NOVA
safety and environmental

August 3, 2011

Jon Bebbington
DCP Midstream, LP
10 Desta Drive
Suite 400 West
Midland, Texas

Re: Loco Hills Gathering Release Site
Remediation Summary Update Letter
Section 3, Township 17 South, Range 29 East
Eddy County, New Mexico

Dear Mr. Bebbington:

NOVA Safety and Environmental (NOVA), is pleased to present DCP Midstream, L.P. (DCP), this Remediation Summary Update Letter for the Loco Hills Gathering Release Site. The legal description of the release site is Unit Letters "F" and "L", Section 3, Township 17 South, Range 29 East, in Eddy County, New Mexico. The property affected by the release is owned by United States Department of the Interior Bureau of Land Management (BLM) and the State of New Mexico and is administered by the New Mexico State Land Office (ROE permit #2052). An Archaeological Survey was conducted by Boone Arch Services of New Mexico, LLC, located at 506 E. Chapman, Carlsbad, New Mexico. The survey indicated an existing archaeological site is located outside the release site boundary. Due to the site being located in close proximity to an archaeological site, a Boone Arch Services representative was present during excavation activities to ensure no encroachment was made. A copy of the Archaeological Survey is attached. The site latitude is 32.86394° North, and the longitude is 104.06673° West. For reference, a Site Location Map (Figure 1) is attached.

On June 3, 2011, DCP discovered a crude oil release had occurred from an eight (8) inch DCP pipeline. The cause of the release is attributed to internal/external corrosion and was reported to the New Mexico Oil Conservation Division (NMOCD) on June 6, 2011. The release was also reported to the BLM and NMSLO. DCP submitted a Release Notification and Corrective Action (Form C-141) to the NMOCD Artesia District Office. The C-141 indicated approximately sixteen (16) barrels of crude oil was released and approximately eleven (11) barrels were recovered. The Release Notification and Corrective Action (Form C-141) is attached.

A search of the New Mexico Office of the State Engineer (NMOSE) database did not identify the average depth to groundwater information for Section 3, Township 17 South, Range 29 East. A reference map utilized by the NMOCD indicated depth to groundwater at the release site should be encountered at approximately 100 feet below ground surface (bgs). The depth to groundwater at the Loco Hills Gathering

Release Site results in a score of ten (10) points being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the Loco Hills Gathering Release Site has an initial ranking score of ten (10). Based on this score, the soil remediation levels for a site with a ranking score of ten (10) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 1,000 mg/Kg (ppm)

On June 15, 2011, NOVA at the request of DCP, commenced excavation activities at the site. Impacted soil was excavated from the release point and continued along the flow path for approximately five hundred (500) feet to the south southwest. Excavated soil was stockpiled on-site on a plastic liner to mitigate the leaching potential of contaminants. The final dimensions of the excavation were approximately five hundred thirty-nine (539) feet in length, ranging in width from approximately two (2) feet to approximately fifty-two (52) feet, and ranging in depth from approximately one (1) foot to approximately eight (8) feet bgs. For reference a Site Details Schematic and Confirmation Soil Sample Locations Map (Figure 2) is attached.

On June 22, 2011, approximately forty (40) cubic yards of heavily impacted soil was transported to Controlled Recovery, Inc. (NMOCD permit # R9166) for disposal.

On June 22, 2011, seventeen (17) soil samples (South S/W-1 @ 1', South S/W-2 @ 4', Floor-1 @ 1', Floor-2 @ 2', East S/W-1 @ 1.5', West S/W-1 @ 1.5', Floor-3 @ 1', Floor-4 @ 1', Floor-5 @ 7', North S/W-1 @ 6', West S/W-2 @ 6', South S/W-3 @ 6', Floor-6 @ 2', West S/W-3 @ 1.5', East S/W-3 @ 1.5', and Floor-7 @ 1') were collected from the excavation. Please reference Figure 2 for sample locations. The soil samples were submitted to the laboratory for determination of concentrations of total petroleum hydrocarbons (TPH) and benzene, toluene, ethyl-benzene, and xylene (BTEX) using EPA method SW8015M and SW 846-8021b, respectively. Laboratory analytical results (summarized in Table 1) indicated benzene concentrations ranged from less than the laboratory method detection limit (MDL) of 0.001 mg/Kg for soil samples Floor-1 @ 1', Floor-2 @ 2', East S/W-1 @ 1.5', West S/W-1 @ 1.5', Floor-3 @ 1', Floor-4 @ 1', Floor-5 @ 7', North S/W-1 @ 6', West S/W-2 @ 6', West S/W-3 @ 1.5', East S/W-3 @ 1.5', and Floor-7 @ 1' to 0.0119 mg/Kg for soil sample South S/W-3 @ 6'. BTEX concentrations ranged from less than the laboratory MDL of 0.0021 mg/Kg for soil samples West S/W-2 @ 6' and Floor-7 @ 1' to 1.67 mg/Kg for soil sample South S/W-2 @ 4'. TPH concentrations ranged from less than the appropriate laboratory MDL for soil samples North S/W-1 @ 6', West S/W-2 @ 6', South S/W-3 @ 6', and Floor-7 @ 1' to 584 mg/Kg for soil sample Floor-4 @ 1'. A review of the analytical results indicted benzene, BTEX and TPH concentrations were less than the NMOCD regulatory

guidelines for all submitted soil samples. A summary of Concentrations of Benzene, BTEX and TPH in Soil (Table 1) and laboratory analytical reports are attached.

On June 24, 2011 six (6) soil samples (North S/W-2 @ 3', North S/W-3 @ 8', West S/W-4 @ 8', East S/W-4 @ 8', South S/W-4 @ 6', and R.P. Floor @ 8') were collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations ranged from less than the appropriate laboratory MDL for soil samples South S/W-4 @ 6' and R.P. Floor @ 8' to 0.0171 mg/Kg for soil sample North S/W-3 @ 8'. BTEX concentrations ranged from less than the laboratory MDL of 0.0021 mg/Kg for soil sample South S/W-4 @ 6' to 0.578 mg/Kg for soil sample West S/W-4 @ 8'. TPH concentrations ranged from 18.5 mg/Kg for soil sample R.P. Floor @ 8' to 1,160 mg/Kg for soil sample West S/W-4 @ 8'. A review of analytical results indicated benzene and BTEX concentrations were less than NMOCD regulatory guidelines for all submitted soil samples. TPH concentrations were less than NMOCD regulatory standards in all the submitted soil samples with the exception of soil samples West S/W-4 @ 8' and East S/W-4 @ 8' which exhibited TPH concentrations of 1,160 mg/Kg and 1,090 mg/Kg, respectively. Based on the analytical results additional excavation was conducted in the areas represented by soil samples West S/W-4 @ 8' and East S/W-4 @ 8'.

On July 1, 2011, three (3) soil samples (SP-1, SP-2, and SP-3) were collected from the stockpiled soil and submitted to the laboratory for TPH analysis. Laboratory analytical results indicated TPH concentrations ranged from 1,750 mg/Kg for soil sample SP-1 to 1,860 mg/Kg for soil sample SP-2. Based on the laboratory analytical results the stockpiled soil required additional blending and mixing. Non-impacted soil excavated during excavation activities was utilized to blend with the stockpiled soil.

