

**GW - 23**

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# **WORK PLANS**



370 17<sup>th</sup> Street, Suite 2500  
Denver, Colorado 80202  
303-595-3331 - main  
303-605-1957 - fax

May 26, 2006

Mr. Mike Bratcher  
New Mexico Oil Conservation Division  
1301 W. Grand Ave  
Artesia, NM 88210

*GPM Artesia Gas Plant*  
**RE: Flare Pit Soil Remediation and Closure Workplan  
Duke Energy Field Services Artesia Gas Plant  
Section 7, T18S, R28E  
Eddy County, NM**

*(GW-23)*

Dear Mr. Bratcher:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, a copy of the Flare Pit Soil Remediation and Closure Report for the DEFS Artesia Gas Plant located in Eddy County, New Mexico (Section 7, Township 18 South, Range 28 East).

Upon your approval, DEFS will move forward with the closure activities. One hard copy of the workplan will also be mailed next week.

If you have any questions regarding these reports, please call at 303-605-1718 or email me [swweathers@duke-energy.com](mailto:swweathers@duke-energy.com).

Sincerely

**Duke Energy Field Services, LP**

Stephen Weathers, PG  
Sr. Environmental Specialist

cc: Boyd Fortin, DEFS Midland Office  
Environmental Files

2006 JUL 10 PM 1 47

FLARE PIT SOIL REMEDIATION AND CLOSURE  
WORKPLAN

DUKE ENERGY FIELD SERVICES  
ARTESIA GAS PLANT  
SECTION 7, T-18-S, R-28-E  
EDDY COUNTY, NEW MEXICO

# **FLARE PIT SOIL REMEDIATION AND CLOSURE WORKPLAN**

**DUKE ENERGY FIELD SERVICES  
ARTESIA GAS PLANT  
SECTION 7, T-18-S, R-28-E  
EDDY COUNTY, NEW MEXICO**

**Prepared For:**

**Mr. Steve Weathers  
DUKE ENERGY FIELD SERVICES  
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**MAY 23, 2006  
REF. NO. 043995 (1)**

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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this Flare Pit Soil Remediation and Closure Workplan on behalf of Duke Energy Field Services (DEFS). The DEFS Artesia Flare Pit (hereafter referred to as the "Site") is located 11 miles east of Artesia in Section 7, T-18-S, R-28-E in Eddy County, New Mexico (FIGURE 1). The flare pit is associated with an active gas plant facility which has been in operation for approximately 40 years. DEFS is in the process of decommissioning the flare pit. The facility is currently owned and operated by DEFS.

The purpose of this document is to provide information for New Mexico Oil Conservation Division (NMOCD) consideration and ultimate approval of Closure Plan information contained in this report. Closure Plan elements include:

- procedures utilized to assess the extent of contamination;
- procedures utilized to manage, remediate and dispose of all contaminated soil and wastes; and
- schedules for submission of closure reports for the subject flare pit.

This document presents the results of initial soil sampling results performed at the Site, a regulatory framework for existing and proposed activities as well as a soil remediation and closure workplan designed to facilitate Site closure. Site details, sampling locations and the proposed remedial excavation area are presented as FIGURE 2. Appendices are provided to include laboratory analytical reports, NMOCD regulatory forms C-138 and C-144 for use in association with proposed project activities, and signed approval by Edward Martin of the NMOCD classifying the waste as RCRA non exempt for disposal at the Artesia Aeration Landfarm.

## 2.0 REGULATORY FRAMEWORK AND SITE CLASSIFICATION

The NMOCD has regulatory jurisdiction over certain oil and gas production operations in the State of New Mexico, including the closure of pits and below-grade tanks. The NMOCD document entitled *Pit and Below-Grade Tank Guidelines*, dated November 1, 2004, was reviewed in the context of planned decommissioning activities for the DEFS Artesia Flare Pit location. The guidelines apply to pits (including flare pits) classified as 1) exempt for Federal Resources Conservation and Recovery Act (RCRA) Subtitle C Regulations, or 2) non-hazardous by characteristic testing. Prior to final closure of an unlined pit (or above grade pit) the operator is required to perform an assessment to evaluate the extent to which soils and/or groundwater may have been impacted by its operation. Assessment results will form the basis of any required remediation. Remediation should be performed in accordance to NMOCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993.

This project is conducted under the regulatory jurisdiction of the NMOCD, which requires the vadose zone shall be abated so that water contaminants in the vadose zone will not, with reasonable probability, contaminate groundwater or surface water (toxic pollutants as defined in 20.6.2.7 New Mexico Administration Code shall not be present) through leaching, percolation, or other transport mechanisms (19.15.1.19 NMAC, Subsection B, Paragraphs 1 and 2). The NMOCD hydrocarbon soil remediation levels are determined by ranking criteria on a site-by-site basis, as outlined in the NMOCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection, and distance to surface water.

Currently, one windmill is located within 1,000 feet of the flare pit with an estimated depth to groundwater of greater than 50 feet below ground surface (bgs) but less than 100 feet bgs. No surface water bodies are located within 1,000 feet or less of the flare pit. The table below illustrates the ranking criteria, used by the NMOCD, and includes site-specific characteristics at the Site.

Criteria	Site Characteristics	Ranking Score
Depth to Ground Water	50-99 feet	10
Wellhead Protection Area	>200 feet to <1,000 feet	20
Distance to Surface Water	>1,000 feet	0
	Total Ranking Score	30

Based on the sites' characteristics and the "Guidelines for Remediation of Spills, Leaks, and Releases" the site has a ranking score of 30. Consequently, the ranking criteria Recommended Remediation Action Levels (RRALs) of 10 milligrams per kilogram (mg/Kg) Benzene, 50 mg/Kg total Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), and 100 mg/Kg Total Petroleum Hydrocarbons (TPH) are proposed for remediation at the Site.

### 3.0 INITIAL SOIL SAMPLING RESULTS

DEFS contacted CRA on January 18, 2006 regarding the evaluation of closure activities on the flare pit. In response, CRA and DEFS personnel were onsite January 23, 2006 to collect six grab soil samples to assess conditions at the former flare pit location. One sample from each of the north, south, east, west walls and two grab bottom samples were collected and submitted to TraceAnalysis Inc. (Trace) of Lubbock, Texas. A Site Details and Sample Location Map is provided as FIGURE 2 presenting the soil sample locations. The samples were analyzed for BTEX utilizing EPA Method 8021B, TPH using EPA 8015 Modified for diesel range organics/gasoline range organics (DRO/GRO), and total metals using EPA Method 5 6010B/7471.

The analytical results collected and submitted for analysis at the flare pit are summarized in TABLES I and II. The results indicate all the samples were below NMOCD RRALS for closure with the exception of the North Bottom 2' sample which had a TPH concentration of 682 mg/Kg (in the DRO). Laboratory reports are presented in APPENDIX A.

#### 4.0 SOIL REMEDIATION WORKPLAN

This Soil Remediation Workplan proposes tasks to remove hydrocarbon-affected soils and perform restoration activities at the Site. The workplan is based upon existing Site conditions and associated NMOCD guidance documents.

The initial soil assessment activities performed by CRA effectively delineated the horizontal and vertical extent of hydrocarbon-affected soils in accordance to NMOCD regulatory guidance. Analytical results indicate that the primary area of affected soils above NMOCD RRALs at the Site is centered around the North Bottom soil sample location.

The primary objectives of this Soil Remediation Workplan are to remove the affected soils from the Site that exhibit hydrocarbon concentrations above NMOCD regulatory guidelines and obtain written acknowledgement from the NMOCD regarding the implemented soil remediation workplan activities. Upon completion of these work plan activities, obtain a written no further action warranted letter from the NMOCD (as appropriate). Excavated soils are scheduled for transportation to Artesia Aeration in Hobbs, New Mexico.

This Remedial Workplan includes the following tasks:

- Task 1 - Site Preparation
- Task 2 - Excavation Plan
- Task 3 - Soil-Staging and Hauling Activities
- Task 4 - Confirmation Soil Sampling Plan
- Task 5 - Waste Management
- Task 6 - Site Restoration
- Task 7 - Site Closure Report

The following sections outline the general tasks proposed for this Soil Remediation Workplan. The findings of the remediation activities will be submitted to the NMOCD District 2 office on Form C-144 (APPENDIX B), with attachments as Site closure documentation.

##### **Task 1 - Site Preparation**

Upon notification to proceed with the Soil Remediation Workplan activities by the NMOCD and DEFS, CRA will initiate Site preparation activities for the Artesia Flare Pit project.

A project specific Health and Safety Plan (HASP) will be prepared by CRA prior to conducting the soil excavation, removal, and backfilling (as appropriate) activities. Safety and health issues associated with this project include working around

excavations, heavy equipment, hydrocarbon-affected soils, and underground utilities such as pipelines. The CRA representative will implement the HASP in the field.

Field activities will require identification of the proposed remedial excavation, communication with New Mexico utility notification services, as well as coordination of activities with DEFS personnel to facilitate a safe working environment at the active Artesia Gas Plant facility. A pre-start site safety review will be implemented prior to beginning field activities in accordance with HASP objectives - including communication and review of DEFS site-specific safety requirements.

Pre-approval of waste management activities including waste characterization, transportation and disposal/treatment of impacted soils are also proposed (see Task 5 - Waste Management).

The proposed waste characterization activities are based on conversations with Mr. Ed Martin of the NMOCD regarding this project.

#### **Task 2 - Excavation Plan**

Subsequent to the completion of the Site preparation task, excavation activities will be implemented at the "proposed remedial excavation area" identified in FIGURE 2. Excavation walls will be sloped or benched in accordance to the Occupational Safety and Health Administration (OSHA) guidelines. Based on the initial soil sampling results for the Site, excavation activities are anticipated to be limited in nature and are not anticipated to exceed 10-foot bgs. Heavy equipment will be utilized to remove affected soils for staging adjacent to the remedial excavation.

Soil samples will periodically be collected within the excavations at various depths and locations based on the judgment of CRA field personnel to assess the completeness of the soil removal activities. The soil samples will be field screened utilizing a photo-ionization detector (PID) calibrated to a 100-ppm isobutylene standard. Each soil sample will be placed in resealable plastic bags leaving a headspace for volatile organic compounds (VOCs) to collect. After sufficient time has passed to allow for volatilization, the headspace in each bagged sample will be measured using the PID. Visual observation of soil conditions will also be utilized to determine the limits of the excavation. Areas exhibiting excessive VOC concentrations and/or visual impacts will be over-excavated and re-sampled until reduced concentrations and/or limited visual impacts are documented.

#### **Task 3 - Soil-Staging and Hauling Activities**

Hydrocarbon-affected soils removed from the remedial excavation area will be staged adjacent to the excavation on a poly liner. The waste materials are identified for offsite transport to the Artesia Aeration landfarm facility (see Task 5 - Waste Management). The materials will be loaded into a trailer or dump trucks at the prescribed staging area. Appropriate documentation including manifests and/or bills-of-lading will be maintained for all soils transported offsite and onsite.

#### **Task 4 - Confirmation Sampling Plan**

The NMOCD District 2 Artesia office will be notified at least 48 hours in advance of planned confirmation sampling activities. Excavation sidewall/floor areas are identified for confirmation soil sampling activities. The grab sample locations will be based on the geometry of the remedial excavation. For planning purposes, 5 sidewall/floor samples in the remedial excavation are anticipated. Site-specific NMOCD ranking criteria cleanup levels of 10 mg/Kg Benzene, 50 mg/Kg total BTEX and 100 mg/Kg TPH are adopted for remedial and closure activities at the Site.

The soil samples will be delivered to TraceAnalysis, Inc. (Trace) in Lubbock, Texas for TPH (GRO/DRO) analysis by EPA Method 8015 (modified) and BTEX analyses by EPA Method 8021B. Each container will be labeled, placed on ice in an insulated cooler, and chilled to a temperature of approximately 40°F (4°C). The cooler will be sealed for shipment to the laboratory. Proper chain-of-custody documentation will accompany the samples to the laboratory.

