

3R - 253

REPORTS

DATE:

Nov. 2-29, 1995

TIERRA ENVIRONMENTAL COMPANY Inc.



*" Because we do not inherit the earth from our parents...
We borrow it from our children.. "*

VOLUNTARY CLEAN-UP OF CRUDE OIL TRANSFER FACILITY

BISTI STATION SITE

SE 1/4 - SEC 17 - T 26 N - R 11 W
SAN JUAN COUNTY, NEW MEXICO

November 2, - November 29, 1995

Project Number 95043

***P.O. DRAWER 15250
FARMINGTON, NEW MEXICO 87401-5250
(505) 334-8894
Fax (505) 334-9024***

TABLE OF CONTENTS

1.0	SUMMARY OF ACTIVITY
2.0	SITE ASSESSMENT
3.0	SOILS MIXING PROCEDURE
4.0	CLOSURE REQUEST TO OCD
5.0	PERMITS
6.0	SITE DIAGRAMS
	6.1 Overall Diagram
	6.2 Excavation Diagram
7.0	AERIAL PHOTOGRAPHS
8.0	MSDS ON OXY - 1
9.0	LAB REPORTS & CHAIN OF CUSTODY
	9.1 TPH Bore Holes
	9.2 TCLP Tank Bottoms
	9.3 TCLP Soils
	9.4 TPH Pit #1 (closure)
	9.5 TPH,Pit #2 (closure)
10.0	SITE PHOTOGRAPHS

1.0

S U M A R Y O F A C T I V I T Y

VOLUNTARY CLEAN-UP OF CRUDE OIL TRANSFER FACILITY

BISTI STATION SITE

November 2-November 29, 1995

1.0

SUMMARY OF ACTIVITY

The Bisti station Crude oil Transfer Facility is located at section SE 1/4 Section 17, T-26N, R-11W, approximately 10 miles south of Bloomfield on Hwy. 44 and 10 miles west on the Chaco Plant Road in San Juan County New Mexico. The facility is currently owned by Gary Williams Energy, but will be taken over by Giant Industries after the Clean-up by Gary Energy. This is part of a purchase agreement between the two companies. The site consists of six 520 bbl tanks, an overflow pit, Lact unit and transfer point, all contained in an area 75 feet by approximately 40 feet. The tanks themselves were to be cleaned as well as the removal of any contaminated soils in the tank, overflow pit, lact unit and transfer point areas. The area was then to be backfilled and compacted.

On October 6, 1995, Tierra Environmental Company Inc., represented by Todd D. Nobis, Red Top Tanks, Safety Alliance and On-Site Technologies deployed to the Bisti Station Site. Red Top and Safety Alliance were contracted by Tierra to clean the inside of the six tanks. On-site was contracted by Tierra to drill test holes around the tank battery with a hollow stem auger in an effort to gauge the extent of the contamination at the site.

On that same date a site assessment was conducted pursuant to section 7d-IV-A-2a OCD Environmental Regulation. The site received a total ranking of 0, as the depth to ground water was over 100 feet, over 1000 feet from a water source and/or 200 feet from a private domestic water source and over 1000 feet from a surface water body. This allows residual TPH levels in the 5000 ppm range. A 400 bbl frac tank was taken to the site to store the tank bottoms until results from a TCLP could be obtained. A TCLP sample of the tank bottoms was taken on October 6, 1995 and turned over to On-Site Tech. for analysis. A TCLP of the soils was taken on November 2, 1995 and also taken to On-Site Tech. for analysis. Three test holes were bored around the facility. (see site diagram BH-1 thru BH-3)

Red top began cleaning the tanks out using water to break-up any solid substances in the tanks. The substances were then transferred to the frac tank on scene. The TCLP of the tank bottoms did not pass and approval was not obtained from OCD to accept them. Arrangements were made with Giant Industries to recover the Tank bottoms and take them to their facilities for refining. (TCLP results enclosed)

On November 2, 1995, the dismantling of the facility began, ie; piping, tanks, lact unit etc.. This was completed on November 3, 1995.

On November 6, 1995, verbal approval was received from OCD to remove the contaminated soils. Excavation was started and other buried piping was dismantled. While excavating on the east side of the area (Pit #1), several lines and pipes were uncovered. These lines and pipes varied in sizes. They were full of what appeared to be crude oil product and were not attached to anything that existed on the facility. They were open ended and appeared to be leaking. It appeared that the facility had been redone sometime in the in the past and that the old piping was not removed.

During the initial excavation on pit #1, some of the excavated soils were removed, set aside and then later mixed with clean backfill in an effort to reduce the amount of dirt hauled from the site and also to reduce the TPH levels in the mixed soils. The mixing will increase the natural

degradation of the hydrocarbons in the soils. After thoroughly mixing the soils, a headspace test was done with results of 25 ppm, a TPH sample (composite) showed 1039 PPM.

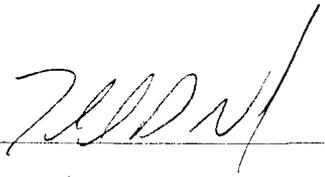
Excavation on pit #1 was completed on November 24, 1995. During the excavation, a dark grayish moist obvious contamination was encountered. The contamination appeared to start at the 4 foot level and in places went as deep as 15 feet. Pit #1 was excavated a maximum of 15 feet and some areas were excavated at a depth of 4 to 5 feet as the contamination appeared to only go down to that depth. Two closure composite samples were taken from Pit #1. A headspace test showed results at 80 PPM. TPH results showed #1 at 2181 PPM and #2 at 934 PPM. Backfill was then started on November 27, 1995 using both clean and mixed backfill. The pit was compacted in two to three foot lifts.

On the same date, excavation was started and completed on Pit #2. As with Pit #1, the dark gray obvious contamination was again encountered. It appeared heaviest where the northern three tanks were set and in the area of the over flow pit. This area was excavated to a maximum depth of approximately 15 feet and also had areas of excavation down to only 4 to 5 feet. Two closure composite samples were then taken from Pit #2. A headspace test showed results of 22 PPM from Pit #2. TPH results showed closure composite #1 at 2970 PPM and closure composite #2 at 2157 PPM. Pit #2 was then backfilled and compacted in two to three foot lifts. The backfill and compaction of the site was completed on November 29, 1995.

Throughout the project, several photographs were taken as the excavation progressed. Approximately 870 cubic yards of contaminated soils were removed from the site and taken to the Tierra Environmental Company Inc. OCD permitted landfarm facility located at 420 CR 3100, San Juan County New Mexico. The material is located in Cell 10 on the facility, where it will be remediated. The backfill used at the site was hauled from Tierra's landfarm virgin backfill stockpile. All laboratory testing was done by On-Site Technologies in Farmington NM. All headspace tests were completed in the field with a 580-B OVM PID.

The site Clean-up was successful in removing the hydrocarbons contaminates in excess of the

New Mexico Oil Conservation Division regulatory limit ie: 5000 PPM range.

BY:  _____

Todd D. Nobis

Environmental Specialist

Tierra Environmental Co. Inc.

2.0

S I T E A S S E S S M E N T

2.0

SITE ASSESSMENT

On October 6, 1995, a site assessment was completed in accordance with OCD Environmental Regulations Section 7d-IV-A-2a. The site received a total ranking of 0 and as follows:

1.) Depth to groundwater	Ranking Score
> 100 feet	0
2.) Wellhead Protection Area	N/A
3.) Distance to Surface Water Body	
> 1000 horizontal feet	0
Total Ranking Score	0
Degree of remediation required:	
Benzene	10ppm
BTEX	50ppm
TPH	5000 ppm

As an added measure of prevention, an excavation to a depth of approximately 25 feet was conducted at the site in pit # 1 where an impermeable layer of clay/shale was encountered. The depth of existing contamination stopped at approximately 15 feet. No groundwater was encountered during this excavation.

William J. Lemay
New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, NM 87501

July 14, 1993

RE: Discharge Plan GW-71
Chaco Canyon Gas Processing Plant
San Juan County, New Mexico

RECEIVED
JUL 19 1993
OIL CON. DIV.
DIST. 3

Dear Mr. Lemay:

El Paso Natural Gas Company is requesting modification of the Chaco Gas Plant Discharge Plan. EPNG would like to modify the Discharge Plan to allow the continued use of the unlined ponds for non-contact waste water, and to waive the requirement to test the non-contact drain system. The current Discharge Plan requires the closure of all unlined ponds and the testing of all drain lines in excess of 25 years old. These requirements were designed to ensure that ground water would not be adversely impacted in the vicinity of the plant. Based upon information obtained from wells drilled on Chaco Plant property, EPNG believes continued use of the unlined ponds and drain lines for non-contact water, poses no threat to ground water.