On July 7, 2011, two (2) soil samples (East S/W-4A @ 8' and West S/W-4A @ 8') were collected from the excavation and submitted to the laboratory for analysis. Laboratory analytical results indicated benzene concentrations of less than the laboratory MDL of 0.001 mg/Kg for soil sample West S/W-4A @ 8' and 0.00136 mg/Kg for soil sample East S/W-4A @ 8'. Analytical results indicated BTEX concentrations of less than the laboratory MDL of 0.0021 mg/Kg for soil sample West S/W-4A @ 8' and 0.150 mg/Kg for soil sample East S/W-4A @ 8'. TPH concentrations were 198 mg/Kg for soil sample East S/W-4A @ 8' and 139 mg/Kg for soil sample West S/W-4A @ 8'. A review of laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than NMOCD regulatory guidelines for both soil samples.

On July 7, 2011, the stockpiled soil was subdivided into seven (7) discreet stockpiles. One (1) composite soil sample was collected from each stockpile, resulting in seven (7) composite soil samples, identified as SP-1 through SP-7. Each sample represented approximately 250 cubic yards of remediated soil. The soil samples were submitted to the laboratory for TPH and BTEX analysis. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all the submitted soil samples with the exception of soil sample SP-2A, which exhibited a benzene concentration of 0.00115 mg/Kg. BTEX concentrations ranged from 0.0621 mg/Kg for soil sample SP-7 to 0.201 mg/Kg for soil sample SP-5. TPH concentrations ranged from 326 mg/Kg for soil sample SP-7 to 1,590 mg/Kg for soil sample SP-1A. A review of laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than NMOCD regulatory guidelines for all the submitted soil samples with the exception of soil sample SP-1A, which exhibited a TPH concentration of 1,590 mg/Kg.

On July 21, 2011, during a meeting between NMOCD Artesia District Office and NOVA representatives, the NMOCD granted verbal approval of the following activities to progress the Loco Hills Gathering Release Site towards an NMOCD approved closure:

- DCP will blend and resample the stockpiled soil represented by soil sample SP-1A until laboratory analytical results indicate TPH concentrations of the soil sample are less than 1,000 mg/Kg. Upon confirmation analytical results indicating TPH concentrations less than 1,000 mg/Kg the soil will be utilized as backfill material.
- The excavation will be backfilled with the remediated stockpiled material and compacted. Following backfill activities the surface will be contoured to fit the surrounding topography. Reseeding of the site with vegetation acceptable to the landowners will take place at the conclusion of the proposed remediation activities.

If you have any questions, or if additional information is needed, please feel free to call me at 432-520-7720 (office) or 575-605-7210 (cell).

Thank you,

Camille Bryant
NOVA Safety and Environmental
Project Manager

Attachments:

Archaeological Survey
Figure 1 - Site Location Map
Release Notification and Corrective Action (Form C-141)
Figure 2 - Site Details Schematic and Soil Sample Locations Map
Table 1 – Concentrations of Benzene, BTEX and TPH in Soil
Laboratory Analytical Reports and Chain of Custody Documentation

Cc: Mike Bratcher, NMOCD, Artesia District Office
Paul Evans, BLM, Carlsbad District Office
Andrew Kraemer, NMSLO, Carlsbad District Office
file

NMCRIS No.: 120983

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS Activity No.:	2a. Lead Agency:	2b. Other Agency(ies):	3. Lead Agency Report No.:
120983	US Bureau of Land Management Carlsbad Field Office	NM State Trust Lands	

4. Title of Report:

A Class III Archaeological Survey for an Oil Spill.

Author(s)

Rebecca L. Hill

5. Type of Report

Negative

X Positive

6. Investigation Type

☐ Research Design ☑ Archaeological Survey/Inventory ☐ Architectural Survey/Inventory ☐ Test Excavation ☐ Excavation
☐ Collections/Non-Field Study ☐ Compliance Decision Based on Previous Inventory ☐ Overview/Lit Review ☐ Monitoring
☐ Ethnographic Study ☐ Site/Property Specific Visit ☐ Historic Structures Report ☐ Other

7. Description of Undertaking (what does the project entail?):

A pedestrian cultural survey was conducted for an oil spill associated with a DCP Midstream pipeline leak. DCP Midstream experienced an oil spill on lands managed by BLM-Carlsbad and NM State Trust Lands in Eddy County T17S R30E Sec 3. A cultural resources survey was conducted on 8, 9, and 10 Jun 2011. Survey method consisted of two 15 meter transects around the spill area. One new site was discovered during this survey LA 170166. R. Hill called Paul Evans of BLM-Carlsbad on13 June 2011 to advise him of the completion of the survey and that the report will be sent to BLM-Carlsbad as soon as it was completed. Mr. Evans said he would authorize DCP Midstream to proceed with the clean-up and to submit the report when it was completed.

[ ] Continuation

8. Dates of Investigation: from: 08-Jun-2011 to: 10-Jun-2011

9. Report Date: 13-Jun-2011

10. Performing Agency/Consultant: Boone Arch Svcs of NM

Principal Investigator: Rebecca L. Hill

Field Supervisor: Rebecca L. Hill

Field Personnel Names: Rebecca L. Hill

Historian / Other:

11. Performing Agency/Consultant Report No.:

BASNM 06-11-11

12. Applicable Cultural Resource Permit No(s):

BLM: #190-2920-11-N State: NM-11-157-S

NMCRIS No.: 120983

13. Client/Customer (project proponent):

DCP Midstream

Contact: Jon Bebbington

Address: 10 Desta Drive, Suite 400 West, Midland, TX 79705 **Phone:** 432-620-4207

14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency)	Acres Surveyed	Acres in APE
US Bureau of Land Management Carlsbad Field Office	0.08	0.02
NM State Land Office	5.54	2.77
TOTALS	5.62	2.79

16. Records Search(es):

Date(s) of HPD/ARMS File Review: 7Jun2011	Name of Reviewer(s): Rebecca L. Hill	
Date(s) of Other Agency File Review: 7Jun2011	Name of Reviewer(s): Christine Mavrick	Agency: BLM-Carlsbad

17. Survey Data:

a. Source Graphics [ ] NAD 27 [x] NAD 83 Note: NAD 83 is the NMCRIS standard.

☑ **USGS 7.5' (1:24,000) topo map** ☐ **Other topo map, Scale:**

☑ **GPS Unit Accuracy** ☑ **<1.0m** ☐ **1-10m** ☐ **10-100m** ☐ **>100m** ☐ **Aerial Photo(s)**

Other Source Graphic(s):

b. USGS 7.5' Topographic Map Name	USGS Quad Code
Red Lake SE, NM	32104-G1

c. County(ies): EDDY

d. Nearest City or Town: Loco Hills, NM

e. Legal Description:

Township (N/S)	Range (E/W)	Section
17S	29E	3

Projected legal description? [ ] Yes [X] No [ ] Unplatted

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

[ ] Continuation

18. Survey Field Methods:

Intensity: ☑ 100% coverage ☐ <100% coverage

NMCRIS No.: 120983

Configuration: ☑ block survey units ☐ linear survey units (l x w):

☐ other survey units (specify):

Scope: ☑ non-selective (all sites/properties recorded) ☐ selective/thematic (selected sites/properties recorded)

Coverage Method: ☑ systematic pedestrian coverage

☐ other method (describe):

Survey Interval (m): 15 **Crew Size:** 1 **Fieldwork Dates:** from: 08-Jun-2011 to: 10-Jun-2011

Survey Person Hours: 2.00 **Recording Person Hours:** 2.50 **Total Hours:** 4.50

Additional Narrative:

Two known sites exist within ¼ mile of the spill, LA 125304 is 119' and LA 118220 is 250' and will not be impacted by the clean-up. Most of the spill occurred on NM State Trust Lands as is the site, but due to the pipeline being federally permitted BLM-Carlsbad is the lead agency.