#### **Task 5 - Waste Management**

Hydrocarbon-affected soils removed from the Site are identified for offsite disposal/treatment at the Artesia Aeration facility located near Hobbs, New Mexico. The soils are identified as RCRA non-exempt waste. Artesia Aeration currently holds Permit NM-01-0030 from the New Mexico Energy, Minerals, and Natural Resources Department - Oil Conservation Division (NMOCD), to operate a commercial surface waste management facility (APPENDIX C). CRA understands that Artesia Aeration is a DEFS-approved facility. The estimated volume of soils targeted for transport to the facility is approximately 10 cubic yards. Manifests and bills-of-lading documentation will be maintained to track the actual amount of soil removed from the Site.

Analytical soil samples were submitted under proper chain-of-custody to Trace for waste profiling purposes - including RCRA (8) Metals, BTEX, and TPH (GRO/DRO) analyses. The laboratory analysis supports a non-hazardous classification for the respective analytes (TABLES I and II). Subsequently, a NMOCD-Request for Approval to Accept Solid Waste Form C-138 and Certificate of Waste Status Form (APPENDIX C) was submitted to the NMOCD along with the waste characterization analytical data in order to obtain pre-approval of the proposed waste shipments to the NMOCD-permitted Artesia Aeration facility. The request was approved as RCRA Non-exempt waste on May 1, 2006 by Mr. Edward Martin of the NMOCD. A Certificate of Waste Status Form (APPENDIX D) will need to be completed and signed by DEFS prior to disposal of any waste at the landfarm.

#### **Task 6 - Site Restoration**

Final grading of construction-affected surface areas will be performed to mitigate wind erosion and facilitate re-vegetation. Re-vegetation efforts will be performed in coordination with the landowner (understood to be DEFS).

## Task 7 – Site Closure Report

A document summarizing the findings of the Soil Remediation and Closure Workplan activities is proposed for submittal to the DEFS Artesia District 2 office on the NMOCD Form C-144 "Pit or Below-Grade Tank Registration or Closure". A Soil Remediation and Site Closure report attachment to the form will summarize soil excavation/staging activities, confirmation sampling results, as well as provide waste management documentation and Site restoration activities. Site figures, certified laboratory reports, manifests, bills-of-lading, and other relevant project information will be provided in the report. The report will be submitted to the DEFS approximately three weeks subsequent to (CRA) receiving final laboratory analytical reports on the confirmation sampling activities.

CRA is prepared to begin work on this project subsequent to NMOCD notification to proceed. If you have any questions, comments, or require additional information, please contact us at  
(432) 686-0086.

All of Which is Respectfully Submitted,  
Conestoga-Rovers & Associates

  
Jeff Kindley  
Project Manager

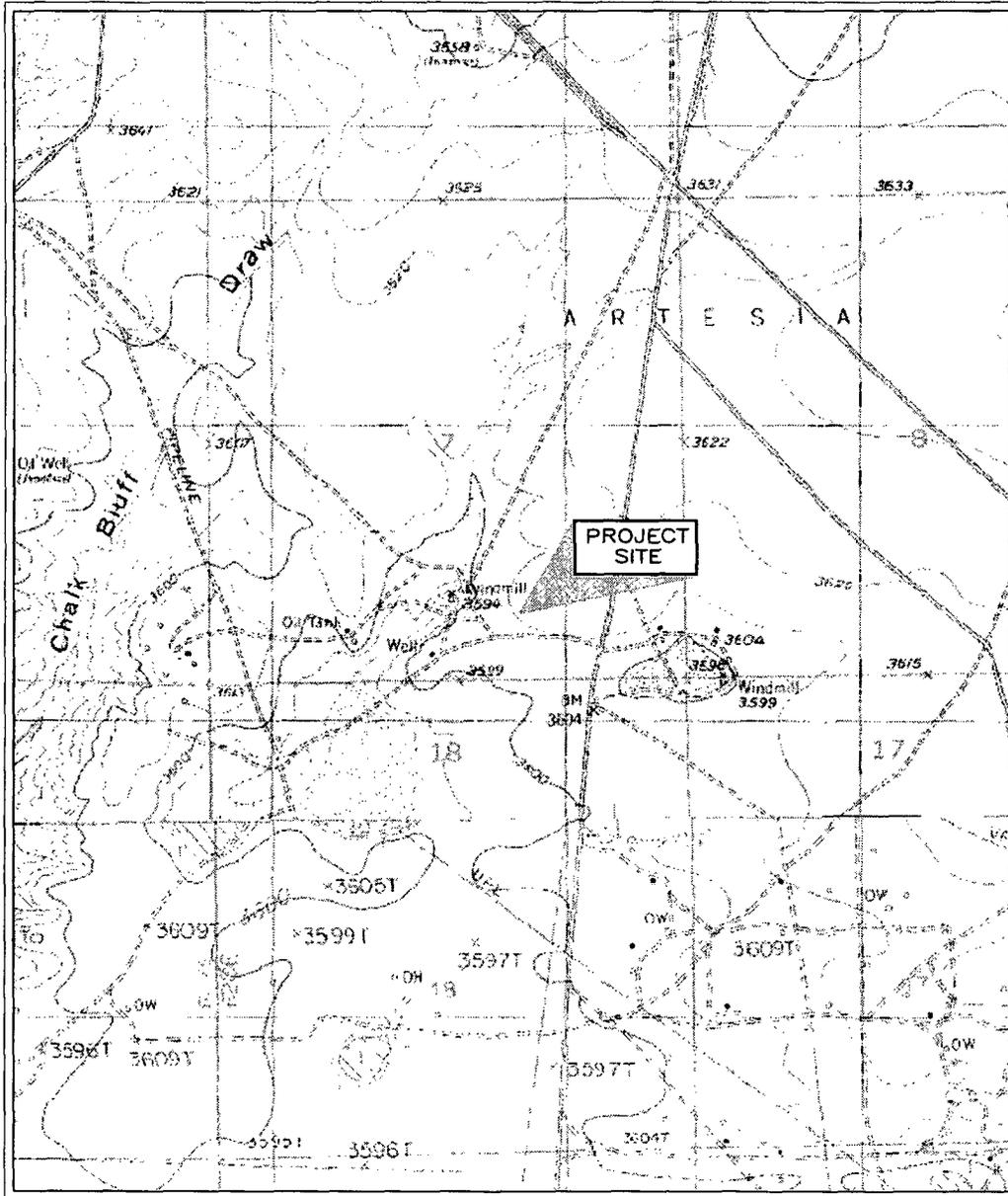
  
Thomas C. Larson  
Operations Manager

# FIGURES

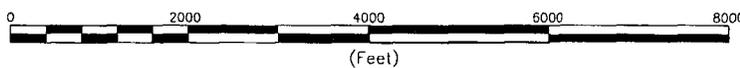
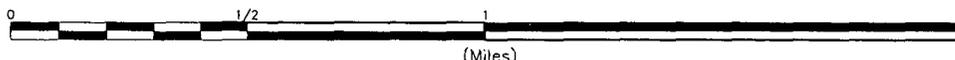
# RED LAKE QUADRANGLE NEW MEXICO

LAT= 32° 45' 24.6" N  
LONG= 104° 12' 45.1" W

PHOTOREVISED 1955



USGS MAP SERIES 1:24000



CONTOUR INTERVAL 10 FEET



NORTH

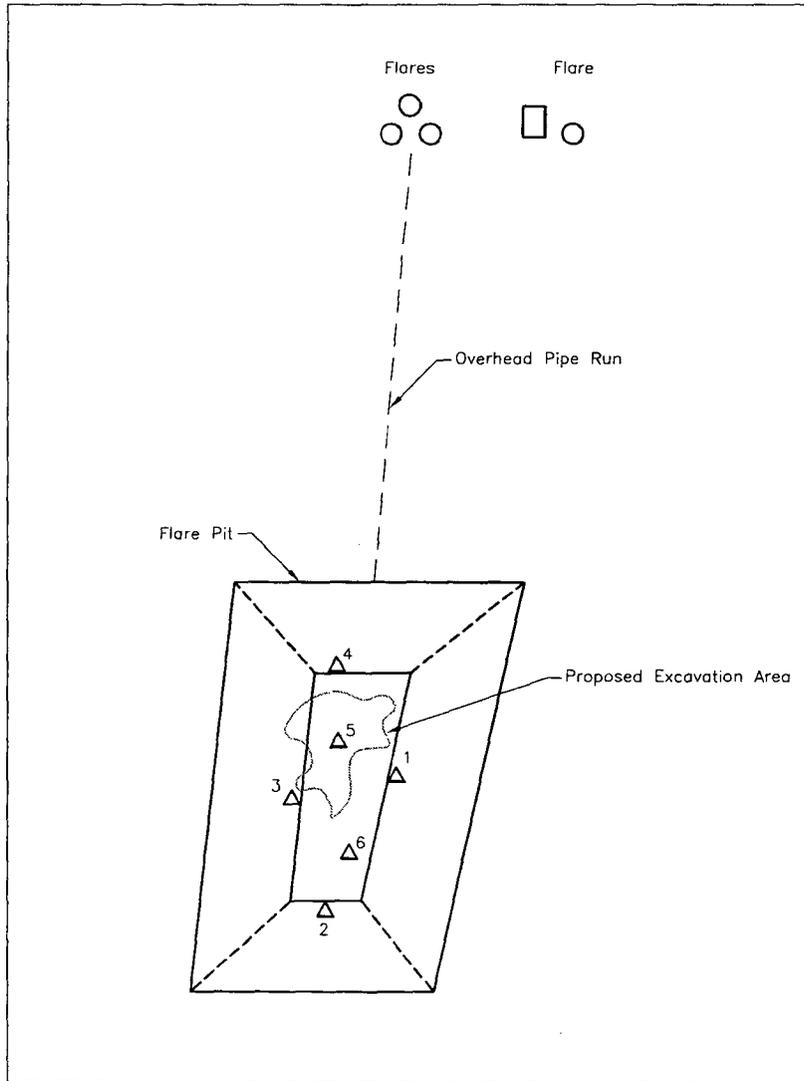
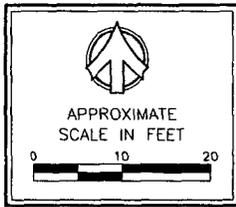
043995 SLR 050806

SITE LOCATION MAP

FLARE PIT      DUKE FIELD SERVICES  
ARTESIA, EDDY COUNTY, NEW MEXICO

JOB No.  
043995

FIGURE  
1



LEGEND

△ Sample Location

043995 SLR 050806

SITE DETAILS AND SAMPLE LOCATION MAP

FLARE PIT DUKE FIELD SERVICES  
ARTESIA, EDDY COUNTY, NEW MEXICO

JOB No.  
043995

FIGURE  
2

# TABLES

TABLE I

SUMMARY OF SOIL ANALYTICAL RESULTS-BTEX/MTBE/TPH  
 DUKE ENERGY FIELD SERVICES  
 ARTESIA FLARE PIT  
 EDDY COUNTY, NEW MEXICO

Sample ID	Date	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)	Total BTEX (mg/Kg)	TPH DRO (mg/Kg)	TPH GRO (mg/Kg)	TOTAL TPH DRO/GRO (mg/Kg)	MTBE (mg/L)
		10 <sup>1</sup>	---	---	---	50 <sup>1</sup>	---	---	100 <sup>1</sup>	---
E Berm	01/23/06	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00	<50.0	<0.0100
S. Berm	01/23/06	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00	<50.0	<0.0100
W. Berm	01/23/06	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00	<50.0	<0.0100
N. Berm	01/23/06	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00	<50.0	<0.0100
N. Bottom (2')	01/23/06	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	682	<5.00	682	<0.0500
S. Bottom (2')	01/23/06	<0.0100	<0.0100	<0.00100	<0.0100	<0.0100	<50.0	<1.00	<50.0	<1.00

Notes:

1. New Mexico Oil Conservation Division *Guidelines for Remediation of Leaks, Spills and Releases*
2. Results shown in mg/Kg
3. BTEX and MTBE analysis by EPA Method 8021B; TPH DRO/GRO by EPA Method 8015B modified.
4. Bolded areas indicate detection above laboratory standards.
5. Shaded areas indicated detection above regulatory limits.