This view is based upon the following:

1. Quality of the non-contact waste water exceeds that of the ground water.
In 1992 EPNG drilled three deep well ground beds to a depth of 505 feet in the northwest corner of Chaco Plant property. Water analysis were performed on all three deep well ground beds, A, B, and C cooling towers, and ponds 1 - 5. This analysis shows that discharge water quality exceeds that of the ground water. (See tab A)
2. At least 50 feet of unsaturated low permeability shale is present above the regional aquifer at the plant site.
The driller's logs show the plant site resting on less than 50 feet of sandy deposits above the lower shale unit of the Nacimiento Formation. A 15 to 20 foot thick sandstone of the Ojo Alamo Formation was encountered below the shale unit. (See tab B)
3. Depth to ground water of 120 feet.
The driller's logs did not indicate a shallow unconfined aquifer. Water was first encountered at a depth of 120 feet in the Ojo Alamo Formation. No other water bearing zones were reported to the total depth of 505 feet. (See tab B)
4. Nearest water well to the plant is over a mile away.
The closest domestic water well to the plant site as reported by the State Engineer is in section 22 over a mile away. This well was drilled in 1963 to a depth of 255 feet. No information on the current status of the well is available.
5. All contact waste water will be routed to a lined pond.
To ensure continued protection of ground water quality, all contact waste water will be routed to a lined pond scheduled to be constructed in 1994.

6. The contact and non-contact waste water systems will be separate systems.

A survey of all contact drain lines will be performed to ensure no contact drain lines are connected to the non-contact drain system.

EPNG believes for the above mentioned reasons that continued use of the unlined ponds for non-contact waste water will not pose a threat to ground water. EPNG also believes that if approval is granted to continue use of the unlined ponds, testing the non-contact discharge lines to the ponds would be unnecessary.

Enclosed is a check covering the filing fee. If you have any questions or comments feel free to call me at (505) 599-2175.

Sincerely,

Kris Alan Sinclair
Compliance Engineer

cc: W.D. Hall, EPNG
N.K. Prince, EPNG
William Olson, NMOCD
Denny Foust, NMOCD

DEEP WELL GROUND DATA

DATE September 1, 1992COMPANY El Paso Natural Gas CompanyCOUNTY San Juan STATE N.M.CONTRACT NO. 5848UNIT NO. CPS 296-6LOCATION Chaco Sta. - 20 miles S. of Farmington, N.M.GROUNDBED: Depth 500 Ft., Dia. 7 7/8 In., Anodes (25) 2 x 60CASING: Size 8 5/8 In., Depth 100 Ft. Anotec SHA-2

DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
5	Top Soil						
10	"						
15	Sand						
20	"						
25	"						
30	Blue Shale						
35	"						
40	"						
45	"						
50	"						
55	"						
60	"						
65	"						
70	"						
75	"						
80	"						
85	"						
90	"						
95	"						
100	"						
105	Sandstone		1.1				
110	"		0.9				
115	"		0.9				
120	"		0.9				
125	Water		0.8				
130	"		1.0				
135	Sandstone		1.7				
140	"		1.4				
145	Blue Clay & Shale		1.7				
150	"		1.7				
155	"		2.0				
160	"		1.8				
165	"		1.8				
170	"		1.8				
175	"		1.8				
180	"		1.8				
185	"		1.7				
190	"		1.7	25		2.5	7.9
195	"		1.8				
200	"		1.6	24		1.7	7.8
205	"		1.5				
210	"		1.5	23		2.4	7.8
215	"		1.3				
220	"		1.4	22		1.8	6.6
225	"		1.6				
230	"		1.8	21		2.4	6.3
235	"		1.7				
240	Blue Clay & Shale		1.7	20		2.3	6.3

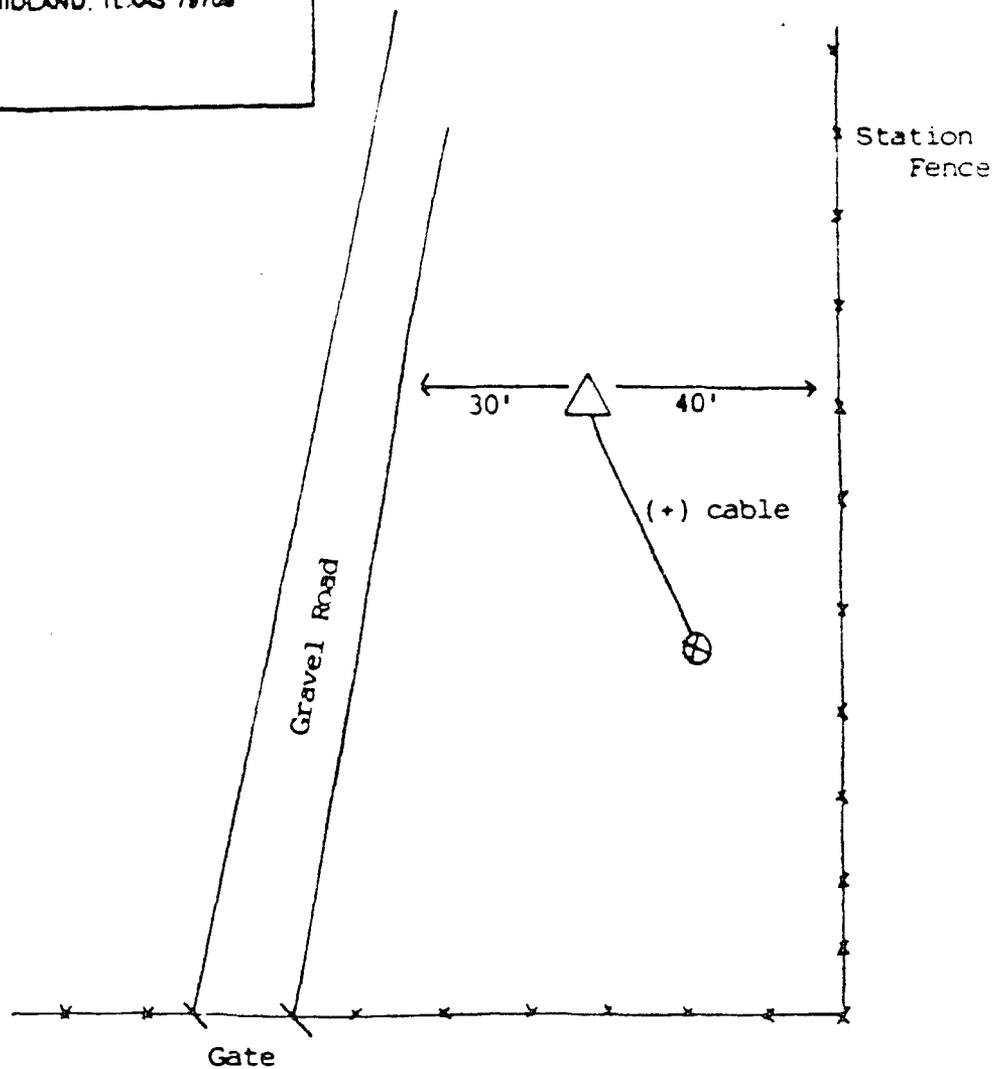
DEPTH FT.	DRILLER'S LOG	RESISTIVITY		ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
		OHMS	AMPS				
245	Blue Clay & Shale		1.6				
250	"		1.6	19		1.9	6.9
255	"		1.5				
260	"		1.5	18		1.9	5.9
265	"		1.6				
270	"		1.6	17		2.0	6.3
275	"		1.5				
280	"		1.5	16		1.9	6.5
285	"		1.6				
290	"		1.5	15		1.7	5.7
295	"		1.0				
300	"		1.6				
305	Sandstone & Blue Shale		1.5	14		1.9	5.6
310	"		1.0				
315	"		0.9				
320	"		1.0				
325	"		1.0				
330	"		0.9				
335	"		0.9				
340	"		1.6				
345	"		1.5	13		1.7	5.8
350	"		0.9				
355	Sandstone		1.6	12		1.8	6.0
360	"		1.3				
365	Blue Clay & Shale		1.6	11		2.1	5.8
370	"		1.9				
375	"		1.5	10		1.8	5.9
380	"		1.6				
385	"		1.6	9		1.9	6.5
390	"		1.8				
395	"		1.7	8		2.0	6.5
400	"		1.5				
405	"		1.4	7		1.7	6.3
410	"		1.5				
415	"		1.5	6		1.8	5.9
420	"		1.4				
425	"		1.3	5		1.6	5.1
430	"		1.1				
435	"		0.9				
440	"		1.2				
445	"		1.7				
450	"		1.4	4		1.7	5.4
455	"		1.0				
460	"		0.8				
465	"		1.4				
470	"		1.5	3		1.8	5.8
475	"		1.7				
480	"		1.6	2		1.8	5.9
485	"		1.6				
490	"		1.6	1		2.0	6.0
495	"		1.7				
500	Blue Clay & Shale		1.7				
505							
510							



THE LOFTIS COMPANY

P O BOX 7841
MIDLAND, TEXAS 79708

AS-BUILT



LEGEND	
	Groundbed
	Rectifier
	Negative
	Junction Box
	Marker/Vent
	Old Groundbed

LOCATION: CPS 296-6, Chaco Station
San Juan County, N.M.
20 mi. S. of Farmington, N.M.

CLIENT: El Paso Natural Gas Company

PROJECT: Cathodic Protection System
Contract #5848

DATE COMPLETED: 09/10/92 NOT TO SCALE

DATE DRILLED: 09/01/92 DRAWN BY: JM/MI APPROVED BY: MFL DRAWING NO.:

3.0

S O I L S M I X I N G P R O C E D U R E

3.0

Soils Mixing Procedure

During excavation of the project, all highly saturated soil was removed from the site to the Tierra OCD permitted landfarm at Crouch Mesa in San Juan County. Some of the less contaminated soils were salvaged and mixed with clean backfill in an effort to reduce the amount of soils hauled from the site and also to reduce the TPH level by enhancing or expediting the natural degradation of the hydrocarbons.