[ ] Continuation

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

Soils: Reeves-Gypsum (RG) 0-3% slope Reeves are fine loamy soils on the down slope and Gypsum soils on the upper riches. The historic plant community has a grassland aspect, dominated by grasses with shrubs. Black grama, blue grama, and tobosa re the historic dominate grass species. Today fourwing salt bush tobosa and mesquite are the dominate vegetation.

[ ] Continuation

20.a. Percent Ground Visibility: 50-70% **b. Condition of Survey Area (grazed, bladed, undistributed, etc.):**

Some oil and gas development and livestock grazing.

[ ] Continuation

21. CULTURAL RESOURCE FINDINGS **X Yes, see next report section** **No, discuss why:**

One new site was located during this project and recorded LA 170166.

[ ] Continuation

22. Attachments (check all appropriate boxes):

[x] USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn (required)

[x] Copy of NMCRIS Map Check (required)

[x] LA Site Forms - new sites (with sketch map & topographic map) if applicable

[ ] LA Site Forms (update) - previously recorded & un-relocated sites (first 2 pages minimum)

[ ] Historic Cultural Property Inventory Forms, if applicable

[ ] List and Description of Isolates, if applicable

[ ] List and Description of Collections, if applicable

23. Other Attachments:

[ ] Photographs and Log

[ ] Other Attachments (Describe):

NMCRIS No.: 120983

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Qualified Supervisor: **Printed Name:** Rebecca L. Hill

Signature: Rebecca Hill **Date:** 13 Jan 2011 **Title:** PI

25. Reviewing Agency	**26. SHPO**
Reviewer's Name/Date:	**Reviewer's Name/Date:**
Accepted [ ] **Rejected [ ]**	**HPD Log #:**
	Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

SURVEY RESULTS:

One new site was discovered during this survey and recorded LA 170166.

Archaeological Sites discovered and registered: 1

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 1

Total isolates recorded: 0 ☑ **Non-selective isolate recording?**

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

It is recommended that the clean-up proceed with a monitor present to ensure LA 170166 is no affected by the action.

[ ] Continuation

IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

SURVEY LA/HCPI NUMBER LOG

Sites/Properties Discovered:

LA/HCPI No.	Field/Agency No.	Eligible? (Y/N/U, applicable criteria)
170166	DCPBASNM19Jun2011	Yes, D

NMCRIS No.: 120983

Previously recorded revisited sites/HCPI properties:

LA/HCPI No. **Field/Agency No.** **Eligible? (Y/N/U, applicable criteria)**

MONITORING LA NUMBER LOG (site form required)

Sites Discovered (site form required):

LA No. **Field/Agency No.**

Previously recorded sites (site update form required):

LA No. **Field/Agency No.**

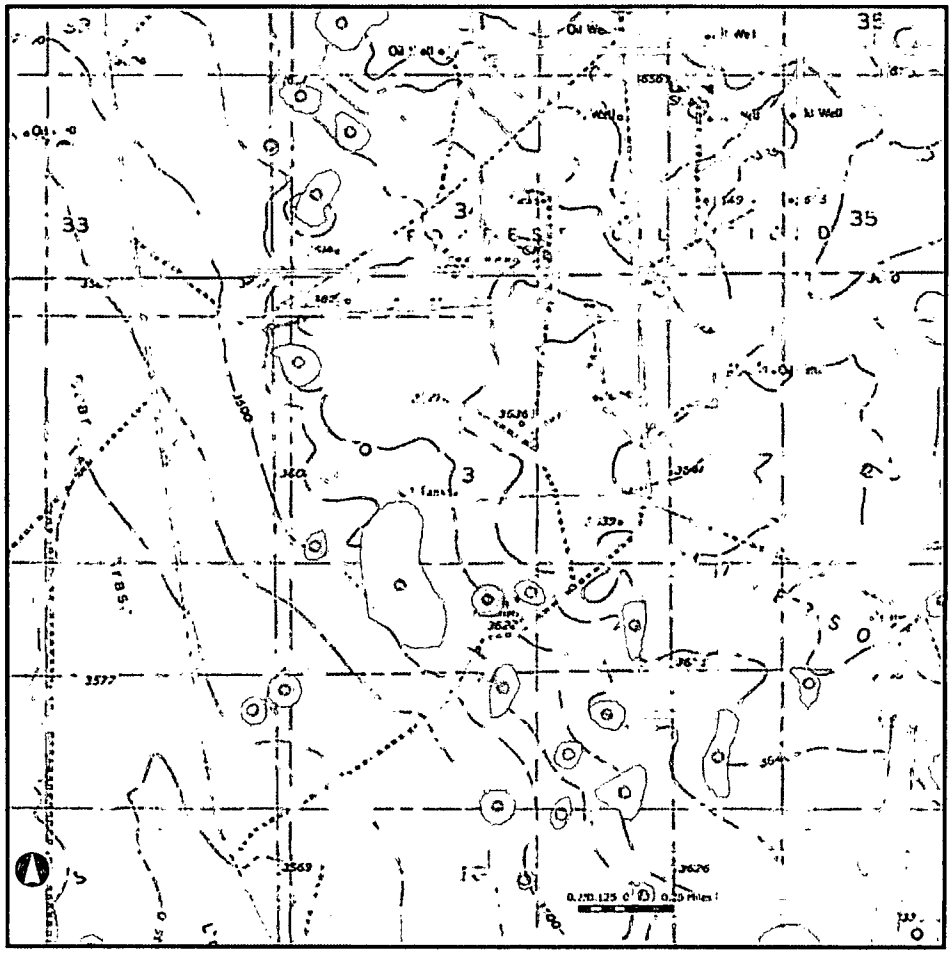
Areas outside known nearby site boundaries monitored? **[ ] Yes** **[ ] No, Explain why:**

TESTING & EXCAVATION LA NUMBER LOG (site form required)

Tested LA number(s)

Excavated LA number(s)

Map



PLSS

Site Labels

Site Boundaries (Edit)

Site Boundaries

- Not Defined
- Proposed
- Approved

Building Labels

Object Labels

Linear Resource Labels

Historic Structures

- Not Defined
- Proposed
- Approved

Buildings

- Not Defined
- Proposed
- Approved

Objects

- Not Defined
- Proposed
- Approved

Linear Resources

- Not Defined
- Proposed

Register Properties

- Not Defined
- Proposed
- Approved

Archaeological Surveys (Edit)

Archaeological Surveys

- Not Defined
- Proposed
- Approved

Highways

- Primary Limited Access or Intersta
- Primary US and State Highways
- Secondary State and County
- Local - Rural

ARCHAEOLOGICAL SURVEY OF A DCP MIDSTREAM OIL SPILL

By
Rebecca L. Hill
Principal Investigator

For
DCP Midstream
Midland, TX

Bureau of Land Management Permit No: 190-2920-11-N
NM State Permit No: NM-11-157-S
NMCRIS Activity No. 120983
Report of Investigations No. BASNM 06-11-11

Boone Arch Services of NM, LLC
506 E. Chapman Road
Carlsbad, NM 88220

June 2011

TABLE OF CONTENTS

ABSTRACT

DCP Midstream proposes to remove contaminated soil from an oil spill which was created during a DCP pipeline break. The oil spill flowed from a federally permitted pipeline on federal lands managed by BLM-Carlsbad onto NM State Trust Lands managed by the NM State Lands Office. These lands are located in Eddy County, NM in T17S R29E Sec 3.