TABLE II

SUMMARY OF SOIL ANALYTICAL RESULTS-TOTAL METALS  
 DUKE ENERGY FIELD SERVICES  
 ARTESIA FLARE PIT  
 EDDY COUNTY, NEW MEXICO

Sample ID	Date	Total Silver	Total Arsenic	Total Barium	Total Cadmium	Total Chromium	Total Mercury	Total Lead	Total Selenium
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
NMOCD STANDARDS									
		391 <sup>1</sup>	3.9 <sup>1</sup>	5450 <sup>1</sup>	39 <sup>1</sup>	10,000 <sup>1</sup>	6.11 <sup>1</sup>	400 <sup>1</sup>	391 <sup>1</sup>
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
E Berm	01/23/06	1.54	<1.00	398	<0.500	52.1	<0.0400	<1.00	<1.00
S. Berm	01/23/06	1.15	<1.00	266	0.542	12.3	0.123	4.00	<1.00
W. Berm	01/23/06	1.20	<1.00	430	<0.500	40.1	<0.0400	1.95	<1.00
N. Berm	01/23/06	1.31	<1.00	310	<0.500	12.4	<0.0400	1.83	<1.00
N. Bottom (2')	01/23/06	<0.200	4.56	59.5	22.6	93.5	0.115	17.9	<1.00
S. Bottom (2')	01/23/06	<0.200	<1.00	189	1.73	18.8	<0.040	11.6	<1.00

Notes:

1. New Mexico Environmental Department Hazardous Waste Bureau Voluntary Remediation Program for Residential Soils
2. Total Metals by EPA Method 5 6010 B
3. Bolded areas indicate detection above laboratory standards.

APPENDIX A  
LABORATORY ANALYTICAL REPORTS

## Summary Report

Edward Phillely  
CRA-Midland  
2135 South Loop 250 West  
Midland, TX, 79703

Report Date: January 31, 2006

Work Order: 6012505



Project Location: Eddy County,NM  
Project Name: Duke-Artesia Flare Pit  
Project Number: 043995

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
83009	E. Berm	soil	2006-01-23	12:50	2006-01-25
83010	S. Berm	soil	2006-01-23	12:57	2006-01-25
83011	W. Berm	soil	2006-01-23	13:05	2006-01-25
83012	N. Berm	soil	2006-01-23	13:13	2006-01-25
83013	N Bottom	soil	2006-01-23	13:25	2006-01-25
83014	S. Bottom	soil	2006-01-23	13:33	2006-01-25

Sample - Field Code	BTEX				MTBE	TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	MTBE (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
83009 - E. Berm	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
83010 - S. Berm	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
83011 - W. Berm	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
83012 - N. Berm	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
83013 - N Bottom	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<b>682</b>	<5.00
83014 - S. Bottom	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00

**Sample: 83009 - E. Berm**

Param	Flag	Result	Units	RL
Total Silver		<b>1.54</b>	mg/Kg	0.200
Total Arsenic		<1.00	mg/Kg	1.00
Total Barium		<b>398</b>	mg/Kg	1.00
Total Cadmium		<0.500	mg/Kg	0.500
Total Chromium		<b>52.1</b>	mg/Kg	1.00
Total Mercury		<0.0400	mg/Kg	0.0400
Total Lead		<1.00	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

**Sample: 83010 - S. Berm**

*continued ...*

sample 83010 continued ...

Param	Flag	Result	Units	RL
Param	Flag	Result	Units	RL
Total Silver		1.15	mg/Kg	0.200
Total Arsenic		<1.00	mg/Kg	1.00
Total Barium		266	mg/Kg	1.00
Total Cadmium		0.542	mg/Kg	0.500
Total Chromium		12.3	mg/Kg	1.00
Total Mercury		0.123	mg/Kg	0.0400
Total Lead		4.00	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

Sample: 83011 - W. Berm

Param	Flag	Result	Units	RL
Total Silver		1.20	mg/Kg	0.200
Total Arsenic		<1.00	mg/Kg	1.00
Total Barium		430	mg/Kg	1.00
Total Cadmium		<0.500	mg/Kg	0.500
Total Chromium		40.1	mg/Kg	1.00
Total Mercury		<0.0400	mg/Kg	0.0400
Total Lead		1.95	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

Sample: 83012 - N. Berm

Param	Flag	Result	Units	RL
Total Silver		1.31	mg/Kg	0.200
Total Arsenic		<1.00	mg/Kg	1.00
Total Barium		310	mg/Kg	1.00
Total Cadmium		<0.500	mg/Kg	0.500
Total Chromium		12.4	mg/Kg	1.00
Total Mercury		<0.0400	mg/Kg	0.0400
Total Lead		1.83	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

Sample: 83013 - N Bottom

Param	Flag	Result	Units	RL
Total Silver		<0.200	mg/Kg	0.200
Total Arsenic		4.56	mg/Kg	1.00
Total Barium		59.5	mg/Kg	1.00
Total Cadmium		22.6	mg/Kg	0.500
Total Chromium		93.5	mg/Kg	1.00
Total Mercury		0.115	mg/Kg	0.0400
Total Lead		17.9	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

Sample: 83014 - S. Bottom

Param	Flag	Result	Units	RL
Total Silver		<0.200	mg/Kg	0.200
Total Arsenic		<1.00	mg/Kg	1.00
Total Barium		189	mg/Kg	1.00
Total Cadmium		1.73	mg/Kg	0.500
Total Chromium		18.8	mg/Kg	1.00
Total Mercury		<0.0400	mg/Kg	0.0400
Total Lead		11.6	mg/Kg	1.00
Total Selenium		<1.00	mg/Kg	1.00

## Analytical and Quality Control Report

Edward Philley  
CRA-Midland  
2135 South Loop 250 West  
Midland, TX, 79703

Report Date: January 31, 2006

Work Order: 6012505



Project Location: Eddy County, NM  
Project Name: Duke-Artesia Flare Pit  
Project Number: 043995

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
83009	E. Berm	soil	2006-01-23	12:50	2006-01-25
83010	S. Berm	soil	2006-01-23	12:57	2006-01-25
83011	W. Berm	soil	2006-01-23	13:05	2006-01-25
83012	N. Berm	soil	2006-01-23	13:13	2006-01-25
83013	N Bottom	soil	2006-01-23	13:25	2006-01-25
83014	S. Bottom	soil	2006-01-23	13:33	2006-01-25

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.

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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 83009 - E. Berm**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 24210	Date Analyzed: 2006-01-25	Analyzed By: MT
Prep Batch: 21279	Sample Preparation: 2006-01-25	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.0100	mg/Kg	10	0.00100
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.916	mg/Kg	10	0.100	92	40.8 - 133.7
4-Bromofluorobenzene (4-BFB)		0.671	mg/Kg	10	0.100	67	40.8 - 140.1

**Sample: 83009 - E. Berm**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3050B
QC Batch: 24236	Date Analyzed: 2006-01-27	Analyzed By: RR
Prep Batch: 21286	Sample Preparation: 2006-01-26	Prepared By: DS
Analysis: Total 8 Metals	Analytical Method: S 7471A	Prep Method: N/A
QC Batch: 24289	Date Analyzed: 2006-01-30	Analyzed By: TP
Prep Batch: 21346	Sample Preparation: 2006-01-30	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		1.54	mg/Kg	1	0.200
Total Arsenic		<1.00	mg/Kg	1	1.00
Total Barium		398	mg/Kg	1	1.00
Total Cadmium		<0.500	mg/Kg	1	0.500
Total Chromium		52.1	mg/Kg	1	1.00
Total Mercury		<0.0400	mg/Kg	1	0.0400
Total Lead		<1.00	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

**Sample: 83009 - E. Berm**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 24274	Date Analyzed: 2006-01-28	Analyzed By: DS
Prep Batch: 21330	Sample Preparation: 2006-01-27	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0



sample 83010 continued...

Parameter	Flag	RL Result	Units	Dilution	RL
Total Arsenic		<1.00	mg/Kg	1	1.00
Total Barium		266	mg/Kg	1	1.00
Total Cadmium		0.542	mg/Kg	1	0.500
Total Chromium		12.3	mg/Kg	1	1.00
Total Mercury		0.123	mg/Kg	1	0.0400
Total Lead		4.00	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

**Sample: 83010 - S. Berm**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 24274                      Date Analyzed: 2006-01-28                      Analyzed By: DS  
 Prep Batch: 21330                      Sample Preparation: 2006-01-27                      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		172	mg/Kg	1	150	114	50 - 150

**Sample: 83010 - S. Berm**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 24211                      Date Analyzed: 2006-01-25                      Analyzed By: MT  
 Prep Batch: 21279                      Sample Preparation: 2006-01-25                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.929	mg/Kg	10	0.100	93	68 - 129.6
4-Bromofluorobenzene (4-BFB)		0.781	mg/Kg	10	0.100	78	71.9 - 123.7

**Sample: 83011 - W. Berm**

Analysis: BTEX                      Analytical Method: S 8021B                      Prep Method: S 5035  
 QC Batch: 24210                      Date Analyzed: 2006-01-25                      Analyzed By: MT  
 Prep Batch: 21279                      Sample Preparation: 2006-01-25                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.0100	mg/Kg	10	0.00100

continued...

sample 83011 continued...

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.956	mg/Kg	10	0.100	96	40.8 - 133.7
4-Bromofluorobenzene (4-BFB)		0.822	mg/Kg	10	0.100	82	40.8 - 140.1

**Sample: 83011 - W. Berm**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3050B
QC Batch: 24236	Date Analyzed: 2006-01-27	Analyzed By: RR
Prep Batch: 21286	Sample Preparation: 2006-01-26	Prepared By: DS
Analysis: Total 8 Metals	Analytical Method: S 7471A	Prep Method: N/A
QC Batch: 24289	Date Analyzed: 2006-01-30	Analyzed By: TP
Prep Batch: 21346	Sample Preparation: 2006-01-30	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		1.20	mg/Kg	1	0.200
Total Arsenic		<1.00	mg/Kg	1	1.00
Total Barium		430	mg/Kg	1	1.00
Total Cadmium		<0.500	mg/Kg	1	0.500
Total Chromium		40.1	mg/Kg	1	1.00
Total Mercury		<0.0400	mg/Kg	1	0.0400
Total Lead		1.95	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

**Sample: 83011 - W. Berm**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 24274	Date Analyzed: 2006-01-28	Analyzed By: DS
Prep Batch: 21330	Sample Preparation: 2006-01-27	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		205	mg/Kg	1	150	136	50 - 150

**Sample: 83011 - W. Berm**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 24211	Date Analyzed: 2006-01-25	Analyzed By: MT
Prep Batch: 21279	Sample Preparation: 2006-01-25	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.932	mg/Kg	10	0.100	93	68 - 129.6
4-Bromofluorobenzene (4-BFB)		0.950	mg/Kg	10	0.100	95	71.9 - 123.7

**Sample: 83012 - N. Berm**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 24210	Date Analyzed: 2006-01-25	Analyzed By: MT
Prep Batch: 21279	Sample Preparation: 2006-01-25	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.0100	mg/Kg	10	0.00100
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.01	mg/Kg	10	0.100	101	40.8 - 133.7
4-Bromofluorobenzene (4-BFB)		0.872	mg/Kg	10	0.100	87	40.8 - 140.1