This was done by adding Tierra's product Oxy-1 to the soils while they were spread on the ground. The soils were then tilled and allowed to air 24 hours. They were then treated again, tilled and then thoroughly mixed with clean backfill at a ratio of 3 to 1. (3 yards of fresh backfill to 1 yard of treated soil) The soil was then used as backfill for most of the Pit #1 area. TPH results from a composite showed the treated soils at 1039 ppm.

4.0

C L O S U R E R E Q U E S T T O O C D



**TIERRA
ENVIRONMENTAL
COMPANY Inc.**

P.O. DRAWER 15250
FARMINGTON, NM 87401

December 8, 1995

Mr. Bill Olsen
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: REQUEST FOR CLOSURE, BISTI STATION, Southeast 1/4, Section 17, R-11W, approximately ten miles south of Bloomfield on Hwy. 44 and ten miles west on the Chaco Plant Road in San Juan County New Mexico, operated by Gary Williams Energy. TECI Project # 95043.

Dear Mr. Olsen:

Enclosed herewith please find the complete report on voluntary cleanup activities conducted at Bisti Station by Tierra Environmental Company, Inc. on behalf of our client Gary Williams Energy.

As was the case with Apache Station, the cleanup activities were conducted at the site as part of a sale of property agreement between Giant Refining and Gary.

When you visited the site last month, we discussed the issue of depth to groundwater. I did as you had suggested and reviewed the adjacent El Paso Chaco Plant information on file with the OCD office in Aztec. It appears that near the plant's impoundment's east of the Bisti Station that ground water was encountered in the monitor wells at a depth of about 35 feet. However after further reviewing the file I found a 1992 report concerning the placement of cathodic protection on the west property boundary, some distance further west of the location of the monitor wells. In 1992, El Paso drilled three deep well ground beds to a depth of 505 feet. The drillers log's indicated that no water was encountered until a depth of 120 feet was reached. The report went on to say that at least fifty feet of unsaturated low permeability shale is present above the aquifer.

After my review of the Chaco Plant file I studied the topography of the area. The monitor well reports indicated that the shallow ground water encountered at 35 feet showed a directional flow of from southwest to northeast, moving away from the Bisti Station. NAAPI has completed an expansion south of the Chaco Plant. The expansion ends near the west border of plant but does not extend towards the Bisti Station. I would have to assume that the groundwater encountered in the monitor wells is as a result of the NAAPI expansion irrigation and quite possibly migration from El Paso's own impoundments. There is a draw that runs southwest to northeast from the expansion that separates the Chaco Plant and the NAAPI expansion from the Bisti Station.

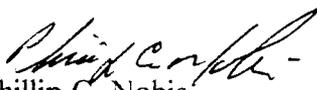
During excavation of the Bisti Station Site, the average depth reached was approximately 15 feet. However at one point near the old lact unit we had removed at the east end of the site, excavation reached a depth of about 25 feet. At that level a blue clay / shale layer was encountered that appeared to be impermeable. There was no water present. That layer is most likely the same one identified in the El Paso project drillers log from Unit 296-6 that was encountered at 30 feet. The BLM topographic map indicates that the Chaco Plant and the impoundments being monitored thereupon are somewhat higher in elevation than the Bisti Station. Therefore it is logical to asume that if no water was encountered at Bisti Station, what ever water might be present in the monitor wells at 30 to 35 feet is confined to the area near the plant and is isolated from the Bisti Station. The groundwater encountered at the Chaco Plant should not be of concern realative to the Bisti Station project.

Based on the preceding information, the site assessment conducted by Todd Nobis of the Bisti Station site, concluded that location should qualify for closure pursuant to OCD Regulations at 5,000 ppm TPH or less. Therefore on behalf of our client Gary Williams Energy, I respectfully request that the Bisti Station Site be considered for final closure under those parameters based on our enclosed final report.

Please call me if you have any questions or require additional information.

Thank you for your professional assistance and cooperation in this matter.

Sincerely,


Phillip C. Nobis
President

xc: Chris Hawley, GWE
D. Foust, OCD Aztec
Final Report

5.0

P E R M I T S

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>Roger Anderson</i> (Submitting this form for oilfield exempt waste is optional)	4. Name of Transporter <i>FESCO</i>
2. Destination <i>Tierra Environmental Co. Inc. Crouch mesa LANDFARM</i>	5. Generator <i>GARY Williams Energy</i>
3. Address of Facility Operator <i>420 CR 3100 Aztec Nm 87410</i>	6. Name of Originating Site <i>B:st: Station</i>
7. Originating Location of Material (Street Address or ULSTR) <i>Section 17 T.26N R-11W SE 1/4 SAN JUAN</i>	8. State <i>New Mexico</i>

9. Check One
- A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; certificate per job.
 - B. All requests for approval to accept non-oilfield exempt wastes will be accompanied by a certification of waste status from the Generator and the New Mexico Environment Department or other appropriate government agency; two certificates per job.
 - C. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analyses to prove the material is non-hazardous and the Generator's certification of origin. No waste classified as hazardous by listing or testing will be approved.
- All transporters must certify that the wastes delivered are only those consigned for transp

Projected Dates(s) for Transportation:

BRIEF DESCRIPTION OF THE MATERIAL:

Soil contaminated with crude oil removed from around
 A six - 500 BBL TANK facility. Site is being cleaned up
 because of a spill from Gary Energy to Giant Refining.
 Facility is a transportation terminal

Estimated Volume 300 yd³ Known Volume (to be entered by the operator at the end of the haul):

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE *Phillip C. Nobis* TITLE *President* DATE *12/1/70*

TYPE OR PRINT NAME Phillip C. Nobis TELEPHONE NO. (505) 334-2894

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



TIERRA ENVIRONMENTAL CORPORATION

CORPORATE OFFICE
P. O. Drawer 15250
Farmington, NM 87401
(505) 325-0924

CERTIFICATE OF WASTE STATUS NON-EXEMPT RCRA WASTE

Originating

Site: (Include Name, Section, Township, Range, 1/4, etc.)

BISTI TANK FACILITY
T26N, R11W, SEC. 17, SE 1/4
SAN JUAN COUNTY, NM

Source: SOIL CONTAMINATED WITH CRUDE OIL FROM
MINOR SPILLS FROM TRUCK OFFLOADING INTO
TANKAGE.

I CHRIS HAWLEY representative
for GARY WILLIAMS ENERGY CORP. &
BLOOMFIELD REFINING CO.

do hereby certify that the waste described above is non-exempt, according to the Resource Conservation and Recovery Act (RCRA), but has been identified as non-hazardous by characteristic analysis or by product identification.

The appropriate documentation is hereto attached.

Check appropriate line(s)

MSDS Information

RCRA TCLP Analysis

RCRA Metals

Corrosivity, Ignitability, Reactivity

Letter from Out of State Regulatory Agency

I further certify that there has been no change in the processes employed or chemicals stored / used at the facility generating the waste since _____.

Signature

Chris Hawley

Title

ENVR. MGR.

Date

7-11-95

Post-It™ brand fax transmittal memo 7671		# of pages	1
To	Chris Hawley	From	Phil Nobis
Co.	Bloomfield Ref.	Co.	Tierra
Dept.		Phone #	
Fax #	632-3911	Fax #	