ENVIRONMENTAL SETTING

Eddy County lies within four distinct land formations, the Mescalero Plain, Southwest Pecos Slopes, Pecos Floodplain/Terrace and the Sacramento Section which includes the Guadalupe Mountains. The DCP oil spill project lies entirely within the Mescalero Sands within the Mescalero Plain within ½ mile of Bear Grass Draw. Bear Grass Draw would have been the closest permanent water resource during the time of prehistoric habitation. The edges of the Mescalero Sand sheet is covered by coppice dunes which are going through a 200 year history of development, growth, and erosion (Hall and Gobel, 2006). Today torrey mesquite covers the project area which were not seen in such quantity by the 19th century surveyors (Hall and Gobel, 2006). Agriculture is not supported in this area due to lack of water for irrigation although cattle ranching is a viable business in this semi-arid climate. These soils support a small range of plant life mostly low grasses, but due to over grazing mesquite is the dominate vegetation.

PREVIOUS RESEARCH

A records check was performed with the Archaeological Records Management System (ARMS) on June 7, 2011 with several previous surveys conducted in the project area. A records check was also conducted at the Carlsbad BLM with the same surveys noted within the project area. Two previously recorded site is within a quarter mile of the project area. LA 125304 is located 119 feet outside of the project area and LA 118220 which is 250 feet neither site will be affected by the project.

METHODS

This is a block survey of 5.62 acres. The survey was conducted by one archaeologist walking 15 meter transcets across the project area as delineated by the oil spill.

CULTURAL ENVIRONMENT

Little specific information is known about the project area, although the project area does lie within the cultural climate as described by Sebastian and Larralde in *Living on the Land: 11,000 Year of Human Adaptation in Southeastern New Mexico.*

General consciences as to the different prehistoric periods of general occupation are listed below:

PaleoIndian	11,000 to 5,500 BC
Archaic	5,500 BC to AD 200
Mogollon	AD 200 to AD 1400

The PaleoIndian period as described by Shelley, represents the earliest documented human occupation in the New World. These lifeways are represented by nomadic groups practicing a specialized subsistence strategy (Shelley and Wenzel 2002). Sebastian describes the paleoindian period as a particular hunting-and-gathering adaptation to their surroundings (Sebastian and Larralde 1989).

As the paleoindian period gave way to the archaic period, a distinctive adaptive change is seen in the types of points used. The archaic period is generally based on the presence at sites of dart points that are typologically similar to those artifacts from better known areas in Texas (Cordell and Harlan 1979). This pattern of hunting and gathering adaptation is believed based on the reduction in moisture that began around 8000 B.P.

(Cordell and Harlan 1979). The change in climate to a dryer environment reduced or eliminated the large game present during the paleoindian period. The small dart points found on archaic period sites indicate an abundance of small game. Large spear and lance points used during the paleoindian period are not found on archaic period sites.

As described by most, the Mogollon period is a time of transition to a more sedentary lifeway and is seen in the archaeological record as small structures such as pithouses to large structures with multi-rooms such as pueblos. The Mogollon/Pueblo period is also characterized by the appearance of ceramics in the archaeological record and in some cases is described as the ceramic period.

Several subcategories are accepted as the cultures advanced in stone tool manufacturing and the introduction of ceramics. The Jornada branch of the Mogollon subcategory is defined as Pithouse (Early/Late) AD 200-1100 and Pueblo (Early/Late) AD 1100-1400.

Contact period began with the first Spanish *entrada* beginning in 1539 with Cortez, but specifically for the Roswell District the contact period began with Francisco Vazquez de Coronado's *entrada* in 1541 searching for "Quivira". New Mexico became part of Mexico in 1821 after Mexico's war of independence between Mexico and Spain. In 1846 New Mexico became a US Territory and became a member of the United States of America in 1912.

CULTURAL RESOURCE FINDINGS

One new site was discovered and recorded during this survey. In-field artifact analysis suggest that the site was occupied during the Mogollon time period specifically the Jornado Phase. The site is located on a small rise overlooking Bear Grass Draw. This location and size of the site suggests that the site could be a camp site used by a large

group of people over a very short period of time or a small group of people over a long period of time.

MANAGEMENT RECOMMENDATIONS

The existing archaeological site is outside of the project boundaries, but is close to the oil spill and should be monitored during the clean-up process thus ensuring a no adverse affect to the site.

REFERENCES

Cordell, L. and M. Harlan

1979 *A Cultural Resources Overview for the Bureau of Land Management Roswell District.* Office of Contract Archeology, Department of Anthropology, University of New Mexico, Albuquerque, NM.

Sebastian, L., and S. Larralde

1989 *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico.* Cultural Resources Series No. 6. Bureau of Land Management, Santa Fe, NM.