**Sample: 83012 - N. Berm**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3050B
QC Batch: 24236	Date Analyzed: 2006-01-27	Analyzed By: RR
Prep Batch: 21286	Sample Preparation: 2006-01-26	Prepared By: DS
Analysis: Total 8 Metals	Analytical Method: S 7471A	Prep Method: N/A
QC Batch: 24289	Date Analyzed: 2006-01-30	Analyzed By: TP
Prep Batch: 21346	Sample Preparation: 2006-01-30	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		1.31	mg/Kg	1	0.200
Total Arsenic		<1.00	mg/Kg	1	1.00
Total Barium		310	mg/Kg	1	1.00
Total Cadmium		<0.500	mg/Kg	1	0.500
Total Chromium		12.4	mg/Kg	1	1.00
Total Mercury		<0.0400	mg/Kg	1	0.0400

continued ...

sample 83012 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Total Lead		1.83	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

**Sample: 83012 - N. Berm**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 24274                      Date Analyzed: 2006-01-28                      Analyzed By: DS  
 Prep Batch: 21330                      Sample Preparation: 2006-01-27                      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		197	mg/Kg	1	150	131	50 - 150

**Sample: 83012 - N. Berm**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 24211                      Date Analyzed: 2006-01-25                      Analyzed By: MT  
 Prep Batch: 21279                      Sample Preparation: 2006-01-25                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.989	mg/Kg	10	0.100	99	68 - 129.6
4-Bromofluorobenzene (4-BFB)		1.01	mg/Kg	10	0.100	101	71.9 - 123.7

**Sample: 83013 - N Bottom**

Analysis: BTEX                      Analytical Method: S 8021B                      Prep Method: S 5035  
 QC Batch: 24210                      Date Analyzed: 2006-01-25                      Analyzed By: MT  
 Prep Batch: 21279                      Sample Preparation: 2006-01-25                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.0500	mg/Kg	50	0.00100
Benzene	1	<0.0500	mg/Kg	50	0.00100
Toluene		<0.0500	mg/Kg	50	0.00100
Ethylbenzene		<0.0500	mg/Kg	50	0.00100

continued ...

<sup>1</sup> Sample ran at dilution due to surfactants.

sample 83013 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene		<0.0500	mg/Kg	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	<sup>2</sup>	1.12	mg/Kg	50	0.100	22	40.8 - 133.7
4-Bromofluorobenzene (4-BFB)	<sup>3</sup>	1.02	mg/Kg	50	0.100	20	40.8 - 140.1

**Sample: 83013 - N Bottom**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3050B
QC Batch: 24236	Date Analyzed: 2006-01-27	Analyzed By: RR
Prep Batch: 21286	Sample Preparation: 2006-01-26	Prepared By: DS
Analysis: Total 8 Metals	Analytical Method: S 7471A	Prep Method: N/A
QC Batch: 24289	Date Analyzed: 2006-01-30	Analyzed By: TP
Prep Batch: 21346	Sample Preparation: 2006-01-30	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.200	mg/Kg	1	0.200
Total Arsenic		4.56	mg/Kg	1	1.00
Total Barium		59.5	mg/Kg	1	1.00
Total Cadmium		22.6	mg/Kg	1	0.500
Total Chromium		93.5	mg/Kg	1	1.00
Total Mercury		0.115	mg/Kg	1	0.0400
Total Lead		17.9	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

**Sample: 83013 - N Bottom**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 24292	Date Analyzed: 2006-01-30	Analyzed By: DS
Prep Batch: 21349	Sample Preparation: 2006-01-30	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		682	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>4</sup>	480	mg/Kg	1	150	320	57.5 - 139

**Sample: 83013 - N Bottom**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 24211	Date Analyzed: 2006-01-25	Analyzed By: MT
Prep Batch: 21279	Sample Preparation: 2006-01-25	Prepared By: MT

<sup>2</sup>Surrogate recovery out due to dilution caused by surfactants in the sample.

<sup>3</sup>Surrogate recovery out due to dilution caused by surfactants in the sample.

<sup>4</sup>High surrogate recovery due to peak interference.

Parameter	Flag	RL Result	Units	Dilution	RL
GRO	5	<5.00	mg/Kg	50	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	6	1.17	mg/Kg	50	0.100	23	68 - 129.6
4-Bromofluorobenzene (4-BFB)	7	1.17	mg/Kg	50	0.100	23	71.9 - 123.7

**Sample: 83014 - S. Bottom**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 24210 Date Analyzed: 2006-01-25 Analyzed By: MT  
 Prep Batch: 21279 Sample Preparation: 2006-01-25 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
MTBE		<0.0100	mg/Kg	10	0.00100
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.913	mg/Kg	10	0.100	91	40.8 - 133.7
4-Bromofluorobenzene (4-BFB)		0.706	mg/Kg	10	0.100	71	40.8 - 140.1

**Sample: 83014 - S. Bottom**

Analysis: Total 8 Metals Analytical Method: S 6010B Prep Method: S 3050B  
 QC Batch: 24236 Date Analyzed: 2006-01-27 Analyzed By: RR  
 Prep Batch: 21286 Sample Preparation: 2006-01-26 Prepared By: DS  
 Analysis: Total 8 Metals Analytical Method: S 7471A Prep Method: N/A  
 QC Batch: 24289 Date Analyzed: 2006-01-30 Analyzed By: TP  
 Prep Batch: 21346 Sample Preparation: 2006-01-30 Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.200	mg/Kg	1	0.200
Total Arsenic		<1.00	mg/Kg	1	1.00
Total Barium		189	mg/Kg	1	1.00
Total Cadmium		1.73	mg/Kg	1	0.500
Total Chromium		18.8	mg/Kg	1	1.00
Total Mercury		<0.0400	mg/Kg	1	0.0400
Total Lead		11.6	mg/Kg	1	1.00
Total Selenium		<1.00	mg/Kg	1	1.00

<sup>5</sup>Sample ran at dilution due to surfactants.

<sup>6</sup>Surrogate recovery out due to dilution caused by surfactants in the sample.

<sup>7</sup>Surrogate recovery out due to dilution caused by surfactants in the sample.

**Sample: 83014 - S. Bottom**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 24274	Date Analyzed: 2006-01-28	Analyzed By: DS
Prep Batch: 21330	Sample Preparation: 2006-01-27	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		198	mg/Kg	1	150	132	50 - 150

**Sample: 83014 - S. Bottom**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 24211	Date Analyzed: 2006-01-25	Analyzed By: MT
Prep Batch: 21279	Sample Preparation: 2006-01-25	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.912	mg/Kg	10	0.100	91	68 - 129.6
4-Bromofluorobenzene (4-BFB)		0.817	mg/Kg	10	0.100	82	71.9 - 123.7

**Method Blank (1) QC Batch: 24210**

Parameter	Flag	MDL Result	Units	RL
MTBE		<0.0152	mg/Kg	0.001
Benzene		<0.00333	mg/Kg	0.001
Toluene		<0.00353	mg/Kg	0.001
Ethylbenzene		<0.00339	mg/Kg	0.001
Xylene		<0.0103	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.922	mg/Kg	10	0.100	92	74.5 - 114
4-Bromofluorobenzene (4-BFB)		0.662	mg/Kg	10	0.100	66	36.6 - 112

**Method Blank (1) QC Batch: 24211**

Parameter	Flag	MDL Result	Units	RL
GRO		2.12	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.08	mg/Kg	10	0.100	108	81.8 - 109
4-Bromofluorobenzene (4-BFB)		0.794	mg/Kg	10	0.100	79	50.7 - 113

**Method Blank (1)** QC Batch: 24236

Parameter	Flag	MDL Result	Units	RL
Total Silver		<0.0444	mg/Kg	0.2
Total Arsenic		<0.228	mg/Kg	1
Total Barium		<0.601	mg/Kg	1
Total Cadmium		<0.0795	mg/Kg	0.5
Total Chromium		<0.125	mg/Kg	1
Total Lead		<0.650	mg/Kg	1
Total Selenium		<0.767	mg/Kg	1

**Method Blank (1)** QC Batch: 24274

Parameter	Flag	MDL Result	Units	RL
DRO		<12.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		185	mg/Kg	1	150	123	50 - 150

**Method Blank (1)** QC Batch: 24289

Parameter	Flag	MDL Result	Units	RL
Total Mercury		<0.00880	mg/Kg	0.04

**Method Blank (1)** QC Batch: 24292

Parameter	Flag	MDL Result	Units	RL
DRO		<10.9	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		144	mg/Kg	1	150	96	57.5 - 139

**Laboratory Control Spike (LCS-1)** QC Batch: 24210

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
MTBE	0.829	0.909	mg/Kg	10	0.100	<0.0152	83	9	81.2 - 105.8	10.6
Benzene	0.982	0.954	mg/Kg	10	0.100	<0.0333	98	3	83.6 - 107.3	20
Toluene	1.01	0.994	mg/Kg	10	0.100	<0.0353	101	2	81.8 - 108.6	20
Ethylbenzene	0.988	0.972	mg/Kg	10	0.100	<0.0339	99	2	76.4 - 113.9	20
Xylene	2.95	2.91	mg/Kg	10	0.300	<0.103	98	1	75.4 - 112.7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.930	0.974	mg/Kg	10	0.100	93	97	76.6 - 114
4-Bromofluorobenzene (4-BFB)	0.853	0.884	mg/Kg	10	0.100	85	88	72 - 111

**Laboratory Control Spike (LCS-1) QC Batch: 24211**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.67	9.91	mg/Kg	10	1.00	<0.381	97	2	88.8 - 102.4	21

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.00	0.996	mg/Kg	10	0.100	100	100	80.4 - 113
4-Bromofluorobenzene (4-BFB)	1.02	0.990	mg/Kg	10	0.100	102	99	72.2 - 119

**Laboratory Control Spike (LCS-1) QC Batch: 24236**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Silver	11.8	11.9	mg/Kg	1	12.5	<0.0444	94	1	85 - 115	20
Total Arsenic	46.7	46.8	mg/Kg	1	50.0	<0.228	93	0	85 - 108	20
Total Barium	88.7	88.9	mg/Kg	1	100	<0.601	89	0	85 - 107	20
Total Cadmium	22.5	22.7	mg/Kg	1	25.0	<0.0795	90	1	85 - 103	20
Total Chromium	10.1	10.1	mg/Kg	1	10.0	<0.125	101	0	85 - 113	20
Total Lead	44.8	44.7	mg/Kg	1	50.0	<0.650	90	0	85 - 110	20
Total Selenium	44.2	43.9	mg/Kg	1	50.0	<0.767	88	1	85 - 100	20

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

**Laboratory Control Spike (LCS-1) QC Batch: 24274**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	246	248	mg/Kg	1	250	<12.0	98	1	70 - 130	20

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

*continued...*

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	186	189	mg/Kg	1	150	124	126	50 - 150

**Laboratory Control Spike (LCS-1)** QC Batch: 24289

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Mercury	0.466	0.519	mg/Kg	1	0.500	<0.00880	93	11	79.5 - 121.1	20

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

**Laboratory Control Spike (LCS-1)** QC Batch: 24292

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	243	249	mg/Kg	1	250	<10.9	97	2	84 - 118	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	151	151	mg/Kg	1	150	101	101	57.5 - 139

**Matrix Spike (MS-1)** QC Batch: 24210 Spiked Sample: 83009

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
MTBE	0.692	0.772	mg/Kg	10	0.100	<0.0152	69	11	55.9 - 144.2	16.5
Benzene	0.819	0.848	mg/Kg	10	0.100	<0.0333	82	4	50.1 - 124.5	20
Toluene	0.872	0.908	mg/Kg	10	0.100	<0.0353	87	4	51.6 - 128.1	20
Ethylbenzene	0.902	0.924	mg/Kg	10	0.100	<0.0339	90	2	53.6 - 135	20
Xylene	2.71	2.76	mg/Kg	10	0.300	<0.103	90	2	50.6 - 134.1	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.892	0.921	mg/Kg	10	0.1	89	92	60.1 - 104
4-Bromofluorobenzene (4-BFB)	0.721	0.692	mg/Kg	10	0.1	72	69	63.1 - 105

