                                                                                                                                    | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Toluene                                                              |                                         |                                                                                     | 0.126                                                    | m mg/Kg                                                       |                                                                                    | 10                                                                                                                                    | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Ethylbenzer                                                          | ne                                      |                                                                                     | 0.0364                                                   | mg/Kg                                                         |                                                                                    | 10                                                                                                                                    | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| M,P,O-Xyle                                                           | ne                                      |                                                                                     | 0.032                                                    | m mg/Kg                                                       |                                                                                    | 10                                                                                                                                    | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Total BTEX                                                           | K                                       |                                                                                     | 0.194                                                    | mg/Kg                                                         |                                                                                    | 10                                                                                                                                    | 0.001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                      |                                         |                                                                                     |                                                          |                                                               | Spile                                                                              | Domoont                                                                                                                               | Pagovoru                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Surrogate                                                            | Flag                                    | Result                                                                              | Units                                                    | Dilution                                                      | Amount                                                                             | Recovery                                                                                                                              | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| TFT                                                                  |                                         | 1.21                                                                                | mg/Kg                                                    | 10                                                            | 1                                                                                  | 121                                                                                                                                   | 70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4-BFB                                                                |                                         | 0.901                                                                               | mg/Kg                                                    | 10                                                            | 1                                                                                  | 90                                                                                                                                    | 70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sample:<br>Analysis:<br>Analyst:                                     | <b>200156</b><br>TPH DRO<br>MM          | - 062502-1<br>Analytical Metho<br>Preparation Meth                                  | d: Mod. 8<br>10d: 3550 B                                 | 015B QC Bat<br>Prep Ba                                        | ch: QC215<br>atch: PB2044                                                          | 86 Date Analyzed<br>31 Date Prepared                                                                                                  | 1: 7/2/02<br>1: 7/2/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Param                                                                | Flag                                    | Result                                                                              | Ur                                                       | nits                                                          | Dilution                                                                           |                                                                                                                                       | RDL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| DRO                                                                  |                                         | <50.0                                                                               | mg                                                       | /Kg                                                           | 1                                                                                  |                                                                                                                                       | 50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>a</b>                                                             |                                         | <b>D</b>                                                                            | <b></b>                                                  |                                                               | Spike                                                                              | Percent                                                                                                                               | Recovery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Surrogate                                                            | Fla                                     | ag Result                                                                           | Units                                                    | Dilution                                                      | Amount                                                                             | Recoverv                                                                                                                              | <b>T 1 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| n-Triaconta                                                          | ne                                      | 110                                                                                 |                                                          |                                                               |                                                                                    |                                                                                                                                       | Limits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                      |                                         |                                                                                     | ing/Kg                                                   | 1                                                             | 150                                                                                | 73                                                                                                                                    | Limits<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sample:                                                              | 200156                                  | - 062502-1                                                                          | mg/ Kg                                                   | 1                                                             | 150                                                                                | 73<br>73<br>74.15 16 17 18 19 20 20 20 20 20 20 20 20 20 20 20 20 20                                                                  | Limits<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sample:<br>Analysis:                                                 | <b>200156</b><br>TPH GRO                | - 062502-1<br>Analytical Meth                                                       | mg/Kg                                                    | QC Batch:                                                     | 150<br>QC21386                                                                     | 73<br>73<br>74:15 16 17 18 79 20 2<br>Date Apalyzed:                                                                                  | Limits<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sample:<br>Analysis:<br>Analyst:                                     | <b>200156</b><br>TPH GRO<br>CG          | - 062502-1<br>Analytical Meth<br>Preparation Me                                     | ng/Kg<br>od: 8015B<br>thod: 5035                         | 1<br>QC Batch:<br>Prep Batch:                                 | 150<br>QC21386<br>: PB20347                                                        | 73<br>73<br>Date Analyzed:<br>T Date Prepared:                                                                                        | Limits<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sample:<br>Analysis:<br>Analyst:<br>Param                            | <b>200156</b><br>TPH GRO<br>CG<br>Flag  | - 062502-1<br>Analytical Meth<br>Preparation Me<br>Result                           | ng/Kg<br>od: 8015B<br>thod: 5035<br>Ur                   | 1<br>QC Batch:<br>Prep Batch:<br>1its                         | 150<br>QC21386<br>: PB20317<br>Dilution                                            | 73<br>73<br>Date Analyzed:<br>Date Prepared:                                                                                          | Limits<br>70 - 130<br>22 6/26/02<br>23 6/25/02<br>24 25<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO                     | <b>200156</b><br>TPH GRO<br>CG<br>Flag  | - 062502-1<br>Analytical Meth<br>Preparation Me<br>Result<br>1.23                   | iod: 8015B<br>thod: 5035                                 | 1<br>QC Batch:<br>Prep Batch:<br>iits<br>/Kg                  | 150<br>QC21386<br>: PB20317<br>Dilution                                            | 73<br>73<br>Date Analyzed:<br>Date Prepared:                                                                                          | Limits<br>70 - 130<br>26/26/02<br>26/25/02<br>26/25/02<br>26/25/02<br>26/25/02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO                     | <b>200156</b><br>TPH GRO<br>CG<br>Flag  | - 062502-1<br>Analytical Meth<br>Preparation Me<br><u>Result</u><br>1.23            | iod: 8015B<br>thod: 5035<br>Ur<br>mg                     | 1<br>QC Batch:<br>Prep Batch<br>nits<br>/Kg                   | 150<br>QC21386<br>: PB20317<br>Dilution                                            | 73<br>73<br>Date: Analyzed:<br>T Date: Prepared:<br>33<br>34<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35<br>35              | Limits<br>70 - 130<br>70 - 100<br>70 - |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO<br>Surrogate        | 200156<br>TPH GRO<br>CG<br>Flag         | - 062502-1<br>Analytical Meth<br>Preparation Me<br>Result<br>1.23                   | Ing/ Kg<br>nod: 8015B<br>thod: 5035<br>Ur<br>mg<br>Units | 1<br>QC Batch:<br>Prep Batch<br>nits<br>/Kg<br>Dilution       | 150<br>QC21386<br>: PB20317<br>Dilution<br>:<br>10<br>Spike<br>Amount              | 73<br>73<br>73<br>Date Analyzed:<br>■ Date Analyzed:<br>■ Date Prepared:<br>30<br>150<br>150<br>150<br>150<br>150<br>150<br>150<br>15 | Limits<br>70 - 130<br>70 - 100<br>70 - |
| Sample:<br>Analysis:<br>Analyst:<br>Param<br>GRO<br>Surrogate<br>TFT | 200156<br>TPH GRO<br>CG<br>Flag<br>Flag | - 062502-1<br>Analytical Meth<br>Preparation Me<br>Result<br>1.23<br>Result<br>1.48 | Ing/Kg<br>nod: 8015B<br>thod: 5035<br>Ur<br>mg/Kg        | 1<br>QC Batch:<br>Prep Batch<br>iits<br>/Kg<br>Dilution<br>10 | 150<br>QC21386<br>: PB20317<br>Dilution<br>:<br>10<br>:<br>Spike<br>Amount<br>0.10 | 73<br>73<br>Date Analyzed:<br>Date Prepared:<br>Date Prepared:<br>500<br>500<br>500<br>500<br>500<br>500<br>500<br>50                 | Limits<br>70 - 130<br>70 - 130<br>70 - 130<br>70 - 130                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

<sup>1</sup>High surrogate due to peak interference.

| Report Dat<br>2-517-00005        | e: July 9, 20<br>51            | 002                                                    | Order Numb<br>Goodwin T | er: A02062616<br>reating Plant |                                 | Page Numl<br>8 Miles West of B   | per: 3 of 21<br>Hobbs, NM     |
|----------------------------------|--------------------------------|--------------------------------------------------------|-------------------------|--------------------------------|---------------------------------|----------------------------------|-------------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>200157</b><br>BTEX<br>CG    | - 062502-2<br>Analytical Method:<br>Preparation Method | S 8021B<br>: S 5035     | QC Batch:<br>Prep Batch:       | QC21385<br>PB20317              | Date Analyzed:<br>Date Prepared: | 6/26/02<br>6/25/02            |
| Param                            |                                | Flag                                                   | Result                  | Units                          | Ι                               | Dilution                         | $\operatorname{RDL}$          |
| Benzene                          |                                |                                                        | < 0.010                 | mg/Kg                          |                                 | 10                               | 0.001                         |
| Toluene                          |                                |                                                        | < 0.010                 | mg/Kg                          |                                 | 10                               | 0.001                         |
| Ethylbenzer                      | ne                             |                                                        | < 0.010                 | mg/Kg                          |                                 | 10                               | 0.001                         |
| M,P,O-Xyle                       | ene                            |                                                        | 0.0172                  | mg/Kg                          |                                 | 10                               | 0.001                         |
| Total BTE                        | X                              |                                                        | 0.0172                  | mg/Kg                          |                                 | 10                               | 0.001                         |
| Surrogate                        | Flog                           | Bosult                                                 | Unite                   | Dilution                       | Spike<br>A mount                | Percent                          | Recovery                      |
| TFT                              | 1 lag                          | 0.943                                                  | mg/Kg                   | 10                             | 1                               | 94                               | 70 - 130                      |
| 4-BFB                            |                                | 0.815                                                  | mg/Kg                   | 10                             | 1                               | 81                               | 70 - 130                      |
| Param<br>DRO                     | Flag                           | Result<br>125                                          | Ur<br>mg                | nits<br>/Kg                    | Dilution<br>1                   |                                  | RDL<br>50                     |
| Surrogate                        | FL                             | ag Result                                              | Units                   | Dilution                       | Spike<br>Amount                 | Percent<br>Recovery              | Recovery<br>Limits            |
| n-Triaconta                      | ine                            | 115                                                    | mg/Kg                   | 1                              | 150                             |                                  | 70 - 130                      |
| Sample:<br>Analysis:<br>Analyst: | <b>200157</b><br>TPH GRO<br>CG | - 062502-2<br>Analytical Meth<br>Preparation Met       | od: 8015B<br>hod: 5035  | QC Batch:<br>Prep Batch        | QC21386<br>:: PB20317           | Date Analyzed:<br>Date Prepared: | 6/26/02<br>6/25/02            |
| Param                            | Flag                           | Result                                                 | Uı                      | nits                           | Dilution                        | ~3 <sup>14</sup> 10              | KDL                           |
| GRO                              |                                | 1.55                                                   | mg                      | /Kg                            | 10                              | 12                               | <u>`</u> { <u></u> .10        |
| Surrogate                        | Flag<br>2                      | Result<br>1.64                                         | Units<br>mg/Kg          | Dilution<br>10<br>10           | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>164       | Recovery<br>Limits<br>705-130 |
| 4-BFB                            |                                | N 1 - 1 - N 1 / 2 -                                    |                         |                                |                                 |                                  |                               |
| 4-BFB                            |                                | 0.002                                                  | mg/mg                   | 10                             | 0.10                            |                                  |                               |

Sample:200158 - 062502-3Analysis:BTEXAnalysis:BTEXAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333Date Prepared:6/27/02

Continued ...

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<sup>2</sup>High surrogate due to peak interference.
| Report Date: 3<br>2-517-000051 | July 9, 2002                           | Order Nun<br>Goodwin | nber: A02062616<br>Treating Plant | 8 Mi     | Page Number: 4 of 21<br>8 Miles West of Hobbs, NM |  |  |
|--------------------------------|----------------------------------------|----------------------|-----------------------------------|----------|---------------------------------------------------|--|--|
| Continued                      | Sample: 200158                         | Analysis: BTEX       |                                   |          |                                                   |  |  |
| Param                          | Flag                                   | Result               | Units                             | Dilution | RDL                                               |  |  |
| Param                          | Flag                                   | Result               | Units                             | Dilution | RDL                                               |  |  |
| Benzene                        | ······································ | < 0.010              | mg/Kg                             | 10       | 0.001                                             |  |  |
| Toluene                        |                                        | < 0.010              | mg/Kg                             | 10       | 0.001                                             |  |  |
| Ethylbenzene                   |                                        | < 0.010              | mg/Kg                             | 10       | 0.001                                             |  |  |
| M,P,O-Xylene                   |                                        | < 0.010              | mg/Kg                             | 10       | 0.001                                             |  |  |
| Total BTEX                     | ·····                                  | <0.010               | mg/Kg                             | 10       | 0.001                                             |  |  |

|           |                 |                   |       |          | Spike  | Percent  | Recovery |
|-----------|-----------------|-------------------|-------|----------|--------|----------|----------|
| Surrogate | $\mathbf{Flag}$ | $\mathbf{Result}$ | Units | Dilution | Amount | Recovery | Limits   |
| TFT       |                 | 1.1               | mg/Kg | 10       | 1      | 110 ,    | 70 - 130 |
| 4-BFB     |                 | 0.873             | mg/Kg | 10       | 1      | 87       | 70 - 130 |

| Sample:   | 200158 - | 062502-3            |            |             |         |                |        |
|-----------|----------|---------------------|------------|-------------|---------|----------------|--------|
| Analysis: | TPH DRO  | Analytical Method:  | Mod. 8015B | QC Batch:   | QC21586 | Date Analyzed: | 7/2/02 |
| Analyst:  | MM       | Preparation Method: | 3550 B     | Prep Batch: | PB20481 | Date Prepared: | 7/2/02 |
| Param     | Flag     | Result              | Units      | Dilu        | tion    |                | RDL    |
| DRO       |          | <50.0               | mg/Kg      | 1           |         |                | 50     |
|           |          |                     |            |             |         |                |        |

|               |      |        |                  |          | Spike  | Percent  | Recovery |
|---------------|------|--------|------------------|----------|--------|----------|----------|
| Surrogate     | Flag | Result | $\mathbf{Units}$ | Dilution | Amount | Recovery | Limits   |
| n-Triacontane |      | 113    | mg/Kg            | 1        | 150    | 75       | 70 - 130 |

# Sample: 200158 - 062502-3

| Analysis:                 | TPH GRO               | Analytical Me    | thod:    | 8015B | QC Batch:   | QC21409            | Date Analyzed:                                | 6/27/02             |
|---------------------------|-----------------------|------------------|----------|-------|-------------|--------------------|-----------------------------------------------|---------------------|
| Analyst:                  | CG                    | Preparation M    | lethod:  | 5035  | Prep Batch: | PB20333            | Date Prepared:                                | 6/27/02             |
| Param                     | Flag                  | Result           |          | Unit  | S           | Dilution           |                                               | RDL                 |
| GRO                       | <u> </u>              | <1               |          | mg/ŀ  | ζg          | 1                  | (10.07)                                       | 0.10                |
|                           |                       |                  | <u></u>  |       |             |                    | 13141510177                                   | 3 19 20 .<br>20 .   |
|                           |                       |                  |          |       |             | Spike              | Percent .                                     | Recovery            |
| Surrogate                 | $\operatorname{Flag}$ | Result           | Units    |       | Dilution    | Amount             | Recovery L                                    | $\sum Limits$       |
| $\overline{\mathrm{TFT}}$ |                       | 0.818            | mg/Kg    | g     | 10          | 0.10               | 81                                            | \$ 70 - 130         |
| 4-BFB                     |                       | 0.806            | mg/K     | g     | 10          | 0.10               | 0 80 3                                        | ల్లై ష్ట్రెలి - 130 |
| Sampler                   | 200150                | 062502 4         |          |       |             |                    | 100 2 4 1 1 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 0 | c.e.                |
| Analysia                  | 200109<br>DTEV        | - UU23U2-4       | J. CO    | 091D  | OC Patah    | 0021409            | Data Analyzadi                                | 6/27/02             |
| Analysis.                 | CG                    | Preparation Meth | od: $S5$ | 035   | Prep Batch: | QC21408<br>PB20333 | Date Prepared:                                | 6/27/02             |
| Param                     |                       | Flag             | Resul    | lt    | Units       |                    | Dilution                                      | RDL                 |
| Benzene                   |                       |                  | < 0.01   | 0     | mg/Kg       |                    | 10                                            | 0.001               |
| Toluene                   |                       |                  | < 0.01   | 0     | m mg/Kg     |                    | 10                                            | 0.001               |
| Ethylbenzer               | ne                    |                  | < 0.01   | 0     | mg/Kg       |                    | 10                                            | 0.001               |

Continued ...

| Report Date: July 9, 2002<br>2-517-000051 |                                       |                                                   | Order Nur<br>Goodwin       | nber: A02062616<br>Treating Plant |                                 | Page Number: 5 of 2<br>8 Miles West of Hobbs, N |                                              |  |
|-------------------------------------------|---------------------------------------|---------------------------------------------------|----------------------------|-----------------------------------|---------------------------------|-------------------------------------------------|----------------------------------------------|--|
| Continue                                  | ed Sample:                            | 200159 Analysis                                   | s: BTEX                    |                                   |                                 |                                                 |                                              |  |
| Param                                     | -                                     | Flag                                              | $\operatorname{Result}$    | Units                             | Dilu                            | ition                                           | RDL                                          |  |
| M,P,O-Xyle                                | ne                                    |                                                   | < 0.010                    | mg/Kg                             | 1                               | 0                                               | 0.001                                        |  |
| Total BTEX                                | <u> </u>                              |                                                   | < 0.010                    | mg/Kg                             |                                 | 0                                               | 0.001                                        |  |
| Surrogate<br>TFT                          | Flag                                  | Result<br>0.985                                   | Units<br>mg/Kg             | Dilution<br>10                    | Spike<br>Amount<br>1            | Percent<br>Recovery<br>98                       | Recovery<br>Limits<br>70 - 130               |  |
| 4-BFB                                     |                                       | 0.929                                             | mg/Kg                      | 10                                | 1                               | 92                                              | 70 - 130                                     |  |
| Sample:<br>Analysis:<br>Analyst:          | <b>200159</b><br>TPH DRO<br>MM        | - 062502-4<br>Analytical Met<br>Preparation M     | bod: Mod.<br>ethod: 3550   | 8015B QC Ba<br>B Prep F           | ntch: QC21586<br>Batch: PB20481 | Date Analyzed:<br>Date Prepared:                | 7/2/02<br>7/2/02                             |  |
| Param                                     | Flag                                  | Result                                            | t.                         | Units                             | Dilution                        |                                                 | RDL                                          |  |
| DRO                                       |                                       | <50.0                                             | ) n                        | ng/Kg                             | 1                               |                                                 | 50                                           |  |
| Surrogate<br>n-Triaconta                  | Fla                                   | ag Result<br>105                                  | Units<br>mg/Kg             | Dilution<br>1                     | Spike<br>Amount<br>150          | Percent<br>Recovery<br>70                       | Recovery<br>Limits<br>70 - 130               |  |
| Sample:<br>Analysis:<br>Analyst:          | <b>200159</b><br>TPH GRO<br>CG        | - 062502-4<br>Analytical M<br>Preparation 1       | ethod: 801<br>Method: 503  | 5B QC Batch<br>5 Prep Batc        | : QC21409<br>h: PB20333         | Date Analyzed:<br>Date Prepared:                | 6/27/02<br>6/27/02                           |  |
| Param                                     | Flag                                  | Resul                                             | t                          | Units                             | Dilution                        |                                                 | RDL                                          |  |
| GRO                                       |                                       | <                                                 | l r                        | ng/Kg                             | 1                               |                                                 | 0.10                                         |  |
| Surrogate<br>TFT<br>4-BFB                 | Flag                                  | Result<br>1.18<br>0.84                            | Units<br>mg/Kg<br>mg/Kg    | Dilution<br>10<br>10              | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>118<br>84                | Recovery _<br>Limits<br>70 - 130<br>70 - 130 |  |
| Sample:<br>Analysis:<br>Analyst:          | <b>200160</b><br>BTEX<br>CG           | - 062502-5<br>Analytical Metho<br>Preparation Met | od: S 8021F<br>hod: S 5035 | 3 QC Batch:<br>Prep Batch         | QC21408<br>1: PB20333           | Date Analyzed:<br>Date Prepared:                | 6/27/02<br>6/27/02                           |  |
| Param                                     |                                       | Flag                                              | Result                     | Units                             | Dil                             | ition                                           | RDL                                          |  |
| Benzene                                   | · · · · · · · · · · · · · · · · · · · |                                                   | < 0.010                    | mg/Kg                             | ;                               | 10                                              | 0.001                                        |  |
| Toluene                                   |                                       |                                                   | < 0.010                    | mg/Kg                             | ;                               | 10                                              | 0.001                                        |  |
| Ethylbenzer                               | ne                                    |                                                   | < 0.010                    | mg/Kg                             | ;                               | 10                                              | 0.001                                        |  |
| M,P,O-Xyle                                | ene                                   |                                                   | < 0.010                    | mg/Kg                             |                                 | 10                                              | 0.001                                        |  |
| Total RIE                                 | 1                                     |                                                   | <0.010                     | mg/Kg                             |                                 | 10                                              | 0.001                                        |  |