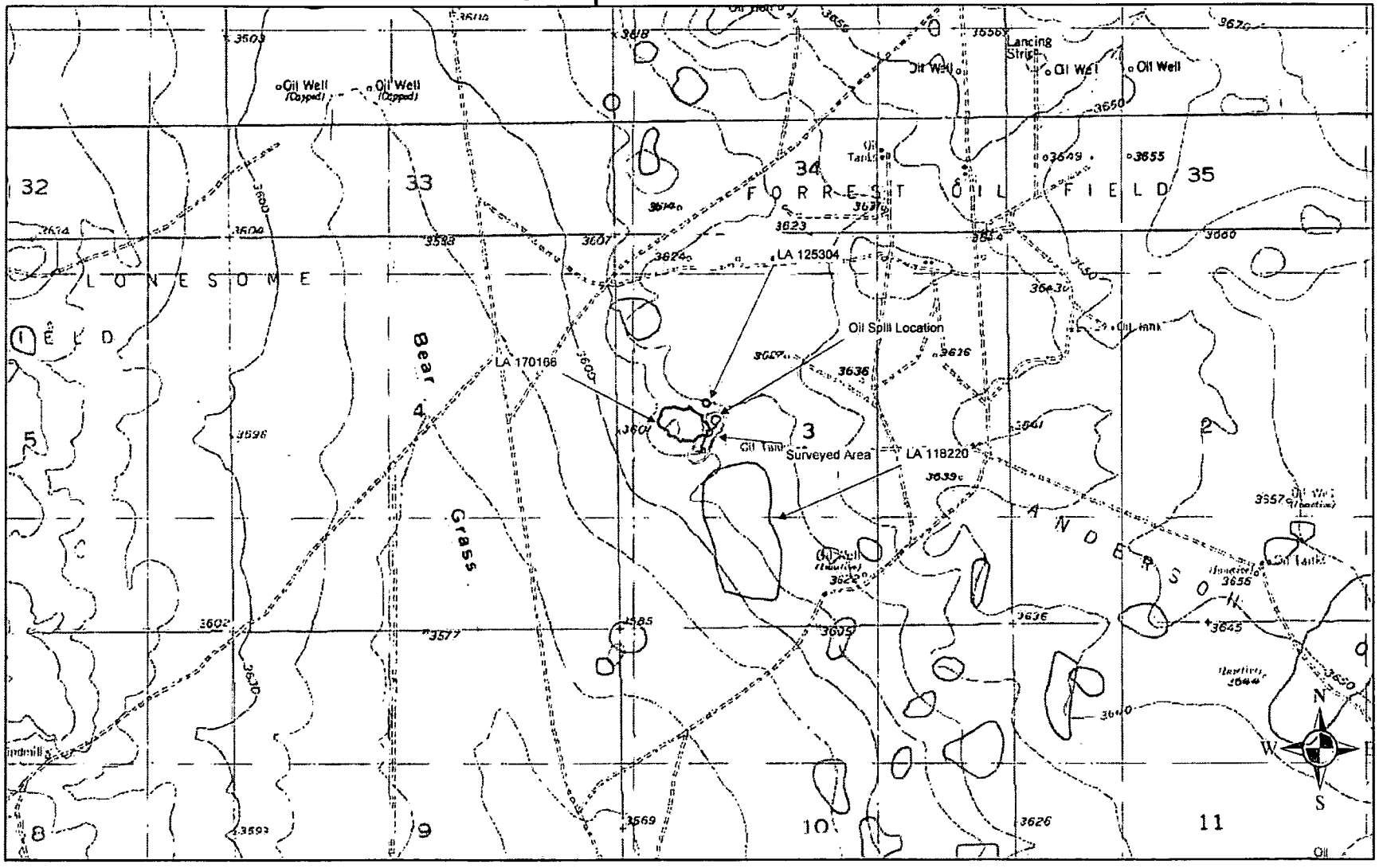
Shelley, P. and K. Wenzel

2002 *Archaeological Variation within the Middle Rio Bonito.* Cultural Resources Series No.14. Bureau of Land Management, Santa Fe, NM.

U.S. Department of Agriculture

1967 *Soil Survey Lea County, New Mexico.* U.S. Government Printing Office, Washington, D.C.

DCP Midstream
Oil Spill Location



1:24,000

Legend

- Site_Poly
- New_Site
- Surveyed Space
- Spill_location
- BLM
- BOR
- DOE
- Forest Service
- I
- National ParkService
- OFA
- Private
- State
- State Game and Fish
- State Park

Red Lake SE
32104-G1
T17S R29E Sec 3

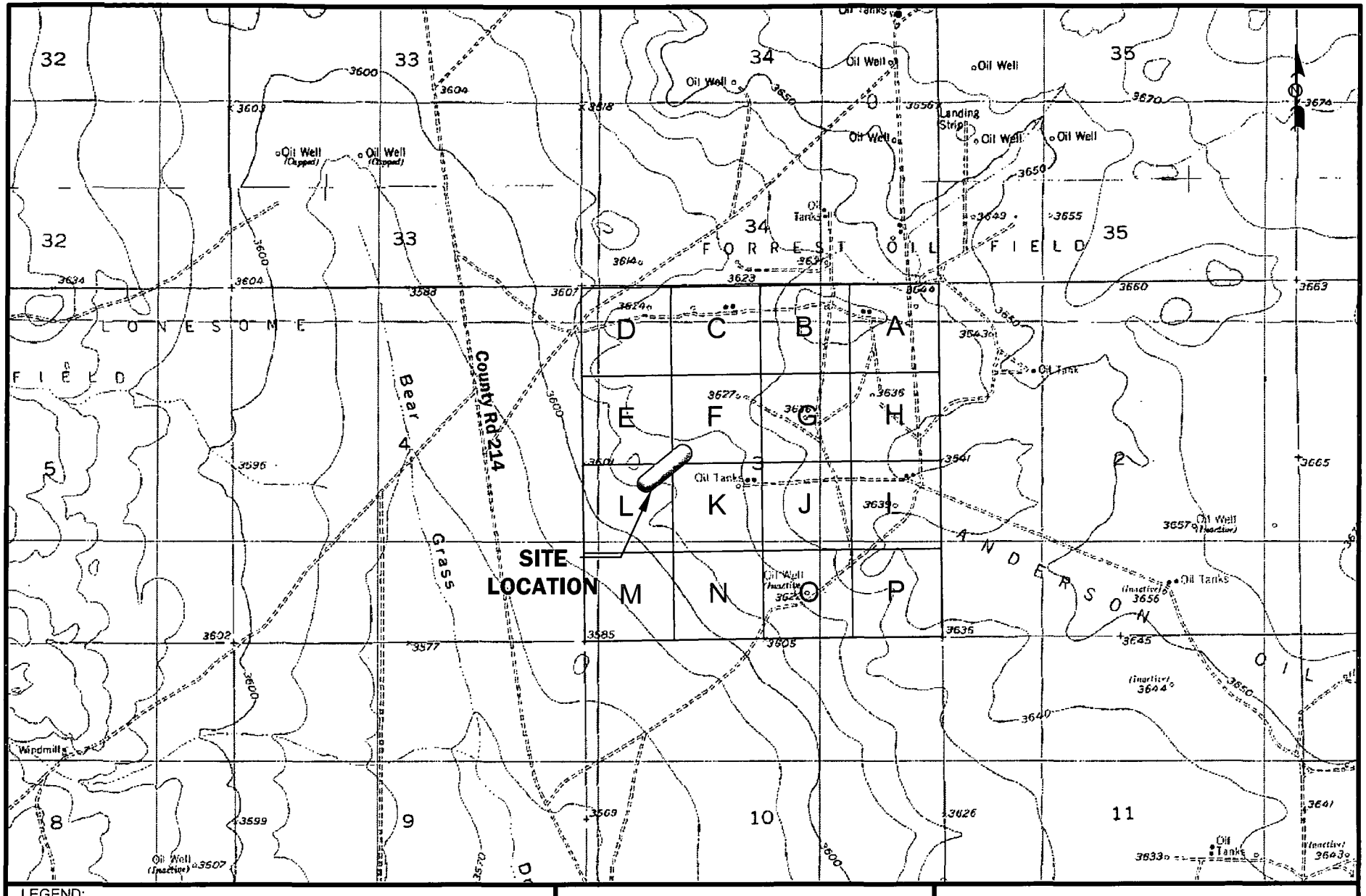


Figure 1
Site Location Map
Loco Hills
DCP Midstream
Eddy County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

June 7, 2011	Scale: 1" = 2000'	CAD By: TA	Checked By: CJB

LATITUDE & LONGITUDE COORDINATES: N 32° 51' 50.14" W 104° 4' 0.23"