**Matrix Spike (MS-1)** QC Batch: 24211 Spiked Sample: 83009

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	7.82	9.24	mg/Kg	10	1.00	<0.381	78	17	54.2 - 156.3	19.6

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.726	0.794	mg/Kg	10	0.1	73	79	10 - 160
4-Bromofluorobenzene (4-BFB)	0.832	0.925	mg/Kg	10	0.1	83	92	10 - 174

Matrix Spike (MS-1) QC Batch: 24236 Spiked Sample:

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Silver	11.3	11.3	mg/Kg	1	12.5	<0.0444	90	0	76.3 - 115	20
Total Arsenic	47.8	48.0	mg/Kg	1	50.0	5.43	85	0	75 - 108	20
Total Barium <sup>89</sup>	922	929	mg/Kg	1	100	900	22	1	75 - 125	20
Total Cadmium	21.2	21.3	mg/Kg	1	25.0	2.12	76	0	75 - 100	20
Total Chromium	16.3	16.3	mg/Kg	1	10.0	6.76	95	0	75 - 125	20
Total Lead	45.7	45.8	mg/Kg	1	50.0	7.5	76	0	75 - 109	20
Total Selenium	44.8	44.8	mg/Kg	1	50.0	<0.767	90	0	75 - 100	20

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

Matrix Spike (MS-1) QC Batch: 24274 Spiked Sample: 83014

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	196	231	mg/Kg	1	250	<12.0	78	16	70 - 130	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	191	208	mg/Kg	1	150	127	139	50 - 150

Matrix Spike (MS-1) QC Batch: 24289 Spiked Sample: 82895

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Mercury	0.464	0.474	mg/Kg	1	0.500	0.015	90	2	80.1 - 125.3	20

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

Matrix Spike (MS-1) QC Batch: 24292 Spiked Sample: 83013

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO <sup>1011</sup>	1280	1380	mg/Kg	1	250	682	239	8	70 - 130	20

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

<sup>8</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>9</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>10</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>11</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	595	598	mg/Kg	1	150	397	399	57.5 - 139

**Standard (ICV-1)** QC Batch: 24210

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0895	90	85 - 115	2006-01-25
Benzene		mg/Kg	0.100	0.0987	99	85 - 115	2006-01-25
Toluene		mg/Kg	0.100	0.103	103	85 - 115	2006-01-25
Ethylbenzene		mg/Kg	0.100	0.100	100	85 - 115	2006-01-25
Xylene		mg/Kg	0.300	0.301	100	85 - 115	2006-01-25

**Standard (CCV-1)** QC Batch: 24210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
MTBE		mg/Kg	0.100	0.0957	96	85 - 115	2006-01-25
Benzene		mg/Kg	0.100	0.0968	97	85 - 115	2006-01-25
Toluene		mg/Kg	0.100	0.101	101	85 - 115	2006-01-25
Ethylbenzene		mg/Kg	0.100	0.0981	98	85 - 115	2006-01-25
Xylene		mg/Kg	0.300	0.294	98	85 - 115	2006-01-25

**Standard (ICV-1)** QC Batch: 24211

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.958	96	85 - 115	2006-01-25

**Standard (CCV-1)** QC Batch: 24211

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.947	95	85 - 115	2006-01-25

**Standard (ICV-1)** QC Batch: 24236

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/Kg	0.125	0.123	98	90 - 110	2006-01-27
Total Arsenic		mg/Kg	1.00	0.976	98	90 - 110	2006-01-27

continued...

<sup>12</sup>High surrogate recovery due to peak interference.

<sup>13</sup>High surrogate recovery due to peak interference.

standard continued...

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/Kg	1.00	0.970	97	90 - 110	2006-01-27
Total Cadmium		mg/Kg	1.00	0.984	98	90 - 110	2006-01-27
Total Chromium		mg/Kg	1.00	0.982	98	90 - 110	2006-01-27
Total Lead		mg/Kg	1.00	0.984	98	90 - 110	2006-01-27
Total Selenium		mg/Kg	1.00	0.977	98	90 - 110	2006-01-27

Standard (CCV-1) QC Batch: 24236

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/Kg	0.125	0.123	98	90 - 110	2006-01-27
Total Arsenic		mg/Kg	1.00	0.981	98	90 - 110	2006-01-27
Total Barium		mg/Kg	1.00	0.967	97	90 - 110	2006-01-27
Total Cadmium		mg/Kg	1.00	0.984	98	90 - 110	2006-01-27
Total Chromium		mg/Kg	1.00	0.984	98	90 - 110	2006-01-27
Total Lead		mg/Kg	1.00	0.988	99	90 - 110	2006-01-27
Total Selenium		mg/Kg	1.00	0.977	98	90 - 110	2006-01-27

Standard (ICV-1) QC Batch: 24274

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	243	97	75 - 125	2006-01-28

Standard (CCV-1) QC Batch: 24274

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	272	109	75 - 125	2006-01-28

Standard (ICV-1) QC Batch: 24289

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00500	0.00461	92	90 - 110	2006-01-30

Standard (CCV-1) QC Batch: 24289

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00500	0.00493	99	80 - 120	2006-01-30

Standard (ICV-1) QC Batch: 24292

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	57.5 - 139	2006-01-30

Standard (CCV-1) QC Batch: 24292

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	248	99	57.5 - 139	2006-01-30

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**  
LAB Order ID # 6012505

155 McCutcheon Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

**Trace Analysis, Inc.**

Company Name: CRA Phone #: (432) 686-0080  
Address: (Street, City, Zip) Fax #: \_\_\_\_\_  
Contact Person: Edward (Ted) Philleary e-mail: e.philleary@cra-world.com

Invoice to: \_\_\_\_\_  
(if different from above)

Project #: 043995 Project Name: Duke - Artesia Flare Pit  
Project Location: Eddy county, Nuy Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX			PRESERVATIVE METHOD					SAMPLING DATE	TIME	Turn Around Time if different from standard
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH			
83009	E. Bern	1	4oz	✓								1/23	12:30	
10	S. Bern	1	4oz	✓								1/23	12:57	
11	W. Bern	1	4oz	✓								1/23	13:05	
12	N. Bern	1	4oz	✓								1/23	13:13	
13	N. Bottom	1	4oz	✓								1/23	13:15	
14	S. Bottom	1	4oz	✓								1/23	13:23	

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7  
 PAH 8270C  
 TX 1005 Extended (C35)  
 TPH 418.1/TX1005  
 BTE 802.1/B62  
 MTE 802.1B/602

TCLP Volatiles  
 TCLP Semi Volatiles  
 TCLP Pesticides  
 RCI  
 GC/MS Vol. 8260B/624  
 GC/MS Semi. Vol. 8270C/625  
 PCB's 8082/608  
 Pesticides 8081A/608  
 BOD, TSS, pH  
 Moisture Content

REMARKS:  
**LAB USE ONLY**  
 Intact: Y / N  
 Headspace: Y / N  
 Temp: 48  
 Log-in Review: RP  
 Carrier # Line Star P1827749

Reinquired by: Edward Philleary Date: 1-24-06 Time: 1445  
 Received by: [Signature] Date: 1-24-06 Time: 1445

Reinquired by: [Signature] Date: 1-24-06 Time: 1700  
 Received by: [Signature] Date: 1-24-06 Time: 1700

Reinquired by: [Signature] Date: 1-24-06 Time: 1700  
 Received by: [Signature] Date: 1-25-06 Time: 0930

Submital of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 6-115

ORIGINAL COPY

APPENDIX B

FORM C-144 PIT OR BELOW-GRADE TANK REGISTRATION OR CLOSURE

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes  No

Type of action: Registration of a pit or below-grade tank  Closure of a pit or below-grade tank

Operator: _____ Telephone: _____ e-mail address: _____		
Address: _____		
Facility or well name: _____ API #: _____ U/L or Qtr/Qtr _____ Sec _____ T _____ R _____		
County: _____ Latitude _____ Longitude _____ NAD: 1927 <input type="checkbox"/> 1983 <input type="checkbox"/>		
Surface Owner: Federal <input type="checkbox"/> State <input type="checkbox"/> Private <input type="checkbox"/> Indian <input type="checkbox"/>		
<b>Pit</b> Type: Drilling <input type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume _____ bbl	<b>Below-grade tank</b> Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) ( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) ( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) ( 0 points)
<b>Ranking Score (Total Points)</b>		

**If this is a pit closure:** (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite  offsite  If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No  Yes  If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

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I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit , or an (attached) alternative OCD-approved plan .

Date: \_\_\_\_\_  
 Printed Name/Title \_\_\_\_\_ Signature \_\_\_\_\_

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:  
 Printed Name/Title \_\_\_\_\_ Signature \_\_\_\_\_ Date: \_\_\_\_\_

APPENDIX C  
ARTESIA AERATION LLC PERMIT



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

November 29, 1999

**CERTIFIED MAIL**  
**RETURN RECEIPT NO. P-326-936-642**

Mr. Rob Mathews  
Artesia Aeration L.L.C.  
P.O. Box 248  
Artesia, NM 88210

**RE: OCD Rule 711 Permit Approval NM-01-0030**  
**Artesia Aeration L.L.C.**  
**Commercial Landfarm**  
**N/2 of Section 7, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico**

Dear Mr. Mathews:

The permit application for the Artesia Aeration L.L.C. (Artesia Aeration) commercial surface waste management facility located in the N/2 N/2 of Section 9 and the N/2 N/2 of Section 10, Township 20 South, Range 38 East, NMPM, Lea County, New Mexico, is hereby approved in accordance with New Mexico Oil Conservation Division (OCD) Rule 711 under the conditions contained in the enclosed attachment. **This permit approval is conditional upon the receipt and approval by the Director of financial assurance in the amount of \$93,420.** According to the schedule outlined in the financial assurance section of the enclosed attachment, \$25,000 is required within thirty (30) days of the date of this permit approval letter. The application consists of the permit application Form C-137 dated June 29, 1999, the public notice dated October 11, 1999, and supplemental materials dated July 15, 1999.

The operation, monitoring and reporting shall be as specified in the enclosed attachment. All modifications and alternatives to the approved landfarming methods must receive prior OCD approval. Artesia Aeration is required to notify the Director of any facility expansion or process modification and to file the appropriate materials with the Division.

Please be advised approval of this facility permit does not relieve Artesia Aeration of liability should your operation result in pollution of surface water, ground water, or the environment. In addition, OCD approval does not relieve Artesia Aeration of responsibility for compliance with other federal, state or local laws and/or regulations.

APPENDIX D

FORM C-138 REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE  
AND CERTIFICATE OF WASTE STATUS

1234 E. French Dr., Hobbs, NM 88240  
 (505) 785-1234  
 1234 W. Central Avenue, Santa Fe, NM 87501  
 (505) 833-1234  
 1234 N. Mountain Road, Santa Fe, NM 87501  
 (505) 833-1234  
 1234 E. French Dr., Santa Fe, NM 87501  
 (505) 833-1234

State of New Mexico  
 Energy Minerals and Natural Resources  
 Oil Conservation Division  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

Form C-12  
 Revised June 19, 2003  
 Submit Original  
 Plus 1 Copy  
 to Appropriate  
 Field Office

**REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE**

1. NEPA Request <input checked="" type="checkbox"/> Non-NEPA Request <input checked="" type="checkbox"/> Verbal Approval Request: Yes <input type="checkbox"/> No <input type="checkbox"/>	4. Generator ENKA Energy
2. Management Facility Identification Artesia Aerodrome	5. Originating Site Nike-Artesia Air P.t.
3. Address of Facility Operator P.O. Box 310 Hobbs, NM 88241	6. Transporter
7. Location of Material (Street Address or TRUST) Mayaguez, NM	8. State NM

A. All requests for approval to accept off-site accept wastes will be accompanied by a certification of waste from the Generator, one certificate per job.  
 B. All requests for approval to accept non-accept wastes must be accompanied by necessary chemical analysis to PROVE the material is non-hazardous and the Generator's certification of origin. If the waste chemical knowledge by listing or testing will be approved.  
 All transportation must certify that wastes delivered are only those certified for transport.