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| Report Dat<br>2-517-00005        | e: July 9, 20               | 002                                                 | Order Num<br>Goodwin 7           | ber: A02062616<br>Freating Plant |                                     | Page Number: 6 of 21<br>8 Miles West of Hobbs, NM |                           |
|----------------------------------|-----------------------------|-----------------------------------------------------|----------------------------------|----------------------------------|-------------------------------------|---------------------------------------------------|---------------------------|
| Surrogate                        | Flag                        | Result                                              | Units                            | Dilution                         | Spike<br>Amount                     | Percent<br>Recovery                               | Recovery<br>Limits        |
| TFT<br>4-BFB                     |                             | $\begin{array}{c} 0.91 \\ 0.832 \end{array}$        | mg/Kg<br>mg/Kg                   | 10<br>10                         | 1<br>1                              | 91<br>83                                          | 70 - 130<br>70 - 130      |
|                                  |                             |                                                     |                                  |                                  |                                     |                                                   |                           |
| Sample:<br>Analysis:             | 200160<br>TPH DRO           | - 062502-5<br>Analytical Meth                       | od: Mod. 8                       | 8015B QC Ba                      | atch: QC21586                       | Date Analyzed:                                    | 7/2/02                    |
| Analyst:                         | MM                          | Preparation Me                                      | thod: 3550 B                     | Prep E                           | Batch: PB20481                      | Date Prepared:                                    | 7/2/02                    |
| Param                            | Flag                        | Result                                              | U                                | nits                             | Dilution                            |                                                   | RDL                       |
| DRO                              |                             | <50.0                                               | mį                               | g/Kg                             | 1                                   |                                                   | 50                        |
|                                  |                             |                                                     |                                  |                                  |                                     |                                                   |                           |
|                                  |                             |                                                     |                                  |                                  | Spike                               | Percent                                           | Recovery                  |
| Surrogate                        | Fla                         | ag Result                                           | Units                            | Dilution                         | Amount                              | Recovery                                          | Limits                    |
| n-Triaconta                      | ne                          | 105                                                 | mg/Kg                            | 1                                | 150                                 | 70                                                | 70 - 130                  |
| Analysis:<br>Analyst:<br>Param   | TPH GRO<br>CG<br>Flag       | Analytical Me<br>Preparation M<br>Result            | thod: 80151<br>lethod: 5035<br>U | B QC Batch<br>Prep Batc          | : QC21409<br>h: PB20333<br>Dilution | Date Analyzed:<br>Date Prepared:                  | 6/27/02<br>6/27/02<br>RDL |
| GRO                              | ·····                       | <1                                                  | mį                               | g/Kg                             | 1                                   |                                                   | 0.10                      |
| Surrogate                        | Flag                        | Result                                              | Units                            | Dilution                         | Spike<br>Amount                     | Percent<br>Recovery                               | Recovery<br>Limits        |
| TFT                              |                             | 1.11                                                | mg/Kg                            | 10                               | 0.10                                | 111                                               | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>200161</b><br>BTEX<br>CG | - 062502-6<br>Analytical Methor<br>Preparation Meth | l: S 8021B<br>od: S 5035         | QC Batch:<br>Prep Batch          | QC21408<br>a: PB20333               | Date Analyzed:<br>Date Prepared:                  | 6/27/02<br>6/27/02        |
| Param                            |                             | Flag                                                | Result                           | Units                            | Dili                                | ution                                             | RDL                       |
| Benzene                          |                             | + +006                                              | <0.010                           | mg/Kø                            |                                     | 10                                                | 0.001                     |
| Toluene                          |                             |                                                     | < 0.010                          | mg/Kg                            |                                     | 10                                                | 0.001                     |
| Ethylbenze                       | ne                          |                                                     | < 0.010                          | mg/Kg                            | ,<br>,                              | 10                                                | 0.001                     |
| M,P,O-Xyle                       | ene                         |                                                     | < 0.010                          | mg/Kg                            | S .                                 | 10                                                | 0.001                     |
| Total BTE                        | X                           |                                                     | < 0.010                          | mg/Kg                            | 5                                   | 10                                                | 0.001                     |
|                                  |                             |                                                     |                                  |                                  | Spike                               | Percent                                           | Recovery                  |
| Surrogate                        | Flag                        | Result                                              | Units                            | Dilution                         | Amount                              | Recovery                                          | Limits                    |
| TFT<br>4 BFP                     |                             | 0.986                                               | mg/Kg<br>mg/Kg                   | 10                               | 1                                   | 98<br>80                                          | 70 - 130<br>70 120        |
| 4-DfD                            |                             | 0.895                                               | mg/ng                            | 10                               | 1                                   | 09                                                | 10 - 130                  |

| Report Dat<br>2-517-00005        | e: July 9, 20<br>51            | 02                                                     | Order<br>Good   | Number: A<br>lwin Treati | .02062616<br>ng Plant    |                            | Page Numb<br>8 Miles West of H         | er: 7 of 21<br>Iobbs, NM |
|----------------------------------|--------------------------------|--------------------------------------------------------|-----------------|--------------------------|--------------------------|----------------------------|----------------------------------------|--------------------------|
| Sample:<br>Analysis:<br>Analyst: | <b>200161</b><br>TPH DRO<br>MM | - 062502-6<br>Analytical Metho<br>Preparation Meth     | d: N<br>.od: 3  | /lod. 8015B<br>550 B     | QC Bate<br>Prep Ba       | ch: QC2158<br>tch: PB2048  | 6 Date Analyzed:<br>1 Date Prepared:   | 7/2/02<br>7/2/02         |
| Param                            | Flag                           | Result                                                 |                 | Units                    | 3                        | Dilution                   |                                        | RDL                      |
| DRO                              | 0                              | <50.0                                                  |                 | mg/Kg                    |                          | 1                          |                                        | 50                       |
|                                  |                                |                                                        |                 |                          |                          |                            |                                        |                          |
| Surrogate                        | Fla                            | g Result                                               | Uni             | its I                    | Dilution                 | Spike<br>Amount            | Percent<br>Recovery                    | Recovery<br>Limits       |
| n-Triaconta                      | ne                             | 110                                                    | mg/             | Kg                       | 1                        | 150                        | 73                                     | 70 - 130                 |
| Sample:<br>Analysis:<br>Analyst: | <b>200161</b><br>TPH GRO<br>CG | - 062502-6<br>Analytical Meth<br>Preparation Met       | od:<br>:hod:    | 8015B<br>5035            | QC Batch:<br>Prep Batch: | QC21409<br>PB20333         | Date Analyzed:<br>Date Prepared:       | 6/27/02<br>6/27/02       |
| Param                            | Flag                           | Result                                                 |                 | Units                    |                          | Dilution                   |                                        | $\frac{RDL}{0.10}$       |
| GRO                              |                                | <1                                                     |                 | mg/Kg                    |                          | <u> </u>                   |                                        | 0.10                     |
| Surrogate                        | Flag                           | Result                                                 | Units           | Di                       | ution                    | Spike<br>Amount            | Percent<br>Recovery                    | Recovery<br>Limits       |
| TFT<br>A DED                     |                                | 0.833                                                  | mg/Kg           | S                        | 10                       | 0.10                       | 83                                     | 70 - 130                 |
| 4-DI D                           |                                | 0.010                                                  | iiig/ Kį        | <u> </u>                 | 10                       | 0.10                       | 01                                     | 10 - 130                 |
| Sample:<br>Analysis:<br>Analyst: | <b>200162</b><br>BTEX<br>CG    | - 062502-7<br>Analytical Method:<br>Preparation Method | S 8<br>l: S 5   | 021B G<br>035 F          | C Batch:<br>rep Batch:   | QC21408<br>PB20333         | Date Analyzed:<br>Date Prepared:       | 6/27/02 $6/27/02$        |
| Param                            |                                | Flag                                                   | Resul           | t                        | Units                    | Di                         | lution                                 | RDL                      |
| Benzene                          |                                |                                                        | < 0.01          | 0                        | mg/Kg                    |                            | 10                                     | 0.001                    |
| Toluene                          |                                |                                                        | < 0.01          | 0                        | mg/Kg                    |                            | 10                                     | 0.001                    |
| Ethylbenze                       | ne                             |                                                        | < 0.01          | 0                        | mg/Kg                    |                            | 10                                     | 0.001                    |
| M,P,O-Xyle                       | ene<br>V                       |                                                        | <0.01           | 0                        | mg/Kg                    |                            | 10                                     | 0.001                    |
|                                  |                                |                                                        |                 | -                        | <u> </u>                 | Spike                      | Percent                                | Recovery                 |
| Surrogate                        | Flag                           | Result                                                 | Units           | Di                       | lution                   | Amount                     | Recovery                               | Limits                   |
|                                  |                                | 1.07                                                   | $mg/K_{i}$      | g                        | 10                       | 1                          | 107                                    | 70 - 130                 |
| 4-Dľ D                           | ······                         | 0.883                                                  | mg/K            | <u> </u>                 | 10                       | 1                          | 88                                     | 10 - 130                 |
| Sample:<br>Analysis:<br>Analyst: | <b>200162</b><br>TPH DRO<br>MM | - 062502-7<br>Analytical Metho<br>Preparation Meth     | od: ]<br>hod: ; | Mod. 8015E<br>3550 B     | B QC Bat<br>Prep Ba      | ch: QC2158<br>ttch: PB2048 | 36 Date Analyzed:<br>31 Date Prepared: | 7/2/02<br>7/2/02         |
| Param                            | Flag                           | Result                                                 |                 | Units                    |                          | Dilution                   |                                        | RDL                      |
| DRO                              |                                | <50.0                                                  |                 | mg/Kg                    |                          | 1                          |                                        | 50                       |

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| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Percent Re<br>ecovery L<br>78 70<br>Prepared: 6/<br>Prepared: 6/<br>Prepared: 6/<br>Prepared: 6/<br>77 70<br>79 70<br>79 70 | ecovery<br>Limits<br>0 - 130<br>3/27/02<br>3/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| SurrogateFlagResultUnitsDilutionAmountRen-Triacontane117mg/Kg1150Sample:200162 - 062502-7Analysis:TPH GROAnalytical Method:8015BQC Batch:QC21409DateAnalysi:CGPreparation Method:5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionGROGRO<1mg/Kg1SurrogateFlagResultUnitsDilutionRecountTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.10Sample:200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalysi:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010mg/Kg10Toluene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg10Chuene<0.010mg/Kg <th>ecovery L<br/>78 70<br/>Analyzed: 6,<br/>Prepared: 6,<br/>ercent Re<br/>covery L<br/>77 70<br/>79 70<br/>79 70</th> <th>Limits<br/>0 - 130<br/>5/27/02<br/>5/27/02<br/>RDL<br/>0.10<br/>ecovery<br/>Limits<br/>0 - 130<br/>0 - 130<br/>0 - 130</th> | ecovery L<br>78 70<br>Analyzed: 6,<br>Prepared: 6,<br>ercent Re<br>covery L<br>77 70<br>79 70<br>79 70                      | Limits<br>0 - 130<br>5/27/02<br>5/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130            |
| n-Triacontane117 $mg/Kg$ 1150Sample:200162 - 062502-7Analysis:TPH GROAnalytical Method:8015BQC Batch:QC21409DateAnalysi:CGPreparation Method:5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionGRO<1mg/Kg1SpikePerFlagResultUnitsDilutionGRO<1mg/Kg100.10SpikeParamFlagResultUnitsDilutionGRO<1mg/Kg100.10SpikePer0.772mg/Kg100.10SpikePB0.797mg/Kg100.10Sample:200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalysi:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010mg/Kg10Coluene<0.010mg/Kg10M,P,O-Xylene<0.010mg/Kg10M,P,O-Xylene<0.010mg/Kg10Total BTEX<0.010mg/Kg10                                                                                                                                                                                                                                                                                                                                | 78702 Analyzed:6/2 Prepared:6/2 Prepared:6/2 Prepared:7/777079707970                                                        | 0 - 130<br>6/27/02<br>6/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130<br>6/27/02           |
| Sample:200162 - 062502-7Analysis:TPH GRO<br>Preparation Method: $\$015B$<br>S035QC Batch:<br>Prep Batch:QC21409<br>Date<br>PB20333DateParamFlag<br>ResultUnitsDilutionGRO $<1$ mg/Kg1SpikePeSurrogateFlag<br>ResultUnitsDilution<br>MemountGRO $<1$ mg/Kg100.10SpikePeSurrogateFlag<br>ResultUnitsDilution<br>MemountGRO $<0.772$<br>mg/Kg100.100.10SpikePeSurrogateFlag<br>ResultNanount<br>MemountResultUnitsDilution<br>AmountSpikePeSpikePeSpikePeSpikeParamFlag<br>ResultDilution<br>SourogationSurrogate200163 - 062502-8Analysis:<br>BTEX<br>Analytical Method:<br>S 5035S021B<br>Prep Batch:<br>PB20333DateDilution<br>Method:<br>S 5035Prep Batch:<br>PB20333Dilution<br>DateParam<br>CGFlag<br>Preparation Method:<br>S 5035S021B<br>Prep Batch:<br>PB20333Dilution<br>DateParam<br>ParamFlag<br>Preparation Method:<br>S 5035S021B<br>Prep Batch:<br>PB20333Dilution<br>PG2033Dilution<br>ParamManuel Method:<br>S 50                                                     | e Analyzed: 6/<br>e Prepared: 6/<br>ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6/                                 | 5/27/02<br>5/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130                                 |
| Sample:200162 - 062502-7Analysis:TPH GROAnalytical Method:8015BQC Batch:QC21409DateAnalyst:CGPreparation Method:5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionGRO<1mg/Kg1SpikePeSurrogateFlagResultUnitsDilutionAmountResultUnitsDilutionAmountResTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.100.10Sample:200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010mg/Kg10Toluene<0.010mg/Kg10Ethylbenzene<0.010mg/Kg10M,P,O-Xylene<0.010mg/Kg10Otal BTEX<0.010mg/Kg10                                                                                                                                                                                                                                                                                                                                                                                        | e Analyzed: 6,<br>e Prepared: 6,<br>ercent Re<br>covery L<br>77 70<br>79 70<br>79 70                                        | 6/27/02<br>6/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130                                 |
| Analysis:       TPH GRO       Analytical Method:       8015B       QC Batch:       QC21409       Date         Analyst:       CG       Preparation Method:       5035       Prep Batch:       PB20333       Date         Param       Flag       Result       Units       Dilution       GRO       <1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Analyzed: 6,<br>Prepared: 6,<br>ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6,                                     | 5/27/02<br>5/27/02<br>RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130                                 |
| Analyst:CGPreparation Method: $5035$ Prep Batch:PB20333DateParamFlagResultUnitsDilutionGRO<1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | e Prepared: 6,<br>ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6,                                                   | 5/27/02<br><u>RDL</u><br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>5/27/02                                     |
| ParamFlagResultUnitsDilutionGRO<1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6/                                                                     | RDL<br>0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130                                                                  |
| GRO<1mg/Kg1SpikePeSurrogateFlagResultUnitsDilutionAmountRecTFT0.772mg/Kg100.10.104-BFB0.797mg/Kg100.10Sample: 200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6/                                                                     | 0.10<br>ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130                                                              |
| SurrogateFlagResultUnitsDilutionAmountRecTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.10Sample: 200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ercent Re<br>covery L<br>77 70<br>79 70<br>Analyzed: 6/                                                                     | ecovery<br>Limits<br>0 - 130<br>0 - 130<br>0 - 130                                                                      |
| SurrogateFlagResultUnitsDilutionAmountRecTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.10Sample: 200163 - 062502-8Analysis:BTEXAnalytical Method:\$ 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:\$ 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Analyzed: 6/                                                                                                                | ecovery<br>Limits<br>0 - 130<br>0 - 130<br>5/27/02                                                                      |
| SurrogateFlagResultUnitsDilutionAmountRecTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.10Sample: 200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Analyzed: 6/                                                                                                                | Limits<br>0 - 130<br>0 - 130<br>0 - 130                                                                                 |
| SurrogateFlagResultUnitsDilutionAmountRecTFT0.772mg/Kg100.104-BFB0.797mg/Kg100.10Sample: 200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Analyzed: 6/                                                                                                                | 0 - 130<br>0 - 130<br>0 - 130                                                                                           |
| IFI $0.772$ mg/Kg10 $0.10$ 4-BFB $0.797$ mg/Kg $10$ $0.10$ Sample: $200163 - 062502-8$ Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 71         70           79         70           Analyzed:         6/           Dremouble         2                          | 0 - 130<br>0 - 130<br>6/27/02                                                                                           |
| 4-BFB0.797mg/Kg100.10Sample:200163 - 062502-8Analysis:BTEXAnalytical Method:S 8021BQC Batch:QC21408DateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Analyzed: 6/                                                                                                                | <u>0 - 130</u><br>5/27/02                                                                                               |
| Analysis:BTEX<br>Analysis:Analytical Method:S 8021B<br>S 5035QC Batch:QC21408<br>QC DateDateAnalyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010mg/Kg10Toluene<0.010mg/Kg10Ethylbenzene<0.010mg/Kg10M,P,O-Xylene<0.010mg/Kg10Total BTEX<0.010mg/Kg10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Analyzed: 6,                                                                                                                | 5/27/02                                                                                                                 |
| Analyst:CGPreparation Method:S 5035Prep Batch:PB20333DateParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Deserve 1 2                                                                                                                 |                                                                                                                         |
| ParamFlagResultUnitsDilutionBenzene<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | r repared: $6/$                                                                                                             | 5/27/02                                                                                                                 |
| Benzene         <0.010         mg/Kg         10           Toluene         <0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             | RDL                                                                                                                     |
| Toluene         <0.010         mg/Kg         10           Ethylbenzene         <0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             | 0.001                                                                                                                   |
| Ethylbenzene         <0.010         mg/Kg         10           M,P,O-Xylene         <0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             | 0.001                                                                                                                   |
| M,P,O-Xylene<0.010mg/Kg10Total BTEX<0.010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             | 0.001                                                                                                                   |
| Total BTEX <0.010 mg/Kg 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             | 0.001                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             | 0.001                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |                                                                                                                         |
| Spike Pe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ercent Re                                                                                                                   | ecovery                                                                                                                 |
| Surrogate Flag Result Units Dilution Amount Rec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | covery L                                                                                                                    | $\operatorname{Limits}$                                                                                                 |
| TFT 0.993 mg/Kg 10 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 99 70                                                                                                                       | 0 - 130                                                                                                                 |
| <u>4-BFB 0.907 mg/Kg 10 1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 90 70                                                                                                                       | 0 - 130                                                                                                                 |
| Sample: 200163 - 062502-8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             | <b>F</b> /0 (00                                                                                                         |
| Analysis: TPH DRO Analytical Method: Mod. 8015B QC Batch: QC21586 Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ate Analyzed:                                                                                                               | 7/2/02                                                                                                                  |
| Analyst: MM Preparation Method: 3550 B Prep Batch: PB20481 Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ate Prepared:                                                                                                               | 7/2/02                                                                                                                  |
| Param Flag Result Units Dilution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             | RDL                                                                                                                     |
| DRO <50.0 mg/Kg 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             | 50                                                                                                                      |
| Spike P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Percent Re                                                                                                                  | ecovery                                                                                                                 |
| Surrogate Flag Result Units Dilution Amount Re                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -                                                                                                                           | Limits                                                                                                                  |
| n-Triacontane 111 mg/Kg 1 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ecovery L                                                                                                                   |                                                                                                                         |

| Report Dat<br>2-517-00005                 | e: July 9, 20<br>51                    | 02                                                         | Orde:<br>Goo          | r Number<br>dwin Trea      | A02062616<br>Ating Plant     |                                       | Page Numb<br>8 Miles West of H       | er: 9 of 21<br>Iobbs, NM                   |
|-------------------------------------------|----------------------------------------|------------------------------------------------------------|-----------------------|----------------------------|------------------------------|---------------------------------------|--------------------------------------|--------------------------------------------|
| Sample:<br>Analysis:<br>Analyst:          | <b>200163</b><br>TPH GRO<br>CG         | - 062502-8<br>Analytical Me<br>Preparation M               | thod:<br>ethod:       | 8015B<br>5035              | QC Batch:<br>Prep Batch:     | QC21409<br>PB20333                    | Date Analyzed:<br>Date Prepared:     | 6/27/02 $6/27/02$                          |
| Param                                     | $\mathbf{Flag}$                        | Result                                                     |                       | Unit                       | 5                            | Dilution                              |                                      | RDL                                        |
| GRO                                       |                                        | <1                                                         |                       | mg/K                       | g                            | 1                                     |                                      | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                 | Flag                                   | Result<br>0.827<br>0.816                                   | Units<br>mg/K<br>mg/K | g                          | Dilution<br>10<br>10         | Spike<br>Amount<br>0.10<br>0.10       | Percent<br>Recovery<br>82<br>81      | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:          | <b>200164</b><br>BTEX<br>CG            | - 062502-24<br>Analytical Method<br>Preparation Meth       | l: S {<br>od: S {     | 8021B<br>5035              | QC Batch:<br>Prep Batch:     | QC21408<br>PB20333                    | Date Analyzed:<br>Date Prepared:     | 6/27/02<br>6/27/02                         |
| Param                                     |                                        | Flag                                                       | Resu                  | lt                         | $\mathbf{Units}$             | Di                                    | lution                               | RDL                                        |
| Benzene                                   |                                        |                                                            | < 0.01                | LO                         | mg/Kg                        |                                       | 10                                   | 0.001                                      |
| Toluene                                   |                                        |                                                            | < 0.01                | 10                         | mg/Kg                        |                                       | 10                                   | 0.001                                      |
| Ethylbenzer                               | ne                                     |                                                            | 0.010                 | )4                         | mg/Kg                        |                                       | 10                                   | 0.001                                      |
| M,P,O-Xyle                                | ene                                    |                                                            | 0.010                 | )9                         | mg/Kg                        |                                       | 10                                   | 0.001                                      |
| Total BTE                                 | <u>X</u>                               |                                                            | 0.021                 | 13                         | mg/Kg                        |                                       | 10                                   | 0.001                                      |
| Surrogate                                 | Flag                                   | Result                                                     | Units                 | 5                          | Dilution                     | Spike<br>Amount                       | Percent<br>Recovery                  | Recovery<br>Limits                         |
| TFT                                       |                                        | 0.907                                                      | mg/K                  | g                          | 10                           | 1                                     | 90                                   | 70 - 130                                   |
| 4-BFB                                     |                                        | 0.84                                                       | mg/K                  | g                          | 10                           | 1                                     | 84                                   | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>200164</b><br>TPH DRO<br>MM<br>Flag | - 062502-24<br>Analytical Meth<br>Preparation Me<br>Result | nod:<br>ethod:        | Mod. 801<br>3550 B<br>Unit | 5B QC Bat<br>Prep Ba         | ch: QC2158<br>tch: PB2048<br>Dilution | 6 Date Analyzed:<br>1 Date Prepared: | 7/2/02<br>7/2/02<br>RDL                    |
| DRO                                       | 1 145                                  | <50.0                                                      |                       | mg/k                       | 5<br>(o                      | 1                                     |                                      | 50                                         |
| Surrogate                                 | Fl                                     | ag Result                                                  | Ur                    | nits                       | Dilution                     | Spike<br>Amount                       | Percent<br>Recovery                  | Recovery<br>Limits                         |
| n-Triaconta                               | ine                                    | 108                                                        | mg                    | /Kg                        | 1                            | 150                                   | 72                                   | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>200164</b><br>TPH GRO<br>CG<br>Flag | - 062502-24<br>Analytical Me<br>Preparation M<br>Result    | thod:<br>Iethod:      | 8015B<br>5035<br>Unit      | QC Batch:<br>Prep Batch<br>s | QC21409<br>: PB20333<br>Dilution      | Date Analyzed:<br>Date Prepared:     | 6/27/02<br>6/27/02<br>RDL                  |
| GRO                                       |                                        | <1                                                         |                       | mg/k                       | ζα                           | 1                                     |                                      | 0.10                                       |

| Report Dat<br>2-517-0000         | te: July 9, 20<br>51           | 02                                               | Order Num<br>Goodwin         | ber: A02062616<br>Treating Plant |                             | Page Number: 10 of 21<br>8 Miles West of Hobbs, NM |                                |  |
|----------------------------------|--------------------------------|--------------------------------------------------|------------------------------|----------------------------------|-----------------------------|----------------------------------------------------|--------------------------------|--|
| Surrogate                        | Flag                           | Result                                           | Units                        | Dilution                         | Spike<br>Amount             | Percent<br>Recovery                                | Recovery<br>Limits             |  |
| TFT                              |                                | 0.736                                            | mg/Kg                        | 10                               | 0.10                        | 73                                                 | 70 - 130                       |  |
| 4-BFB                            |                                | 0.772                                            | mg/Kg                        | 10                               | 0.10                        | 77                                                 | 70 - 130                       |  |
|                                  |                                |                                                  | 8/8                          |                                  |                             |                                                    |                                |  |
| Sample:                          | 200165                         | - 062502-22                                      |                              |                                  |                             |                                                    | - / /                          |  |
| Analysis:<br>Analyst:            | BTEX<br>CG                     | Analytical Method<br>Preparation Method          | t: S $8021B$<br>od: S $5035$ | QC Batch:<br>Prep Batch:         | QC21408<br>PB20333          | Date Analyzed:<br>Date Prepared:                   | $\frac{6}{27}$                 |  |
| Param                            |                                | Flag                                             | Result                       | Units                            | Dil                         | ution                                              | $\operatorname{RDL}$           |  |
| Benzene                          |                                |                                                  | < 0.010                      | mg/Kg                            |                             | 10                                                 | 0.001                          |  |
| Toluene                          |                                |                                                  | < 0.010                      | mg/Kg                            |                             | 10                                                 | 0.001                          |  |
| Ethylbenze                       | ne                             |                                                  | < 0.010                      | mg/Kg                            |                             | 10                                                 | 0.001                          |  |
| M,P,O-Xyle                       | ene                            |                                                  | 0.0104                       | mg/Kg                            |                             | 10                                                 | 0.001                          |  |
| Total BTE                        | X                              |                                                  | 0.0104                       | mg/Kg                            |                             | 10                                                 | 0.001                          |  |
| Surrogate                        | Flag                           | Recult                                           | Unite                        | Dilution                         | Spike                       | Percent                                            | Recovery                       |  |
|                                  | 1 lag                          | 0.014                                            | mg/Kg                        | 10                               | 1                           |                                                    | 70 130                         |  |
| 1F1<br>4_BFB                     |                                | 0.914                                            | mg/Kg                        | 10                               | 1                           | 91<br>89                                           | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200165</b><br>TPH DRO<br>MM | - 062502-22<br>Analytical Meth<br>Preparation Me | d: Mod.<br>thod: 3550 l      | 8015B QC Bat<br>B Prep Ba        | ch: QC2158<br>atch: PB20481 | 6 Date Analyzed:<br>1 Date Prepared:               | 7/2/02<br>7/2/02               |  |
| Param                            | Flag                           | Result                                           | т                            | Inits                            | Dilution                    |                                                    | RDI.                           |  |
| DRO                              | 1 105                          | <50.0                                            | <br>                         | σ/Kσ                             | 1                           |                                                    | 50                             |  |
|                                  |                                |                                                  | 11.                          | 16/116                           | 1                           |                                                    |                                |  |
| <b>a</b>                         |                                |                                                  |                              |                                  | Spike                       | Percent                                            | Recovery                       |  |
| Surrogate                        | Fla                            | ag Result                                        | Units                        | Dilution                         | Amount                      | Recovery                                           | Limits                         |  |
| n-Triaconta                      | ane                            | 106                                              | mg/Kg                        | 1                                | 150                         | 70                                                 | 70 - 130                       |  |
| Sample:                          | 200165                         | - 062502-22                                      |                              |                                  |                             |                                                    |                                |  |
| Analysis:                        | TPH GRO                        | Analytical Me                                    | thod: 8015                   | B QC Batch:                      | QC21409                     | Date Analyzed:                                     | 6/27/02                        |  |
| Analyst:                         | CG                             | Preparation M                                    | lethod: 5035                 | Prep Batch                       | : PB20333                   | Date Prepared:                                     | 6/27/02                        |  |
| Param                            | Flag                           | Result                                           | ĩ                            | Units                            | Dilution                    |                                                    | RDL                            |  |
| GRO                              |                                | <1                                               | n                            | ng/Kg                            | 1                           |                                                    | 0.10                           |  |
| <u></u>                          |                                |                                                  |                              |                                  | <u> </u>                    | <b>.</b>                                           |                                |  |
|                                  |                                |                                                  |                              |                                  | Spike                       | Porcont                                            | Recovery                       |  |
| Surrogate                        | Flag                           | Result                                           | Units                        | Dilution                         | Spike<br>Amount             | Percent<br>Recovery                                | Recovery<br>Limits             |  |
| Surrogate<br>TFT                 | Flag                           | Result                                           | Units<br>mg/Kg               | Dilution<br>10                   | Spike<br>Amount<br>0.10     | Percent<br>Recovery<br>77                          | Recovery<br>Limits<br>70 - 130 |  |