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

DCP MIDSTREAM, L.P.
LOCO HILLS GATHERING SYSTEM
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M			
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}
South S/W-1 @ 1'	06/22/11	0.00243	0.0779	0.141	0.216	0.0928	0.530	41.4	350	<15.2	391
South S/W-2 @ 4'	06/22/11	0.00798	0.175	0.696	0.566	0.222	1.67	28.4	<15.1	<15.1	28.4
Floor-1 @ 1'	06/22/11	<0.001	0.00425	0.00328	0.00360	0.00393	0.0151	<15.1	482	46.1	528
Floor-2 @ 2'	06/22/11	<0.001	<0.002	0.00212	0.00285	0.00123	0.00620	<15.2	379	18.1	397
East S/W-1 @ 1.5'	06/22/11	<0.001	<0.002	0.00136	0.00249	0.00187	0.00572	<15.3	25.1	<15.3	25.1
West S/W-1 @ 1.5'	06/22/11	<0.001	<0.002	<0.001	<0.002	0.00171	0.00171	<15.0	130	<15.0	130
Floor-3 @ 1'	06/22/11	<0.001	<0.002	0.00105	0.00805	0.00933	0.0184	<75.3	228	<75.3	228
Floor-4 @ 1'	06/22/11	<0.001	0.00895	0.0189	0.0256	0.0164	0.0699	<75.5	584	<75.5	584
Floor-5 @ 7'	06/22/11	<0.001	<0.0021	0.0013	<0.021	<0.001	0.0013	<15.6	28.1	<15.6	28.1
North S/W-1 @ 6'	06/22/11	<0.001	0.00315	0.00375	0.00502	0.00350	0.0154	<15.2	<15.2	<15.2	<15.2
West S/W-2 @ 6'	06/22/11	<0.001	<0.0021	<0.001	<0.0021	<0.001	<0.0021	<15.6	<15.6	<15.6	<15.6
East S/W-2 @ 6'	06/22/11	0.00188	0.0152	0.0162	0.0208	0.00769	0.0618	<15.6	16.2	<15.6	16.2
South S/W-3 @ 6'	06/22/11	0.0119	0.0849	0.0706	0.116	0.044	0.327	<15.1	<15.1	<15.1	<15.1
Floor-6 @ 2'	06/22/11	0.00136	<0.0021	<0.001	<0.0021	<0.001	0.00136	<15.2	192	<15.2	192
West S/W-3 @ 1.5'	06/22/11	<0.001	0.00311	0.00492	0.0085	0.00418	0.0207	<15.4	26.5	<15.4	26.5
East S/W-3 @ 1.5'	06/22/11	<0.001	<0.0021	0.00171	0.00368	<0.001	0.00539	<15.5	19.3	<15.5	19.3
Floor-7 @ 1'	06/22/11	<0.001	<0.0021	<0.001	<0.0021	<0.001	<0.0021	<15.7	<15.7	<15.7	<15.7
North S/W-2 @ 3'	06/24/11	0.00114	0.0105	0.0119	0.0200	0.00829	0.0518	<15.8	21.6	<15.8	21.6
North S/W-3 @ 8'	06/24/11	0.0171	0.0807	0.0643	0.0775	0.0259	0.266	<15.5	36.1	<15.5	36.1
West S/W-4 @ 8'	06/24/11	0.0111	0.12	0.125	0.228	0.094	0.578	64.8	1,100	<15.7	**1,160**
East S/W-4 @ 8'	06/24/11	0.0016	0.0135	0.0144	0.0206	0.00946	0.0596	36.8	1,020	34.4	**1,090**
South S/W-4 @ 6'	06/24/11	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.9	51.3	<15.9	51.3
R.P. Floor @ 8'	06/24/11	<0.001	0.00393	0.00864	0.0147	0.00555	0.0328	<15.7	18.5	<15.7	18.5
SP-1	07/01/11	-	-	-	-	-	-	169	1,560	20.6	**1,750**
SP-2	07/01/11	-	-	-	-	-	-	219	1,640	<15.4	**1,860**
SP-3	07/01/11	-	-	-	-	-	-	213	1,610	20.8	**1,840**
East S/W-4A @ 8'	07/07/11	0.00136	0.00927	0.0270	0.0695	0.0428	0.150	34.7	163	<15.0	198
West S/W-4A @ 8'	07/07/11	<0.001	<0.0021	<0.001	<0.0021	<0.001	<0.0021	<15.5	139	<15.5	139
SP-1A	07/07/11	<0.001	0.0126	0.0435	0.0830	0.0497	0.189	115	1,470	<15.1	**1,590**
SP-2A	07/07/11	0.00115	0.00731	0.0294	0.0568	0.0350	0.130	55.1	651	<15.1	706
SP-3A	07/07/11	<0.001	0.00648	0.0269	0.0529	0.0324	0.119	72.5	777	22.6	872

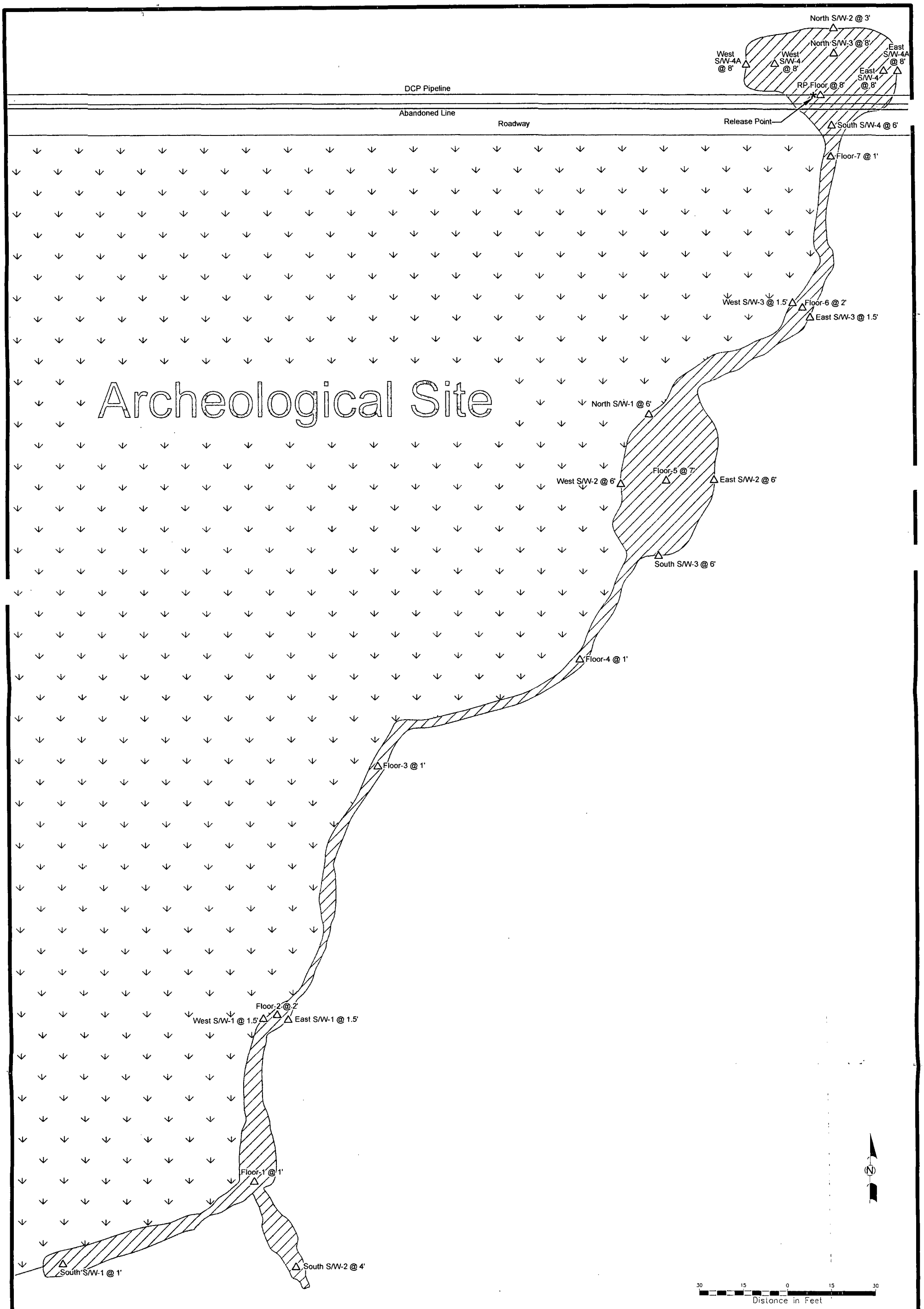
TABLE 1

CONCENTRATIONS OF BENZENE, BTEX AND TPH IN SOIL

DCP MIDSTREAM, L.P.
LOCO HILLS GATHERING SYSTEM
EDDY COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	METHODS: SW 846-8021b						METHOD: SW 8015M			
		BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{12}	TPH DRO C_{12}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}
SP-4	07/07/11	<0.001	0.0101	0.0341	0.0619	0.0352	0.141	54.6	719	23	797
SP-5	07/07/11	<0.001	0.0145	0.0491	0.0868	0.0508	0.201	59	705	20.6	785
SP-6	07/07/11	<0.001	0.00566	0.0168	0.0315	0.0202	0.0742	36.5	409	19.8	465
SP-7	07/07/11	<0.00099	0.00549	0.0144	0.0265	0.0157	0.0621	25.9	300	<15.1	326