6.0

S I T E D I A G R A M S



OVERFLOW PIT

TANK #6

TANK #5

TANK #4

LACT UNIT

TANK #1

TANK #2

TANK #3

BH-1

BH-3

BH-2

TRANSFER POINT

GARY WILLIAMS ENERGY
BISTI STATION
SE 1/4 SEC 17 - T26N - R11W
SAN JUAN COUNTY NEW MEXICO

TIERRA ENVIRONMENTAL CO., Inc.
PROJECT No. 95043
SCALE = NONE

PIT #2

PIT #1

N

CLOSURE
COMPOSITE
AREAS

CLOSURE
COMPOSITE
AREAS

#2

#1

#2

#1

PIT #2

HEADSPACE - 22ppm
AREA #1 - 2470ppm
AREA #2 - 2157ppm

PIT #1

HEADSPACE - 80ppm
AREA #1 - 2181ppm
AREA #2 - 934ppm

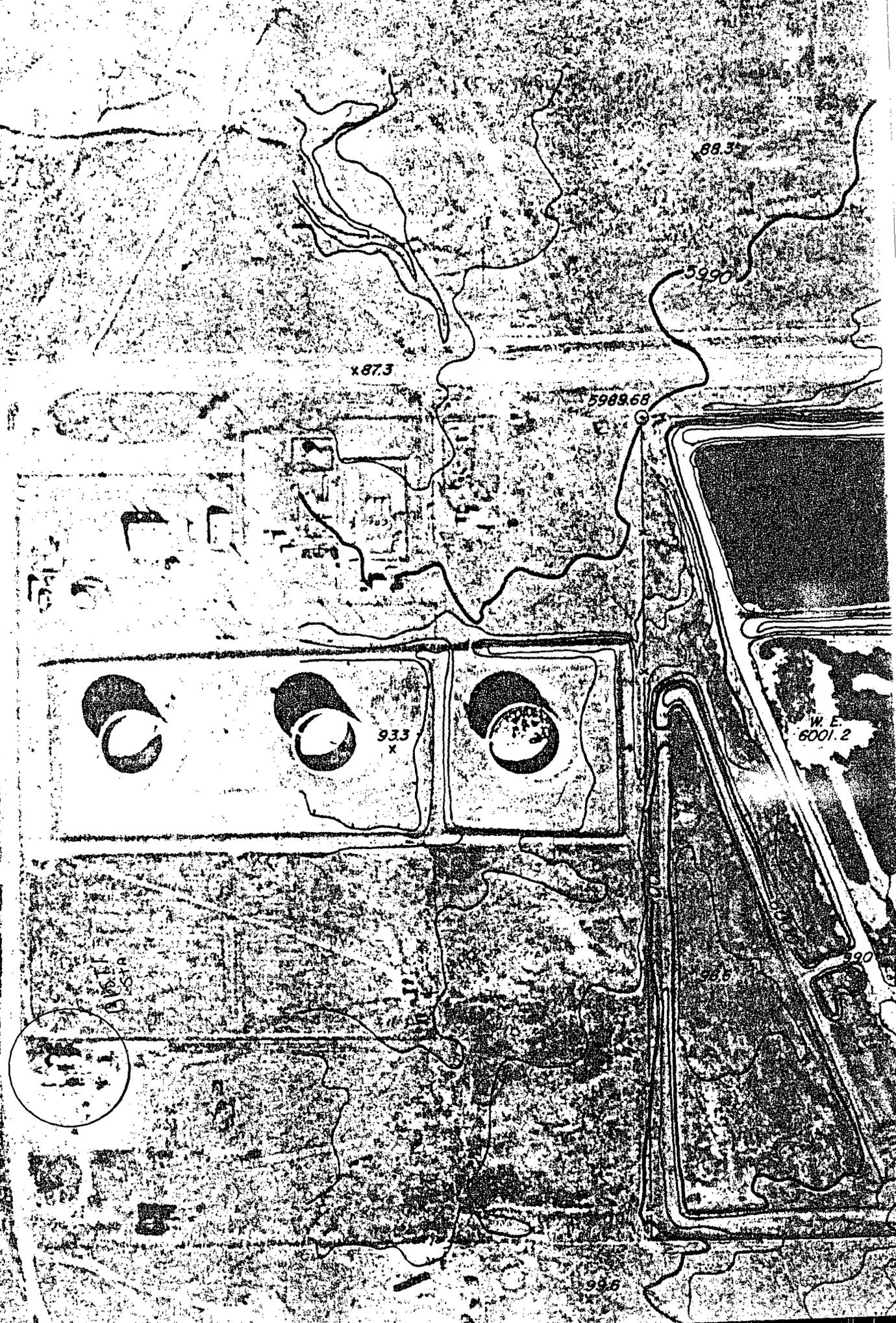
VOLUME of EXCAVATION
APPROX. 870 cu./yds.

GARY WILLIAMS ENERGY
BISTI STATION
SE 1/4 SEC 17 - T26N - R11W
SAN JUAN COUNTY NEW MEXICO

TIERRA ENVIRONMENTAL CO., Inc.
PROJECT No. 95043
SCALE = NONE

7.0

A E R I A L P H O T O G R A P H S



88.3

x87.3

5989.68

5990

933
X

W. E.
6001.2



94.6

8.0

M S D S O N O X Y - 1



TIERRA
ENVIRONMENTAL
COMPANY Inc.

MATERIAL SAFETY DATA SHEET OXY - 1

SECTION I Product Identification

ISSUE DATE 10/01/92

PRODUCT NAME: OXY - 1

MANUFACTURERS: TIERRA ENVIRONMENTAL COMPANY Inc.
P.O. Drawer 15250
Farmington, New Mexico 87401-5250

24 HOUR PHONE No. (505) 334-8894 Fax : (505) 334-9024

HMIS RATING: H-2, F-0, R-1, S-None

DOT HAZARD CLASS: OXIDIZER 5.1 UN # 1490

SECTION II Hazardous Ingredients

INGREDIENT	CAS No.	% by Weight
Potassium Permanganate	7722647	< 5%

SECTION III Physical Data

BOILING POINT: = WATER
VAPOR DENSITY: UNKNOWN
SPECIFIC GRAVITY: 0.99
pH: 7

VAPOR PRESSURE: UNKNOWN
SOLUBILITY (WATER): >99%
% VOLATILE: >99

SECTION IV Reactivity Data

STABLE: STABLE

CONDITIONS to AVOID: CONTACT WITH ORGANIC or READILY OXIDIZABLE MATERIALS

INCOMPATIBILITY: SEE CONDITIONS TO AVOID

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

STEPS TO BE TAKEN IN THE EVENT OF SPILL or LEAK: FLUSH AREA WITH WATER.
WASTE DISPOSAL METHOD: CONSULT LOCAL AUTHORITIES.

SECTION V Fire and Explosion Hazard

FLASH POINT: N/A
FLAMMABLE LIMITS: N/A
EXTINGUISHING MEDIA: N/A
SPECIAL FIRE FIGHTING PROCEDURES: N/A
UNUSUAL FIRE and EXPLOSION HAZARDS: N/A

SECTION VI Health Hazard Data

THRESHOLD LIMIT VALUE: > 2000ppm

EFFECTS of OVEREXPOSURE: NONE

EMERGENCY and FIRST AID PROCEDURES: For contact with eyes, flush with water for 15 minutes and consult with a doctor if irritation persists. If swallowed, give large amount of milk or water and consult doctor immediately.

SECTION VII Special Protection Information

RESPIRATORY PROTECTION: NONE
VENTILATION: AVOID CONFINED SPACE
PROTECTIVE GLOVES: YES
EYE PROTECTION: GOGGLES or FACE SHIELD
OTHER PROTECTIVE EQUIPMENT: NONE

SECTION VIII Special Precautions

PRECAUTIONS to be taken in HANDLING and STORAGE: NONE

CONDITIONS TO AVOID:

Keep out of contact with Alcohol, Arsenites, Bromides, Iodides, Hydrochloric Acid, Charcoal, Organic substances in general, Ferrous or Mercurous Salts, Hypophosphites, Hyposulfites, Sulfites, Peroxides and Oxylates.

This information herein provided is believed to be accurate but is not warranted to be whether originating with the company or not.

9.0

LAB REPORTS & CHAIN OF CUSTODY

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *10-Oct-95*
COC No.: *3532*
Sample No. *8524*
Job No. *2-1000*

Project Name: *Bisti Tank Battery*
Project Location: *BH1 @ 5' Soil Boring*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *6-Oct-95* Time:
Date: *9-Oct-95*

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
<i>8524-3532</i>	<i>Bisti Tank Battery BH1 @ 5' Soil Boring</i>	<i>< 25 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*
Date: *10/10/95*



OFF: (505) 325-8786

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *10-Oct-95*
COC No.: *3532*
Sample No. *8525*
Job No. *2-1000*

Project Name: *Bisti Tank Battery*
Project Location: *BH1 @ 10' Soil Boring*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *6-Oct-95* Time:
Date: *9-Oct-95*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>8525-3532</i>	<i>Bisti Tank Battery BH1 @ 10' Soil Boring</i>	<i>785 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Daly*
Date: *10/10/95*

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: 10-Oct-95
COC No.: 3532
Sample No. 8526
Job No. 2-1000

Project Name: *Bisti Tank Battery*
Project Location: *BH1 @ 15' Soil Boring*
Sampled by: TN Date: 6-Oct-95 Time:
Analyzed by: BV Date: 9-Oct-95
Type of Sample: *Soil*

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
8526-3532	<i>Bisti Tank Battery BH1 @ 15' Soil Boring</i>	58 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Daly*
Date: *10/10/95*

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: 10-Oct-95
COC No.: 3532
Sample No. 8527
Job No. 2-1000

Project Name: *Bisti Tank Battery*
Project Location: *BH2 @ 5' Soil Boring*
Sampled by: TN
Analyzed by: BV
Type of Sample: *Soil*

Date: 6-Oct-95 Time:
Date: 9-Oct-95

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
8527-3532	<i>Bisti Tank Battery</i> <i>BH2 @ 5' Soil Boring</i>	135 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Jack*

Date: *10/10/95*

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
 Company: *Tierra Environmental*
 Address: *P.O. Box 15250*
 City, State: *Farmington, NM 87499*

Date: 10-Oct-95
 COC No.: 3532
 Sample No. 8528
 Job No. 2-1000

Project Name: *Bisti Tank Battery*
 Project Location: *BH2 @ 10' Soil Boring*
 Sampled by: TN Date: 6-Oct-95 Time:
 Analyzed by: BV Date: 9-Oct-95
 Type of Sample: *Soil*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
8528-3532	<i>Bisti Tank Battery</i> <i>BH2 @ 10' Soil Boring</i>	< 25 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Daly*
 Date: *10/10/95*