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| Report Dat<br>2-517-0000         | te: July 9, 20<br>51           | 002                                                      | Order Numbe<br>Goodwin Tr | er: A02062616<br>reating Plant |                          | Page Number: 11 of 21<br>8 Miles West of Hobbs, NM |                                |  |
|----------------------------------|--------------------------------|----------------------------------------------------------|---------------------------|--------------------------------|--------------------------|----------------------------------------------------|--------------------------------|--|
| Sample:                          | 200166                         | - 062502-23                                              |                           |                                |                          |                                                    |                                |  |
| Analysis:<br>Analyst:            | BTEX<br>CG                     | Analytical Method:<br>Preparation Method:                | S 8021B<br>S 5035         | QC Batch:<br>Prep Batch:       | QC21408<br>PB20333       | Date Analyzed:<br>Date Prepared:                   | $\frac{6}{27}$                 |  |
| Param                            |                                | Flag                                                     | Result                    | Units                          | D                        | Pilution                                           | RDL                            |  |
| Benzene                          | ·····                          | 0                                                        | < 0.010                   | mg/Kg                          |                          | 10                                                 | 0.001                          |  |
| Toluene                          |                                |                                                          | < 0.010                   | mg/Kg                          |                          | 10                                                 | 0.001                          |  |
| Ethylbenze                       | ne                             |                                                          | 0.0104                    | mg/Kg                          |                          | 10                                                 | 0.001                          |  |
| M,P,O-Xyle                       | ene                            |                                                          | 0.012                     | mg/Kg                          |                          | 10                                                 | 0.001                          |  |
| Total BTE                        | X                              | ·                                                        | 0.0224                    | mg/Kg                          |                          | 10                                                 | 0.001                          |  |
| Surrogate                        | Flag                           | Besult                                                   | Units                     | Dilution                       | Spike<br>Amount          | Percent<br>Recovery                                | Recovery<br>Limits             |  |
| TFT                              | 1 105                          | 0.847                                                    | mg/Kg                     | 10                             | 1                        | 84                                                 | 70 - 130                       |  |
| 4-BFB                            |                                | 0.787                                                    | mg/Kg                     | 10                             | 1                        | 78                                                 | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200166</b><br>TPH DRC<br>MM | - 062502-23<br>Analytical Method<br>Preparation Meth     | d: Mod. 80<br>od: 3550 B  | 015B QC Bat<br>Prep Ba         | ch: QC215<br>.tch: PB204 | 86 Date Analyzed:<br>81 Date Prepared:             | 7/2/02<br>7/2/02               |  |
| Param                            | Flag                           | Result                                                   | Un                        | its                            | Dilution                 |                                                    | RDL                            |  |
| DRO                              |                                | <50.0                                                    | mg,                       | /Kg                            | 1                        |                                                    | 50                             |  |
| Surrogate                        | · FI                           | lag Result                                               | Units                     | Dilution                       | Spike<br>Amount          | Percent<br>Recovery                                | Recovery<br>Limits             |  |
| n-1riaconta                      |                                | 114                                                      | mg/Kg                     | L                              | 150                      |                                                    | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200166</b><br>TPH GRC<br>CG | <b>- 062502-23</b><br>Analytical Meth<br>Preparation Met | od: 8015B<br>bod: 5035    | QC Batch:<br>Prep Batch        | QC21409<br>: PB20333     | Date Analyzed:<br>Date Prepared:                   | 6/27/02<br>6/27/02             |  |
| Param                            | Flag                           | g Result                                                 | Ur                        | nits                           | Dilution                 |                                                    | RDL                            |  |
| GRO                              |                                | <1                                                       | mg                        | /Kg                            | 1                        |                                                    | 0.10                           |  |
| Surrogate<br>TFT                 | Flag                           | Result                                                   | Units<br>mg/Kg            | Dilution<br>10                 | Spike<br>Amount<br>0.10  | Percent<br>Recovery<br>70                          | Recovery<br>Limits<br>70 - 130 |  |
| 4-BFB                            |                                | 0.701                                                    | mg/Kg                     | 10                             | 0.10                     | 70                                                 | 70 - 130                       |  |
| Sample:<br>Analysis:             | 200167<br>BTEX                 | - 062502-25<br>Analytical Method:                        | S 8021B                   | QC Batch:                      | QC21408                  | Date Analyzed:                                     | 6/27/02                        |  |
| Analyst:                         | UG                             | Preparation Method                                       | I: S 5035                 | Prep Batch:                    | PB20333                  | Date Prepared:                                     | 6/27/02                        |  |
| Param                            |                                | Flag                                                     | Result                    | Units                          | Ι                        | Dilution                                           | RDL                            |  |
| Benzene<br>Toluene               |                                |                                                          | <0.010                    | mg/Kg                          |                          | 10<br>10                                           | 0.001                          |  |
| 10140110                         |                                |                                                          | NU/UIU                    | אזישון                         |                          | 10                                                 | 11.11/1                        |  |

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|                                  |                                  |                                                        |                      |                        | •                        |                            |                                                    |                                |  |
|----------------------------------|----------------------------------|--------------------------------------------------------|----------------------|------------------------|--------------------------|----------------------------|----------------------------------------------------|--------------------------------|--|
| Report Date<br>2-517-000051      | :: July 9, 2002<br>l             |                                                        | Order Ni<br>Goodwi   | umber: A<br>in Treatin | 02062616<br>Ig Plant     |                            | Page Number: 12 of 21<br>8 Miles West of Hobbs, NM |                                |  |
| Continued                        | d Sample: 20                     | 0167 Analysis:                                         | BTEX                 |                        |                          |                            |                                                    |                                |  |
| Param                            |                                  | Flag                                                   | Result               |                        | $\mathbf{Units}$         | Dilu                       | ition                                              | $\operatorname{RDL}$           |  |
| Ethylbenzene                     | 9                                | 0                                                      | < 0.010              |                        | mg/Kg                    | 1                          | 0                                                  | 0.001                          |  |
| M.P.O-Xvlen                      | e                                |                                                        | < 0.010              |                        | mg/Kg                    | 1                          | .0                                                 | 0.001                          |  |
| Total BTEX                       |                                  |                                                        | <0.010               |                        | mg/Kg                    | 1                          | .0                                                 | 0.001                          |  |
| Surrogate                        | Flag                             | Result                                                 | Units                | Dilt                   | ution                    | Spike<br>Amount            | Percent<br>Recovery                                | Recovery<br>Limits             |  |
| $\mathbf{TFT}$                   | 3                                | 0.687                                                  | mg/Kg                | -                      | 10                       | 1                          | 68                                                 | 70 - 130                       |  |
| 4-BFB                            | 4                                | 0.632                                                  | mg/Kg                |                        | 10                       | 1                          | 63                                                 | 70 - 130                       |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200167 -</b><br>TPH DRO<br>MM | <b>062502-25</b><br>Analytical Meth<br>Preparation Met | od: Moo<br>hod: 355( | d. 8015B<br>0 B        | QC Batc<br>Prep Bat      | h: QC21403<br>sch: PB20329 | Date Analyzed:<br>Date Prepared:                   | 6/27/02<br>6/26/02             |  |
| Param                            | Flag                             | Result                                                 |                      | Units                  | ]                        | Dilution                   |                                                    | RDL                            |  |
| DRO                              |                                  | <50.0                                                  |                      | mg/Kg                  |                          | 1                          |                                                    | 50                             |  |
| Surrogate<br>n-Triacontar        | Flag                             | Result<br>112                                          | Units<br>mg/Kg       | D                      | ilution<br>1             | Spike<br>Amount<br>150     | Percent<br>Recovery<br>75                          | Recovery<br>Limits<br>70 - 130 |  |
| Sample:<br>Analysis:<br>Analyst: | <b>200167 -</b><br>TPH GRO<br>CG | <b>062502-25</b><br>Analytical Met<br>Preparation M    | hod: 80<br>ethod: 50 | )15B (<br>)35 ]        | QC Batch:<br>Prep Batch: | QC21409<br>PB20333         | Date Analyzed:<br>Date Prepared:                   | 6/27/02<br>6/27/02             |  |
| Param                            | Flag                             | Result                                                 |                      | Units                  |                          | Dilution                   |                                                    | RDL                            |  |
| GRO                              |                                  | <1                                                     |                      | mg/Kg                  |                          | 1                          |                                                    | 0.10                           |  |
| Surrogate                        | Flag<br>5                        | Result                                                 | Units<br>mg/Kg       | Dil                    | ution                    | Spike<br>Amount            | Percent<br>Recovery<br>54                          | Recovery<br>Limits<br>70 - 130 |  |
| 4-BFB                            | 6                                | 0.571                                                  | mg/Kg                |                        | 10                       | 0.10                       | 57                                                 | 70 - 130                       |  |

<sup>&</sup>lt;sup>3</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>4</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control. <sup>5</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control. <sup>6</sup>Low surrogate recovery due to matrix interference. ICV, CCV, CCV show the method to be in control.

Report Date: July 9, 2002 2-517-000051

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Order Number: A02062616 Goodwin Treating Plant Page Number: 13 of 21 8 Miles West of Hobbs, NM

# Quality Control Report Method Blank

| Method E                | Blank    | QCBatch: | QC21385                               |          |        |          |                    |
|-------------------------|----------|----------|---------------------------------------|----------|--------|----------|--------------------|
|                         |          |          |                                       | <b>.</b> |        |          | Reporting          |
| Param                   |          | Flag     |                                       | Results  | Units  |          | Limit              |
| Benzene                 |          |          |                                       | <0.010   | mg/Kg  |          | 0.001              |
| Toluene<br>Ethylbangona |          |          |                                       | < 0.010  | mg/Kg  |          | 0.001              |
| M D O Yalana            |          |          |                                       | < 0.010  | mg/Kg  |          | 0.001              |
| Total BTEX              | 2        |          |                                       | < 0.010  | mg/Kg  |          | 0.001              |
|                         |          |          |                                       | <0.010   |        | <u></u>  |                    |
|                         |          |          |                                       |          | Spike  | Percent  | Recovery           |
| Surrogate               | Flag     | Result   | Units                                 | Dilution | Amount | Recovery | Limits             |
| TFT                     |          | 1.08     | mg/Kg                                 | 10       | 1      | 108      | 70 - 130           |
| <u>4-BFB</u>            |          | 0.978    | mg/Kg                                 | 10       | 1      | 97       | 70 - 130           |
| Method H                | Blank    | QCBatch: | QC21386                               |          |        |          |                    |
| Param                   |          | Flag     | Res                                   | mlts     | Units  |          | Reporting<br>Limit |
| GRO                     |          | 1105     | 100                                   | 1 42     | mg/Kg  | <u></u>  | 0.10               |
|                         |          |          |                                       |          |        | 1. 1.000 |                    |
| a                       |          |          | <b>.</b>                              |          | Spike  | Percent  | Recovery           |
| Surrogate               | Flag     | Result   | Units                                 | Dilution | Amount | Recovery | Limits             |
|                         |          | 1.04     | mg/Kg                                 | 10       | 0.10   | 104      | 70 - 130           |
| <u>4-BFB</u>            |          | 0.904    | mg/Kg                                 | 10       | 0.10   | 90       | 70 - 130           |
| Method I                | Blank    | QCBatch: | QC21403                               |          |        |          |                    |
| Param                   |          | Flag     | Bo                                    | mite     | Units  |          | Reporting<br>Limit |
| DRO                     | <u></u>  | 1108     |                                       | <50      | mg/Kg  |          | 50                 |
|                         |          |          |                                       |          | 6/116  |          |                    |
|                         |          |          |                                       |          | Spike  | Percent  | Recovery           |
| Surrogate               | Flag     | Result   | Units                                 | Dilution | Amount | Recovery | Limits             |
| n-Triacontane           | <u>}</u> | 235      | mg/Kg                                 | 1        | 15     | 153      | 70 - 130           |
| Method I                | Blank    | QCBatch: | QC21408                               |          |        |          |                    |
| Param                   |          | Flag     |                                       | Results  | Units  |          | Reporting<br>Limit |
| Benzene                 |          |          | · · · · · · · · · · · · · · · · · · · | < 0.010  | mg/Kg  |          | 0.001              |
|                         |          |          |                                       |          |        |          | Continued          |

| Report Date: July 9, 2002<br>2-517-000051 |          | ······································ | Order Numl<br>Goodwin 7 | ber: A02062616<br>Freating Plant |        | Page Nur<br>8 Miles West | mber: 14 of 21<br>of Hobbs, NM |
|-------------------------------------------|----------|----------------------------------------|-------------------------|----------------------------------|--------|--------------------------|--------------------------------|
| $\dots Continued$                         |          |                                        |                         |                                  |        |                          |                                |
| Param                                     |          | Flag                                   | F                       | Results                          | Units  | 5                        | Limit                          |
| Toluene                                   |          |                                        |                         | <0.010                           | mg/K   | <u> </u>                 | 0.001                          |
| Ethylbenzene                              |          |                                        |                         | < 0.010                          | mg/K   | g                        | 0.001                          |
| M,P,O-Xylene                              |          |                                        | •                       | < 0.010                          | mg/K   | g                        | 0.001                          |
| Total BTEX                                |          |                                        | •                       | <0.010                           | mg/K   | g                        | 0.001                          |
|                                           |          |                                        |                         |                                  | Spike  | Percent                  | Recovery                       |
| Surrogate Fla                             | ıg       | Result                                 | Units                   | Dilution                         | Amount | Recovery                 | Limits                         |
| TFT                                       | <u> </u> | 1.10                                   | mg/Kg                   | 10                               | 1      | 110                      | 70 - 130                       |
| 4-BFB                                     |          | 0.980                                  | mg/Kg                   | 10                               | 1      | 98                       | 70 - 130                       |
| Method Blank                              |          | QCBatch:                               | QC21409                 |                                  |        |                          |                                |
| D                                         |          | ור                                     | D                       | 1.                               | TT •,  |                          | Reporting                      |
| Param                                     | ŀ        | lag                                    | Resu                    | ilts                             | Units  |                          | Limit                          |
| GRO                                       | ь.<br>-  |                                        |                         | <1                               | mg/ Kg |                          | 0.10                           |
|                                           |          |                                        | TT                      |                                  | Spike  | Percent                  | Recovery                       |
| Surrogate Fla                             | ag       | Result                                 | Units                   | Dilution                         | Amount | Recovery                 | Limits                         |
| 4-RFR                                     |          | 1.07                                   | mg/Kg                   | 10                               | 0.10   | 107<br>Q1                | 70 - 130                       |
| <u>+-DI-D</u>                             |          | 0.900                                  | mg/ Ng                  | 10                               | 0.10   |                          | 10 - 130                       |
| Method Blank                              | :        | QCBatch:                               | QC21586                 |                                  |        |                          |                                |
| Param                                     | I        | Flag                                   | Rest                    | ılts                             | Units  |                          | Reporting<br>Limit             |
| DRO                                       |          |                                        | <5                      | 0.0                              | mg/Kg  |                          | 50                             |
|                                           |          | ·····                                  |                         | ,,,,,,,,                         |        |                          |                                |
| Surrogate                                 | Flor     | Regult                                 | Unita                   | Dilution                         | Spike  | Percent                  | Recovery                       |
| n-Triacontane                             | гıаg     | 110                                    |                         | 1                                | 150    | 79                       | 70 120                         |
| m-rnacompane                              |          | 110                                    | mg/ mg                  | T                                | 100    | 10                       | 10 - 130                       |

# Quality Control Report Lab Control Spikes and Duplicate Spikes

| Laboratory   | l Spikes      | QCBatch:       |       | QC21385 |                          |                  |       |     |                |              |
|--------------|---------------|----------------|-------|---------|--------------------------|------------------|-------|-----|----------------|--------------|
| Param        | LCS<br>Result | LCSD<br>Result | Units | Dil.    | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
| MTBE         | 1.09          | 1.08           | mg/Kg | 10      | 1                        | < 0.010          | 109   | 0   | 70 - 130       | 20           |
| Benzene      | 1.05          | 1.03           | mg/Kg | 10      | 1                        | < 0.010          | 105   | 1   | 70 - 130       | 20           |
| Toluene      | 1.02          | 1.01           | mg/Kg | 10      | 1                        | < 0.010          | 102   | 0   | 70 - 130       | 20           |
| Ethylbenzene | 0.988         | 0.983          | mg/Kg | 10      | 1                        | < 0.010          | 98    | 0   | 70 - 130       | 20           |

Continued ...

 Report Date: July 9, 2002
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 2-517-000051
 Goodwin Treating Plant
 8 Miles West of Hobbs, NM

 ... Continued
 ...

|              |        |        |       |      | Spike  |         |               |     |                  |                  |
|--------------|--------|--------|-------|------|--------|---------|---------------|-----|------------------|------------------|
|              | LCS    | LCSD   |       |      | Amount | Matrix  |               |     | $\% { m Rec}$    | RPD              |
| Param        | Result | Result | Units | Dil. | Added  | Result  | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | $\mathbf{Limit}$ |
| M,P,O-Xylene | 2.88   | 2.86   | mg/Kg | 10   | 3      | < 0.010 | 96            | 0   | 70 - 130         | 20               |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{\% \ Rec} \end{array}$ | Recovery<br>Limits |
|-----------|----------------------------------------------------------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|-------------------------------------------------------------------|--------------------|
| TFT       | 1.05                                                           | 1.07                                                            | mg/Kg | 10       | 1               | 105          | 107                                                               | 70 - 130           |
| 4-BFB     | 1                                                              | 1.02                                                            | mg/Kg | 10       | 1               | 100          | 102                                                               | 70 - 130           |

#### Laboratory Control Spikes QCBatch: QC21403

|       |                   |                   |       |      | Spike  |                   |       |     |                  |                  |
|-------|-------------------|-------------------|-------|------|--------|-------------------|-------|-----|------------------|------------------|
|       | LCS               | LCSD              |       |      | Amount | Matrix            |       |     | $\% { m Rec}$    | RPD              |
| Param | $\mathbf{Result}$ | $\mathbf{Result}$ | Units | Dil. | Added  | $\mathbf{Result}$ | % Rec | RPD | $\mathbf{Limit}$ | $\mathbf{Limit}$ |
| DRO   | 232               | 228               | mg/Kg | 1    | 250    | <50               | 93    | 2   | 70 - 130         | 20               |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS    | LCSD   |       |          | Spike  | LCS   | LCSD          | Recovery |
|---------------|--------|--------|-------|----------|--------|-------|---------------|----------|
| Surrogate     | Result | Result | Units | Dilution | Amount | % Rec | $\% { m Rec}$ | Limits   |
| n-Triacontane | 112    | 160    | mg/Kg | 1        | 150    | 75    | 106           | 70 - 130 |

Laboratory Control Spikes

QCBatch: QC21408

| Param        | LCS<br>Result | LCSD<br>Result | Units | Dil. | Spike<br>Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|---------------|----------------|-------|------|--------------------------|------------------|-------|-----|----------------|--------------|
| MTBE         | 1             | 0.951          | mg/Kg | 10   | 1                        | < 0.010          | 100   | 5   | 70 - 130       | 20           |
| Benzene      | 1.02          | 0.845          | mg/Kg | 10   | 1                        | < 0.010          | 102   | 18  | 70 - 130       | 20           |
| Toluene      | 1.01          | 0.822          | mg/Kg | 10   | 1                        | < 0.010          | 101   | 20  | 70 - 130       | <b>20</b>    |
| Ethylbenzene | 0.993         | 0.812          | mg/Kg | 10   | 1                        | < 0.010          | 99    | 20  | 70 - 130       | 20           |
| M,P,O-Xylene | 2.89          | 2.36           | mg/Kg | 10   | 3                        | < 0.010          | 96    | 20  | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|----------------------------------------------------------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 1.06                                                           | 0.898                                                           | mg/Kg | 10       | 1               | 106          | 89            | 70 - 130           |
| 4-BFB     | 0.999                                                          | 0.825                                                           | mg/Kg | 10       | 1               | 99           | 82            | 70 - 130           |

Laboratory Control Spikes

QCBatch: QC21409

|       |                   |                   |       |      | Spike  |                   |               |     |                  |                |
|-------|-------------------|-------------------|-------|------|--------|-------------------|---------------|-----|------------------|----------------|
|       | LCS               | LCSD              |       |      | Amount | Matrix            |               |     | $\% { m Rec}$    | $\mathbf{RPD}$ |
| Param | $\mathbf{Result}$ | $\mathbf{Result}$ | Units | Dil. | Added  | $\mathbf{Result}$ | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | Limit          |
| GRO   | 9.1               | 9.09              | mg/Kg | 10   | 1      | <1                | 91            | 0   | 80 - 120         | 20             |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.



| Report Date: July 9, 2002<br>2-517-000051 |               |                | Order<br>Good | Number: A020<br>Iwin Treating I | )62616<br>Plant | Page Number: 16 of 21<br>8 Miles West of Hobbs, NM |               |                    |  |
|-------------------------------------------|---------------|----------------|---------------|---------------------------------|-----------------|----------------------------------------------------|---------------|--------------------|--|
| Surrogate                                 | LCS<br>Result | LCSD<br>Result | Units         | Dilution                        | Spike<br>Amount | LCS<br>% Rec                                       | LCSD<br>% Rec | Recovery<br>Limits |  |
| TFT                                       | 0.883         | 0.863          | mg/Kg         | 10                              | 0.10            | 88                                                 | 86            | 70 - 130           |  |
| 4-BFB                                     | 0.944         | 0.935          | mg/Kg         | 10                              | 0.10            | 94                                                 | 93            | 70 - 130           |  |

Laboratory Control Spikes QCBatch: QC21586

|       |                   |        |       |      | Spike  |                   |       |     |               |                        |
|-------|-------------------|--------|-------|------|--------|-------------------|-------|-----|---------------|------------------------|
|       | LCS               | LCSD   |       |      | Amount | Matrix            |       |     | $\% { m Rec}$ | RPD                    |
| Param | $\mathbf{Result}$ | Result | Units | Dil. | Added  | $\mathbf{Result}$ | % Rec | RPD | Limit         | $\operatorname{Limit}$ |
| DRO   | 240               | 225    | mg/Kg | 1    | 250    | <50.0             | 96    | 6   | 70 - 130      | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|               | LCS               | LCSD   |       |          | Spike  | LCS           | LCSD          | Recovery |
|---------------|-------------------|--------|-------|----------|--------|---------------|---------------|----------|
| Surrogate     | $\mathbf{Result}$ | Result | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| n-Triacontane | 124               | 115    | mg/Kg | 1        | 150    | 83            | 77            | 70 - 130 |

# Quality Control Report Matrix Spikes and Duplicate Spikes

**Matrix Spikes** QCBatch:

|              |        |                   |       |      | $\mathbf{Spike}$        |         |               |     |                  |                        |
|--------------|--------|-------------------|-------|------|-------------------------|---------|---------------|-----|------------------|------------------------|
|              | MS     | MSD               |       |      | $\operatorname{Amount}$ | Matrix  |               |     | $\% { m Rec}$    | RPD                    |
| Param        | Result | $\mathbf{Result}$ | Units | Dil. | Added                   | Result  | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | $\operatorname{Limit}$ |
| Benzene      | 0.876  | 0.696             | mg/Kg | 10   | 1                       | < 0.010 | 87            | 22  | 70 - 130         | $\overline{20}$        |
| Toluene      | 0.866  | 0.69              | mg/Kg | 10   | 1                       | < 0.010 | 86            | 22  | 70 - 130         | 20                     |
| Ethylbenzene | 0.851  | 0.679             | mg/Kg | 10   | 1                       | < 0.010 | 85            | 22  | 70 - 130         | 20                     |
| M,P,O-Xylene | 2.46   | 1.95              | mg/Kg | 10   | 3                       | < 0.010 | 82            | 23  | 70 - 130         | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

QC21385

|           | $\mathbf{MS}$      | MSD                |       |          | Spike  | $\mathbf{MS}$ | MSD           | Recovery |
|-----------|--------------------|--------------------|-------|----------|--------|---------------|---------------|----------|
| Surrogate | Result             | $\mathbf{Result}$  | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | 7 0.68             | 8 0.692            | mg/Kg | 10       | 1      | 68            | 69            | 70 - 130 |
| 4-BFB     | <sup>9</sup> 0.646 | <sup>10</sup> 0.63 | mg/Kg | 10       | 1      | 64            | 63            | 70 - 130 |

| Matrix | c Spikes | Q      | CBatch: | QC21386 |                 |        |               |     |          |       |
|--------|----------|--------|---------|---------|-----------------|--------|---------------|-----|----------|-------|
|        | MS       | MSD    |         |         | Spike<br>Amount | Matrix |               |     | % Rec    | RPD   |
| Param  | Result   | Result | Units   | Dil.    | Added           | Result | $\% { m Rec}$ | RPD | Limit    | Limit |
| GRO    | 15.0     | 13.5   | mg/Kg   | 10      | 1               | <1.00  | 150           | 10  | 80 - 120 | 20    |

 $^7\mathrm{Low}$  surrogate recovery due to prep. ICV, CCV show the method to be in control.