**BRIEF DESCRIPTION OF MATERIAL:**

Contaminated soil

Estimated Volume 500 cu Yards Volume (to be entered by the operator at the end of the haul) 0

SIGNATURE Jim Wilson TITLE: Manager DATE: 4/28/06  
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Jim Wilson TELEPHONE NO. 392-9575

E-MAIL ADDRESS \_\_\_\_\_

(This space for State Use)

APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED BY: Ed Martin TITLE: ENKING ENGR DATE: 5-2-06

## CERTIFICATE OF WASTE STATUS

* 1. Generator Name and Address	2. Destination Name:
3. Originating Site (name):	Location of Waste (Street address &/or ULSTR):
4. Source and Description of Waste	

\* I, \_\_\_\_\_ do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1988, regulatory determination, the above described waste is: (Check appropriate classification)

EXEMPT oilfield waste

NON-EXEMPT oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For NON-EXEMPT waste the following documentation is attached (check appropriate box)

MSDS Information                       Other (description)  
 RCRA Hazardous Waste Analysis  
 Chain of Custody

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant to 29 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**OCD DCP Midstream LP. Sites Discussion Meeting  
(Stephen Weathers, Daniel Dick, et. al) February 1, 2007**

**GPM Artesia GP (GW-23)**

On 5/26/2006, Stephen Weathers PG 303-605-1718 (swweathers@duke-energy.com) submitted a Flare Pit Soil Remediation & Closure Work plan by Conestoga-Rovers & Assoc. to Mike Bratcher. Upon your approval, DEFS will move forward w/ the closure activities. One hard copy of the work plan will also be mailed next week (OCD Santa Fe never received it).

Stephen Weathers, et al. will present the info. during the 1/31/2007 meeting in Santa Fe.

**Lee Compressor Station (GW-227) (Also known as the Gillespie/Feagan)  
A-24-T17 S 35 E**

Closure work plan dated 9/5/2006 mailed to Ben Stone to complete a site closure.

The work plan was develop. Based on DEFS decision to cancel the discharge plan GW-227 and close the site. The closure plan is submitted to the OCD for approval.

Closure Activities: DEFS will remove all remaining equip. from site. The site will be visually inspected to determine if hydrocarb. impacted soil is present at the site. If no HC impacted soils are encountered, the site will be leveled and reseeded with native grass. If HC impacted soils are encountered, the impact soil will be remediated following NMOCD Guidelines for Remed. of Leaks, Spills, & Releases, 8/1993 and using: Benz (10 ppm), BTEX (50 ppm), and TPH (100 ppm). A PID might be used to screen potential HC impacted soil. If headspace is  $\leq$  100 ppm, the PID reading will be used as a substitute to lab analysis for benz./BTEX. If the PID is not used for screening confirm. soil samples will be analyzed for BTEX using EPA 8021B.

HC impact soils that are found to be greater than cleanup criteria will be excavated and properly disposed at an NMOCD approved facility. Confirmation soil samples will then be collected within the base and sidewalls of the excavation to confirm that the HC impacted soils have been removed to below the NMOCD cleanup stds. for this site.

After confirmation soil samples confirm the impacted soils has been removed to below the NMOCD cleanup Stds., the excavation will be backfilled with clean fill mtl. and the area reseeded w/ native grass. A closure report will be completed summarizing all field activities and analytical results. The closure report will also request that no further action will be needed at this site. Upon approval of this work plan, field activities will be scheduled. A 48 hr. notice will be given to the NMOCD Hobbs DO informing them of the start up of the field activities.

## **LEE GP (GW-2)**

Dick Daniel (DIDick@dcpmidstream.com)

Received Q4 2006 GW Monitor Rpt. On 1/30/07 w/ recommendations for certain activities, i.e., free-product recovery in MWs 5 and 15 w/ restart analysis on MW-8 recommended.

Expired DP and OCD msg. to Ruth Lang on 12/21/06: the Lee Compressor Station (GW-227) correspondence dated 12/28/06 indicates that the facility will remain inactive and follow the closure plan to permanently close the facility. Upon receipt of the closure plan info. and verification that contamination exists at the facility with some photos to display what the site currently looks like, the OCD may close the DP?

## **DUKE LINAM RANCH GP (GW-15)**

Third Qtr. 2006 GW Monitoring Report dated January 30, 2007.

GW conditions remain stable. Next monitor event is scheduled for first qtr. 2007. Next annual report for site will be prepared following completion of first qtr. 2007 monitor activities.

On 11/1/2006 Dick Daniel (didick@duke-energy.com) submitted the Annual GW Rpt. 2005-2006. The summary rpt. for Q3 2005 and Q1 2006 GW sampling event. The data indicate that GW conditions remain stable. The next monitor event was performed in 9/2006. The next annual rpt. for the site will be prepared following the completion of the Q1 2007 monitor activities & review & validation of the analytical results. The water tables rose substantially more in MW-1 and 2 than in MW-3, 7 & 9. MW-1 & 2 are located in or adjacent to a natural drainage swale that has been blocked in the S part of site to produce an internally drained condition. The other 3 wells are outside of this area. Unusually high precip in 2004-2005 resulted in more GW mounding beneath the closed drain swale than the rest of the site. The water table in MWs 1 & 2 began to recede after the precip. patterns returned to normal. Water tables in the other 3 wells continue to rise suggesting a more dampened relationship between the precipitation and resulting chgs. in the water table elevations.

MW-7 was not included in the piezometer maps. The level in MW-7 was not included in these maps. Including this well results in a water-table configuration that suggests radial flow from the center of the property. MW-7 has never contained measurable BTEX. This suggests the relatively higher water table in the central part of site is localized so contours should not be carried to the NW. FPH thick measurements for 9/29/2005 (MW-4=0.68 in & MW-6=4.23 in.) and 3/22/2006 (MW-4=0.76 & MW-6=3.69 in.). Only MWs 10 & 10D exceeded BTEX Stds. Any dissolved phase BTEX that emanate from FPH at MW-4 & MW-6 attenuate to below the method reporting limits before migrating to the vicinity of MW-1 (cross gradient) or MW-8 (down gradient). BTEX measured at MW-10 and 10D attenuate to concentrations that are slightly above MW-9 or below the reporting limits (MW-12 & 13) at the interior down gradient wells. The above have remained constant since ~ 6/2001. This indicates that BTEX distribution and attenuating mechanism that controls it are equilibrated.

The affected areas are min. of 1,000 ft. from the nearest down gradient property boundary. Wells containing FPH are in an active gas processing area so the safety risks inherent to restarting FPH collection more than offsets the environmental benefits that would be associated with the activity. The data establishes that dissolved phase releases from the FPH that is present in this area are attenuated approx. 1,000 ft. from the nearest down-gradient property boundary. The next semi-annual GW monitor event is scheduled for the Q3 2006. Contact Michael Stewart PE 303-948-7733 if you have questions.

### **HOBBS BOOSTER CS (GW-44)**

Project Summary: Hobbs Booster Station, (Discharge Plan GW-044)  
(Units C and D, Section 4, Township 19 South, Range 38 East)

Summary date: October 10, 2006

#### Project history:

DEFS inherited Hobbs Booster Station (Former Gas Plant) when it acquired the assets of GPM. Site investigation activities began in July 1999. Plume delineation was completed in June 2003.

Two remediation systems are present at the site. An air sparge system was installed in January 2004 to control cross-gradient off site migration of dissolved phase hydrocarbons. It has operated on a near continual basis except for a couple of periods when it was under repair, and the groundwater data verifies that it is controlling off-site migration.

A free phase hydrocarbon (FPH) collection system became operational in January 2005 in the center of the site. It has operated on a regular schedule except for a couple of brief periods when it was down for repairs. The system has effectively remove FPH since it was started. The system is inspected and maintained on a regular basis. DEFS is currently evaluating the potential of adding vacuum to the system to increase the production rate and capture zone of each well.

#### Current Project Status:

The hydrocarbon plume has been delineated to below the method detection limits. There is no evidence of plume expansion. Operation of the air sparge system is necessary to control dissolved-phase hydrocarbon releases to the south. FPH collection will continue indefinitely.

Detection level Groundwater monitoring continues at the site on a quarterly basis. Operation of the air sparge and the FPH collection system will continue indefinitely.

On 12/17/06 Michael Stewart & Steve Weathers notified OCD that Trident Environmental will conduct quarterly monitor well gauging & GW sampling and the following: SWLs in MW, RW and temp. wells using an oil/water interface problem; Collect GW samples for BTEX w/ QA/QC; Purge water disposed at NMOCD approved facility. Project site location: 1625 W. Marland, Hobbs (C&D 4-19S-36E). Sampling will begin on 12/20/06.

On 10/30/06, Stephen Weathers 303-605-1718 (swweathers@duke-energy.com) submitted additional vacuum enhancement testing for the free phase hydrocarbon extraction system located at C&D 4-19S-38E. DEFS would like to complete this test early next week. Upon completion of the field activities DEFS will complete an assessment report summarizing the results of the test.

The AEC 10/30/06 summary of initial assessment activities & recom. for further evaluation of adding vacuum enhancement to the free phase hydrocarbon extraction system. Depth (BTOC) is about 50 feet. The above SWL indicate that recent heavy rains have not affected the water table in a fashion similar to 2004 precip. This fact is important because the WT historically declined at a rate of about 1 ft/yr. this trend should continue to expose more of the screened interval in these wells to make them available to vacuum effects.

FPH thickness ranges from about 0.43 in. to 10.63 in. in TW-C, OW-25W & 50W, OW-100W, OW-25S, OW-50S, OW-25 E & OW-25 N. There is a gravel interval at about 34 to 64 feet BGL.

On 10/23/2006, Stephen Weathers 4-303-605-1718 (swweathers@duke-energy.com) submitted an electronic copy of the 2005-2006 Annual GW Monitor Rpt. along w/ a cover letter.

The report is missing & OCD should request another copy.

#### **DUKE APEX CS (GW-163)**

old conoco

Trisha Elizondo (ARCADIS) (Trisha.elizondo@arcadis-us.com)

On 1/17/07, notification that ARCADIS will be conducting mo. Product recovery and PCA Junction on 1/22-23/07. Routine product recovery is on-going at site through hand-bailing. MWs at 2 locations will be surveyed to help w/ GW flow & potentiometric surface.

#### **DUKE HOBBS GP (GW-175)**

old conoco

Stephen Weathers (SWWeathers@dcpmidstream.com)

Project Summary: Hobbs Gas Plant  
Unit G, Section 36 Township 18 South, Range 36 East

Summary date: October 10, 2006

Project history:

DEFS acquired the Hobbs Gas Plant in March of 2004. Ground water monitoring wells (6 wells) were installed at the site during the due diligence phase of the acquisition. Benzene was identified above the WQCC standards in one of the groundwater monitoring wells.

Current Project Status:

Groundwater monitoring continues at the site on a quarterly basis.

On 1/29/07, 4Q 2006 GW monitor rpt. submitted. Two MWs exhibit elevated benzene levels. SE and E-central portions of site adjacent to process equip. Qtly sampling continues. Results of Q1 2007 sampling will be reported in A1 2007 GW monitor report. Potentiometric surface maps for site in future reports can be expected.