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: 10-Oct-95
COC No.: 3532
Sample No. 8529
Job No. 2-1000

Project Name: *Bisti Tank Battery*
Project Location: *BH2 @ 15' Soil Boring*
Sampled by: TN
Analyzed by: BV
Type of Sample: *Soil*

Date: 6-Oct-95 Time:
Date: 9-Oct-95

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
8529-3532	<i>Bisti Tank Battery BH2 @ 15' Soil Boring</i>	211 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Jaly*

Date: *10/10/95*

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
 Company: *Tierra Environmental*
 Address: *P.O. Box 15250*
 City, State: *Farmington, NM 87499*

Date: 10-Oct-95
 COC No.: 3532
 Sample No. 8530
 Job No. 2-1000

Project Name: *Bisti Tank Battery*
 Project Location: *BH3 @ 5' Soil Boring*
 Sampled by: TN
 Analyzed by: BV
 Type of Sample: *Soil*

Date: 6-Oct-95 Time:
 Date: 9-Oct-95

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
8530-3532	<i>Bisti Tank Battery BH3 @ 5' Soil Boring</i>	843 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*
 Date: *10/10/95*

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *10-Oct-95*
COC No.: *3532*
Sample No. *8531*
Job No. *2-1000*

Project Name: *Bisti Tank Battery*
Project Location: *BH3 @ 10' Soil Boring*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *6-Oct-95* Time:
Date: *9-Oct-95*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>8531-3532</i>	<i>Bisti Tank Battery BH3 @ 10' Soil Boring</i>	<i>173 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Da G*
Date: *10/10/95*

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Phil Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *10-Oct-95*
COC No.: *3532*
Sample No. *8532*
Job No. *2-1000*

Project Name: *Bisti Tank Battery*
Project Location: *BH3 @ 15' Soil Boring*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *6-Oct-95* Time:
Date: *9-Oct-95*

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
<i>8532-3532</i>	<i>Bisti Tank Battery BH3 @ 15' Soil Boring</i>	<i>156 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*

Date: *10/10/95*

LABORATORY TESTS RESULTS
10/17/95

JOB NUMBER: 952966

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVID COX

CLIENT I.D.: 4-1247

LABORATORY I.D.: 952966-0001

DATE SAMPLED: 10/06/95

DATE RECEIVED: 10/09/95

TIME SAMPLED: 09:05

TIME RECEIVED: 10:30

WORK DESCRIPTION: TANK BOTTOMS 8533-3532 (BIST) TANK BATT-

REMARKS: SAMPLED BY: TODD

TEST DESCRIPTION	FINAL RESULT	LIMITS/DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
TCLP Semivolatiles		*5		EPA SW-846 8270	10/16/95	GEF
1,4-Dichlorobenzene	<50	50	ug/L	EPA SW-846 8270		
2,4-Dinitrotoluene	<50	50	ug/L	EPA SW-846 8270		
Hexachlorobenzene	<50	50	ug/L	EPA SW-846 8270		
Hexachlorobutadiene	<50	50	ug/L	EPA SW-846 8270		
Hexachloroethane	<50	50	ug/L	EPA SW-846 8270		
Nitrobenzene	<50	50	ug/L	EPA SW-846 8270		
Pentachlorophenol	<250	250	ug/L	EPA SW-846 8270		
2,4,5-Trichlorophenol	<50	50	ug/L	EPA SW-846 8270		
2,4,6-Trichlorophenol	<50	50	ug/L	EPA SW-846 8270		
Pyridine	<50	50	ug/L	EPA SW-846 8270		
p,m-Cresol	110	50	ug/L	EPA SW-846 8270		
o-Cresol	210	50	ug/L	EPA SW-846 8270		
2-Fluorophenol (Surrogate)	57	0	% Recovery	21-83% QC LIMITS		
Phenol-d6 (Surrogate)	87	0	% Recovery	24-94% QC LIMITS		
Nitrobenzene-d5 (Surrogate)	99	0	% Recovery	35-102% QC LIMITS		
2-Fluorobiphenyl (Surrogate)	114	0	% Recovery	43-103% QC LIMITS		
2,4,6-Tribromophenol (Surrogate)	84	0	% Recovery	28-111% QC LIMITS		
Terphenyl-d14 (Surrogate)	90	0	% Recovery	43-117% QC LIMITS		
TCLP Volatiles		*100		EPA SW-846 8260	10/17/95	GP
Benzene	8000	500	ug/L	EPA SW-846 8260		
Carbon tetrachloride	<500	500	ug/L	EPA SW-846 8260		
Chlorobenzene	<500	500	ug/L	EPA SW-846 8260		
Chloroform	<500	500	ug/L	EPA SW-846 8260		
Methyl ethyl ketone	<5000	5000	ug/L	EPA SW-846 8260		
Trichloroethane	<500	500	ug/L	EPA SW-846 8260		
Vinyl chloride	<400	400	ug/L	EPA SW-846 8260		
1,2-Dichloroethane	<500	500	ug/L	EPA SW-846 8260		
Tetrachloroethane	<500	500	ug/L	EPA SW-846 8260		
1,1-Dichloroethane	<500	500	ug/L	EPA SW-846 8260		
Dibromofluoromethane (Surrogate)	106	0	% Recovery	86-115% QC LIMITS		
Toluene d-8 (Surrogate)	97	0	% Recovery	88-110% QC LIMITS		
4-Bromofluorobenzene (Surrogate)	94	0	% Recovery	86-115% QC LIMITS		
Extraction - TCLP Semivolatiles	Completed			EPA SW-846 3520	10/11/95	WEB
Glass Jar Extraction for Metals	Completed			EPA SW-846 1311	10/09/95	DDP
Glass Jar Extraction Semivolatiles	Completed			EPA SW-846 1311	10/09/95	DDP
Arsenic (As), extractable TCLP	0.07	0.05	mg/L	EPA SW-846 6010	10/16/95	GC

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673

LABORATORY TESTS RESULTS
10/17/95

JOB NUMBER: 952966

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

CLIENT I.D.: 4-1247

DATE SAMPLED: 10/06/95

TIME SAMPLED: 09:05

WORK DESCRIPTION: TANK BOTOMS 8533-3532 BISTI TANK BATT.

LABORATORY I.D.: 952966-0001

DATE RECEIVED: 10/09/95

TIME RECEIVED: 10:30

REMARKS: SAMPLED BY: TOOD

TEST DESCRIPTION	FINAL RESULT	LIMITS/DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Barium (Ba), extractable TCLP	2.53	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Cadmium (Cd), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Chromium (Cr), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Lead (Pb), extractable TCLP	0.11	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Selenium (Se), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Silver (Ag), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010	10/16/95	GCC
Flammability Potential	Negative		+ or -	ASTM D4982-89	10/17/95	EBS
Cyanide, Reactive	<5	5	mg/kg	EPA SW-846 7.3.3.2	10/11/95	DEW
Corrosivity by pH	6.1	0.1	pH units	EPA SW-846 9045 C	10/17/95	SEW
Sulfide, Reactive	1000	50	mg/kg	EPA SW-846 7.3.4.2	10/11/95	DEW
Mercury (Hg), extractable, TCLP	<0.02	0.02	mg/L	EPA SW-846 7470	10/13/95	EBS
Metals Digest on Extracted Sample	Completed			EPA SW-846 3010	10/12/95	EE
Zero Headspace Extraction-Volatile	Completed			EPA SW-846 1311	10/09/95	DGP

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78465
(512) 289-2673



CORE LABORATORIES

CORE LABORATORIES
ANALYTICAL REPORT
Job Number: 953325
Prepared For:
ONSITE TECHNOLOGIES LIMITED
DAVE COX
657 W. MAPLE
FARMINGTON, NM 87401
Date: 11/16/95


Signature

11/16/95
Date:

Name: Charles Sassine

CORE LABORATORIES
1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408

Title: Laboratory Supervisor



CORE LABORATORIES

LABORATORY TESTS RESULTS 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

CLIENT I.D.: T1E1001 BLOOMFIELD REFINERY
 DATE SAMPLED: 11/02/95
 TIME SAMPLED: 10:07
 WORK DESCRIPTION: 9051-3642 B15T1 STATION COMPOSITE