 $^{8}\mathrm{Low}$  surrogate recovery due to prep. ICV, CCV show the method to be in control.

 $^{9}\mathrm{Low}$  surrogate recovery due to prep. ICV, CCV show the method to be in control.

 $^{10}\mathrm{Low}$  surrogate recovery due to prep. ICV, CCV show the method to be in control.

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | MS<br>Resul       | M<br>t Re     | $_{ m sult}^{ m SD}$ | Units   | Dilution                 | Spike<br>Amount  | ${ m MS}$ ${ m \%}$ Re | ec  | MSD<br>% Rec   | Recovery<br>Limits |
|-----------|-------------------|---------------|----------------------|---------|--------------------------|------------------|------------------------|-----|----------------|--------------------|
| TFT       | $1.1\overline{2}$ | 1.            | .36                  | mg/Kg   | 10                       | 0.10             | 112                    |     | 136            | 70 - 130           |
| 4-BFB     | 0.577             | 0.            | 640                  | mg/Kg   | 10                       | 0.10             | 58                     |     | 64             | 70 - 130           |
| Matrix    | Spikes            | Q             | CBatch:              | QC21403 |                          |                  |                        |     |                |                    |
| Param     | MS                | MSD<br>Besult | Unite                | انط     | Spike<br>Amount<br>Added | Matrix<br>Besult | % Bec                  | RPD | % Rec<br>Limit | RPD<br>Limit       |
|           |                   |               | 011105               | 1       | Audeu                    |                  | 70 ILEC                |     | 70 120         | 20                 |
| DRO       | 226               | 240           | mg/Kg                | 1       | 250                      | <50.0            | 90                     | 6   | 70 - 130       | 20                 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

QC21408

|               | MS                | MSD               |       |          | Spike  | MS            | MSD           | Recovery                |
|---------------|-------------------|-------------------|-------|----------|--------|---------------|---------------|-------------------------|
| Surrogate     | $\mathbf{Result}$ | $\mathbf{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | $\operatorname{Limits}$ |
| n-Triacontane | 111               | 111               | mg/Kg | 1        | 150    | 74            | 74            | 70 - 130                |

Matrix Spikes QCBatch:

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|              | MS                      | MSD               |                  |      | Amount | Matrix                  |               |          | $\% { m Rec}$ | RPD   |
|--------------|-------------------------|-------------------|------------------|------|--------|-------------------------|---------------|----------|---------------|-------|
| Param        | $\operatorname{Result}$ | $\mathbf{Result}$ | $\mathbf{Units}$ | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD      | Limit         | Limit |
| Benzene      | 0.872                   | 0.884             | mg/Kg            | 10   | · 1    | < 0.010                 | 87            | 1        | 70 - 130      | 20    |
| Toluene      | 0.881                   | 0.891             | mg/Kg            | 10   | 1      | < 0.010                 | 88            | 1        | 70 - 130      | 20    |
| Ethylbenzene | 0.859                   | 0.874             | mg/Kg            | 10   | 1      | 0.0107                  | 84            | 1        | 70 - 130      | 20    |
| M,P,O-Xylene | 2.48                    | 2.53              | mg/Kg            | 10   | 3      | 0.0165                  | 82            | <b>2</b> | 70 - 130      | 20    |

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Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | ${ m MS}$ Result | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | ${f Spike}\ {f Amount}$ | ${ m MS}$ ${ m Rec}$ | MSD<br>% Rec | Recovery<br>Limits |
|-----------|------------------|-------------------------------------------------------------|-------|----------|-------------------------|----------------------|--------------|--------------------|
| TFT       | 0.895            | 0.916                                                       | mg/Kg | 10       | 1                       | 89                   | 91           | 70 - 130           |
| 4-BFB     | 0.843            | 0.885                                                       | mg/Kg | 10       | 1                       | 84                   | 88           | 70 - 130           |

#### Matrix Spikes QCBat

| tch: | QC21409 |
|------|---------|

|       |        |        |                  |      | Spike  |                   |               |     |                        |                        |
|-------|--------|--------|------------------|------|--------|-------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD    |                  |      | Amount | Matrix            |               |     | % Rec                  | RPD                    |
| Param | Result | Result | $\mathbf{Units}$ | Dil. | Added  | $\mathbf{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 8.94   | 8.33   | mg/Kg            | 10   | 1      | <1                | 89            | 7   | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Report Da<br>2-517-000    | ate: July 9<br>051 | 9, 2002        |               | Order N<br>Goodw          | umber: A020<br>vin Treating | )62616<br>Plant         |               | 8 Mi     | Page Numbe<br>les West of F | r: 18 of 21<br>lobbs, NM |
|---------------------------|--------------------|----------------|---------------|---------------------------|-----------------------------|-------------------------|---------------|----------|-----------------------------|--------------------------|
|                           | MS                 | S              | MSD           |                           |                             | Spike                   | MS            | 5        | MSD                         | Recoverv                 |
| Surrogate                 | Rest               | ult I          | Result        | Units                     | Dilution                    | Amount                  | % R           | ec       | % Rec                       | Limits                   |
| $\overline{\mathrm{TFT}}$ | 0.79               | 93             | 0.75          | mg/Kg                     | 10                          | 0.10                    | 79            | )        | 75                          | 70 - 130                 |
| 4-BFB                     | 0.87               | 76             | 0.819         | mg/Kg                     | 10                          | 0.10                    | 88            |          | 82                          | 70 - 130                 |
|                           |                    |                |               |                           |                             |                         |               | •        |                             |                          |
| Matrix                    | Spikes             | C              | QCBatch:      | QC21586                   |                             |                         |               |          |                             |                          |
|                           |                    |                |               |                           | Spike                       |                         |               |          |                             |                          |
|                           | MS                 | MSD            |               |                           | Amount                      | Matrix                  |               |          | $\% { m Rec}$               | RPD                      |
| Param                     | Result             | Result         | Units         | Dil.                      | Added                       | $\operatorname{Result}$ | $\% { m Rec}$ | RPD      | $\mathbf{Limit}$            | Limit                    |
| DRO                       | 195                | 198            | mg/Kg         | 1                         | 250                         | <50.0                   | 78            | 2        | 70 - 130                    | 20                       |
| Surrogate<br>n-Triacont   | tane               | Result<br>98.2 | Result<br>101 | Units<br>mg/Kg<br>Quality | Dilution<br>1<br>Control    | Amour<br>150            | $\frac{1}{6}$ | Rec<br>5 | % Rec<br>67                 | Limits<br>70 - 130       |
| CCV (                     | 1)                 | QCBa           | atch: Q       | C21385                    |                             | meatio                  | n Stan        | luaru    | 5                           |                          |
|                           |                    |                |               | CCVs                      | s CCV                       | /s (                    | CCVs          | Pe       | $\mathbf{rcent}$            |                          |
| D                         |                    |                | ** •.         | True                      | Four                        | id Po                   | ercent        | Rec      | covery                      | Date                     |
| Param                     |                    | Flag           | Units         | Conc.                     | Con                         | c. Re                   | ecovery       | Li       | mits                        | Analyzed                 |
| MIBE                      |                    |                | mg/L          | 0.10                      | 0.099                       | 97<br>12                | 99<br>109     | 85       | - 115                       | 6/26/02                  |
| Benzene                   |                    |                | mg/L          | 0.10                      | 0.10                        | 3                       | 103           | 85       | - 115                       | 6/26/02                  |
| Toluene                   |                    |                | mg/L          | 0.10                      | 0.1                         |                         | 100           | 85       | - 115                       | 6/26/02                  |
| M D O V.                  | iene<br>domo       |                | mg/L          | 0.10                      | 0.098                       | 88                      | 98            | 85       | - 115                       | 6/26/02                  |
| м, г, О-лу                |                    |                | mg/L          | 0.30                      | 0.28                        |                         | 90            | 85       | - 115                       | 6/26/02                  |
| CCV (                     | (2)                | QCB            | atch: Q(      | C21385                    |                             |                         |               |          |                             |                          |
|                           |                    |                |               | CCVs                      | CCV                         | /s (                    | CCVs          | Pe       | rcent                       | Data                     |
| Daram                     |                    | <b>D</b> 1     | T T : 4       |                           | roui                        | iu I<br>. D             | GIUGIII       | 1100     | Jover y                     |                          |

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|              |                 |                 | IIue  | round  | reicent  | Recovery | Date     |
|--------------|-----------------|-----------------|-------|--------|----------|----------|----------|
| Param        | $\mathbf{Flag}$ | Units           | Conc. | Conc.  | Recovery | Limits   | Analyzed |
| MTBE         |                 | mg/L            | 0.10  | 0.103  | 103      | 85 - 115 | 6/26/02  |
| Benzene      |                 | mg/L .          | 0.10  | 0.102  | 102      | 85 - 115 | 6/26/02  |
| Toluene      |                 | $\mathrm{mg/L}$ | 0.10  | 0.0991 | 99       | 85 - 115 | 6/26/02  |
| Ethylbenzene |                 | mg/L            | 0.10  | 0.0982 | 98       | 85 - 115 | 6/26/02  |
| M,P,O-Xylene |                 | mg/L            | 0.30  | 0.284  | 94       | 85 - 115 | 6/26/02  |
|              |                 |                 |       |        |          |          |          |

ICV (1) QCBatch: QC21385

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## **CCV (1)** QCBatch: QC21403

|       |      |                  | CCVs  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|-------|------|------------------|-------|-----------------|-----------------|----------|----------|
|       |      |                  | True  | Found           | Percent         | Recovery | Date     |
| Param | Flag | $\mathbf{Units}$ | Conc. | Conc.           | Recovery        | Limits   | Analyzed |
| DRO   |      | mg/Kg            | 250   | 224             | 90              | 75 - 125 | 6/27/02  |

#### ICV (1) QCBatch: QC21403

|       |                 |       | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|-------|-----------------|-------|-----------------|-----------------|-----------------|----------|----------|
|       | J               |       | True            | Found           | Percent         | Recovery | Date     |
| Param | $\mathbf{Flag}$ | Units | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| DRO   |                 | mg/Kg | 250             | 222             | 89              | 75 - 125 | 6/27/02  |

## CCV (1) QCBatch: QC21408

|              |                 |                  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|--------------|-----------------|------------------|-----------------|-----------------|-----------------|----------|----------|
|              |                 |                  | True            | Found           | Percent         | Recovery | Date     |
| Param        | $\mathbf{Flag}$ | $\mathbf{Units}$ | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |                 | m mg/L           | 0.10            | 0.103           | 103             | 85 - 115 | 6/27/02  |
| Benzene      |                 | m mg/L           | 0.10            | 0.103           | 103             | 85 - 115 | 6/27/02  |
| Toluene      |                 | $\mathrm{mg/L}$  | 0.10            | 0.1             | 100             | 85 - 115 | 6/27/02  |
| Ethylbenzene |                 | $\mathrm{mg/L}$  | 0.10            | 0.0979          | 97              | 85 - 115 | 6/27/02  |
| M,P,O-Xylene |                 | mg/L             | 0.30            | 0.284           | 94              | 85 - 115 | 6/27/02  |

#### **CCV (2)** QCBatch: QC21408

|              |      |                  | CCVs  | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent  |          |
|--------------|------|------------------|-------|-----------------|-----------------|----------|----------|
|              |      |                  | True  | Found           | Percent         | Recovery | Date     |
| Param        | Flag | $\mathbf{Units}$ | Conc. | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L             | 0.10  | 0.106           | 106             | 85 - 115 | 6/27/02  |
| Benzene      |      | m mg/L           | 0.10  | 0.103           | 103             | 85 - 115 | 6/27/02  |
| Toluene      |      | mg/L             | 0.10  | 0.102           | 102             | 85 - 115 | 6/27/02  |
| Ethylbenzene |      | mg/L             | 0.10  | 0.0985          | 98              | 85 - 115 | 6/27/02  |
| M,P,O-Xylene |      | $\mathrm{mg/L}$  | 0.30  | 0.287           | 95              | 85 - 115 | 6/27/02  |

| Report Date:<br>2-517-000051 | July 9, | 2002     |              | Order Nur<br>Goodwin | mber: A0206263  | 16<br>t         | Page Nur<br>8 Miles West | mber: 20 of 21<br>of Hobbs, NM |
|------------------------------|---------|----------|--------------|----------------------|-----------------|-----------------|--------------------------|--------------------------------|
| ICV (1)                      |         | QCBatch: | QC21         | 408                  |                 |                 |                          |                                |
|                              |         |          |              | CCVs                 | CCVs            | CCVs            | Percent                  | Data                           |
| Dorom                        |         | Flog     | Unita        | Cone                 | Found           | Percent         | Limite                   | Date                           |
|                              |         | Tag      | mg/I         |                      | 0.0075          | necovery<br>07  | <u> </u>                 | <u> </u>                       |
| Benzene                      |         | •        | mg/L<br>mg/L | 0.10                 | 0.0975          | 102             | 85 - 115                 | 6/27/02                        |
| Toluene                      |         |          | mg/L         | 0.10                 | 0.0998          | 99              | 85 - 115                 | 6/27/02                        |
| Ethylbenzene                 |         |          | mg/L         | 0.10                 | 0.0974          | 97              | 85 - 115                 | 6/27/02                        |
| M,P,O-Xylene                 | •       |          | mg/L         | 0.30                 | 0.28            | 93              | 85 - 115                 | 6/27/02                        |
| CCV (1)                      |         | QCBatch: | QC2          | 21409                |                 |                 |                          |                                |
|                              |         |          |              | CCVs                 | CCVs            | CCVs            | Percent                  |                                |
|                              |         |          |              | True                 | Found           | Percent         | Recovery                 | Date                           |
| Param                        | Flag    | Units    |              | Conc.                | Conc.           | Recovery        | Limits                   | Analyzed                       |
| GRO                          | 0       | mg/K     | <u> </u>     | 1                    | 0.939           | 93              | 85 - 115                 | $\frac{6/27/02}{6/27/02}$      |
|                              |         |          |              |                      |                 |                 |                          |                                |
| CCV (2)                      |         | QCBatch: | QC2          | 21409                |                 |                 |                          |                                |
|                              |         |          |              | CCVs                 | CCVs            | $\mathrm{CCVs}$ | Percent                  |                                |
|                              |         |          |              | True                 | Found           | Percent         | Recovery                 | Date                           |
| Param                        | Flag    | Units    | 5            | Conc.                | Conc.           | Recovery        | Limits                   | Analyzed                       |
| GRO                          |         | mg/K     | g            | 1                    | 0.909           | 90              | 85 - 115                 | 6/27/02                        |
|                              | ı       |          |              |                      |                 |                 |                          |                                |
| ICV (1)                      |         | QCBatch: | QC2          | 1409                 |                 |                 |                          |                                |
|                              |         |          |              | $\mathbf{CCVs}$      | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent                  |                                |
|                              |         |          |              | True                 | Found           | Percent         | Recovery                 | Date                           |
| Param                        | Flag    | Units    | 8            | Conc.                | Conc.           | Recovery        | Limits                   | Analyzed                       |
| GRO                          |         | mg/K     | g            | 1                    | 0.944           | 94              | 85 - 115                 | 6/27/02                        |
| CCV (1)                      |         | QCBatch: | QC:          | 21586                |                 |                 |                          |                                |
|                              |         |          |              | CCVs                 | CCVs            | CCVs            | Percent                  |                                |
|                              |         |          |              | True                 | Found           | Percent         | Recovery                 | Date                           |
| Param                        | Flag    | Unite    | 3            | Conc                 | Conc            | Recovery        | Limits                   | Analyzed                       |
| DRO                          | 0       | mg/K     | g            | 250                  | 218             | 87              | 75 - 125                 | 7/2/02                         |
|                              |         |          | <u></u>      |                      |                 |                 |                          |                                |
| CCV (2)                      |         | QCBatch: | QC           | 21586                |                 |                 |                          |                                |
| (-)                          |         |          |              |                      |                 |                 |                          | Continued                      |

| Report Date:<br>2-517-000051 | Report Date: July 9, 2002<br>2-517-000051 |          |                                 | umber: A02062<br>n Treating Pla | 616<br>nt       | Page Nu<br>8 Miles West | mber: 21 of 21<br>of Hobbs, NM |
|------------------------------|-------------------------------------------|----------|---------------------------------|---------------------------------|-----------------|-------------------------|--------------------------------|
| Continued                    |                                           |          |                                 |                                 |                 |                         |                                |
|                              |                                           |          | $\mathrm{CCVs}$                 | $\mathbf{CCVs}$                 | $\mathrm{CCVs}$ | Percent                 |                                |
|                              |                                           |          | True                            | Found                           | Percent         | Recovery                | Date                           |
| Param                        | Flag                                      | Units    | Conc.                           | Conc.                           | Recovery        | Limits                  | Analyzed                       |
|                              |                                           |          | CCVs                            | CCVs                            | CCVs            | Percent                 |                                |
|                              |                                           |          | True                            | Found                           | Percent         | Recovery                | Date                           |
| Param                        | Flag                                      | Units    | Conc.                           | Conc.                           | Recovery        | Limits                  | Analyzed                       |
| DRO                          | 0                                         | mg/Kg    | 250                             | 225                             | 90              | 75 - 125                | 7/2/02                         |
| CCV (3)                      | Flog                                      | QCBatch: | QC21586<br>CCVs<br>True<br>Conc | CCVs<br>Found                   | CCVs<br>Percent | Percent<br>Recovery     | Date                           |
| DRO                          | riag                                      | mg/Kg    | 250                             | 232                             | <u>92</u>       | 75 - 125                | $\frac{-1}{7/2/02}$            |
| ICV (1)                      |                                           | QCBatch: | QC21586<br>CCVs                 | CCVs                            | CCVs            | Percent                 |                                |
|                              |                                           |          | True                            | Found                           | Percent         | Recovery                | Date                           |
| Param                        | Flag                                      | Units    | Conc.                           | Conc.                           | Recovery        | Limits                  | Analyzed                       |
| DRO                          | 3                                         | mg/Kg    | 250                             | 214                             | 86              | 75 - 125                | 7/2/02                         |

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                          |                                                          |                                                                                            |                                                                                                                   |             | J  |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------|----|
| 6701 Aberdeen Avenue, Ste. 9<br>Lubbock, Texas 79424       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 155 McCut<br>El Paso,                  | cheon,Suite H<br>Texas 79932             | CHAIN-OF                                                 |                                                                                            | AND ANALYSI                                                                                                       | IS REQUEST  |    |
| I (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296 | canalysis, I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | IIC. Tel (915<br>Fax (915)<br>1 (888)  | ) 585-3443<br>s) 585-4944<br>588-3443    |                                                          | ter ID # $A$                                                                               | nenceo                                                                                                            | 110         |    |
| Company Name:                                              | Phone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | #:<br>505-476-34                       | 188                                      |                                                          |                                                                                            |                                                                                                                   |             |    |
| Address: (Street, City, Zip)<br>/625 N. French T           | Fax #:<br>Drive Hobhs NM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 88240                                  |                                          |                                                          |                                                                                            |                                                                                                                   |             |    |
| Contact Person: Martyne Kiplin                             | and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se |                                        |                                          | 08/500<br>79 + 67                                        |                                                                                            |                                                                                                                   |             |    |
| Invoice to:<br>(If different from above)                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                          | н <sup>д</sup><br>9604(                                  |                                                                                            |                                                                                                                   | andard      |    |
| Project #: 2-517-000051                                    | Project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Name:<br>Delivity Treating O           | lant                                     | 92 dg<br>92 dg<br>92 dg<br>92 dg                         | ·                                                                                          | 2                                                                                                                 |             | (  |
| Project Location:<br>& melp, West of Hobb,                 | Sample                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | r Signature                            |                                          | a cq c<br>cq cl                                          | P                                                                                          | 200/62                                                                                                            | ifferent    |    |
|                                                            | MATRIX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | PRESERVATIVE<br>METHOD                 | SAMPLING                                 | 502<br>2005<br>588 2A<br>588 2A<br>588 2A 25             | 29lits<br>24<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28<br>28 | 701.827<br>701.827<br>8<br>8<br>8<br>8<br>8<br>8<br>0<br>8<br>0<br>8<br>0<br>8<br>0<br>8<br>0<br>8<br>0<br>8<br>0 | b li əm     |    |
| LAB # FIELD CODE                                           | aniativo:<br>omA\emul<br>ABTZ<br>BATZ<br>F<br>DIGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DNE<br>E<br>OH<br>SO <sup>4</sup><br>I | NE<br>ME                                 | BE 8021B/6<br>H 418.1/TX1<br>H 8270C<br>al Metals Ag     | LP Pesticide<br>LP Pesticide<br>LP Volaticide                                              | Mis 701, 52<br>Mis 8082/60<br>Sticides 808<br>Dicides 808                                                         | iT bnυorA n | PI |
| 200154 062502-1                                            | • • • • • • • • • • • • • • • • • • •                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        | 11 10 10 10 10 10 10 10 10 10 10 10 10 1 | MI<br>MI<br>MI<br>MI<br>MI<br>MI<br>MI<br>MI<br>MI<br>MI | от<br>от<br>от<br>оя                                                                       | BC<br>BC<br>DB<br>DD<br>DD                                                                                        | iuT         | он |
| 51 062502 - Z                                              | 1 402                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | . \                                    | 4/2021054                                | ×<br>•<br>•<br>•                                         |                                                                                            |                                                                                                                   |             |    |
| 58 062502 - 3                                              | 1 402 ~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7                                      | 6/2002 1100                              | بر<br>بر<br>بر                                           |                                                                                            |                                                                                                                   |             |    |
| 59 062502-4                                                | 1 402 ~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7                                      | 42 ration                                | ·×<br>.7                                                 |                                                                                            |                                                                                                                   |             |    |
| 60 062502 - 5                                              | 1 402 ~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <u>}</u>                               | 6/24/00-1110                             | ×<br>-}                                                  |                                                                                            |                                                                                                                   |             |    |
| \$1 062502-6                                               | 1 402 ~                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | Glatoz III4                              | \ <u>x</u><br>. \                                        |                                                                                            |                                                                                                                   |             |    |
| 61 062502-7                                                | 1 402 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | 6/2/2 1117                               | 1                                                        |                                                                                            |                                                                                                                   |             |    |
| 63 062502-8                                                | 1 402 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | \<br>                                  | 6/2/02 1120                              | ×                                                        |                                                                                            |                                                                                                                   |             |    |
| 14 062572-24                                               | 1 402 V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7                                      | 6/25/02/230                              | X                                                        |                                                                                            |                                                                                                                   |             |    |
| 65 962502-22                                               | 1 902 -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                        | 6/\$02(21)                               |                                                          |                                                                                            |                                                                                                                   |             |    |
| 64 062502-23                                               | 7 for                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>&gt;</b>                            | 6/2901200                                | 14                                                       |                                                                                            |                                                                                                                   |             |    |
| Relinquished by: Date: Time:                               | Received by:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Date: Time:                            |                                          | LAB USE                                                  | REMARKS                                                                                    |                                                                                                                   | BRU         |    |
| Relinquished by: Date: Time:                               | Received by:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Date: Time:                            | 011                                      | Intact N N                                               | rac                                                                                        | anaryne,<br>11                                                                                                    | Sec + D     | es |
| dellan alkelten elector 1830                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |                                          | Headspace <u>Y / N</u>                                   |                                                                                            | 71951                                                                                                             | d           |    |
| Relinquished by: Date: Time:                               | Hepenyed at Laboratory py:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | How we water                           | كملاحك                                   | lemp<br>Log-in Review/                                   |                                                                                            | neck If Special Report<br>mits Are Needed                                                                         | ting        |    |
| Submittal of samples constitutes agreement to Term         | s and Conditions listed on reverse s<br>ORIGINAL 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ide of C.O.C. / Ad W                   | St-road                                  | carrier # AVUA                                           | NANT                                                                                       | NOV 16                                                                                                            | 23-566-890- | 2  |