LEGEND:

△ Soil Sample Location

—— Pipeline

Figure 2
Site Details Schematic & Confirmation
Soil Sample Locations Map
DCP Midstream
Loco Hills Gathering
Eddy County, NM

NOVA safety and environmental
2057 Commerce Drive
Midland, Texas 79703
432.520.7720
www.novasafetyandenvironmental.com

September 20, 2010	Scale: 1" = 30'	CAD By: TA	Checked By: CJB
Lat. N 32° 51' 50.14" Long. W 104° 4' 0.23"		SW1/4 NW1/4 Sec 3 T17S R29E	

Analytical Report 420862

for

Nova Safety & Environmental

Project Manager: Camille Bryant

Loco Hills Gathering

29-JUN-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

29-JUN-11

Project Manager: **Camille Bryant**
Nova Safety & Environmental
2057 Commerce Street
Midland, TX 79703

Reference: XENCO Report No: **420862**
Loco Hills Gathering
Project Address: Eddy County, New Mexico

Camille Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 420862. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 420862 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 420862

Nova Safety & Environmental, Midland, TX

Loco Hills Gathering

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
South S/W-1 @ 1'	S	Jun-22-11 13:00		420862-001
South S/W-2 @ 4'	S	Jun-22-11 13:05		420862-002
Floor-1 @ 1'	S	Jun-22-11 13:10		420862-003
Floor-2 @ 2'	S	Jun-22-11 13:15		420862-004
East S/W-1 @ 1.5'	S	Jun-22-11 13:20		420862-005
West S/W-1 @ 1.5'	S	Jun-22-11 13:25		420862-006
Floor-3 @ 1'	S	Jun-22-11 13:30		420862-007
Floor -4 @ 1'	S	Jun-22-11 13:35		420862-008
Floor-5 @ 7'	S	Jun-22-11 13:40		420862-009
North S/W-1 @ 6'	S	Jun-22-11 13:45		420862-010
West S/W-2 @ 6'	S	Jun-22-11 13:50		420862-011
East S/W-2 @ 6'	S	Jun-22-11 13:55		420862-012
South S/W-3 @ 6'	S	Jun-22-11 14:00		420862-013
Floor-6 @ 2'	S	Jun-22-11 14:05		420862-014
West S/W-3 @ 1.5'	S	Jun-22-11 14:10		420862-015
East S/W-3 @ 1.5'	S	Jun-22-11 14:15		420862-016
Floor-7 @ 1'	S	Jun-22-11 14:20		420862-017

CASE NARRATIVE

Client Name: Nova Safety & Environmental
Project Name: Loco Hills Gathering

Project ID:
Work Order Number: 420862

Report Date: 29-JUN-11
Date Received: 06/23/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-861584 BTEX by EPA 8021B
SW8021BM

Batch 861584, Benzene recovered below QC limits in the Matrix Spike. Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420862-009, -011, -016, -002, -008, -013, -017, -001, -005, -006, -014, -007, -010, -015, -004, -012.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 861584, 4-Bromofluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 420862-013,420862-008.

Batch: LBA-861924 BTEX by EPA 8021B
SW8021BM

Batch 861924, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 420862-003, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Certificate of Analysis Summary 420862

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:

Contact: Camille Bryant

Project Location: Eddy County, New Mexico

Date Received in Lab: Thu Jun-23-11 09:30 am

Report Date: 29-JUN-11

Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420862-001		420862-002		420862-003		420862-004		420862-005		420862-006	
	Field Id:	South S/W-1 @ 1'		South S/W-2 @ 4'		Floor-1 @ 1'		Floor-2 @ 2'		East S/W-1 @ 1.5'		West S/W-1 @ 1.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-22-11 13:00		Jun-22-11 13:05		Jun-22-11 13:10		Jun-22-11 13:15		Jun-22-11 13:20		Jun-22-11 13:25	
BTEX by EPA 8021B	*Extracted:*	Jun-24-11 11:30		Jun-24-11 11:30		Jun-28-11 08:20		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30	
	Analyzed:	Jun-24-11 15:37		Jun-24-11 16:00		Jun-28-11 12:33		Jun-24-11 16:46		Jun-24-11 17:08		Jun-24-11 17:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00243	0.0010	0.00798	0.0010	ND	0.00100	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		0.0779	0.0020	0.175	0.0020	0.00425	0.0020	ND	0.0020	ND	0.0020	ND	0.0020
Ethylbenzene		0.141	0.0010	0.696 D	0.0099	0.00328	0.00100	0.00212	0.0010	0.00136	0.0010	ND	0.0010
m_p-Xylenes		0.216	0.0020	0.566	0.0020	0.00360	0.0020	0.00285	0.0020	0.00249	0.0020	ND	0.0020
o-Xylene		0.0928	0.0010	0.222	0.0010	0.00393	0.00100	0.00123	0.0010	0.00187	0.0010	0.00171	0.0010
Total Xylenes		0.309	0.0010	0.788	0.0010	0.00753	0.00100	0.00408	0.0010	0.00436	0.0010	0.00171	0.0010
Total BTEX		0.530	0.0010	1.67 D	0.0010	0.0151	0.00100	0.00620	0.0010	0.00572	0.0010	0.00171	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		1.81	1.00	ND	1.00	ND	1.00	1.52	1.00	1.63	1.00	ND	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30	
	Analyzed:	Jun-24-11 15:39		Jun-24-11 16:09		Jun-24-11 16:39		Jun-24-11 17:10		Jun-24-11 17:40		Jun-24-11 18:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		41.4	15.2	28.4	15.1	ND	15.1	ND	15.2	ND	15.3	ND	15.0
C12-C28 Diesel Range Hydrocarbons		350	15.2	ND	15.1	482	15.1	379	15.2	25.1	15.3	130	15.0
C28-C35 Oil Range Hydrocarbons		ND	15.2	ND	15.1	46.1	15.1	18.1	15.2	ND	15.3	ND	15.0
Total TPH		391	15.2	28.4	15.1	528	15.1	397	15.2	25.1	15.3	130	15.0

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Certificate of Analysis Summary 420862

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:
Contact: Camille Bryant
Project Location: Eddy County, New Mexico