LABORATORY I.D.: 953325-0001
 DATE RECEIVED: 11/06/95
 TIME RECEIVED: 10:30
 REMARKS:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
TCLP Semivolatiles		*5		EPA SW-846 8270	11/10/95	GEF
1,4-Dichlorobenzene	<50	50	ug/L	EPA SW-846 8270		
2,4-Dinitrotoluene	<50	50	ug/L	EPA SW-846 8270		
Hexachlorobenzene	<50	50	ug/L	EPA SW-846 8270		
Hexachlorobutadiene	<50	50	ug/L	EPA SW-846 8270		
Hexachloroethane	<50	50	ug/L	EPA SW-846 8270		
Nitrobenzene	<50	50	ug/L	EPA SW-846 8270		
Pentachlorophenol	<250	250	ug/L	EPA SW-846 8270		
2,4,5-Trichlorophenol	<50	50	ug/L	EPA SW-846 8270		
2,4,6-Trichlorophenol	<50	50	ug/L	EPA SW-846 8270		
Pyridine	<50	50	ug/L	EPA SW-846 8270		
p,m-Cresol	<50	50	ug/L	EPA SW-846 8270		
o-Cresol	<50	50	ug/L	EPA SW-846 8270		
2-Fluorophenol (Surrogate)	71	0	% Recovery	21-83% QC LIMITS		
Phenol-d6 (Surrogate)	92	0	% Recovery	24-94% QC LIMITS		
Nitrobenzene-d5 (Surrogate)	82	0	% Recovery	35-102% QC LIMITS		
2-Fluorobiphenyl (Surrogate)	76	0	% Recovery	43-103% QC LIMITS		
2,4,6-Tribromophenol(Surrogate)	69	0	% Recovery	28-111% QC LIMITS		
Terphenyl-d14 (Surrogate)	89	0	% Recovery	43-117% QC LIMITS		
TCLP Volatiles		*10		EPA SW-846 8260	11/11/95	QP
Benzene	<50	50	ug/L	EPA SW-846 8260		
Carbon tetrachloride	<50	50	ug/L	EPA SW-846 8260		
Chlorobenzene	<50	50	ug/L	EPA SW-846 8260		
Chloroform	<50	50	ug/L	EPA SW-846 8260		
Methyl ethyl ketone	<500	500	ug/L	EPA SW-846 8260		
Trichloroethene	<50	50	ug/L	EPA SW-846 8260		
Vinyl chloride	<40	40	ug/L	EPA SW-846 8260		
1,2-Dichloroethane	<50	50	ug/L	EPA SW-846 8260		
Tetrachloroethene	53	50	ug/L	EPA SW-846 8260		
1,1-Dichloroethene	<50	50	ug/L	EPA SW-846 8260		
Dibromofluoromethane(Surrogate)	109	0	% Recovery	86-115% QC LIMITS		
Toluene d-8 (Surrogate)	95	0	% Recovery	88-110% QC LIMITS		
4-Bromofluorobenzene(Surrogate)	87	0	% Recovery	86-115% QC LIMITS		
Extraction - TCLP Semivolatiles	Completed			EPA SW-846 3520	11/08/95	WEB
Glass Jar Extraction for Metals	Completed			EPA SW-846 1311	11/07/95	DGP
Glass Jar Extraction-Semivolatiles	Completed			EPA SW-846 1311	11/07/95	DGP
Arsenic (As), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC

1733 NORTH PADRE ISLAND DRIVE
 CORPUS CHRISTI, TX 78408
 (512) 289-2673



CORE LABORATORIES

LABORATORY TESTS RESULTS 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

CLIENT I.D.: T1E1001 BLOOMFIELD REFINERY
DATE SAMPLED: 11/02/95
TIME SAMPLED: 10:07
WORK DESCRIPTION: 9051-3642 B15T1 STATION COMPOSITE

LABORATORY I.D.: 953325-0001
DATE RECEIVED: 11/06/95
TIME RECEIVED: 10:30
REMARKS:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Barium (Ba), extractable TCLP	0.90	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Cadmium (Cd), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Chromium (Cr), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Lead (Pb), extractable TCLP	0.07	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Selenium (Se), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Silver (Ag), extractable TCLP	<0.05	0.05	mg/L	EPA SW-846 6010A	11/14/95	GCC
Flammability Potential	Negative		+ or -	ASTM D4982-89	11/10/95	DEH
Cyanide, Reactive	<5	5	mg/kg	EPA SW-846 7.3.3.2	11/07/95	DEH
Corrosivity by pH	7.8	0.1	pH units	EPA SW-846 9045C	11/10/95	DJ
Sulfide, Reactive	<50	50	mg/kg	EPA SW-846 7.3.4.2	11/09/95	DJ
Mercury (Hg), extractable, TCLP	<0.002	0.002	mg/L	EPA SW-846 7470	11/10/95	EBS
Metals Digest on Extracted Sample	Completed			EPA SW-846 3010A	11/13/95	TFB
Zero Headspace Extraction-Volatile	Completed			EPA SW-846 1311	11/07/95	DGP

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Cyanide, Reactive REPORTING LIMIT/DF: UNITS: mg/kg				DATE/TIME ANALYZED: 11/07/95 13:00 METHOD REFERENCE : EPA SW-846 7.3.3.2		QC BATCH NUMBER: 993949 TECHNICIAN: DEH				
BLANK	MB 110795	DI H2O	<5							
STANDARD	LCS2	508.37.25	1.88			1.92	98			
SPIKE	PDS	953325-1	2.18					<5	1.93	113
DUPLICATE	MD	953325-1	<5	<5	0					
PARAMETER: Sulfide, Reactive REPORTING LIMIT/DF: 50 UNITS: mg/kg				DATE/TIME ANALYZED: 11/09/95 08:00 METHOD REFERENCE : EPA SW-846 7.3.4.2		QC BATCH NUMBER: 993990 TECHNICIAN: DJ				
BLANK	MB 110995	DI H2O	<50							
STANDARD	LCS	508.36.22	273			300	91			
SPIKE	MS	953280-1	265					<50	300	88
DUPLICATE	MD	953280-1	<50	<50	NC					
PARAMETER: Corrosivity by pH REPORTING LIMIT/DF: 0.1 UNITS: pH units				DATE/TIME ANALYZED: 11/10/95 10:00 METHOD REFERENCE : EPA SW-846 9045C		QC BATCH NUMBER: 994100 TECHNICIAN: DJ				
STANDARD	LCS	386.20.32	7.03			7.00	100			
DUPLICATE	MD	953326-1	7.96	8.01	1					
PARAMETER: Flammability Potential REPORTING LIMIT/DF: UNITS: + or -				DATE/TIME ANALYZED: 11/10/95 14:50 METHOD REFERENCE : ASTM D4982-89		QC BATCH NUMBER: 994125 TECHNICIAN: WEH				
BLANK	MD									
DUPLICATE	MD	953326-1	Negative	Negative	0					
PARAMETER: Mercury (Hg), extractable, TCLP REPORTING LIMIT/DF: 0.002 UNITS: mg/L				DATE/TIME ANALYZED: 11/10/95 08:00 METHOD REFERENCE : EPA SW-846 7470		QC BATCH NUMBER: 994145 TECHNICIAN: EBS				
BLANK	MB	DI H2O	<0.002							
STANDARD	RS	507.3.19	0.022			0.020	110			
SPIKE	MS	953267-1	0.045					<0.002	0.050	90
DUPLICATE	MD	953267-1	<0.002	<0.002	NC					
PARAMETER: Arsenic (As), extractable TCLP REPORTING LIMIT/DF: 0.05 UNITS: mg/L				DATE/TIME ANALYZED: 11/14/95 15:51 METHOD REFERENCE : SW-846 6010A		QC BATCH NUMBER: 994365 TECHNICIAN: GCC				
BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	Q1095	0.99			1.00	99			
STANDARD	CCV	1013C	5.11			5.00	102			
SPIKE	MS	953326-002	1.00					<0.05	1.00	100
DUPLICATE	MD	953326-002	<0.05	<0.05	NC					

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325 CUSTOMER: ONSITE TECHNOLOGIES LIMITED ATTN: DAVE COX

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY

PARAMETER: Barium (Ba), extractable TCLP DATE/TIME ANALYZED: 11/14/95 15:51 QC BATCH NUMBER: 994366
 REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE : SW-846 6010A TECHNICIAN: GCC

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	1023C	1.03			1.00	103			
STANDARD	CCV	1013C	5.12			5.00	102			
SPIKE	MS	953326-002	1.71					0.86	1.00	85
DUPLICATE	MD	953326-002	0.86	1.00	15					

PARAMETER: Cadmium (Cd), extractable TCLP DATE/TIME ANALYZED: 11/14/95 15:51 QC BATCH NUMBER: 994367
 REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE : SW-846 6010A TECHNICIAN: GCC

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	Q1095	1.00			1.00	100			
STANDARD	CCV	1013C	5.18			5.00	104			
SPIKE	MS	953326-002	0.98					<0.05	1.00	98
DUPLICATE	MD	953326-002	<0.05	<0.05	NC					

PARAMETER: Chromium (Cr), extractable TCLP DATE/TIME ANALYZED: 11/14/95 15:51 QC BATCH NUMBER: 994368
 REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE : SW-846 6010A TECHNICIAN: GCC

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	Q1095	1.02			1.00	102			
STANDARD	CCV	1013C	5.22			5.00	104			
SPIKE	MS	953326-002	0.92					0	1.00	92
DUPLICATE	MD	953326-002	<0.05	<0.05	NC					

PARAMETER: Lead (Pb), extractable TCLP DATE/TIME ANALYZED: 11/14/95 15:51 QC BATCH NUMBER: 994369
 REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE : SW-846 6010A TECHNICIAN: GCC

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	Q1095	1.00			1.00	100			
STANDARD	CCV	1023C	5.10			5.00	102			
SPIKE	MS	953326-002	0.89					0.05	1.00	84
DUPLICATE	MD	953326-002	0.05	0	0.05					