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| 6701 Aberdeen Avenue, Ste. 9<br>Lubbock, Texas 79424                                               | E                      |         |              |           |            |            |                  |                   | 155 Mc<br>El Pa:   | Cutcheon<br>so, Texas               | 1, Suite H<br>79932    |                                               |               | Н<br>Н      | AIN-(                   | JF-C          | UST(         | λαc                  | AND                  | ANA          |               | S REC | DUES    | ۲. |          |     |
|----------------------------------------------------------------------------------------------------|------------------------|---------|--------------|-----------|------------|------------|------------------|-------------------|--------------------|-------------------------------------|------------------------|-----------------------------------------------|---------------|-------------|-------------------------|---------------|--------------|----------------------|----------------------|--------------|---------------|-------|---------|----|----------|-----|
| Tel (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296                                       | Irace                  | AN      | al           | S         | S.         |            | י <u>כ</u> ו     |                   | Tel<br>Fax<br>1 (8 | 915) 585<br>(915) 585<br>(88) 588-3 | -3443<br>-4944<br>3443 | L                                             |               | 5           |                         | Jrder I       | Ŭ#           |                      |                      |              |               |       |         |    |          |     |
| Company Name: $\mathcal{NMOCD}$                                                                    |                        |         |              |           | Рһс        | μ<br>β     | イン               | - 92              | 548                | $\mathbf{\lambda}$                  |                        |                                               |               |             |                         | AN<br>Morio   | ALY          | SIS F                | Noth:                | EST<br>of No | _             |       |         |    |          |     |
| Address: (Street, City, Zip)                                                                       | Terch D.               | 1/1     | 2665         | S         | Fax<br>17  | #:<br>5824 | 27               |                   |                    |                                     |                        |                                               |               |             |                         | <u>הומ</u>    | ດ<br>ວັ      | becily               | - men                |              |               |       |         |    |          |     |
| Contact Person:                                                                                    | Kriching               |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             | 08/200                  |               |              |                      |                      |              |               |       | <u></u> |    |          |     |
| Invoice to:<br>(If different from above)                                                           |                        | r.      |              |           |            |            |                  |                   |                    |                                     |                        |                                               | ú             |             | н <sup>д</sup> 601      |               |              |                      |                      |              |               |       |         |    | andard   |     |
| Project #: Z-S/                                                                                    | 7-00005/               |         |              |           | Ba         | ect Na     | me:<br>J źż (    | 1/                | the way            | Pla                                 | 4                      |                                               |               | 10          | Pb Se                   |               |              |                      | 9                    |              |               |       |         |    | trom sta |     |
| Project Location:                                                                                  | of Hobbs               | NM      |              |           | SIN,       | NDC        | gnatu            | ()                | le la              | 0                                   |                        |                                               | ~8            | 00          | a Cd Cr                 |               |              |                      | 529/004              |              |               |       |         |    | ifferent |     |
|                                                                                                    |                        | รษ      | tun          | Ŵ         | VTRIX      |            | PRI              | ESERV             | VATIVE<br>OD       | IS I                                | AMPLIN                 | وەت<br>ق                                      | 002<br>002    |             | 68 2A (<br>8 2A (       | aalitel       | Same         | 29/809               | Vol. 82              | 8<br>809/41  |               |       |         |    | b îi əm  |     |
| FIEL                                                                                               | D CODE                 | JNIATN  | omA\9r<br>Я  |           | BO         |            |                  | ŀ                 |                    |                                     |                        | 80218                                         | 9/21/1 81     | 270C        | oA elisten<br>A elistem | volatiles     | Pesticide    | 28 JoV 8             | / .ime2 č            | .808 səp     | Hq ,221       |       | • .     |    | iT bruoi |     |
| (LAB USE)                                                                                          |                        | # COI   | Volun<br>TAW | OIL       | רחנ<br>⊮וא | HCI        | <sup>©</sup> ONH | 10 <sup>P</sup> N | NONE<br>ICE        |                                     | 31AQ                   | ami i<br>B8tm                                 | хата<br>У нат | 8 HA9       | TCLP<br>TCLP            | TCLP          | TCLP         | <u>פכ/שפ</u><br>ובפו | SW/29                | PCB's        | . 'OOB        |       |         |    | A muT    | рюн |
| 200167 062502-2                                                                                    | ل                      | 1 46    | Ň            | 7         |            | ļ          |                  |                   | 7                  | 6/2                                 | 902152                 | 9                                             | •>            | 2           | -                       |               |              |                      |                      |              |               |       |         |    |          | [   |
| м I<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1<br>1 |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               | -     |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       | -       |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         | _  |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         |    |          |     |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        | -                                             |               |             |                         |               |              |                      |                      |              |               |       | -       |    | -+       | - T |
|                                                                                                    |                        |         |              |           |            |            |                  |                   |                    |                                     |                        |                                               |               |             |                         |               |              |                      |                      |              |               |       |         | _  |          |     |
| Relinquished by Dat                                                                                | e: Time:<br>5-02 1 X/O | Refeive | d by:        | the       | Here have  | , ler      | Date             | 66                | Time:              | 240                                 |                        |                                               | 3             | ONL         | N<br>N<br>N<br>N<br>N   |               | REM          | ARKS                 |                      |              |               |       |         |    | I        |     |
| Relinquished by: Dat                                                                               | e: Time:               | Receive | id by:       |           | I          |            | Date             |                   | Time:              |                                     |                        | E I                                           | act           | 7           | Z >                     |               |              |                      |                      |              |               |       |         |    |          |     |
| Relinquished by: A Dat                                                                             | e: Time:               | Receive |              | borato    | Nov:       |            | Date             | 70                |                    | 1                                   |                        | <u>은 혁                                   </u> | <br>          | }<br>}<br>} | 5                       | $  c \rangle$ | $\Box \circ$ | ٿ ٿ                  | eck If S<br>tits Are | Nerede       | Reportir<br>d | þ     |         |    |          |     |
| Submittal of samples constitutes                                                                   | agreement to Terms     |         | ditions li   | ) sted of | I Teven    | AL CO      | N C C C          | )<br>0            | A A                | A A                                 | 2-15                   | Ca                                            | rrier #       | F\$L        | K.                      | 3             | $\mathbb{R}$ | 3                    | $ \vec{\lambda}  $   | $\mathbf{k}$ | 103           | 5-5   | -90     | 88 | 171      |     |

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|                                                |                                       |                                       | ACEA                                                | NALYSIS, INC                                                                    |                                            |                                          |
|------------------------------------------------|---------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------|------------------------------------------|
| 6<br>1                                         | 701 Aberdeen Ave<br>55 McCutcheon, Si | nue, Suite 9<br>uite H                | Lubbock, Texas 79<br>El Paso, Texas 79<br>E-Mail: 1 | 424 800•378•1296 806•794•<br>932 888•588•3443 915•585•<br>lab@traceanalysis.com | 1296 FAX 806•794•12<br>3443 FAX 915•585•49 | 298<br>944                               |
| Bill To:                                       | OCD<br>1220 S. Sain<br>Santa Fe, NM   | t Francis Dr<br>/ 87505               |                                                     | . ir                                                                            | IVOICE #<br>Invoice Date:<br>Order ID:     | <b>53483</b><br>Jul 8, 2002<br>A02062409 |
| Project #:<br>Project Name:<br>Project Locatio | on:                                   | 2-517-0000<br>Goodwin 1<br>8 Miles We | 51<br>Freating Plan                                 | t P.A. Number                                                                   | 20-521-07-02                               | 2497                                     |
| Test                                           | · · · · · · · · · · · · · · · · · · · | Quantity                              | Matrix                                              | Description                                                                     | Price                                      | SubTotal                                 |
| TPH DRO<br>BTEX/TPH GRO                        | )                                     | 9<br>9                                | Soil<br>Soil                                        | 199901 - 199909<br>199901 - 199909                                              | \$40.00<br>\$60.00                         | \$360.00<br>\$540.00                     |
| Paym                                           | ent Terms: N                          | et 30 Days                            |                                                     |                                                                                 | Total                                      | \$900.00                                 |
|                                                |                                       |                                       |                                                     | B                                                                               |                                            |                                          |

ox to pay martyre Kulin 7-22.02

Director, Dr. Blair Leftwich

TraceAnalysis, Inc.

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Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 9, 2002Order Number: A020624092-517-000051Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

## **Summary Report**

Report Date:

July 9, 2002

Order ID Number: A02062409

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

Project Number:2-517-000051Project Name:Goodwin Treating PlantProject Location:8 Miles West of Hobbs, NM

|        |             |        | Date    | $\mathbf{Time}$ | Date     |
|--------|-------------|--------|---------|-----------------|----------|
| Sample | Description | Matrix | Taken   | Taken           | Received |
| 199901 | 062102-13   | Soil   | 6/21/02 | 9:47            | 6/22/02  |
| 199902 | 062102-14   | Soil   | 6/21/02 | 9:52            | 6/22/02  |
| 199903 | 062102-15   | Soil   | 6/21/02 | 10:55           | 6/22/02  |
| 199904 | 062102-16   | Soil   | 6/21/02 | 11:00           | 6/22/02  |
| 199905 | 062102-17   | Soil   | 6/21/02 | 11:04           | 6/22/02  |
| 199906 | 062102-18   | Soil   | 6/21/02 | 11:12           | 6/22/02  |
| 199907 | 062102-19   | Soil   | 6/21/02 | 11:17           | 6/22/02  |
| 199908 | 062102-20   | Soil   | 6/21/02 | 11:27           | 6/22/02  |
| 199909 | 062102-21   | Soil   | 6/21/02 | 11:32           | 6/22/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

|                     |         |         | BTEX         |              |            | TPH DRO | TPH GRO |
|---------------------|---------|---------|--------------|--------------|------------|---------|---------|
|                     | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene | Total BTEX | DRO     | GRO     |
| Sample - Field Code | (ppm)   | (ppm)   | (ppm)        | (ppm)        | (ppm)      | (ppm)   | (ppm)   |
| 199901 - 062102-13  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | 69.8    | <1.00   |
| 199902 - 062102-14  | < 0.010 | < 0.010 | <0.010       | < 0.010      | < 0.010    | 109     | <1.00   |
| 199903 - 062102-15  | <0.010  | <0.010  | < 0.010      | 0.0106       | 0.0106     | 179     | <1.00   |
| 199904 - 062102-16  | <0.010  | < 0.010 | 0.0167       | 0.0393       | 0.056      | 1960    | 12.5    |
| 199905 - 062102-17  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | <50     | 2.32    |
| 199906 - 062102-18  | <0.010  | <0.010  | < 0.010      | < 0.010      | < 0.010    | <50     | <1.00   |
| 199907 - 062102-19  | < 0.010 | <0.010  | <0.010       | < 0.010      | < 0.010    | <50     | <1.00   |
| 199908 - 062102-20  | < 0.010 | <0.010  | < 0.010      | < 0.010      | < 0.010    | <50     | <1.00   |
| 199909 - 062102-21  | < 0.010 | < 0.010 | < 0.010      | < 0.010      | < 0.010    | 1530    | <1.00   |

| Примя виденски<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>подолжизани<br>под | 1 Aberdeen Avenue Ste 9                                               |                     |              |             |          |       |                                                                                                                 |            |                   |                      |          | - VeV                                         | tood Suite         | I           |                           |                 |                      |                  |                |                 |      |                 |                   |                                 |           | ,      |                                       |          |                 | Γ.   |
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| Поли С                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ock, Texas 79424<br>(806) 794-1296<br>(806) 794-1298<br>8001 378-1306 | Trace               | eA.          | nal         | Ň        | Si    | Ś                                                                                                               | IT         | IC                | •                    | <u> </u> | 5 MCCUI<br>El Paso, ]<br>Tel (915<br>Fax (915 | 585-3443 (585-4944 |             | 2<br>1814 (19<br>17 - 191 |                 | Ð                    |                  | OF-            | Sno # g         | 10D  | A A             | N D               | 40<br>40                        | rsis<br>9 | RE     | JONE JONE                             | ST<br>ST |                 | 5    |
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| НЕКО         Обезатол         Неконови         Неконови         Неконови           При соотерет                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | cation:                                                               | 11.50               | Hok          | \$5         |          |       | Sam                                                                                                             | pler S     | A lignat          | <b>Ly</b><br>I iei v | 2        | Pr A                                          | 4                  |             |                           | •••             |                      | CA Cr PI         |                |                 |      | t               | 070/00            |                                 |           |        | · · · · · · · · · · · · · · · · · · · |          | nt trianat      |      |
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| O62102       -20       I       Vol.2       V       Vul.60       Vul.13       V       Vul.60       Vul.13       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V       V <thv< th="">       V       V</thv<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 201220                                                                | 61-                 | ~            | 402         | 2        |       |                                                                                                                 |            | _                 |                      | 5        |                                               | Lindo              | (11)        |                           | • •             |                      |                  |                |                 |      |                 |                   |                                 | _         | -      | -                                     |          |                 |      |
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| f samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | id by: [                                                              | )ate: Time:         | Reg          | lived at    |          | Te 2  | ,<br>A<br>A                                                                                                     |            | Coat              | is Lo                | F 5      | те:<br>                                       | 0:05               | 4           | Tem                       | n Re            | view 1               | <u>`</u>  >      | ° 1            |                 |      | Check<br>Limits | If Spec<br>Are Ne | ial Re<br>eded                  | portin    | -<br>0 |                                       |          |                 |      |
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TraceAnalysis, Inc.

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: July 9, 2002Order Number: A020624092-517-000051Goodwin Treating Plant

Page Number: 1 of 1 8 Miles West of Hobbs, NM

# **Summary Report**

Report Date: July

July 9, 2002

Order ID Number: A02062409

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240

| Project Number:   | 2-517-000051              |
|-------------------|---------------------------|
| Project Name:     | Goodwin Treating Plant    |
| Project Location: | 8 Miles West of Hobbs, NM |

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 199901 | 062102-13   | Soil   | 6/21/02 | 9:47  | 6/22/02  |
| 199902 | 062102-14   | Soil   | 6/21/02 | 9:52  | 6/22/02  |
| 199903 | 062102-15   | Soil   | 6/21/02 | 10:55 | 6/22/02  |
| 199904 | 062102-16   | Soil   | 6/21/02 | 11:00 | 6/22/02  |
| 199905 | 062102-17   | Soil   | 6/21/02 | 11:04 | 6/22/02  |
| 199906 | 062102-18   | Soil   | 6/21/02 | 11:12 | 6/22/02  |
| 199907 | 062102-19   | Soil   | 6/21/02 | 11:17 | 6/22/02  |
| 199908 | 062102-20   | Soil   | 6/21/02 | 11:27 | 6/22/02  |
| 199909 | 062102-21   | Soil   | 6/21/02 | 11:32 | 6/22/02  |

0 This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

| · · · · · · · · · · · · · · · · · · · |         |         | BTEX         | · · · · · · · · · · · · · · · · · · · |            | TPH DRO | TPH GRO |
|---------------------------------------|---------|---------|--------------|---------------------------------------|------------|---------|---------|
|                                       | Benzene | Toluene | Ethylbenzene | M,P,O-Xylene                          | Total BTEX | DRO     | GRO     |
| Sample - Field Code                   | (ppm)   | (ppm)   | (ppm)        | (ppm)                                 | (ppm)      | (ppm)   | (ppm)   |
| 199901 - 062102-13                    | < 0.010 | < 0.010 | <0.010       | <0.010                                | < 0.010    | 69.8    | <1.00   |
| 199902 - 062102-14                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | 109     | <1.00   |
| 199903 - 062102-15                    | < 0.010 | < 0.010 | < 0.010      | 0.0106                                | 0.0106     | 179     | <1.00   |
| 199904 - 062102-16                    | < 0.010 | < 0.010 | 0.0167       | 0.0393                                | 0.056      | 1960    | 12.5    |
| 199905 - 062102-17                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | <50     | 2.32    |
| 199906 - 062102-18                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | <50     | <1.00   |
| 199907 - 062102-19                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | <50     | <1.00   |
| 199908 - 062102-20                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | <50     | < 1.00  |
| 199909 - 062102-21                    | < 0.010 | < 0.010 | < 0.010      | < 0.010                               | < 0.010    | 1530    | <1.00   |



## Analytical and Quality Control Report

Martyne Kieling OCD Hobbs Office 1625 N. French Drive Hobbs, NM 88240 Report Date:

July 9, 2002

Order ID Number: A02062409

Project Number:2-517-000051Project Name:Goodwin Treating PlantProject Location:8 Miles West of Hobbs, NM

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to Trace-Analysis, Inc.

|        |             |        | Date    | Time  | Date     |
|--------|-------------|--------|---------|-------|----------|
| Sample | Description | Matrix | Taken   | Taken | Received |
| 199901 | 062102-13   | Soil   | 6/21/02 | 9:47  | 6/22/02  |
| 199902 | 062102-14   | Soil   | 6/21/02 | 9:52  | 6/22/02  |
| 199903 | 062102-15   | Soil   | 6/21/02 | 10:55 | 6/22/02  |
| 199904 | 062102-16   | Soil   | 6/21/02 | 11:00 | 6/22/02  |
| 199905 | 062102-17   | Soil   | 6/21/02 | 11:04 | 6/22/02  |
| 199906 | 062102-18   | Soil   | 6/21/02 | 11:12 | 6/22/02  |
| 199907 | 062102-19   | Soil   | 6/21/02 | 11:17 | 6/22/02  |
| 199908 | 062102-20   | Soil   | 6/21/02 | 11:27 | 6/22/02  |
| 199909 | 062102-21   | Soil   | 6/21/02 | 11:32 | 6/22/02  |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed. Note: the RDL is equal to MQL for all organic analytes including TPH.

The test results contained within this report meet all requirements of LAC 33:I unless otherwise noted.

This report consists of a total of 19 pages and shall not be reproduced except in its entirety including the chain of custody (COC), without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Report Date: July 9, 2002 2-517-000051 Order Number: A02062409 Goodwin Treating Plant Page Number: 2 of 19 8 Miles West of Hobbs, NM

# **Analytical Report**

#### Sample: 199901 - 062102-13

| Analysis:<br>Analyst: | BTEX<br>CG | Analytical Me<br>Preparation N | ethod: S 8021B<br>Aethod: S 5035 | QC Batch:<br>Prep Batch: | QC21324<br>PB20267 | Date Analyzed:<br>Date Prepared: | $\frac{6}{24}$       |
|-----------------------|------------|--------------------------------|----------------------------------|--------------------------|--------------------|----------------------------------|----------------------|
| Param                 |            | Flag                           | Result                           | Units                    | D                  | ilution                          | $\operatorname{RDL}$ |
| Benzene               |            |                                | < 0.010                          | mg/Kg                    |                    | 10                               | 0.001                |
| Toluene               |            |                                | < 0.010                          | mg/Kg                    |                    | 10                               | 0.001                |
| Ethylbenze            | ene        |                                | < 0.010                          | mg/Kg                    |                    | 10                               | 0.001                |
| M,P,O-Xyl             | ene        |                                | < 0.010                          | mg/Kg                    |                    | 10                               | 0.001                |
| Total BTE             | X          |                                | < 0.010                          | mg/Kg                    |                    | 10                               | 0.001                |
|                       |            |                                |                                  |                          |                    |                                  |                      |

|                           |      |                   |       |          | Spike  | Percent  | Recovery |
|---------------------------|------|-------------------|-------|----------|--------|----------|----------|
| Surrogate                 | Flag | $\mathbf{Result}$ | Units | Dilution | Amount | Recovery | Limits   |
| $\overline{\mathrm{TFT}}$ |      | 0.758             | mg/Kg | 10       | 1      | 76       | 70 - 130 |
| 4-BFB                     |      | 0.704             | mg/Kg | 10       | 1      | 70       | 70 - 130 |

## Sample: 199901 - 062102-13

| Analysis:<br>Analyst: | TPH DRO<br>MM | Analytical Method:<br>Preparation Method: | Mod. 8015B<br>3550 B | QC Batch:<br>Prep Batch: | QC21642<br>PB20525 | Date Analyzed:<br>Date Prepared: | 6/25/02<br>6/25/02   |
|-----------------------|---------------|-------------------------------------------|----------------------|--------------------------|--------------------|----------------------------------|----------------------|
| Param                 | Flag          | Result                                    | Units                | Dilu                     | tion               |                                  | $\operatorname{RDL}$ |
| DRO                   | ·····         | 69.8                                      | mg/Kg                | 1                        |                    |                                  | 50                   |
| -                     |               |                                           |                      |                          |                    |                                  |                      |

|               |      |        |       |          | Spike  | Percent  | Recovery |
|---------------|------|--------|-------|----------|--------|----------|----------|
| Surrogate     | Flag | Result | Units | Dilution | Amount | Recovery | Limits   |
| n-Triacontane |      | 179    | mg/Kg | 1        | 150    | 119      | 70 - 130 |

#### Sample: 199901 - 062102-13

| Analysis:<br>Analyst: | TPH GRO<br>DN | Analytical Method:<br>Preparation Method: | 8015B<br>5035 | QC Batch:<br>Prep Batch: | QC21575 $PB20472$ | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02 |
|-----------------------|---------------|-------------------------------------------|---------------|--------------------------|-------------------|----------------------------------|------------------|
| Param                 | Flag          | Result                                    | Units         | D                        | ilution           |                                  | RDL              |
| GRO                   |               | <1.00                                     | mg/Kg         |                          | 10                |                                  | 0.10             |

| _         |      |                         |                  |          | Spike                   | Percent  | Recovery |
|-----------|------|-------------------------|------------------|----------|-------------------------|----------|----------|
| Surrogate | Flag | $\operatorname{Result}$ | $\mathbf{Units}$ | Dilution | $\operatorname{Amount}$ | Recovery | Limits   |
| TFT       |      | 1.08                    | mg/Kg            | 10       | 0.10                    | 108      | 70 - 130 |
| 4-BFB     | 1    | 0.645                   | mg/Kg            | 10       | 0.10                    | 64       | 70 - 130 |