### **Remediation Sites**

#### **C-line Release Site (1RP-401-0)**

Project Summary: C-line Release site (1RP-401-0)  
(Unit O, Section 31, Township 19 South, Range 37 East)

Summary date: October 10, 2006

Project history: Pipeline Release

Duke Energy Field Services C-Line Pipeline Release occurred in May of 2002. The release occurred on New Mexico State Land. Environmental Plus, Inc. was contracted to complete the soil remediation. Approximately 3,868 cubic yards of impacted soil was excavated. 2,707 cubic yards of impacted soils was properly disposed and the remaining impacted soil was blended/shredded until below cleanup standards and placed back into the excavation. During the soil remediation, groundwater was determined to be impacted with hydrocarbons. The groundwater characterization activities began in fourth quarter 2002. A total of 9 groundwater monitor wells were installed. Active free phase hydrocarbon (FPH) removal initiated in November 2003. A soil vapor extraction system was installed in October 2004. The system was expanded to include a second well in June 2005. No FPH has been measured since March 2006 even after the SVE system was turned off (but remains at the site) in June 2006.

Current Project Status:

All FPH has been removed as discussed above. The hydrocarbon plume has been delineated. There is no evidence of plume expansion, and, in fact, the plume may actually be contracting.

Groundwater monitoring continues at the site on a quarterly basis. Site monitoring could be decreased to semi-annual.

Received Q3 2006 GW monitor rpt. from Stephen Weathers on 12/18/06.

## **Eldridge Ranch (AP-33)**

Stephen Weathers (SWWeathers@dcpmidstream.com)

Project Summary: Eldridge Ranch, (Abatement Plan AP-33)  
(Unit P, Section 21, Township 19 South, Range 37 East)

Summary date: October 10, 2006

Project history: Pipeline Release

DEFS initiated investigative activities in June 2002 following notification by NMOCD. Site characterization activities were largely completed by the fourth quarter of 2003. The boundaries of detectable hydrocarbons have been delineated.

DEFS submitted the Stage 1 Abatement Site Investigation Report (ASIR) on February 11, 2004 to the New Mexico Oil Conservation Division (OCD). In the ASIR, DEFS committed to continuing two activities (groundwater monitoring and free phase hydrocarbon (FPH) removal) independent of the ASIR review timeframe. The OCD has not commented on the ASIR. Groundwater monitoring and FPH removal activities continue on a regular basis.

### **Current Project Status:**

FPH recovery has been attempted at the site with limited results. The FPH at the site is generally limited in thickness to less than one foot. In addition, the FPH appears to be relatively immobile based upon the inability of the automatic collection systems to collect the liquids.

The hydrocarbon plume has been delineated to below the method detection limits. There is no evidence of plume expansion; however, concentrations the interior of the plume appears to exhibit nominal increases and decrease in response to seasonal precipitation.

Groundwater monitoring continues at the site on a quarterly basis. Site monitoring could be decreased to semi-annual without jeopardizing environmental impacts. FPH removal continues as site conditions warrant.

On 1/26/07, received Q4 2006 GW monitor rpt. for AP-33 near Monument NM. Some conclusions: FPH mobility appears to be limited based on historic bail down/recovery tests and failure to reappear; FPH thick is less than 0.8 ft. in six wells and less than 0.1 ft in 2 of 6 wells. FPH is relatively immobile at thick less than 1 ft. FH continues to decline in MW-EE from max. thick. of 0.83 ft. in 9/2005. FPH thick in other wells (excepting MW-CC) also exhibit decreasing trends. Benzene horiz. distrib. remain unchanged over duration of project. The benz level in the former house well continues to remain below NM WQCC GW std. Summer 2006 rains did not create a spike in levels at MWs like the heavy 2004-2005 rains. No evidence of plume expansion exists ; thus, natural attenuation stabilizes and removes hydrocarbs as they migrate away from area.

AEC recommends that Q1 2007 monitoring be completed and data reviewed to evaluate changes in GW flow patterns in S-central part of study area.

On 12/22/06, received Q3 2006 GW monitor report conclusions: FPH remains in 4 wells in W-central part of study area. FPH thick decrease in 3 of 4 wells. FPH present to N in MW-EE at 0.35 ft. FPH continues to decline from max thick of 0.83 ft. in 9/2005. FPH was not measured anywhere else within study area. FPH mobility appears to be limited based on historic bail down/recovery tests and its failure to reappear in previously affected wells to S. Benz distrib. unchg. over duration of project. Temporal benz distrib. - see charts.

On 10/24/06, Stephen Weathers 303-605-1718 (swweathers@duke-energy.com) submitted GW monitor rpt. for Q2 2006. The former NMG-148C Study Area was combined with the Eldridge Ranch Study Area beginning w/ the Q1 2006. The areas were combined after estab. that hydrocarb plume orig. from NMG-148C had migrated into the Eldridge Ranch Study Area before it attenuated. The combined sites will be treated as a single entity in all subsequent sample events. Activities are governed under AP-33. DEFS submitted the Stage 1 Abatement Site Investigation Rpt. (ASIR) on 2/11/2004 to the OCD. In that rpt., DEFS is committed to continuing 2 activities independ. of the ASIR review timeframe. The activities include GW monitor. & free phase hydrocarb. (FPH) removal when practicable.

GW Monitor activities were completed on 6/19 and 20, 2006 abiding by the OCD approved SAP. SWLs, FPH tick measurements, and GW sampling were completed (see report). The conclusions were: The interpretations are grouped accord. to GW flow, product thick and GW chemistry. 6/2006: data from newly installed MW-28-31 continues to indicate that GW flow beneath the northern part of the Huston property is southward rather than toward the SE.

The WT continues to decline at a uniform rate across the site from a high in 12/2004. The vertical gradient measured between MWs 1s & 1d has not varied substantially over the duration of the project.

Conclusions are: FPH is present in 5 MWs in the w-central part of the study area. The FPH mobility appears to be limited based upon historic bail down/recovery tests & its failure to reappear in previously affected wells to the S. FPH was also present to the N in MW-EE at 0.35 ft. FPH has now declined from a max. thick of 0.83 ft. in 9/2005. FPH was not measured anywhere else within the study area. The Benz distribution has remained essentially unchg. over the duration of the project. MWs 28, 30 & 31 installed in 3/2006 did not contain detectable concentrations of BTEX constituents when they were sampled a second time. MW-29 has detected BTEX. The northernmost NMG-148C plume and moves south. The pattern indicates that the areal extent of the dissolved phase plume assoc. w/ NMG release is not expanding.

The concern. in MW-e & MW-1 located in the S part of this area continue to decline. Samples from the other 4 wells (MW-M, O, Q & M) produced concentrations that were at or slightly higher than the 3/2006 values. This indicates that the S part of the dissolved phase plume in this area appears to be contracting to the N while the remainder of the plume in this area remains constant. None of the data indicates that the plume is expanding.

Benz time concent. for the wells located immed. adjacent to MW-1 or on the Eldridge property (irrigation wells, house well) are shown in Fig. 9. The concentrations in MW-1 and the irrig. well leveled out after an apprec. 1-yr decline. The concent. in the house well has remained consistent over the past 3 sample events. The pattern does not indicate that the dissolved phase plume is expanding in this area. Wells MW-A, 4 & 5 located N of the Huston-Eldridge boundary, remained relatively consistent.

All of the above relationships indicate that natural attenuation is stabilizing & removing hydrocarbs as they migrate away from the src. areas. There is no evidence of plume expansion.

#### Recommendations:

AEC recommends that a Q3 monitoring be completed and evaluated. The monitor freq. should then be decreased from qtrly. to semi-annual if the data results do not vary appreciably. The potential for FPH removal will be evaluated based upon info. gathered during the Q3 monitor event. Recommendations on FPH will be provided as necessary separate from the monitor report. Michael Stewart PE (303-948-7733).

#### **J-4-2 Release Site**

Project Summary: J-4-2 Release Site  
Unit C, Section 27 Township 19 South, Range 35 East

Summary date: October 10, 2006

Project history: Pipeline Leak

The release at this site was discovered in August 2005. EPI completed a limited soil cleanup and preliminary groundwater investigations between August 2005 and the first quarter of 2006.

A work plan proposing additional site characterization activities was submitted to the NMOCD. The site activities were completed in September 2006 and a report is currently being generated.

#### Current Project Status:

Preliminary evaluation of the data indicates that the groundwater plume has been defined beyond the limit of detectable concentrations. Additional activities will be proposed as necessary in the pending investigative report.

On 12/28/06, Stephen Weathers e-mailed a AEC Consultants site investigation rpt. (12/26/07). Water table elevations rose by 0.45 to 1 ft. FPH thickness in MW-2 declined from 0.57 to 0.15 between 2/06 and 9/06. Probably due to high precip. summer 2006. I~ 0.006 toward SE. Head at MW-2 slightly higher than at other wells. K~ 90 ft/day based on pump test. n! 0.15. Estimated GW velocity !3.6 ft/day or 1,310 ft/yr. All develop. and purge water was disposed of at the Linam Ranch facility by EPI. All cuttings generated during the drilling process will be stockpiled

and sampled and then disposed of in an appropriate fashion. Unaffected cuttings will be spread thin.

Final field activity completed was to measure physical properties of saturated mtl. Slug tests were completed on all wells that don't contain FPH to estim. saturated K.

Following recommendations from AEC (Michael Stewart 303-948-7733):

A passive bailer should be installed in MW-2 to attempt to remove mobile FPH. GW monitoring should be completed 3 more times on a qly. basis to compile a data base based upon 4 seasons of measurements; Qly repts should be generated based upon the results of the 4th qtr. 2006 and Q1 2007 monitor events; A comprehensive report will be compiled follow. completion of Q2 2007 monitor episode. This report. include recom. of both long-term monitor and , if necessary, implementation of active remediation; Additional charact. activities & active remediation activities will not be completed during this time interval unless data indicates hydrocarb. plume is expanding; the next GW monitor event is scheduled fro the Q4 2006.

On 12/20/06, John Furgerson (jmfergerson@grandecom.net) sent msg. that Trident Environ. a subcontractor of Duke's will be conducting monitor well gauging & GW sampling at 1300 MST Thursday, Dec. 21, 2006. They will measure SWLs in all MWs using an oil/water interface probe; purge non-product MW/RWs. Collect GW samples for BTEX; ship samples using COC protocol; and purge water will be disposed at a NMOCD approved facility.

#### **X-line Site (1RP-400)**

Project Summary: X line Release Site (1RP-400)  
Unit B, Section 7 Township 15 South, Range 34 East

Summary date: October 10, 2006

Project history: Pipeline Release

The release at this site was discovered in January 2002. EPI completed soil cleanup and preliminary groundwater investigations the first quarter of 2002. A preliminary groundwater investigation was completed in May 2002.

The following remediation components were installed at the site:

- A free phase hydrocarbon (FPH) removal system was installed in MW-8 in July 2003. The system continued to function until the mobile FPH was removed.
  
- An air sparge (AS) system became operational in June 2003. The system was operated until hydrocarbon concentrations in the wells (except for the FPH collection well) were all measured below the method detection limits.

· A soil vapor extraction (SVE) system was also installed in June 2003. The SVE system operated regularly until August 2006. No FPH was present in the extraction well in September 2006.

Quarterly monitoring is completed at the site. The last monitoring episode was conducted in September 2006.

**Current Project Status:**

A report detailing the September 2006 activities at this site will be prepared when the analytical data is received and verified.

DEFS will evaluate the feasibility of initiating air sparge in the FPH recovery well to complete source recovery provided no additional FPH is measured in the well.

Received 4th qtr 2006 GW monitor report for pipeline release on January 30, 2007.

Received Q3 2006 GW monitor report from Stephen Weathers 303-605-1718)) for pipeline release on 12/18/06. X-Line pipeline release on the Etcheverry Ranch at 33 deg 02 min 11 sec, 103 deg 32 min 48 sec. MWs 1 through 8 sampled. SWLs reassured. Unfiltered samples were collected for BTEX. MW-8 is not included in hydrograph because casing elev. has not been established (see report for conclusions, etc.).