PARAMETER: Selenium (Se), extractable TCLP DATE/TIME ANALYZED: 11/14/95 15:51 QC BATCH NUMBER: 994370
 REPORTING LIMIT/DF: 0.05 UNITS: mg/L METHOD REFERENCE : SW-846 6010A TECHNICIAN: GCC

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							

1733 NORTH PADRE ISLAND DRIVE
 CORPUS CHRISTI, TX 78408
 (512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

ANALYSIS				DUPLICATES		REFERENCE STANDARDS		MATRIX SPIKES		
ANALYSIS TYPE	ANALYSIS SUB-TYPE	ANALYSIS I.D.	ANALYZED VALUE (A)	DUPLICATE VALUE (B)	RPD or (A-B)	TRUE VALUE	PERCENT RECOVERY	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY
PARAMETER: Selenium (Se), extractable TCLP REPORTING LIMIT/DF: 0.05 UNITS:mg/L				DATE/TIME ANALYZED: 11/14/95 15:51 METHOD REFERENCE : SW-846 6010A		QC BATCH NUMBER: 994370 TECHNICIAN: GCC				

BLANK STANDARD	MB ICV	3051 01095	<0.05 1.05			1.00	105			
STANDARD	CCV	1023C	5.06			5.00	101			
SPIKE	MS	953326-002	0.99					<0.05	1.00	99
DUPLICATE	MD	953326-002	<0.05	<0.05	NC					

PARAMETER: Silver (Ag), extractable TCLP REPORTING LIMIT/DF: 0.05 UNITS:mg/L				DATE/TIME ANALYZED: 11/14/95 15:51 METHOD REFERENCE : SW-846 6010A		QC BATCH NUMBER: 994371 TECHNICIAN: GCC				
---	--	--	--	---	--	--	--	--	--	--

BLANK	MB	3005	<0.05							
BLANK	MB	3010	<0.05							
BLANK	MB	3051	<0.05							
STANDARD	ICV	1023C	1.00			1.00	100			
STANDARD	CCV	1013C	5.00			5.00	100			
SPIKE	MS	953326-002	0.94					<0.05	1.00	94
DUPLICATE	MD	953326-002	<0.05	<0.05	NC					

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

TCLP SEMIVOLATILES

DATE ANALYZED: 11/10/95 TIME ANALYZED: 08:44 METHOD: EPA SW-846 8270

QC NUMBER: 994204

BLANKS

TEST DESCRIPTION	ANALY	SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
1,4-Dichlorobenzene	MB		110895	1	<10	10	ug/L
2,4-Dinitrotoluene	MB		110895	1	<10	10	ug/L
Hexachlorobenzene	MB		110895	1	<10	10	ug/L
Hexachlorobutadiene	MB		110895	1	<10	10	ug/L
Hexachloroethane	MB		110895	1	<10	10	ug/L
Nitrobenzene	MB		110895	1	<10	10	ug/L
Pentachlorophenol	MB		110895	1	<50	50	ug/L
2,4,5-Trichlorophenol	MB		110895	1	<10	10	ug/L
2,4,6-Trichlorophenol	MB		110895	1	<10	10	ug/L
Pyridine	MB		110895	1	<10	10	ug/L
Cresols (Total)	MB		110895	1	<30	30	ug/L

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

TCLP SEMIVOLATILES

DATE ANALYZED: 11/10/95 TIME ANALYZED: 08:44 METHOD: EPA SW-846 8270

QC NUMBER: 994204

MATRIX SPIKES

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
1,4-Dichlorobenzene	BS	110895-00	1	90	0	250	36	10	ug/L
2,4-Dinitrotoluene	BS	110895-00	1	220	0	250	88	10	ug/L
Hexachlorobenzene	BS	110895-00	1	240	0	250	96	10	ug/L
Hexachlorobutadiene	BS	110895-00	1	110	0	250	44	10	ug/L
Hexachloroethane	BS	110895-00	1	70	0	250	28	10	ug/L
Nitrobenzene	BS	110895-00	1	340	0	250	136	10	ug/L
Pentachlorophenol	BS	110895-00	1	850	0	750	113	50	ug/L
2,4,5-Trichlorophenol	BS	110895-00	1	720	0	750	96	10	ug/L
2,4,6-Trichlorophenol	BS	110895-00	1	310	0	250	124	10	ug/L
Pyridine	BS	110895-00	1	440	0	500	88	10	ug/L
Cresols (Total)	BS	110895-00	1	580	0	750	77	30	ug/L

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

TCLP Volatiles

DATE ANALYZED: 11/11/95 TIME ANALYZED: 13:36 METHOD: EPA SW-846 8260

QC NUMBER: 994210

B L A N K S

TEST DESCRIPTION	ANALY	SUB-TYPE	ANALYSIS I.D.	DILUTION FACTOR	ANALYZED VALUE	DETECTION LIMIT	UNITS OF MEASURE
Vinyl chloride	MB		110795	1	<5	5	ug/L
1,1-Dichloroethene	MB		110795	1	<5	5	ug/L
Methyl ethyl ketone	MB		110795	1	<50	50	ug/L
Chloroform	MB		110795	1	<5	5	ug/L
Carbon tetrachloride	MB		110795	1	<5	5	ug/L
1,2-Dichloroethane	MB		110795	1	<5	5	ug/L
Benzene	MB		110795	1	<5	5	ug/L
Trichloroethene	MB		110795	1	<5	5	ug/L
Tetrachloroethene	MB		110795	1	<5	5	ug/L
Chlorobenzene	MB		110795	1	<5	5	ug/L

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

TCCLP Volatiles

DATE ANALYZED: 11/11/95 TIME ANALYZED: 13:36 METHOD: EPA SW-846 8260

QC NUMBER: 994210

REFERENCE STANDARDS

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	TRUE VALUE	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Vinyl chloride	CC	342.97.1	1	101	100	101	5	ug/L
1,1-Dichloroethene	CC	342.97.1	1	117	100	117	5	ug/L
Methyl ethyl ketone	CC	342.97.1	1	100	100	100	50	ug/L
Chloroform	CC	342.97.1	1	102	100	102	5	ug/L
Carbon tetrachloride	CC	342.97.1	1	102	100	102	5	ug/L
1,2-Dichloroethane	CC	342.97.1	1	100	100	100	5	ug/L
Benzene	CC	342.97.1	1	104	100	104	5	ug/L
Trichloroethene	CC	342.97.1	1	106	100	106	5	ug/L
Tetrachloroethene	CC	342.97.1	1	103	100	103	5	ug/L
Chlorobenzene	CC	342.97.1	1	101	100	101	5	ug/L
Dibromofluoromethane(Surrogate)	CC	342.97.1	1	47	50	94	5	ug/L
Toluene d-8 (Surrogate)	CC	342.97.1	1	49	50	98	5	ug/L
4-Bromofluorobenzene(Surrogate)	CC	342.97.1	1	47	50	94	5	ug/L

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE REPORT 11/16/95

JOB NUMBER: 953325

CUSTOMER: ONSITE TECHNOLOGIES LIMITED

ATTN: DAVE COX

TCLP Volatiles

DATE ANALYZED: 11/11/95 TIME ANALYZED: 13:36 METHOD: EPA SW-846 8260

QC NUMBER: 994210

MATRIX SPIKES

TEST DESCRIPTION	ANALYSIS SUB-TYPE	ANALYSIS I. D.	DILUTION FACTOR	ANALYZED VALUE	ORIGINAL VALUE	SPIKE ADDED	PERCENT RECOVERY	DETECTION LIMITS	UNITS OF MEASURE
Vinyl chloride	MS	953268-1	1	1010	0	1000	101	5	ug/L
	MSD	953268-1	1	960	0	1000	96	5	ug/L
1,1-Dichloroethene	MS	953268-1	1	1120	0	1000	112	5	ug/L
	MSD	953268-1	1	1090	0	1000	109	5	ug/L
Methyl ethyl ketone	MS	953268-1	1	710	0	1000	71	50	ug/L
	MSD	953268-1	1	750	0	1000	75	50	ug/L
Chloroform	MS	953268-1	1	970	0	1000	97	5	ug/L
	MSD	953268-1	1	950	0	1000	95	5	ug/L
Carbon tetrachloride	MS	953268-1	1	990	0	1000	99	5	ug/L
	MSD	953268-1	1	930	0	1000	93	5	ug/L
1,2-Dichloroethane	MS	953268-1	1	960	0	1000	96	5	ug/L
	MSD	953268-1	1	900	0	1000	90	5	ug/L
Benzene	MS	953268-1	1	1050	0	1000	105	5	ug/L
	MSD	953268-1	1	980	0	1000	98	5	ug/L
Trichloroethene	MS	953268-1	1	960	0	1000	96	5	ug/L
	MSD	953268-1	1	900	0	1000	90	5	ug/L
Tetrachloroethene	MS	953268-1	1	1280	0	1000	128	5	ug/L
	MSD	953268-1	1	980	0	1000	98	5	ug/L
Chlorobenzene	MS	953268-1	1	1040	0	1000	104	5	ug/L
	MSD	953268-1	1	980	0	1000	98	5	ug/L
Dibromofluoromethane(Surrogate)	MB	110795-00	1	540	0	500	108	5	ug/L
Toluene d-8 (Surrogate)	MB	110795-00	1	460	0	500	92	5	ug/L
4-Bromofluorobenzene(Surrogate)	MB	110795-00	1	470	0	500	94	5	ug/L

1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408
(512) 289-2673



CORE LABORATORIES

QUALITY ASSURANCE FOOTER

Cited Methods are obtained from the following documents :

- EPA 600/2-79-020, Methods for the Analysis of Water and Wastes, March 1983.
- USEPA SW-846 3rd. Edition, November 1990 and July 1992 Update, Test Methods for Evaluating Solid Waste.
- EPA 600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils.
- Federal Register, July 1, 1992 (40 CFR Part 136).
- Standard Methods for the Examination of Water and Wastewater, 18th Ed. APHA, AWWA, WPCF.
- Methods of Soil Analysis, Agronomy No. 9, C.A. Black, 1965.