<sup>1</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

| Report Dat<br>2-517-00005                 | e: July 9, 20                  | 002                                                     | Order Numbe<br>Goodwin Tr      | er: A02062409<br>eating Plant |                                 | Page Numl<br>8 Miles West of I                     | per: 3 of 19<br>Hobbs, NM                  |
|-------------------------------------------|--------------------------------|---------------------------------------------------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------------------------|--------------------------------------------|
| Sample                                    | 100002                         | 062102 14                                               |                                |                               |                                 |                                                    |                                            |
| Analysis:<br>Analyst:                     | BTEX<br>CG                     | Analytical Method:<br>Preparation Method                | S 8021B<br>l: S 5035           | QC Batch:<br>Prep Batch:      | QC21324<br>PB20267              | Date Analyzed:<br>Date Prepared:                   | 6/24/02<br>6/24/02                         |
| Param                                     |                                | Flag                                                    | Result                         | Units                         | Dil                             | ition                                              | RDL                                        |
| Benzene                                   |                                | it. alateite                                            | < 0.010                        | mg/Kg                         |                                 | 10                                                 | 0.001                                      |
| Toluene                                   |                                |                                                         | < 0.010                        | mg/Kg                         | -                               | 10                                                 | 0.001                                      |
| Ethylbenzer                               | ne                             |                                                         | < 0.010                        | m mg/Kg                       |                                 | 10                                                 | 0.001                                      |
| M,P,O-Xyle                                | ne                             |                                                         | < 0.010                        | mg/Kg                         |                                 | 10                                                 | 0.001                                      |
| Total BTEX                                | ζ                              |                                                         | <0.010                         | mg/Kg                         |                                 | 10                                                 | 0.001                                      |
| Surrogate                                 | Flag                           | Result                                                  | Units                          | Dilution                      | Spike<br>Amount                 | Percent<br>Recovery                                | Recovery<br>Limits                         |
| TFT                                       |                                | 0.795                                                   | mg/Kg                          | 10                            | 1                               | 80                                                 | 70 - 130                                   |
| 4-BFB                                     |                                | 0.746                                                   | mg/Kg                          | 10                            | 1                               | 75                                                 | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:          | <b>199902</b><br>TPH DRO<br>MM | - 062102-14<br>Analytical Metho<br>Preparation Meth     | d: Mod. 80<br>10d: 3550 B      | 15B QC Bate<br>Prep Bat       | h: QC21642<br>tch: PB20525      | Date Analyzed:<br>Date Prepared:                   | 6/25/02<br>6/25/02                         |
| Param                                     | Flag                           | $\mathbf{Result}$                                       | Un                             | its                           | Dilution                        |                                                    | RDL                                        |
| DRO                                       |                                | 109                                                     | mg/                            | ′Kg                           | 1                               | 1949 Annald Anna ann an Anna Anna Anna Anna Anna A | 50                                         |
| Surrogate                                 | Fl                             | ag Result                                               | Units                          | Dilution                      | Spike<br>Amount                 | Percent<br>Recovery                                | Recovery<br>Limits                         |
| n-Triaconta                               | ne                             | 183                                                     | mg/Kg                          | 1                             | 150                             | 122                                                | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:          | <b>199902</b><br>TPH GRC<br>DN | - 062102-14<br>Analytical Meth<br>Preparation Me        | nod: 8015B<br>thod: 5035       | QC Batch:<br>Prep Batch       | QC21575<br>:: PB20472           | Date Analyzed:<br>Date Prepared:                   | 7/2/02<br>7/2/02                           |
| Param                                     | Flag                           | Result                                                  | Un                             | its                           | Dilution                        |                                                    | $\operatorname{RDL}$                       |
| GRO                                       |                                | <1.00                                                   | mg/                            | ′Kg                           | 10                              |                                                    | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB                 | Flag                           | Result<br>1.05<br>0.696                                 | Units<br>mg/Kg<br>mg/Kg        | Dilution<br>10<br>10          | Spike<br>Amount<br>0.10<br>0.10 | Percent<br>Recovery<br>105<br>70                   | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>199903</b><br>BTEX<br>CG    | - 062102-15<br>Analytical Method:<br>Preparation Method | S 8021B<br>d: S 5035<br>Begult | QC Batch:<br>Prep Batch:      | QC21324<br>PB20461              | Date Analyzed:<br>Date Prepared:                   | 6/24/02<br>7/2/02                          |
| Renzene                                   |                                | t lag                                                   |                                | ma/Ka                         |                                 | 10                                                 | <u></u>                                    |
| Toluene                                   |                                |                                                         | < 0.010                        | mg/Kg                         |                                 | 10                                                 | 0.001                                      |
| · · · · · · · · · · · · · · · · · · ·     |                                |                                                         |                                |                               |                                 | ·····                                              |                                            |

Continued ...

| Report Date<br>2-517-00005       | e: July 9, 200<br>1            | 02                                                | Order Num<br>Goodwin       | ber: A02062409<br>Treating Plant |                               | Page Numb<br>8 Miles West of F   | per: 4 of 19<br>Iobbs, NM |
|----------------------------------|--------------------------------|---------------------------------------------------|----------------------------|----------------------------------|-------------------------------|----------------------------------|---------------------------|
| Continue                         | d Sample:                      | 199903 Analysis:                                  | BTEX                       |                                  |                               |                                  |                           |
| Param                            | · · · · ·                      | Flag                                              | Result                     | $\mathbf{Units}$                 | $\operatorname{Dil}$          | ution                            | $\operatorname{RDL}$      |
| Ethylbenzen                      | le                             | Ŭ                                                 | < 0.010                    | mg/Kg                            |                               | 10                               | 0.001                     |
| M,P,O-Xyler                      | ne                             |                                                   | 0.0106                     | mg/Kg                            |                               | 10                               | 0.001                     |
| Total BTEX                       | Σ                              |                                                   | 0.0106                     | mg/Kg                            |                               | 10                               | 0.001                     |
|                                  |                                |                                                   |                            |                                  |                               |                                  |                           |
|                                  |                                |                                                   |                            |                                  |                               | •                                |                           |
|                                  |                                |                                                   |                            |                                  | $\mathbf{Spike}$              | Percent                          | Recovery                  |
| Surrogate                        | Flag                           | Result                                            | Units                      | Dilution                         | Amount                        | Recovery                         | Limits                    |
| $\mathbf{TFT}$                   |                                | 0.916                                             | m mg/Kg                    | 10                               | 1                             | 92                               | 70 - 130                  |
| 4-BFB                            |                                | 0.847                                             | mg/Kg                      | 10                               | 1                             | 85                               | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>199903</b><br>TPH DRO<br>MM | - 062102-15<br>Analytical Meth<br>Preparation Met | od: Mod.<br>hod: 3550 I    | 8015B QC Ba<br>3 Prep B          | tch: QC21642<br>atch: PB20525 | Date Analyzed:<br>Date Prepared: | 6/25/02 $6/25/02$         |
| Damana                           | Flor                           | Pogult                                            | т                          | Inito                            | Dilution                      |                                  | RDI                       |
|                                  | r lag                          | 170                                               |                            | Juits                            | 1                             |                                  | 50                        |
|                                  | ·                              | 179                                               | <b>11</b>                  | ig/ng                            | L                             |                                  |                           |
| Surrogate                        | Fla                            | ag Result                                         | Units                      | Dilution                         | Spike<br>Amount               | Percent<br>Recovery              | Recovery<br>Limits        |
| n-Triaconta:                     | ne                             | 243                                               | mg/Kg                      | 1                                | 150                           | 162                              | 70 - 130                  |
| Sample:<br>Analysis:<br>Analyst: | <b>199903</b><br>TPH GRO<br>DN | - 062102-15<br>Analytical Me<br>Preparation M     | thod: 8018<br>[ethod: 5038 | 5B QC Batch<br>5 Prep Bate       | ı: QC21579<br>ch: PB20461     | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02          |
| Param                            | Flag                           | Result                                            | 1                          | Units                            | Dilution                      |                                  | $\operatorname{RDL}$      |
| GRO                              |                                | <1.00                                             | n                          | ng/Kg                            | 10                            |                                  | 0.10                      |
| C                                |                                | D14                                               | TT                         |                                  | Spike                         | Percent                          | Recovery                  |
| Surrogate                        | Flag                           | 1 10                                              |                            |                                  | Amount                        | 110                              | 70 120                    |
|                                  |                                | 1.10                                              | mg/Kg                      | 10                               | 0.10                          | 110<br>81                        | 70 - 130                  |
|                                  | 100004                         | 0.012                                             | ing/ Kg                    | 10                               | 0.10                          |                                  | 10 - 130                  |
| Sample:                          | 199904                         | - 002102-10                                       | 1. C 0001T                 |                                  | 0.001204                      | Data Amal                        | 6/91/09                   |
| Analysis:                        | BLEX                           | Analytical Method                                 | 1: S 8021E                 | S QU Batch:                      | QU21324                       | Date Analyzed:                   | 0/24/02                   |
| Analyst:                         | CG                             | Preparation Metho                                 | od: S 5035                 | Prep Batch                       | n: PB20267                    | Date Prepared:                   | 6/24/02                   |
| Param                            |                                | Flag                                              | Result                     | Units                            | Di                            | lution                           | RDL                       |
| Benzene                          |                                | -0                                                | <0.010                     | mg/Kg                            | <u> </u>                      | 10                               | 0.001                     |
| Toluene                          |                                |                                                   | < 0.010                    | mg/Kg                            |                               | 10                               | 0.001                     |
| Ethylbenze                       | ne                             |                                                   | 0.0167                     | mg/Kg                            | -<br>                         | 10                               | 0.001                     |
| M,P,O-Xyle                       | ene                            |                                                   | 0.0393                     | mg/Kg                            | -<br>5                        | 10                               | 0.001                     |
| Total BTE                        | X                              |                                                   | 0.056                      | mg/Kg                            | 5                             | 10                               | 0.001                     |
|                                  |                                |                                                   |                            |                                  |                               |                                  |                           |

<sup>2</sup>Surrogate out of recovery limits due to peak interference. LCS, ICV, and CCV show the process is in control.

| Report Dat<br>2-517-00005        | Report Date: July 9, 2002<br>2-517-000051 |                                                         | Order Numb<br>Goodwin T     | er: A02062409<br>reating Plant | Page Number: 5 of 19<br>8 Miles West of Hobbs, NM |                                  |                                |
|----------------------------------|-------------------------------------------|---------------------------------------------------------|-----------------------------|--------------------------------|---------------------------------------------------|----------------------------------|--------------------------------|
| Surrogate                        | Flag                                      | Result                                                  | Units                       | Dilution                       | Spike<br>Amount                                   | Percent<br>Recovery              | Recovery<br>Limits             |
| TFT                              |                                           | 0.772                                                   | mg/Kg                       | 10                             | 1                                                 | 77                               | 70 - 130                       |
| <u>4-BFB</u>                     |                                           | 0.807                                                   | mg/Kg                       | 10                             | 1                                                 | 8/                               | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>199904</b><br>TPH DRO<br>MM            | - 062102-16<br>Analytical Meth<br>Preparation Met       | od: Mod. 80<br>hod: 3550 B  | 015B QC Bate<br>Prep Ba        | ch: QC21607<br>tch: PB20496                       | Date Analyzed:<br>Date Prepared: | 6/24/02 $6/24/02$              |
| Danama                           | Ele «                                     | Docult                                                  | Τ.                          | .:to                           | Dilution                                          |                                  | וחק                            |
| DPO                              | <u> </u>                                  |                                                         | 01                          |                                | 1                                                 |                                  | <u>50</u>                      |
|                                  |                                           | 1900                                                    | IIIg                        | / Kg                           | 1                                                 |                                  |                                |
| Surrogate                        | Fla                                       | ag Result                                               | Units                       | Dilution                       | Spike<br>Amount                                   | Percent<br>Recovery              | Recovery<br>Limits             |
| n-Triaconta                      | ne                                        | <sup>3</sup> 480                                        | mg/Kg                       | 5                              | 150                                               | 320                              | 70 - 130                       |
| Analysis:<br>Analyst:<br>Param   | TPH GRO<br>DN                             | - 062102-16<br>Analytical Me<br>Preparation M<br>Besult | thod: 8015E<br>lethod: 5035 | B QC Batch:<br>Prep Batch      | QC21575<br>n: PB20472                             | Date Analyzed:<br>Date Prepared: | 7/2/02<br>7/2/02<br>BDL        |
| CRO                              | Flag                                      | 12.5                                                    | 01                          | /Ka                            |                                                   |                                  |                                |
|                                  |                                           | 12.0                                                    |                             | / Kg                           | 10                                                |                                  | 0.10                           |
| Surrogate                        | Flag                                      | Result                                                  | Units                       | Dilution                       | Spike<br>Amount                                   | Percent<br>Recovery              | Recovery<br>Limits             |
| TFT<br>4 DED                     |                                           | 0.676                                                   | mg/Kg                       | 10                             | 0.10                                              | 68                               | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>199905</b><br>BTEX<br>CG               | - 062102-17<br>Analytical Method<br>Preparation Method  | d: S 8021B<br>od: S 5035    | QC Batch:<br>Prep Batch:       | QC21324<br>PB20267                                | Date Analyzed:<br>Date Prepared: | 6/24/02<br>6/24/02             |
| Param                            |                                           | Flag                                                    | Result                      | Units                          | Dil                                               | ution                            | RDL                            |
| Benzene                          |                                           |                                                         | < 0.010                     | mg/Kg                          |                                                   | 10                               | 0.001                          |
| Toluene                          |                                           |                                                         | < 0.010                     | mg/Kg                          |                                                   | 10                               | 0.001                          |
| Ethylbenze                       | ne                                        |                                                         | < 0.010                     | mg/Kg                          |                                                   | 10                               | 0.001                          |
| M,P,O-Xyle                       | ene                                       |                                                         | <0.010                      | mg/Kg                          |                                                   | 10                               | 0.001                          |
| Total BTE                        | Λ                                         |                                                         | <0.010                      | mg/Kg                          |                                                   | 10                               | 0.001                          |
| Surrogate                        | Flag                                      | Result                                                  | Units<br>mg/Kg              | Dilution                       | Spike<br>Amount                                   | Percent<br>Recovery<br>84        | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                            |                                           | 0.770                                                   | mg/Kg                       | 10                             | 1                                                 | 77                               | 70 - 130                       |
|                                  |                                           |                                                         | 07=-0                       |                                |                                                   |                                  |                                |

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<sup>3</sup>Poor surrogate recovery due to dilution. LCS and LCSD show the process is in control. <sup>4</sup>Low TFT surrogate recovery due to matrix interference. BFB surrogate recovery shows the method to be in control.

| Report Dat<br>2-517-00005                                   | e: July 9, 20                  | 02                                                   | Order Nu<br>Goodwir                            | mber: A(<br>1 Treatin | 2062409<br>g Plant               |                           | Page Numb<br>8 Miles West of F       | Page Number: 6 of 19<br>8 Miles West of Hobbs, NM |  |
|-------------------------------------------------------------|--------------------------------|------------------------------------------------------|------------------------------------------------|-----------------------|----------------------------------|---------------------------|--------------------------------------|---------------------------------------------------|--|
| Sample:<br>Analysis:<br>Analyst:                            | <b>199905</b><br>TPH DRO<br>MM | - 062102-17<br>Analytical Meth<br>Preparation Met    | od: Mod.<br>bod: 3550                          | . 8015B<br>B          | QC Batch<br>Prep Bate            | n: QC21607<br>ch: PB20496 | Date Analyzed:<br>Date Prepared:     | 6/24/02<br>6/24/02                                |  |
| Param                                                       | Flag                           | Result                                               |                                                | Units                 | I                                | Dilution                  |                                      | RDL                                               |  |
| DRO                                                         | ······                         | <50                                                  | 1                                              | mg/Kg                 |                                  | 1                         |                                      | 50                                                |  |
| Surrogate<br>n-Triaconta                                    | Fla                            | ag Result<br>198                                     | Units<br>mg/Kg                                 | Di                    | lution<br>1                      | Spike<br>Amount<br>150    | Percent<br>Recovery<br>130           | Recovery<br>Limits<br>70 - 130                    |  |
| Sample:<br>Analysis:<br>Analyst:                            | <b>199905</b><br>TPH GRO<br>DN | - 062102-17<br>Analytical Me<br>Preparation M        | thod: 801<br>Iethod: 503                       | 15B (<br>35 H         | QC Batch:<br>Prep Batch:         | QC21575<br>PB20472        | Date Analyzed:<br>Date Prepared:     | 7/2/02<br>7/2/02                                  |  |
| Param                                                       | Flag                           | Result                                               |                                                | Units                 | I                                | Dilution                  |                                      | RDL                                               |  |
| GRO                                                         |                                | 2.32                                                 | ]                                              | mg/Kg                 |                                  | 10                        |                                      | 0.10                                              |  |
| Surrogate<br>TFT                                            | Flag<br>5                      | Result<br>1.43                                       | Units<br>mg/Kg                                 | Dilu<br>1             | ution                            | Spike<br>Amount<br>0.10   | Percent<br>Recovery<br>143           | Recovery<br>Limits<br>70 - 130                    |  |
| 4-BFB                                                       |                                | 0.749                                                | mg/Kg                                          | 1                     | 0                                | 0.10                      | 75                                   | 70 - 130                                          |  |
| Sample:<br>Analysis:<br>Analyst:                            | <b>199906</b><br>BTEX<br>CG    | - 062102-18<br>Analytical Method<br>Preparation Meth | d: S 80211<br>od: S 5035                       | B Q0<br>Pr            | C Batch:<br>ep Batch:            | QC21324<br>PB20267        | Date Analyzed:<br>Date Prepared:     | 6/24/02<br>6/24/02                                |  |
| Param                                                       |                                | Flag                                                 | Besult                                         |                       | Units                            | Dil                       | ution                                | BDL                                               |  |
| Benzene<br>Toluene<br>Ethylbenze<br>M,P,O-Xyle<br>Total BTE | ne<br>ene<br>X                 |                                                      | <0.010<br><0.010<br><0.010<br><0.010<br><0.010 |                       | mg/Kg<br>mg/Kg<br>mg/Kg<br>mg/Kg |                           | 10<br>10<br>10<br>10<br>10<br>10     | 0.001<br>0.001<br>0.001<br>0.001<br>0.001         |  |
| Surrogate<br>TFT<br>4-BFB                                   | Flag                           | <u>Result</u><br>0.914<br>0.859                      | Units<br>mg/Kg<br>mg/Kg                        | Dilu<br>1<br>1        | ution<br>.0<br>.0                | Spike<br>Amount<br>1<br>1 | Percent<br>Recovery<br>91<br>85      | Recovery<br>Limits<br>70 - 130<br>70 - 130        |  |
| Sample:<br>Analysis:<br>Analyst:                            | <b>199906</b><br>TPH DRO<br>MM | - 062102-18<br>Analytical Meth<br>Preparation Me     | nod: Mod<br>thod: 3550                         | . 8015B<br>B          | QC Batc<br>Prep Bat              | h: QC21607<br>ch: PB20496 | 7 Date Analyzed:<br>5 Date Prepared: | 6/24/02<br>6/24/02                                |  |

| Report Date<br>2-517-00005                | e: July 9, 200<br>1                      | )2                                                          | Order<br>Good           | Number:<br>dwin Trea       | A02062409<br>ting Plant |                         |                          | Page Numb<br>8 Miles West of I       | er: 7 of 19<br>Iobbs, NM                   |
|-------------------------------------------|------------------------------------------|-------------------------------------------------------------|-------------------------|----------------------------|-------------------------|-------------------------|--------------------------|--------------------------------------|--------------------------------------------|
| Continue                                  | d Sample                                 | 199006 Analysis:                                            | трн г                   | )R()                       |                         |                         |                          |                                      |                                            |
| Param                                     | Flag                                     | Result                                                      |                         | Units                      | 3                       | Diluti                  | on                       |                                      | RDL                                        |
| Param                                     | Flag                                     | Besult                                                      |                         | Units                      | s.                      | Diluti                  | on                       |                                      | RDL                                        |
| DRO                                       | 1 1008                                   | <50                                                         |                         | mg/K                       | σ                       | 1                       |                          |                                      | 50                                         |
| <u></u>                                   |                                          |                                                             | ••• •• ••               |                            | 8                       | -                       |                          |                                      |                                            |
|                                           |                                          |                                                             |                         |                            |                         |                         |                          |                                      |                                            |
| 0                                         |                                          |                                                             | <b>T</b> T -            | .,                         |                         | S                       | pike                     | Percent                              | Recovery                                   |
| Surrogate                                 | Flag                                     | g Result                                                    |                         | its                        | Dilution                | AI                      | nount                    | Recovery                             | Limits                                     |
| n-Triacontar                              | ie                                       | 195                                                         | mg/                     | Kg                         | 1                       |                         | 150                      | 130                                  | 70 - 130                                   |
| Sample:                                   | 199906 -                                 | 062102-18                                                   |                         | 001 <b>F</b>               |                         |                         |                          |                                      | <b>F</b> (0. (00)                          |
| Analysis:                                 | TPH GRO                                  | Analytical Met                                              | thod:                   | 8015B                      | QC Batch                | 1: QC                   | 21575                    | Date Analyzed:                       | $\frac{7}{2}$                              |
| Analyst:                                  | DIN                                      | Preparation M                                               | letnod:                 | 0030                       | Prep Bate               | ch: Pr                  | 520472                   | Date Prepared:                       | 1/2/02                                     |
| Param                                     | Flag                                     | Result                                                      |                         | Units                      | 5                       | Diluti                  | on                       |                                      | RDL                                        |
| GRO                                       |                                          | <1.00                                                       |                         | mg/K                       | g                       | 10                      |                          |                                      | 0.10                                       |
| Surrogate<br>TFT<br>4-BFB<br>Sample:      | Flag                                     | Result<br>1.07<br>0.808                                     | Units<br>mg/Kg<br>mg/Kg | g<br>g                     | Dilution<br>10<br>10    | Sp<br>Am<br>0.<br>0.    | oike<br>ount<br>10<br>10 | Percent<br>Recovery<br>107<br>81     | Recovery<br>Limits<br>70 - 130<br>70 - 130 |
| Analysis:                                 | BTEX                                     | Analytical Method                                           | l: 58                   | 021B                       | QC Batch:               | QC                      | 21324                    | Date Analyzed:                       | 6/24/02                                    |
| Analyst:                                  | CG                                       | Preparation Metho                                           | d: S5                   | 035                        | Prep Batch              | : PB2                   | 20267                    | Date Prepared:                       | 6/24/02                                    |
| <b>J</b>                                  |                                          |                                                             |                         |                            | Trop Daton              |                         |                          | roparoa.                             | 0// 0-                                     |
| Param                                     |                                          | $\mathbf{Flag}$                                             | Resul                   | lt                         | Units                   |                         | Di                       | lution                               | RDL                                        |
| Benzene                                   |                                          |                                                             | < 0.01                  | 0                          | mg/Kg                   |                         |                          | 10                                   | 0.001                                      |
| Toluene                                   |                                          |                                                             | < 0.01                  | 0                          | m mg/Kg                 | ;                       |                          | 10                                   | 0.001                                      |
| Ethylbenzer                               | ie                                       |                                                             | < 0.01                  | 0                          | m mg/Kg                 | ;                       |                          | 10                                   | 0.001                                      |
| M,P,O-Xyle                                | ne                                       |                                                             | < 0.01                  | 0                          | mg/Kg                   |                         |                          | 10                                   | 0.001                                      |
| Total BTEX                                | <u> </u>                                 |                                                             | < 0.01                  | .0                         | mg/Kg                   |                         |                          | 10                                   | 0.001                                      |
| Surrogate                                 | Flag                                     | Result                                                      | Units                   |                            | Dilution                | Sı<br>Am                | oike<br>Iount            | Percent<br>Recovery                  | Recovery<br>Limits                         |
| TFT                                       |                                          | 0.808                                                       | mg/K                    | g                          | 10                      |                         | 1                        | 81                                   | 70 - 130                                   |
| 4-BFB                                     |                                          | 0.749                                                       | mg/K                    | g                          | 10                      |                         | 1                        | 75                                   | 70 - 130                                   |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>199907</b> -<br>TPH DRO<br>MM<br>Flag | - 062102-19<br>Analytical Meth<br>Preparation Met<br>Result | od: 1<br>thod: 3        | Mod. 801<br>3550 B<br>Unit | 5B QC Ba<br>Prep B<br>s | tch:<br>Satch:<br>Dilut | QC2160<br>PB2049<br>ion  | 7 Date Analyzed:<br>6 Date Prepared: | 6/24/02<br>6/24/02<br>RDL                  |
| DRO                                       |                                          | <50                                                         |                         | mg/k                       | Kg                      | 1                       |                          |                                      | 50                                         |