On 9/8/2006, Stephen Weathers (swweathers@duke-energy.com) sent Ben Stone the Q2 2006 GW monitor report located on the Etcheverry Ranch near Lovington, NM.

The report is missing and OCD needs another copy.

**RR Ext, (AP-55)**

Project Summary: RR Ext, (Abatement Plan AP-55)  
Unit C, Section 19 Township 20 South, Range 37 East

Summary date: October 10, 2006

**Project history:**

DEFS initiated cleanup activities after a December 13, 2005 release. The spill was remediated, and a temporary well was drilled to groundwater during the first quarter of 2006. A sample from the well contained dissolved-phase hydrocarbons.

The NMOCD assigned the site an abatement plan number based upon the groundwater sample. A Stage 1 Abatement Plan Proposal was submitted to the NMOCD on or about May 26, 2006.

**Current Project Status:**

DEFS is waiting for approval for the Stage 1 Abatement Plan Proposal. DEFS will initiate the required activities following receipt of that approval

### **PCA Junction**

Trisha Elizondo (ARCADIS) (Trisha.elizondo@arcadis-us.com)

On 1/17/07, notification that ARCADIS will be conducting mo. Product recovery and PCA Junction on 1/22-23/07. Routine product recovery is on going at site through hand bailing. MWs at 2 locations will be surveyed to help w/ GW flow & potentiometric surface.

### **Monument Booster Station (Gas Compression Facility)**

Q3 2006 GW Monitor activities completed on 9/20/06 & submitted 1/30/07. Next monitor event Q1 2007. Next annual rpt. Prepared following completion of Q1 2007.

No measurable free-product was detected in any MWs. However, in the submittal is shows MWs 1 and 5 have free product at 1.6 and 0.55 inches? No BTEX detected in down-gradient boundary wells MW-3 and 4. No BTEX in up gradient MWs 1D and 2. MW-6 showed anomalously high levels of BEX. Will keep in mind next sample event for continuing trend.

On 11/1/2006, Daniel Dick 303-605-1893 (didick@duke-energy.com) submitted Annual GW Monitor Rpt. 2005-2006. A copy of the summary report for Q3 2005 and Q1 2006 GW sampling effort. Data indicates that the GW conditions remain stable. The next monitor episode was performed 9/2006. The next annual report for the site will be prepared following the completion of the Q1 2007 monitor activities & review & validation of the analytical results. FPH thick measurements on 3/16/06 for period since passive FPH collectors were removed at MW-1 (0.37 in.) and MW-5 (0.39). FPH thick may be declining in MW-1 and is stable at MW-5. None of the BTEX constituents were detected in downgrade boundary wells MW-3 and MW-4. BTEX was also not detected in upgrade wells MW-1D & 2. Hydrocarbs were detected in MW-7, but benz was only constituent above WQCC Stds. No sample has exceeded the WQCC Stds for TEX. Only MW-7 samples have exceeded for benz. Since 2/2000. Benz detection sporadic in all wells except MW-7 since 2/2000. BTX concentrations in MW-7 continue to fluctuate.

Further src. control activities should be postponed given the decreasing product thick in MW-1. The Next semi-annual gw monitor event is scheduled for Q3 2006. Reporting will continue on an annual basis unless unusual conditions warrant notification after the Q3 sampling event.

Attachment: DCP Midstream LP Related Facilities

Application No.	Application Type	Order No. (ex. GW-#)	Applicant	Facility	Environmental Permit Status	Rec'd	Order	Exp	Legal	County	Reviewer	District	Routing/Off	Notes	Cleanup Status
PEN00003W0 0154	Discharge Plan Permit	143	DCP MIDSTREAM L.P.	DUKE CAL- MON CS	A	03/29/1993	05/14/1993	05/14/2008	J-35-23 S-31 E	Eddy	Chavez	Antesa	Santa Fe		
PEN00003W0 0242	Discharge Plan Permit	227	DCP MIDSTREAM L.P.	LG&E HADSON GILLESPIE/ EAGAN CS	I		12/28/1995	12/28/2005	A-24-17 S-35 E	Lea	Chavez	Hobbs	Santa Fe		
PEN00003W0 0331	Discharge Plan Permit	316	DCP MIDSTREAM L.P.	DUKE PARBUE CS	A	08/17/1999	01/06/2000	01/06/2005	O-4-21 S-32 E	Lea	Chavez	Hobbs	Santa Fe		
PEN00003W0 0326	Discharge Plan Permit	311	DCP MIDSTREAM L.P.	RAFFORN COTTON DRAW	A	07/15/1999	01/06/2000	01/06/2005	C-18-25 S-32 E	Lea	Chavez	Hobbs	Santa Fe		
PEN00003W0 0187	Discharge Plan Permit	176	DCP MIDSTREAM L.P.	DUKE BOOTLEG CS	A	10/27/1994	01/20/1995	01/20/2005	J-18-22 S-33 E	Lea	Chavez	Hobbs	Santa Fe		
PEN00003W0 0163	Discharge Plan Permit	152	DCP MIDSTREAM L.P.	DUKE WHITE CITY C.S.	C		12/13/1993		-10-24 S-28 E	Eddy	Chavez	Antesa	Santa Fe	Site is shut down-Land to submit dozala	
PEN00003W0 0228	Discharge Plan Permit	213	DCP MIDSTREAM L.P.	DUKE STRATA CS	A	07/18/1995	08/30/1995	08/30/2000	A-22-23 S-34 E	Lea	Chavez	Hobbs	Santa Fe	dozala requested need picture and TPH analysis	
PEN00003W0 0156	Discharge Plan Permit	145	DCP MIDSTREAM L.P.	DUKE ZA GAS PLANT & ZA BOOSTER STATION	A		07/06/1993	07/06/2008	A-18-19 S-32 E	Lea	Chavez	Hobbs	Santa Fe	3 below grade tanks registered	
PEN00003W0 0178	Discharge Plan Permit	167	DCP MIDSTREAM L.P.	DUKE P & P Malaga CS	A	05/19/1994	07/25/1994	07/25/2004	G-3-24 S-28 E	Eddy	Chavez	Antesa	Santa Fe	need \$400 fee + sign-off	
PEN00003W0 0173	Discharge Plan Permit	162	DCP MIDSTREAM L.P.	DUKE ANTELOPE RIDGE GP	A	01/21/1994	04/04/1994	03/23/2004	O-15-23 S-34 E	Lea	Chavez	Hobbs	Santa Fe	need DP App + \$100 issued PN and Draft DP 1/23/04	
PEN00003W0 0171	Discharge Plan Permit	160	DCP MIDSTREAM L.P.	DUKE BRIGHAM FED CS	C	11/29/1993	01/14/1994		C-21-19 S-33 E	Lea	Chavez	Hobbs	Santa Fe	DP terminated 1/22/04	
PEN00003W0 0161	Discharge Plan Permit	150	DCP MIDSTREAM L.P.	DUKE PURE GOLD 28"	A		11/22/1993	11/22/2003	D-28-23 S-31 E	Lea	Chavez	Hobbs	Santa Fe	Fac DP application + \$100 issued PN 1/23/04 & Draft DP	
PEN00003W0 0311	Discharge Plan Permit	296	DCP MIDSTREAM L.P.	DUKE CEDAR CANYON CS	A	03/23/1998	07/15/1998	07/15/2008	F-9-24 S-29 E	Eddy	Chavez	Antesa	Santa Fe		
PEN00003W0 0232	Discharge Plan Permit	237	DCP MIDSTREAM L.P.	DUKE MECOS DIAMOND GP	A	02/05/1996	03/29/1996	03/29/2011	G-3-18 S-27 E	Eddy	Chavez	Antesa	Santa Fe	1 below grade tank registered	

PENV000GWO 0079	Discharge Plan Permit	69	DCP MIDSTREAM L.P.	DUKE CARLSBAD GP	A	12/28/2006	04/29/1992	04/29/2012	G-10-23 S-28 E	Eddy	Chavez	Artesa	Santa Fe	Public Notice prepared 1/1/02. Request for additional information sent 1/2/02. Received \$100 filing fee & renewal on 1/28/06	4 stamps registered
PENV000GWO 0189	Discharge Plan Permit	178	DCP MIDSTREAM L.P.	DUKE WCON TON CS	C		03/21/1995	03/21/2005	1-10-17 S-37 E	Laa	Chavez	Hobbs	Santa Fe	1 below grade tank registered	
PENV000GWO 0138	Discharge Plan Permit	127	DCP MIDSTREAM L.P.	DUKE MAGNUM C.S.(BURTON N FLATS GP)	A	08/10/1992	02/03/1993	02/03/2008	G-9-20 S-29 E	Eddy	Chavez	Artesa	Santa Fe	1 below grade tank registered as stamp	
PENV000GWO 0139	Discharge Plan Permit	128	DCP MIDSTREAM L.P.	DUKE PAGE CS	A	08/11/1992	11/19/1992	11/20/2007	O-4-21 S-32 E	Laa	Chavez	Hobbs	Santa Fe	6 mo. Renewal notice sent 7/10/02. renewal application received	
PENV000GWO 0148	Discharge Plan Permit	137	DCP MIDSTREAM L.P.	DUKE CARBASSO CS	A		04/28/1993	04/28/2008	F-14-23 S-28 E	Eddy	Chavez	Artesa	Santa Fe	1 solid stamp registered	
PENV000GWO 0150	Discharge Plan Permit	139	DCP MIDSTREAM L.P.	DUKE GP-1 CS	C		04/28/1993		1-15-23 S-28 E	Eddy	Chavez	Artesa	Santa Fe	Site inactive, requested closure workplan 1/10/03, WP approved, Closure Approved 10/15/2003	
PENV000GWO 0153	Discharge Plan Permit	142	DCP MIDSTREAM L.P.	DUKE SAND DUNES CS	A	03/26/1993	05/17/1993	05/17/2008	P-23-23 S-31 E	Eddy	Chavez	Artesa	Santa Fe	1 below grade tank registered	
PENV000GWO 0155	Discharge Plan Permit	144	DCP MIDSTREAM L.P.	DUKE NORTH (WESTALL) CS	A	05/05/1993	08/19/1993	08/19/2008	E-35-22 S-28 E	Eddy	Chavez	Artesa	Santa Fe	Renewal application dated 4/30/03. renewed on hold pending legal determination	1 below grade tank registered
PENV000GWO 0179	Discharge Plan Permit	168	DCP MIDSTREAM L.P.	DUKE SOUTH FEAGAN CS	C	07/06/1994	12/28/1994	12/27/2004	N-31-18 S-25 E	Eddy	Chavez	Artesa	Santa Fe	Late filing fee and lat fee 1/11/02. Flat fee received 1/29/02.	
PENV000GWO 0188	Discharge Plan Permit	177	DCP MIDSTREAM L.P.	DUKE MALAMAR CS	C		03/21/1995	03/21/2005	1-20-17 S-33 E	Laa	Chavez	Hobbs	Santa Fe		
PENV000GWO 0046	Discharge Plan Permit	44	DCP MIDSTREAM L.P.	HOBBES BOOSTER CS	A		12/23/1987	12/23/2007	4-19 S-38 E	Laa	Chavez	Hobbs	Santa Fe	renewal notice sent 7/10/02	

AP-55	DCP MIDSTREAM L.P.	PRR Ex. (AP- S9)						C-19-20 S-37 E	?	Hobbs	Santa Fe	Meeting w/ company 2/1/07
2R-043	DCP MIDSTREAM L.P.	PCA Junction						11-20 S-30 E	?	Hobbs	Santa Fe	Meeting w/ company 2/1/07
1R-156	DCP MIDSTREAM L.P.	Monument Booster Station						B-39-19 S-37 E (92,6228 - 103,2550)	?	Hobbs	Santa Fe	Meeting w/ company 2/1/07