Quality control acceptance criteria are method dependent.

All data reported on sample "as received" unless noted.

Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.

NC = Not Calculated due to value at or below detection limit.

NOTE: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical range.

The "TIME ANALYZED" in the QA report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "DATE ANALYZED" is the actual date of analysis.

The data in this report are within the limits of uncertainty specified in the referenced method unless otherwise indicated.

SUB CONTRACTED LABORATORY LOCATIONS

For analyses performed by a subcontract laboratory, an "*" and the designated laboratory code is indicated in the "TECHN" column of the laboratory test results report.

Core Laboratories :

Anaheim	*AN	Lake Charles	*LC
Aurora	*AU	Long Beach	*LB
Casper	*CA	Other Laboratories	*XX
Houston	*HP		

QUALITY ASSURANCE REPORT CODES

BLANKS*

- NB = Method Blank
- RB = Reagent Blank
- SB = Storage Blank
- ICB = Initial Calib. Blank
- CCB = Continuing Calib. Blank

REFERENCE STANDARDS

- RS = Reference Standard
- CC = Continuing Calib.
- LCS = Laboratory Control Std.
- ICV = Initial Calib. Verification
- CCV = Cont. Calib. Verification

SPIKES AND DUPLICATES

- MS = Matrix Spike, BS = Blank Spike
- SS = Surrogate Spike, MD = Matrix Dup.
- PDS= Post Digested Spike
- MSD= Matrix Spike Duplicate
- PDD= Post Digested Duplicate

*In the event that several different method blanks are analyzed, the blank type will be designated by the preparation method, i.e., ZHE, TCLP, 3010, 3050, etc.

1733 NORTH PADRE ISLAND DRIVE
 CORPUS CHRISTI, TX 78408
 (512) 289-2673

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Todd Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *27-Nov-95*
COC No.: *3560*
Sample No. *9374*
Job No. *2-1000*

Project Name: *Bisti Station*
Project Location: *Pit #1 Composite #1*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *24-Nov-95* Time: *13:40*
Date: *27-Nov-95*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>9374-3560</i>	<i>Bisti Station Pit #1 Composite #1</i>	<i>2,181 mg/kg</i>

Quality Assurance Report

Laboratory Identification	Analyzed Value	Acceptable Range	Units of Measure
<i>Laboratory Fortified Blank Soil - QCBS1</i>	<i>35</i>	<i>22 - 46</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>887</i>	<i>828 - 1024</i>	<i>mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:
Date:

Jaby
11/27/95

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Todd Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *27-Nov-95*
COC No.: *3560*
Sample No. *9375*
Job No. *2-1000*

Project Name: *Bisti Station*
Project Location: *Pit #1 Composite #2*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *24-Nov-95* Time: *13:45*
Date: *27-Nov-95*

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
<i>9375-3560</i>	<i>Bisti Station Pit #1 Composite #2</i>	<i>934 mg/kg</i>

Quality Assurance Report

<i>Laboratory Identification</i>	<i>Analyzed Value</i>	<i>Acceptable Range</i>	<i>Units of Measure</i>
<i>Laboratory Fortified Blank Soil - QCBS1</i>	<i>35</i>	<i>22 - 46</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>887</i>	<i>828 - 1024</i>	<i>mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:
Date:

Jax
11/27/95

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Todd Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *27-Nov-95*
COC No.: *3560*
Sample No. *9376*
Job No. *2-1000*

Project Name: *Bisti Station*
Project Location: *Backfill Composite*
Sampled by: *TN*
Analyzed by: *BV*
Type of Sample: *Soil*

Date: *24-Nov-95* Time: *13:50*
Date: *27-Nov-95*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
9376-3560	<i>Bisti Station</i> <i>Backfill Composite</i>	1,039 mg/kg

Quality Assurance Report

Laboratory Identification	Analyzed Value	Acceptable Range	Units of Measure
<i>Laboratory Fortified Blank Soil - QCBS1</i>	35	22 - 46	mg/kg
<i>Laboratory Fortified Spike Soil - QCSS1</i>	887	828 - 1024	mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:

Date:

Jax
11/27/95

CHAIN OF CUSTODY RECORD

ON SITE

TECHNOLOGIES, LTD. 657 W. Maple • P. O. Box 2606 • Farmington NM 87499
 L.A.B: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:		Job No.		Name		Title	
SEND INVOICE TO		Company		Company		Company	
Address		Dept.		Mailing Address		Mailing Address	
City, State, Zip				City, State, Zip		City, State, Zip	
Sampling Location:				Telephone No.		Telephone No.	
Sampler:				ANALYSIS REQUESTED			
REPORT RESULTS TO		Number of Containers					
SAMPLE IDENTIFICATION		PRES.					
DATE		DATE					
TIME		TIME					
MATRIX		MATRIX					
LAB ID		LAB ID					
Date/Time		Date/Time					
Date/Time		Date/Time					
Date/Time		Date/Time					
Relinquished by:		Received by:		Date/Time		Date/Time	
Relinquished by:		Received by:		Date/Time		Date/Time	
Relinquished by:		Received by:		Date/Time		Date/Time	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Authorized by:						Special Instructions:	

ON SITE

OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Todd Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *30-Nov-95*
COC No.: *3561*
Sample No. *9433*
Job No. *2-1000*

Project Name: *Bisti Station (BRC)*
Project Location: *Pit #2, #1 Closure Composite*
Sampled by: *TN* Date: *28-Nov-95* Time: *10:00*
Analyzed by: *HR* Date: *30-Nov-95*
Type of Sample: *Soil*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
9433-3561	<i>Bisti Station (BRC) Pit #2, #1 Closure Composite</i>	<i>2,970 mg/kg</i>

Quality Assurance Report

Laboratory Identification	Analyzed Value	Acceptable Range	Units of Measure
<i>Laboratory Fortified Blank Soil - QCBS1</i>	<i>29</i>	<i>22 - 46</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>850</i>	<i>828 - 1024</i>	<i>mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*

Date: *11/30/95*



OFF: (505) 325-8786

LAB: (505) 325-5667

TECHNOLOGIES, LTD.

TOTAL PETROLEUM HYDROCARBONS

Attn: *Todd Nobis*
Company: *Tierra Environmental*
Address: *P.O. Box 15250*
City, State: *Farmington, NM 87499*

Date: *30-Nov-95*
COC No.: *3561*
Sample No. *9434*
Job No. *2-1000*

Project Name: *Bisti Station (BRC)*
Project Location: *Pit #2, #2 Closure Composite*
Sampled by: *TN* Date: *28-Nov-95* Time: *10:10*
Analyzed by: *HR* Date: *30-Nov-95*
Type of Sample: *Soil*

Laboratory Analysis

<i>Laboratory Identification</i>	<i>Sample Identification</i>	<i>Total Petroleum Hydrocarbons</i>
<i>9434-3561</i>	<i>Bisti Station (BRC) Pit #2, #2 Closure Composite</i>	<i>2,157 mg/kg</i>

Quality Assurance Report

<i>Laboratory Identification</i>	<i>Analyzed Value</i>	<i>Acceptable Range</i>	<i>Units of Measure</i>
<i>Laboratory Fortified Blank Soil - QCBS1</i>	<i>29</i>	<i>22 - 46</i>	<i>mg/kg</i>
<i>Laboratory Fortified Spike Soil - QCSS1</i>	<i>850</i>	<i>828 - 1024</i>	<i>mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *[Signature]*
Date: *11/30/95*

CHAIN OF CUSTODY RECORD



TECHNOLOGIES, LTD. 657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 11-1-97

Purchase Order No.:		Job No.		Name		Title	
SEND INVOICE TO		Company		Mailing Address		Company	
Address		Dept.		City, State, Zip		Telephone No.	
City, State, Zip				Telephone No.		Telefax No.	
Sampling Location:				RESULTS TO			
Sampler:				Containers			
SAMPLE IDENTIFICATION		SAMPLE DATE		MATRIX		PRES.	
ANALYSIS REQUESTED							
Date/Time		Date/Time		Date/Time		Date/Time	
Received by:		Received by:		Received by:		Received by:	
Date/Time		Date/Time		Date/Time		Date/Time	
Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	
Date/Time		Date/Time		Date/Time		Date/Time	
Method of Shipment:		Rush		24-48 Hours		10 Working Days	
Special Instructions:							
Authorized by:				Date			
(Client Signature <u>Must</u> Accompany Request)							

10.0

S I T E P H O T O G R A P H S