| Report Dat<br>2-517-00005                 | e: July 9, 200                   | 02                                                          | Order Num<br>Goodwin                | Page Number: 8 of 19<br>8 Miles West of Hobbs, NM |                           |                                           |                                |
|-------------------------------------------|----------------------------------|-------------------------------------------------------------|-------------------------------------|---------------------------------------------------|---------------------------|-------------------------------------------|--------------------------------|
| Surrogate                                 | Fla                              | g Result                                                    | Units                               | Dilution                                          | Spike<br>Amount           | Percent<br>Recovery                       | Recovery<br>Limits             |
| n-Triaconta                               | ne                               | 196                                                         | mg/Kg                               | 1                                                 | 150                       | 130                                       | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst:          | <b>199907</b> -<br>TPH GRO<br>DN | - 062102-19<br>Analytical Me<br>Preparation M               | ethod: 8015<br>Aethod: 5035         | B QC Batch<br>Prep Batc                           | : QC21575<br>h: PB20472   | Date Analyzed:<br>Date Prepared:          | 7/2/02<br>7/2/02               |
| Param                                     | Flag                             | Result                                                      | τ                                   | Jnits                                             | Dilution                  |                                           | $\operatorname{RDL}$           |
| GRO                                       | <u> </u>                         | <1.00                                                       | m                                   | g/Kg                                              | 10                        |                                           | 0.10                           |
| Surrogate<br>TFT                          | Flag                             | Result<br>1.01                                              | Units<br>mg/Kg                      | Dilution<br>10                                    | Spike<br>Amount<br>0.10   | Percent<br>Recovery<br>101                | Recovery<br>Limits<br>70 - 130 |
| 4-BFB                                     |                                  | 0.702                                                       | mg/Kg                               | 10                                                | 0.10                      | 70                                        | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst:<br>Param | <b>199908</b><br>BTEX<br>CG      | - 062102-20<br>Analytical Metho<br>Preparation Meth<br>Flag | d: S 8021B<br>aod: S 5035<br>Result | QC Batch:<br>Prep Batch:<br>Units                 | QC21324<br>PB20267<br>Dil | Date Analyzed:<br>Date Prepared:<br>ution | 6/24/02<br>6/24/02<br>RDL      |
| Benzene                                   |                                  |                                                             | < 0.010                             | mg/Kg                                             |                           | 10                                        | 0.001                          |
| Toluene                                   |                                  |                                                             | < 0.010                             | mg/Kg                                             |                           | 10                                        | 0.001                          |
| Ethylbenzer                               | ne                               |                                                             | < 0.010                             | mg/Kg                                             |                           | 10                                        | 0.001                          |
| M,P,O-Xyle                                | ene                              |                                                             | < 0.010                             | mg/Kg                                             |                           | 10                                        | 0.001                          |
| Total BTE                                 | X                                |                                                             | < 0.010                             | mg/Kg                                             |                           | 10                                        | 0.001                          |
|                                           |                                  |                                                             |                                     |                                                   | Spike                     | Percent                                   | Recovery                       |
| Surrogate                                 | Flag                             | Result                                                      | Units                               | Dilution                                          | Amount                    | Recovery                                  | Limits                         |
|                                           |                                  | 0.804                                                       | mg/Kg                               | 10                                                | 1                         | 80                                        | 70 - 130                       |
| Sample:                                   | 199908                           | - 062102-20                                                 | ing/itg                             | 10                                                | 1                         |                                           | 10 - 130                       |
| Analysis:                                 | TPH DRO                          | Analytical Met                                              | hod: Mod.                           | 8015B QC Bat                                      | tch: QC21607              | 7 Date Analyzed:                          | 6/24/02                        |
| Analyst:                                  | MM                               | Preparation M                                               | ethod: 3550 I                       | B Prep B                                          | atch: PB20496             | 5 Date Prepared:                          | 6/24/02                        |
| Param                                     | Flag                             | Result                                                      | t 1                                 | Units                                             | Dilution                  |                                           | RDL                            |
| DRO                                       |                                  | <50                                                         | ) n                                 | ng/Kg                                             | 1                         |                                           | 50                             |
|                                           |                                  |                                                             |                                     |                                                   | Spike                     | Percent                                   | Recovery                       |
| Surrogate                                 | <u> </u>                         | ag Result                                                   | Units                               | Dilution                                          | Amount                    | Recovery                                  | Limits                         |
| n-Triaconta                               | ine                              | 195                                                         | mg/Kg                               | 1                                                 | 150                       | 130                                       | 70 - 130                       |

|                                  |                                        |                                                           | 0.1                |                          | 1 00000 100               |                           |                                      | 0 (10                          |
|----------------------------------|----------------------------------------|-----------------------------------------------------------|--------------------|--------------------------|---------------------------|---------------------------|--------------------------------------|--------------------------------|
| Report Dat<br>2-517-00003        | te: July 9, 200<br>51                  | )2                                                        | Goc                | r Number:<br>odwin Treat | 8 Miles West of Hobbs, NM |                           |                                      |                                |
| Sample:                          | 199908 -                               | 062102-20                                                 |                    |                          |                           |                           |                                      |                                |
| Analysis:                        | TPH GRO                                | Analytical M                                              | ethod:             | 8015B                    | QC Batch:                 | QC21575                   | Date Analyzed:                       | 7/2/02                         |
| Analyst:                         | DN                                     | Preparation 1                                             | Method:            | 5035                     | Prep Batch                | n: PB20472                | Date Prepared:                       | 7/2/02                         |
| Param                            | Flag                                   | Resul                                                     | t                  | Units                    |                           | Dilution                  |                                      | RDL                            |
| GRO                              |                                        | <1.00                                                     | )                  | mg/Kg                    | 5                         | 10                        |                                      | 0.10                           |
|                                  |                                        |                                                           |                    |                          |                           |                           |                                      |                                |
|                                  |                                        |                                                           |                    |                          | •                         | Spike                     | Percent                              | Recoverv                       |
| Surrogate                        | Flag                                   | Result                                                    | Units              | s D                      | ilution                   | Amount                    | Recovery                             | Limits                         |
| TFT                              | 6                                      | 1.36                                                      | mg/K               | p                        | 10                        | 0.10                      | 136                                  | 70 - 130                       |
| 4-BFB                            |                                        | 0.744                                                     | mg/K               | e<br>g                   | 10                        | 0.10                      | 74                                   | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>199909</b> -<br>BTEX<br>CG          | - <b>062102-21</b><br>Analytical Metho<br>Preparation Met | d: S               | 8021B<br>5035            | QC Batch:<br>Prep Batch:  | QC21359<br>PB20297        | Date Analyzed:<br>Date Prepared:     | 6/25/02<br>6/25/02             |
| Param                            |                                        | Flag                                                      | Resu               | 1+                       | Units                     | بر<br>ا                   | ilution                              | BDI.                           |
| Benzene                          | ·····                                  | 1 10g                                                     |                    | 10<br>10                 | mg/Kg                     | D.                        | 10                                   | 0.001                          |
| Toluene                          |                                        |                                                           | <0.0               | 10                       | mg/Kg                     |                           | 10                                   | 0.001                          |
| Ethylbenze                       | ne                                     |                                                           | < 0.0              | 10                       | mg/Kg                     |                           | 10                                   | 0.001                          |
| M.P.O-Xvle                       | ene                                    |                                                           | < 0.0              | 10                       | mg/Kg                     |                           | 10                                   | 0.001                          |
| Total BTE                        | X                                      |                                                           | < 0.0              | 10                       | mg/Kg                     |                           | 10                                   | 0.001                          |
| Surrogate                        | Flag                                   | Result                                                    | Unit               | s I                      | Dilution                  | Spike<br>Amount           | Percent<br>Recovery                  | Recovery<br>Limits             |
| $\overline{\mathrm{TFT}}$        |                                        | 0.882                                                     | mg/K               |                          | 10                        | 1                         | 88                                   | 70 - 130                       |
| 4-BFB                            |                                        | 0.795                                                     | mg/K               | g                        | 10                        | 1                         | 80                                   | 70 - 130                       |
| Sample:<br>Analysis:<br>Analyst: | <b>199909</b><br>TPH DRO<br>MM         | - 062102-21<br>Analytical Me<br>Preparation M             | thod:<br>ethod:    | Mod. 8015<br>3550 B      | B QC Bate<br>Prep Ba      | ch: QC2160<br>tch: PB2049 | 7 Date Analyzed:<br>6 Date Prepared: | 6/24/02<br>6/24/02             |
| Param                            | Flag                                   | Resul                                                     | t                  | Units                    |                           | Dilution                  |                                      | RDL                            |
| DRO                              |                                        | 153                                                       | 0                  | mg/K                     | g                         | 1                         |                                      | 50                             |
|                                  | ************************************** |                                                           |                    |                          |                           |                           |                                      |                                |
| Surrogate<br>n-Triaconta         | Fla                                    | ng Result                                                 | U1<br>mg           | nits<br>/Kg              | Dilution<br>10            | Spike<br>Amount<br>150    | Percent<br>Recovery<br>397           | Recovery<br>Limits<br>70 - 130 |
| Sample:<br>Analysis:<br>Analyst: | <b>199909</b><br>TPH GRO<br>DN         | - 062102-21<br>Analytical M<br>Preparation                | lethod:<br>Method: | 8015B<br>5035            | QC Batch:<br>Prep Batch   | QC21575<br>h: PB20472     | Date Analyzed:<br>Date Prepared:     | 7/2/02<br>7/2/02               |

<sup>6</sup>High TFT due to peak interference. <sup>7</sup>Poor surrogate recovery due to dilution. LCS and LCSD show the process is in control.

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|-------------------------------------------|-----------------|---------------|------------------|--------------------------------------|----------------------------------------------------|-----------|----------------------|
| Param                                     | Flag            | Result        |                  | Units                                | Dilution                                           |           | RDL                  |
| GRO                                       |                 | <1.00         |                  | mg/Kg                                | 10                                                 | 0.1       |                      |
|                                           |                 |               |                  |                                      | Spike                                              | Percent   | Recovery             |
| Surrogate                                 | $\mathbf{Flag}$ | Result        | Units            | Dilution                             | Amount                                             | Recovery  | Limits               |
| TFT<br>4-BFB                              | 8               | 1.39<br>0.744 | mg/Kg<br>mg/Kg   | 10<br>10                             | 0.10<br>0.10                                       | 139<br>74 | 70 - 130<br>70 - 130 |

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## Quality Control Report Method Blank

| Method Blank | QCBatch: | QC21324 |       |                    |
|--------------|----------|---------|-------|--------------------|
| Param        | Flag     | Results | Units | Reporting<br>Limit |
| Benzene      |          | < 0.010 | mg/Kg | 0.001              |
| Toluene      |          | < 0.010 | mg/Kg | 0.001              |
| Ethylbenzene |          | < 0.010 | mg/Kg | 0.001              |
| M,P,O-Xylene |          | < 0.010 | mg/Kg | 0.001              |
| Total BTEX   |          | < 0.010 | mg/Kg | 0.001              |
|              |          |         |       |                    |

|           |                 |                   |       |          | $\mathbf{Spike}$ | Percent  | Recovery |
|-----------|-----------------|-------------------|-------|----------|------------------|----------|----------|
| Surrogate | $\mathbf{Flag}$ | $\mathbf{Result}$ | Units | Dilution | Amount           | Recovery | Limits   |
| TFT       |                 | 0.951             | mg/Kg | 10       | 1                | 95       | 70 - 130 |
| 4-BFB     |                 | 0.968             | mg/Kg | 10       | 1                | 96       | 70 - 130 |

Method Blank QCBatch: QC21359

|              |                       |         |                  | Reporting              |
|--------------|-----------------------|---------|------------------|------------------------|
| Param        | $\operatorname{Flag}$ | Results | $\mathbf{Units}$ | $\operatorname{Limit}$ |
| Benzene      |                       | < 0.010 | mg/Kg            | 0.001                  |
| Toluene      |                       | < 0.010 | mg/Kg            | 0.001                  |
| Ethylbenzene |                       | < 0.010 | m mg/Kg          | 0.001                  |
| M,P,O-Xylene |                       | < 0.010 | mg/Kg            | 0.001                  |
| Total BTEX   |                       | < 0.010 | mg/Kg            | 0.001                  |

|           |      |        |       |          | Spike  | Percent  | Recovery |
|-----------|------|--------|-------|----------|--------|----------|----------|
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits   |
| TFT       |      | 1.11   | mg/Kg | 10       | 1      | 111      | 70 - 130 |
| 4-BFB     |      | 0.994  | mg/Kg | 10       | 1      | 99       | 70 - 130 |

Method Blank

QCBatch: QC21575

| Param        | Flag |                                              | Re             | Results  |                                           | Units               |                      |  |
|--------------|------|----------------------------------------------|----------------|----------|-------------------------------------------|---------------------|----------------------|--|
| GRO          |      |                                              |                | <1       |                                           | mg/Kg               |                      |  |
| Surrogate    | Flag | Result                                       | Units          | Dilution | Spike<br>Amount                           | Percent<br>Recovery | Recovery<br>Limits   |  |
| TFT<br>4-BFB |      | $\begin{array}{c} 1.06 \\ 0.920 \end{array}$ | mg/Kg<br>mg/Kg | 10<br>10 | $\begin{array}{c} 0.10\\ 0.10\end{array}$ | 106<br>92           | 70 - 130<br>70 - 130 |  |

| 2-517-000051   | Order Numb<br>Goodwin T | ber: A02062409<br>Treating Plant |          | Page Number: 12 of 19<br>8 Miles West of Hobbs, NM |                     |                      |  |
|----------------|-------------------------|----------------------------------|----------|----------------------------------------------------|---------------------|----------------------|--|
| Method Blank   | QCBatch:                | QC21579                          |          |                                                    |                     |                      |  |
| Param          | Flag                    | Resu                             | lts      | Units                                              | Reporting<br>Limit  |                      |  |
| GRO            |                         | <                                | <1       | mg/Kg                                              | 0.10                |                      |  |
| Surrogate Flag | Result                  | Units                            | Dilution | ${ m Spike} \ { m Amount}$                         | Percent<br>Recovery | Recovery<br>Limits   |  |
| TFT<br>4-BFB   | $\frac{1.14}{0.927}$    | mg/Kg<br>mg/Kg                   | 10<br>10 | 0.10<br>0.10                                       | 114<br>93           | 70 - 130<br>70 - 130 |  |
| Method Blank   | QCBatch:                | QC21607                          |          |                                                    |                     |                      |  |
| Param          | Flag                    | Resu                             | lts      | Units                                              | Reporting<br>Limit  |                      |  |
| DRO            |                         | <50                              |          | mg/Kg                                              | 50                  |                      |  |
| Surrogata      | Popult                  | Unita                            | Dilution | Spike                                              | Percent             | Recovery             |  |
| n-Triacontane  | 180                     | mg/Kg                            | 1        | 150                                                | 120                 | 70 - 130             |  |
| Method Blank   | QCBatch:                | QC21642                          |          |                                                    |                     |                      |  |
| Param          | Flag                    |                                  | Results  |                                                    | Units               |                      |  |
| DRO            |                         | <                                | :50      | mg/Kg                                              | L 1                 | 50                   |  |
| Surrogate Flag | Result                  | Units                            | Dilution | Spike<br>Amount                                    | Percent<br>Recovery | Recovery<br>Limits   |  |
| ÷ ***          | 170                     | mg/Kg                            | 1        | 150                                                | 113                 | 70 - 130             |  |

| Param        | Result | Result | Units | Dil. | Added | Result  | $\% { m Rec}$ | RPD | Limit    | Limit |
|--------------|--------|--------|-------|------|-------|---------|---------------|-----|----------|-------|
|              |        |        |       |      |       |         |               |     |          |       |
| Benzene      | 0.999  | 1.01   | mg/Kg | 10   | 1     | < 0.010 | 99            | 1   | 70 - 130 | 20    |
| Toluene      | 0.994  | 1      | mg/Kg | 10   | 1     | < 0.010 | 99            | 0   | 70 - 130 | 20    |
| Ethylbenzene | 1.01   | 1.02   | mg/Kg | 10   | 1     | < 0.010 | 101           | 0   | 70 - 130 | 20    |
| M,P,O-Xylene | 3.07   | 3.09   | mg/Kg | 10   | 3     | < 0.010 | 102           | 0   | 70 - 130 | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.




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#### Order Number: A02062409 Goodwin Treating Plant

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| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $f LCSD \ Result$ | Units | Dilution | Spike<br>Amount | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{\% \ Rec} \end{array}$ | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|----------------------------------------------------------------|-------------------|-------|----------|-----------------|------------------------------------------------------------------|---------------|--------------------|
| TFT       | 0.917                                                          | 0.953             | mg/Kg | 10       | 1               | 91                                                               | 95            | 70 - 130           |
| 4-BFB     | 0.985                                                          | 0.992             | mg/Kg | 10       | 1               | 98                                                               | 99            | 70 - 130           |

Laboratory Control Spikes

QCBatch: QC21359

| Param        | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | LCSD<br>Result | Units | Dil. | Amount<br>Added | Matrix<br>Result | % Rec | RPD | % Rec<br>Limit | RPD<br>Limit |
|--------------|----------------------------------------------------------------|----------------|-------|------|-----------------|------------------|-------|-----|----------------|--------------|
| MTBE         | 1.04                                                           | 1.04           | mg/Kg | 10   | 1               | < 0.010          | 104   | 0   | 70 - 130       | 20           |
| Benzene      | 1.05                                                           | 1.04           | mg/Kg | 10   | 1               | < 0.010          | 105   | 0   | 70 - 130       | 20           |
| Toluene      | 1.03                                                           | 1.02           | mg/Kg | 10   | 1               | < 0.010          | 103   | 0   | 70 - 130       | 20           |
| Ethylbenzene | 1                                                              | 1              | mg/Kg | 10   | 1               | < 0.010          | 100   | 0   | 70 - 130       | 20           |
| M,P,O-Xylene | 2.94                                                           | 2.92           | mg/Kg | 10   | 3               | < 0.010          | 98    | 0   | 70 - 130       | 20           |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | LCS<br>Result | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | ${ m Spike} \ { m Amount}$ | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|---------------|-----------------------------------------------------------------|-------|----------|----------------------------|--------------|---------------|--------------------|
| TFT       | 1.08          | 1.1                                                             | mg/Kg | 10       | 1                          | 108          | 110           | 70 - 130           |
| 4-BFB     | 1.01          | 1.04                                                            | mg/Kg | 10       | 1                          | 101          | 104           | 70 - 130           |

### Laboratory Control Spikes QCBatch: QC21575

|       |                   |        |       |      | Spike  |        |               |     |                  |       |
|-------|-------------------|--------|-------|------|--------|--------|---------------|-----|------------------|-------|
|       | LCS               | LCSD   |       |      | Amount | Matrix |               |     | $\% { m Rec}$    | RPD   |
| Param | $\mathbf{Result}$ | Result | Units | Dil. | Added  | Result | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | Limit |
| GRO   | 9.36              | 9.75   | mg/Kg | 10   | • 1    | <1     | 94            | 0   | 80 - 120         | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | LCS<br>% Rec | LCSD<br>% Rec | Recovery<br>Limits |
|-----------|----------------------------------------------------------------|-----------------------------------------------------------------|-------|----------|-----------------|--------------|---------------|--------------------|
| TFT       | 0.89                                                           | 0.9                                                             | mg/Kg | 10       | 0.10            | 89           | 90            | 70 - 130           |
| 4-BFB     | 0.895                                                          | 0.947                                                           | mg/Kg | 10       | 0.10            | 89           | 95            | 70 - 130           |

Laboratory Control Spikes

QCBatch: QC21579

|       |                   |                   |       |      | Spike  |                   |               |     |                  |       |
|-------|-------------------|-------------------|-------|------|--------|-------------------|---------------|-----|------------------|-------|
|       | LCS               | LCSD              |       |      | Amount | Matrix            |               |     | $\% { m Rec}$    | RPD   |
| Param | $\mathbf{Result}$ | $\mathbf{Result}$ | Units | Dil. | Added  | $\mathbf{Result}$ | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | Limit |
| GRO   | 11                | 9.39              | mg/Kg | 10   | 1      | <1                | 110           | 15  | 80 - 120         | 20    |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate    | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{Result} \end{array}$ | $\begin{array}{c} { m LCSD} \\ { m Result} \end{array}$ | Units | Dilution | Spike<br>Amount | $\begin{array}{c} \mathrm{LCS} \\ \mathrm{\% \ Rec} \end{array}$ | $\begin{array}{c} \mathrm{LCSD} \\ \mathrm{\% \ Rec} \end{array}$ | Recovery<br>Limits |
|--------------|----------------------------------------------------------------|---------------------------------------------------------|-------|----------|-----------------|------------------------------------------------------------------|-------------------------------------------------------------------|--------------------|
| TFT          | 1.14                                                           | 0.92                                                    | mg/Kg | 10       | 0.10            | 114                                                              | 92                                                                | 70 - 130           |
| <u>4-BFB</u> | 0.98                                                           | 0.972                                                   | mg/Kg | 10       | 0.10            | 98                                                               | 97                                                                | 70 - 130           |

| Report I<br>2-517-00             | Date: July<br>0051 | 9, 2002                                             |                                | Order N<br>Goodv          | umber: A020<br>vin Treating I                          | 62409<br>Plant                                  |               | Page Number: 14 of 19<br>8 Miles West of Hobbs, NM |                               |                                                |  |
|----------------------------------|--------------------|-----------------------------------------------------|--------------------------------|---------------------------|--------------------------------------------------------|-------------------------------------------------|---------------|----------------------------------------------------|-------------------------------|------------------------------------------------|--|
| Labora                           | tory C             | ontrol Sp                                           | oikes                          | QCBatcl                   | n: QC21607                                             | 7                                               |               |                                                    |                               |                                                |  |
|                                  | LCS                | LCSD                                                |                                |                           | Spike<br>Amount                                        | Matrix                                          |               |                                                    | % Rec                         | RPD                                            |  |
| Param                            | Result             | $\mathbf{Result}$                                   | Units                          | Dil.                      | Added                                                  | Result                                          | $\% { m Rec}$ | RPD                                                | $\mathbf{Limit}$              | Limit                                          |  |
| DRO                              | <sup>9</sup> 259   | 248                                                 | mg/Kg                          | 1                         | 250                                                    | <50                                             | 103           | 4                                                  | 70 - 130                      | 20                                             |  |
| Surrogate                        |                    | LCS<br>Result                                       | LCSD<br>Result                 | Units                     | Dilution                                               | Spike<br>Amount                                 | L<br>%        | CS<br>Rec                                          | LCSD<br>% Rec                 | Recovery<br>Limits                             |  |
| Surrogate                        | tane               | LCS<br>Result<br>178                                | LCSD<br>Result<br>180          | Units<br>mg/Kg            | Dilution<br>1                                          | Spike<br>Amount<br>150                          | L<br>%<br>1   | CS<br>Rec<br>18                                    | LCSD<br>% Rec<br>120          | Recovery<br>Limits<br>70 - 130                 |  |
| Surrogate<br>n-Triacon           | tane               | LCS<br>Result<br>178<br>ontrol Sp                   | LCSD<br>Result<br>180          | Units<br>mg/Kg<br>QCBatch | Dilution<br>1<br>h: QC2164                             | Spike<br>Amount<br>150<br>2                     | L<br>%<br>1   | CS<br>Rec<br>18                                    | LCSD<br>% Rec<br>120          | Recovery<br>Limits<br>70 - 130                 |  |
| Surrogate<br>n-Triacon<br>Labora | tane<br>atory C    | LCS<br>Result<br>178<br>ontrol Sp<br>LCSD<br>Result | LCSD<br>Result<br>180<br>Dikes | Units<br>mg/Kg<br>QCBatcl | Dilution<br>1<br>h: QC2164<br>Spike<br>Amount<br>Added | Spike<br>Amount<br>150<br>2<br>Matrix<br>Besult | L<br>%<br>1   | CS<br>Rec<br>18                                    | LCSD<br>% Rec<br>120<br>% Rec | Recovery<br>Limits<br>70 - 130<br>RPD<br>Limit |  |

|               | LCS               | LCSD              |       |          | Spike  | LCS           | LCSD          | Recovery |
|---------------|-------------------|-------------------|-------|----------|--------|---------------|---------------|----------|
| Surrogate     | $\mathbf{Result}$ | $\mathbf{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| n-Triacontane | 169               | 167               | mg/Kg | 1        | 150    | 112           | 111           | 70 - 130 |

# Quality Control Report Matrix Spikes and Duplicate Spikes

**Matrix Spikes** 

QCBatch: QC21324

|              |                   |        |       |      | Spike  |         |               |     |                        |                        |
|--------------|-------------------|--------|-------|------|--------|---------|---------------|-----|------------------------|------------------------|
|              | MS                | MSD    |       |      | Amount | Matrix  |               |     | $\%~{ m Rec}$          | RPD                    |
| Param        | $\mathbf{Result}$ | Result | Units | Dil. | Added  | Result  | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| Benzene      | 0.937             | 0.871  | mg/Kg | 10   | 1      | < 0.010 | 93            | 7   | 70 - 130               | 20                     |
| Toluene      | 0.927             | 0.863  | mg/Kg | 10   | 1      | < 0.010 | 92            | 7   | 70 - 130               | 20                     |
| Ethylbenzene | 0.953             | 0.888  | mg/Kg | 10   | 1      | < 0.010 | 95            | 7   | 70 - 130               | 20                     |
| M,P,O-Xylene | 2.86              | 2.67   | mg/Kg | 10   | 3      | < 0.010 | 95            | 6   | 70 - 130               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | ${ m MS}$ Result | $\begin{array}{c} \mathrm{MSD} \\ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|-----------|------------------|----------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|--------------------|
| TFT       | 0.873            | 0.811                                                          | mg/Kg | 10       | 1               | 87          | 81           | 70 - 130           |
| 4-BFB     | 0.934            | 0.881                                                          | mg/Kg | 10       | <u> </u>        | 93          | 88           | 70 - 130           |

## Matrix Spikes QCBatch: QC21359

<sup>9</sup>MS and MSD not reported due previously reported for TX1005. LCS and LCSD show the process is in control.



Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Surrogate | ${f MS} {f Result}$ | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|-----------|---------------------|-------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|--------------------|
| TFT       | 0.947               | 0.898                                                       | mg/Kg | 10       | 1               | 94          | 89           | 70 - 130           |
| 4-BFB     | 0.89                | 0.83                                                        | mg/Kg | 10       | 1               | 89          | 83           | 70 - 130           |

### Matrix Spikes QCBatch: QC21575

|       |        |                         |                  |      | Spike  |                         |               |     |                        |                        |
|-------|--------|-------------------------|------------------|------|--------|-------------------------|---------------|-----|------------------------|------------------------|
|       | MS     | MSD                     |                  |      | Amount | <b>Matrix</b>           |               |     | $\% { m Rec}$          | RPD                    |
| Param | Result | $\operatorname{Result}$ | $\mathbf{Units}$ | Dil. | Added  | $\operatorname{Result}$ | $\% { m Rec}$ | RPD | $\operatorname{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 6.86   | 8.91                    | mg/Kg            | 10   | 1      | 7.72                    | 69            | 0   | 80 - 120               | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

|           | MS                | MSD                     |       |          | Spike  | $\mathbf{MS}$ | MSD           | Recovery |
|-----------|-------------------|-------------------------|-------|----------|--------|---------------|---------------|----------|
| Surrogate | $\mathbf{Result}$ | $\operatorname{Result}$ | Units | Dilution | Amount | $\% { m Rec}$ | $\% { m Rec}$ | Limits   |
| TFT       | $^{10}$ 0.653     | 0.884                   | mg/Kg | 10       | 0.10   | 65            | 88            | 70 - 130 |
| 4-BFB     | $^{11}$ 0.548     | 0.756                   | mg/Kg | 10       | 0.10   | 58            | 76            | 70 - 130 |

Matrix Spikes QCBatch:

|       |        |        |       |      | Spike  |        |               |     |                  |                        |
|-------|--------|--------|-------|------|--------|--------|---------------|-----|------------------|------------------------|
|       | MS     | MSD    |       |      | Amount | Matrix |               |     | $\% { m Rec}$    | RPD                    |
| Param | Result | Result | Units | Dil. | Added  | Result | $\% { m Rec}$ | RPD | $\mathbf{Limit}$ | $\operatorname{Limit}$ |
| GRO   | 9.65   | 9.99   | mg/Kg | 10   | 1      | <1.00  | 96            | 3   | 80 - 120         | 20                     |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

QC21579

| Surrogate                 | MS<br>Result | $egin{array}{c} \mathrm{MSD} \ \mathrm{Result} \end{array}$ | Units | Dilution | Spike<br>Amount | MS<br>% Rec | MSD<br>% Rec | Recovery<br>Limits |
|---------------------------|--------------|-------------------------------------------------------------|-------|----------|-----------------|-------------|--------------|--------------------|
| $\overline{\mathrm{TFT}}$ | 0.989        | 1.03                                                        | mg/Kg | 10       | 0.10            | 98          | 103          | 70 - 130           |
| <u>4-BFB</u>              | 0.832        | 0.861                                                       | mg/Kg | 10       | 0.10            | 83          | 86           | 70 - 130           |

## Quality Control Report Continuing Calibration Verification Standards

<sup>10</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

<sup>11</sup>Low surrogate recovery due to matrix interference. ICV, CCV show the method to be in control.

| Report Date: Jul<br>2-517-000051 |        | Order Num<br>Goodwin 7 | ber: A0206240<br>Freating Plant | Page Number: 16 of 19<br>8 Miles West of Hobbs, NM |                             |                               |                  |
|----------------------------------|--------|------------------------|---------------------------------|----------------------------------------------------|-----------------------------|-------------------------------|------------------|
| CCV (1)                          | QCBa   | tch: QC21              | 324                             |                                                    |                             |                               |                  |
| Param                            | Flag   | Units                  | CCVs<br>True<br>Conc            | CCVs<br>Found<br>Conc                              | CCVs<br>Percent<br>Becovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
| MTBE                             | 1 1005 | mg/L                   | 0.10                            | 0.0984                                             | <u></u>                     | 85 - 115                      | 6/24/02          |
| Benzene                          |        | mg/L                   | 0.10                            | 0.0983                                             | 98                          | 85 - 115                      | 6/24/02          |
| Toluene                          |        | mg/L                   | 0.10                            | 0.0982                                             | 98                          | 85 - 115                      | 6/24/02          |
|                                  |        |                        |                                 |                                                    |                             |                               |                  |

0.0992

0.299

0.10

0.30

85 - 115

85 - 115

6/24/026/24/02

99

99

CCV (2) QCBatch:

Ethylbenzene M,P,O-Xylene

QC21324

mg/L mg/L

| Param        | Flag | Units           | CCVs<br>True<br>Conc. | CCVs<br>Found<br>Conc. | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed |
|--------------|------|-----------------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| MTBE         |      | mg/L            | 0.10                  | 0.0964                 | 96                          | 85 - 115                      | 6/24/02          |
| Benzene      |      | mg/L            | 0.10                  | 0.0966                 | 96                          | 85 - 115                      | 6/24/02          |
| Toluene      |      | mg/L            | 0.10                  | 0.0945                 | 94                          | 85 - 115                      | 6/24/02          |
| Ethylbenzene |      | $\mathrm{mg/L}$ | 0.10                  | 0.096                  | 96                          | 85 - 115                      | 6/24/02          |
| M,P,O-Xylene |      | mg/L            | 0.30                  | 0.288                  | 96                          | 85 - 115                      | 6/24/02          |

ICV (1) QCBatch:

QC21324

|              |                       |                  | CCVs  | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent  |          |
|--------------|-----------------------|------------------|-------|-----------------|-----------------|----------|----------|
|              |                       |                  | True  | Found           | Percent         | Recovery | Date     |
| Param        | $\operatorname{Flag}$ | $\mathbf{Units}$ | Conc. | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |                       | -mg/L            | 0.10  | 0.0975          | 97              | 85 - 115 | 6/24/02  |
| Benzene      |                       | mg/L             | 0.10  | 0.1             | 100             | 85 - 115 | 6/24/02  |
| Toluene      |                       | $\mathrm{mg/L}$  | 0.10  | 0.1             | 100             | 85 - 115 | 6/24/02  |
| Ethylbenzene |                       | mg/L             | 0.10  | 0.104           | 104             | 85 - 115 | 6/24/02  |
| M,P,O-Xylene |                       | mg/L             | 0.30  | 0.316           | 105             | 85 - 115 | 6/24/02  |

CCV (1)

QCBatch: QC21359

|              |      |                 | $\mathrm{CCVs}$ | CCVs   | $\mathrm{CCVs}$ | Percent  |          |
|--------------|------|-----------------|-----------------|--------|-----------------|----------|----------|
|              |      |                 | True            | Found  | Percent         | Recovery | Date     |
| Param        | Flag | Units           | Conc.           | Conc.  | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L            | 0.10            | 0.108  | 108             | 85 - 115 | 6/25/02  |
| Benzene      |      | mg/L            | 0.10            | 0.102  | 102             | 85 - 115 | 6/25/02  |
| Toluene      |      | $\mathrm{mg/L}$ | 0.10            | 0.102  | 102             | 85 - 115 | 6/25/02  |
| Ethylbenzene |      | mg/L            | 0.10            | 0.0964 | 96              | 85 - 115 | 6/25/02  |
| M,P,O-Xylene |      | $\mathrm{mg/L}$ | 0.30            | 0.282  | 94              | 85 - 115 | 6/25/02  |

CCV (2) QCBatch: QC21359



#### ICV(1)QCBatch: QC21359

|              |      |        | $\mathrm{CCVs}$       | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | Percent  |          |
|--------------|------|--------|-----------------------|-----------------|-----------------|----------|----------|
|              |      |        | $\operatorname{True}$ | Found           | Percent         | Recovery | Date     |
| Param        | Flag | Units  | Conc.                 | Conc.           | Recovery        | Limits   | Analyzed |
| MTBE         |      | mg/L   | 0.10                  | 0.107           | 107             | 85 - 115 | 6/25/02  |
| Benzene      |      | m mg/L | 0.10                  | 0.105           | 105             | 85 - 115 | 6/25/02  |
| Toluene      |      | mg/L   | 0.10                  | 0.103           | 103             | 85 - 115 | 6/25/02  |
| Ethylbenzene |      | mg/L   | 0.10                  | 0.100           | 100             | 85 - 115 | 6/25/02  |
| M,P,O-Xylene |      | mg/L   | 0.30                  | 0.293           | 98              | 85 - 115 | 6/25/02  |

| $\mathbf{CCV}$ (1 | L)              | QCBatch: | QC21575 |       |          |          |          |
|-------------------|-----------------|----------|---------|-------|----------|----------|----------|
|                   |                 |          | CCVs    | CCVs  | CCVs     | Percent  |          |
|                   |                 |          | True    | Found | Percent  | Recovery | Date     |
| Param             | $\mathbf{Flag}$ | Units    | Conc.   | Conc. | Recovery | Limits   | Analyzed |
| GRO               |                 | mg/Kg    | 1       | 0.978 | 97       | 85 - 115 | 7/2/02   |

| CCV(2) | QCBatch: | QC21575 |
|--------|----------|---------|
|--------|----------|---------|

|       |      |                  | $\mathrm{CCVs}$ | $\mathrm{CCVs}$ | $\mathbf{CCVs}$ | Percent  |          |
|-------|------|------------------|-----------------|-----------------|-----------------|----------|----------|
|       |      |                  | True            | Found           | Percent         | Recovery | Date     |
| Param | Flag | $\mathbf{Units}$ | Conc.           | Conc.           | Recovery        | Limits   | Analyzed |
| GRO   |      | mg/Kg            | 1               | 1.04            | 104             | 85 - 115 | 7/2/02   |

#### ICV (1) QCBatch: QC21575

|       |      |                  | CCVs<br>True | CCVs<br>Found | CCVs<br>Percent | Percent<br>Recoverv | Date     |
|-------|------|------------------|--------------|---------------|-----------------|---------------------|----------|
| Param | Flag | $\mathbf{Units}$ | Conc.        | Conc.         | Recovery        | Limits              | Analyzed |
| GRO   |      | mg/Kg            | 1            | 0.9766        | 97              | 85 - 115            | 7/2/02   |

CCV (1) QCBatch: QC21579

| Report Date:<br>2-517-000051 | July 9, | 2002                  | Order Nu<br>Goodwi                    | 1mber: A020624<br>n Treating Plan | 109<br>nt                   | Page Nu:<br>· 8 Miles West    | mber: 18 of 19<br>of Hobbs, NM |
|------------------------------|---------|-----------------------|---------------------------------------|-----------------------------------|-----------------------------|-------------------------------|--------------------------------|
| Param                        | Flag    | Units                 | CCVs<br>True<br>Conc.                 | CCVs<br>Found<br>Conc.            | CCVs<br>Percent<br>Recovery | Percent<br>Recovery<br>Limits | Date<br>Analyzed               |
| GRO                          |         | mg/Kg                 | 1                                     | 0.978                             | 97                          | 85 - 115                      | 7/2/02                         |
|                              |         |                       |                                       |                                   |                             |                               |                                |
| CCV (2)                      |         | QCBatch:              | QC21579                               |                                   |                             |                               |                                |
|                              |         |                       | $\operatorname{CCVs}$ True            | CCVs<br>Found                     | $\operatorname{CCVs}$       | Percent<br>Recovery           | Date                           |
| Param                        | Flag    | Units                 | Conc.                                 | Conc.                             | Recovery                    | Limits                        | Analyzed                       |
| GRO                          |         | mg/Kg                 | 11                                    | 0.887                             | 88                          | 85 - 115                      | 7/2/02                         |
| ICV (1)                      |         | QCBatch:              | QC21579                               |                                   |                             |                               |                                |
| D                            |         | <b>T</b> T <b>1</b> . | CCVs<br>True                          | CCVs<br>Found                     | CCVs<br>Percent             | Percent<br>Recovery           | Date                           |
| Param                        | Flag_   | Units                 | Conc.                                 | <u> </u>                          | Recovery                    | Limits                        | Analyzed                       |
| CCV(1)                       |         | OCPatali              | 0.001607                              |                                   |                             |                               |                                |
|                              |         | QCDatch.              | QC21007                               | CCVa                              | COVe                        | Densent                       |                                |
|                              |         |                       |                                       | Found                             | Percent                     | Recovery                      | Date                           |
| Param                        | Flag    | Units                 | Conc.                                 | Conc.                             | Recovery                    | Limits                        | Analyzed                       |
| DRO                          |         | mg/Kg                 | 250                                   | 272                               | 108                         | 75 - 125                      | 6/24/02                        |
| CCV (2)                      |         | QCBatch:              | QC21607                               |                                   |                             |                               |                                |
|                              |         |                       | CCVs<br>True                          | CCVs<br>Found                     | CCVs<br>Percent             | Percent                       | Data                           |
| Param                        | Flag    | Units                 | Conc.                                 | Conc.                             | Recovery                    | Limits                        | Analyzed                       |
| DRO                          |         | mg/Kg                 | 250                                   | 275                               | 110                         | 75 - 125                      | 6/24/02                        |
|                              |         | <u> </u>              | · · · · · · · · · · · · · · · · · · · |                                   |                             | <u>. in m</u>                 |                                |
| ICV (1)                      |         | QCBatch:              | QC21607                               |                                   |                             |                               |                                |
|                              |         |                       | CCVs<br>True                          | CCVs<br>Found                     | $\operatorname{CCVs}$       | Percent<br>Recovery           | Date                           |
| Param                        | Flag    | Units                 | Conc.                                 | Conc.                             | Recovery                    | Limits                        | Analyzed                       |
| DRO                          |         | mg/Kg                 | 250                                   |                                   | 100                         | 75 105                        | <u>C /04 /00</u>               |

CCV (1) QCBatch: QC21642

| Report Date:<br>2-517-000051 | July 9,  | 2002     | Order Nu<br>Goodwi | umber: A02062<br>in Treating Pla | 409<br>nt | Page Nu<br>8 Miles West | mber: 19 of 19<br>of Hobbs, NM |
|------------------------------|----------|----------|--------------------|----------------------------------|-----------|-------------------------|--------------------------------|
|                              |          |          | CCVs               | CCVs                             | CCVs      | Percent                 |                                |
| ~                            |          | -        | True               | Found                            | Percent   | Recovery                | Date                           |
| Param                        | Flag     | Units    | Conc.              | Conc.                            | Recovery  | Limits                  | Analyzed                       |
| DRO                          | <u> </u> | mg/Kg    | 250                | 247                              | 98        | 75 - 125                | 6/25/02                        |
| CCV (2)                      |          | QCBatch: | QC21642            |                                  |           |                         |                                |
|                              |          |          | CCVs               | CCVs                             | CCVs      | Percent                 |                                |
|                              |          |          | True               | Found                            | Percent   | Recovery                | Date                           |
| Param                        | Flag     | Units    | Conc.              | Conc.                            | Recovery  | Limits                  | Analyzed                       |
| DRO                          |          | mg/Kg    | 250                | 256                              | 102       | 75 - 125                | 6/25/02                        |
| ICV (1)                      |          | QCBatch: | QC21642            |                                  |           |                         |                                |
|                              |          |          | CCVs               | CCVs                             | CCVs      | Percent                 |                                |
|                              |          |          | True               | Found                            | Percent   | Recovery                | Date                           |
| Param                        | Flag     | Units    | Conc.              | Conc.                            | Recovery  | Limits                  | Analyzed                       |
| DRO                          |          | mg/Kg    | 250                | 245                              | 98        | 75 - 125                | 6/25/02                        |

| 6701 Ahardoon Auonus Sta                                     |                     |                |                 |               |               |          |                                |            |                           |                                        |               |               |             |                        |              |                       |             |                 | 1         | {              | ĺ      |                  |     |                |      |
|--------------------------------------------------------------|---------------------|----------------|-----------------|---------------|---------------|----------|--------------------------------|------------|---------------------------|----------------------------------------|---------------|---------------|-------------|------------------------|--------------|-----------------------|-------------|-----------------|-----------|----------------|--------|------------------|-----|----------------|------|
| Lubbock, Texas 79424                                         |                     |                |                 |               | (<br>•        |          | \$                             |            | 155 McC                   | utcheon,St<br>, Texas 79               | uite H<br>932 |               |             | CHA                    | ō<br>Z       | îno                   | STOD        | Y AN            | D AN      | ALYS           | SIS F  | 2<br>E<br>O<br>U | EST |                |      |
| rei (806) 794-1296<br>Fax (806) 794-1298<br>1 (800) 378-1296 | ILa                 | CEA            | RIL             |               |               |          |                                |            | Tel (9<br>Fax (9<br>1 (88 | (5) 585-34<br>15) 585-49<br>3) 588-344 | 44            | 3<br>-<br>-   |             | 2                      | Ď            | der ID                | <i>H t</i>  | JC6             | 57        | bak            |        |                  |     |                |      |
| Company Name:                                                | Hobks               |                |                 |               | ā •           | ione #:  | 476                            | , v        | 887                       |                                        |               |               |             |                        |              | ANA                   | ,<br>VSI    | S RE(           | DUES      | <br>           |        |                  |     |                |      |
| Address: (Street, Cit)                                       | /, Zip)             |                |                 |               | ι.<br>Έ       | *        | 12                             | 5          | 2                         |                                        |               |               |             |                        | ¥            | Sircle o              | n Spe<br>—  | − utor<br>−     | ethod h   |                |        |                  | _   |                |      |
| Contact Person:                                              |                     |                |                 |               |               |          |                                |            | 1                         |                                        |               |               |             | \500                   |              |                       |             |                 |           |                |        |                  |     |                |      |
| NALTYN                                                       | ( KILUNS            |                |                 |               |               |          |                                |            |                           |                                        |               |               |             | 801                    |              |                       |             |                 |           |                |        |                  |     | p              |      |
| If different from above)                                     |                     |                |                 |               |               |          |                                |            |                           |                                        |               |               |             | 09 <u>6</u> H          | 6н           | ~                     |             |                 |           |                |        |                  |     | lebne          |      |
| Project #:                                                   |                     |                |                 |               | Å             | oject Na | me:                            |            |                           |                                        |               |               |             | 1 92                   | əS o         |                       |             |                 |           |                |        |                  |     | ste m          |      |
| 02-517-6                                                     | 000051              |                |                 |               | <u>()</u>     | Deve     | Tree                           | Tive       | PC                        | 22                                     |               |               |             | <u>ч</u> д 2           | <u>1</u> 4 x |                       |             |                 |           |                |        |                  |     | ioit t         |      |
| roject Location:<br>名 イルビビ                                   | West OF             | Ko             | 665             |               | S.            | le xu    | ignatur.                       | ä          |                           |                                        |               |               |             | Cq Ci                  | D P D E      |                       |             | t               | 20/00     |                |        |                  |     | uə <b>l</b> əµ |      |
|                                                              |                     | <u>୍</u> ଟେମ୍ବ | ţun             |               | MATRIX        |          | PRE                            | SERVA      | UTIVE<br>D                | SAM                                    | PLING         | 05            | S00         | в8 sA                  | s8 sA g      | səlite                | s           | 29/809          | 8         | 809/4          | ·      |                  |     | ib li en       |      |
|                                                              | FIELD CODE          | 3NIA           |                 |               |               |          |                                |            |                           |                                        |               | 518/60        |             | Ha Ag<br>C             | gA els       | some<br>sloV in       | ticide      | 928 .Ic         | 309/26    | 1808 ;<br>Hq ; | Ø      |                  |     | niT bn         |      |
| (LAB USE)                                                    |                     | # CONL'        | v/əmuloV        | WATER<br>SOIL | SLUDGE<br>AIR | HCI      | <sup>s</sup> OS <sup>z</sup> H | HOBN       |                           | <b>JTAQ</b>                            | TIME          | MTBE 802      | 100 X210    | PAH 8270<br>Total Meta | TCLP Met     | TCLP Sen              | TCLP Pes    | N SW/29         | PCB's 808 | BOD' 122       | 29     | >>/0             |     | Turn Arou      | pioH |
| 99901 062102                                                 | - 13                | <u> </u>       | 402             | 7             |               |          |                                | <b>c</b> . |                           | קודוע<br>רודוע                         | 6947          |               | -7          |                        |              |                       |             |                 |           |                | ×      | ×                |     |                |      |
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| Of DENOT                                                     | -16                 | 1              | 402             | 2             |               |          |                                | 2          |                           | elids                                  | - //00        |               | • •         |                        |              |                       |             |                 |           |                |        | •                |     |                |      |
| DE DEZION                                                    | - 17                | ~              | 402             | 1             |               |          |                                | 3          |                           | 9/17                                   | r (107        | • •           | • \$        |                        |              |                       |             |                 |           |                | _      |                  |     |                |      |
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|                                                              |                     |                |                 |               |               |          |                                |            |                           |                                        |               |               |             |                        |              | _                     |             |                 | -         |                |        |                  |     |                |      |
|                                                              |                     |                |                 |               |               |          |                                |            |                           |                                        |               |               |             |                        |              |                       |             |                 |           |                |        |                  |     |                | .,   |
| Relinquished by:                                             | Date: Time          | Rec            | ceived b        | 5             |               |          | Date:                          | Í          | Time:                     |                                        | · ·           | د. خمر<br>۸   | P<br>S<br>S | NLY W                  | Ш<br>С       | Œ                     | EMAR        |                 |           |                |        |                  |     |                | ]    |
| Relinquished by:                                             | Date: Time          | Rec            | ceived b        | *             |               |          | Date:                          |            | Time:                     |                                        |               | Intac<br>Head | space       | <u> </u>               | N N          |                       | -<br>-<br>- | (T              | 1         |                | L L    | 9                |     |                |      |
| Relinquished by:                                             | Date: Time          | Rec            | pived at<br>UUU | Labora        | tory by:      |          | Date:                          | iele.      | Time:<br>72 ,             | 10:0.                                  | Sar           | Temp<br>Log-i | n Rev       | 10<br>iew              | M            | • <u>)</u> - <u>_</u> |             | Check<br>Limits | If Spec   | al Rep<br>eded | orting | -                |     |                |      |
| Submittal of samples constit                                 | utes agreement to T | erms and (     | Condition       | ns listed     | on reve       | rse side | of C.O.                        | -<br>      |                           | .                                      |               | Carri         | er #        | Bu                     | s            | Ħ                     | 16          | 326             | é         | 20             | P      | _                |     |                |      |
|                                                              |                     |                |                 | 2             | HIGIN         | AL W     | ×                              |            | •                         |                                        |               |               |             |                        |              |                       |             | -               |           |                |        |                  |     |                | ]    |

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