Date Received in Lab: Thu Jun-23-11 09:30 am
Report Date: 29-JUN-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	420862-007		420862-008		420862-009		420862-010		420862-011		420862-012	
	Field Id:	Floor-3 @ 1'		Floor -4 @ 1'		Floor-5 @ 7'		North S/W-1 @ 6'		West S/W-2 @ 6'		East S/W-2 @ 6'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-22-11 13:30		Jun-22-11 13:35		Jun-22-11 13:40		Jun-22-11 13:45		Jun-22-11 13:50		Jun-22-11 13:55	
BTEX by EPA 8021B	*Extracted:*	Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30	
	Analyzed:	Jun-24-11 17:54		Jun-24-11 18:17		Jun-24-11 18:39		Jun-24-11 19:02		Jun-24-11 20:56		Jun-24-11 21:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		ND	0.00100	ND	0.0010	ND	0.0010	ND	0.0010	ND	0.0010	0.00188	0.0010
Toluene		ND	0.0020	0.00895	0.0020	ND	0.0021	0.00315	0.0020	ND	0.0021	0.0152	0.0021
Ethylbenzene		0.00105	0.00100	0.0189	0.0010	0.00130	0.0010	0.00375	0.0010	ND	0.0010	0.0162	0.0010
m_p-Xylenes		0.00805	0.0020	0.0256	0.0020	ND	0.0021	0.00502	0.0020	ND	0.0021	0.0208	0.0021
o-Xylene		0.00933	0.00100	0.0164	0.0010	ND	0.0010	0.00350	0.0010	ND	0.0010	0.00769	0.0010
Total Xylenes		0.0174	0.00100	0.0420	0.0010	ND	0.0010	0.00852	0.0010	ND	0.0010	0.0285	0.0010
Total BTEX		0.0184	0.00100	0.0699	0.0010	0.00130	0.0010	0.0154	0.0010	ND	0.0010	0.0618	0.0010
Percent Moisture	*Extracted:*												
	Analyzed:	Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	ND	1.00	3.31	1.00	1.62	1.00	3.68	1.00	3.92	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30	
	Analyzed:	Jun-24-11 18:40		Jun-24-11 19:09		Jun-24-11 19:39		Jun-24-11 20:09		Jun-24-11 21:07		Jun-24-11 21:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	75.3	ND	75.5	ND	15.6	ND	15.2	ND	15.6	ND	15.6
C12-C28 Diesel Range Hydrocarbons		228	75.3	584	75.5	28.1	15.6	ND	15.2	ND	15.6	16.2	15.6
C28-C35 Oil Range Hydrocarbons		ND	75.3	ND	75.5	ND	15.6	ND	15.2	ND	15.6	ND	15.6
Total TPH		228	75.3	584	75.5	28.1	15.6	ND	15.2	ND	15.6	16.2	15.6

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Certificate of Analysis Summary 420862

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:

Contact: Camille Bryant

Project Location: Eddy County, New Mexico

Date Received in Lab: Thu Jun-23-11 09:30 am

Report Date: 29-JUN-11

Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	420862-013		420862-014		420862-015		420862-016		420862-017	
	Field Id:	South S/W-3 @ 6'		Floor-6 @ 2'		West S/W-3 @ 1.5'		East S/W-3 @ 1.5'		Floor-7 @ 1'	
	Depth:										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-22-11 14:00		Jun-22-11 14:05		Jun-22-11 14:10		Jun-22-11 14:15		Jun-22-11 14:20	
BTEX by EPA 8021B	*Extracted:*	Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30		Jun-24-11 11:30	
	Analyzed:	Jun-24-11 21:41		Jun-24-11 22:04		Jun-24-11 22:26		Jun-24-11 22:49		Jun-24-11 23:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.0119	0.0010	0.00136	0.0010	ND	0.0010	ND	0.0010	ND	0.0010
Toluene		0.0849	0.0020	ND	0.0021	0.00311	0.0020	ND	0.0021	ND	0.0021
Ethylbenzene		0.0706	0.0010	ND	0.0010	0.00492	0.0010	0.00171	0.0010	ND	0.0010
m_p-Xylenes		0.116	0.0020	ND	0.0021	0.00850	0.0020	0.00368	0.0021	ND	0.0021
o-Xylene		0.0440	0.0010	ND	0.0010	0.00418	0.0010	ND	0.0010	ND	0.0010
Total Xylenes		0.160	0.0010	ND	0.0010	0.0127	0.0010	0.00368	0.0010	ND	0.0010
Total BTEX		0.327	0.0010	0.00136	0.0010	0.0207	0.0010	0.00539	0.0010	ND	0.0010
Percent Moisture	*Extracted:*										
	Analyzed:	Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00		Jun-23-11 17:00	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	1.93	1.00	1.87	1.00	3.05	1.00	4.45	1.00
TPH By SW8015 Mod	*Extracted:*	Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30		Jun-23-11 11:30	
	Analyzed:	Jun-24-11 22:05		Jun-24-11 22:34		Jun-24-11 23:03		Jun-24-11 23:32		Jun-25-11 00:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.1	ND	15.2	ND	15.4	ND	15.5	ND	15.7
C12-C28 Diesel Range Hydrocarbons		ND	15.1	192	15.2	26.5	15.4	19.3	15.5	ND	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.1	ND	15.2	ND	15.4	ND	15.5	ND	15.7
Total TPH		ND	15.1	192	15.2	26.5	15.4	19.3	15.5	ND	15.7

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861584 **Sample:** 606039-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 12:24

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 861584 **Sample:** 606039-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 12:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 861584 **Sample:** 606039-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 13:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0248	0.0300	83	80-120	
4-Bromofluorobenzene	0.0256	0.0300	85	80-120	

Lab Batch #: 861584 **Sample:** 420862-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 15:37

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 861584 **Sample:** 420862-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 16:00

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0359	0.0300	120	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861584 **Sample:** 420862-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 16:46

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0260	0.0300	87	80-120	

Lab Batch #: 861584 **Sample:** 420862-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 17:08

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 861584 **Sample:** 420862-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 17:31

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0259	0.0300	86	80-120	

Lab Batch #: 861584 **Sample:** 420862-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 17:54

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0262	0.0300	87	80-120	

Lab Batch #: 861584 **Sample:** 420862-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 18:17

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0224	0.0300	75	80-120	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861584 **Sample:** 420862-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 18:39

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 861584 **Sample:** 420862-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 19:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 861584 **Sample:** 420862-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 19:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0277	0.0300	92	80-120	

Lab Batch #: 861584 **Sample:** 420862-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 19:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 861584 **Sample:** 420862-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 20:56

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861584 **Sample:** 420862-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 21:19

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 861584 **Sample:** 420862-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 21:41

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0265	0.0300	88	80-120	
4-Bromofluorobenzene	0.0216	0.0300	72	80-120	*

Lab Batch #: 861584 **Sample:** 420862-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 22:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 861584 **Sample:** 420862-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 22:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 861584 **Sample:** 420862-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 22:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861584 **Sample:** 420862-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 23:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 861924 **Sample:** 606224-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 09:21

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 861924 **Sample:** 606224-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 09:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 861924 **Sample:** 606224-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 10:51

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 861924 **Sample:** 420862-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 12:33

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0284	0.0300	95	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861924 **Sample:** 420862-002 / DL **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 12:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 861924 **Sample:** 420862-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 18:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 861924 **Sample:** 420862-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 18:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 861507 **Sample:** 605982-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 14:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.6	115	70-135	
o-Terphenyl	53.0	49.8	106	70-135	

Lab Batch #: 861507 **Sample:** 605982-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 14:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-135	
o-Terphenyl	53.0	50.0	106	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861507 **Sample:** 605982-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/24/11 15:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	58.6	50.0	117	70-135	

Lab Batch #: 861507 **Sample:** 420862-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 15:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.8	116	70-135	
o-Terphenyl	59.3	49.9	119	70-135	

Lab Batch #: 861507 **Sample:** 420862-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 16:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	99.8	108	70-135	
o-Terphenyl	54.2	49.9	109	70-135	

Lab Batch #: 861507 **Sample:** 420862-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 16:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	53.1	50.1	106	70-135	

Lab Batch #: 861507 **Sample:** 420862-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 17:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	56.1	49.8	113	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861507 **Sample:** 420862-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 17:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	101	109	70-135	
o-Terphenyl	56.6	50.3	113	70-135	

Lab Batch #: 861507 **Sample:** 420862-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 18:10

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	99.5	108	70-135	
o-Terphenyl	55.0	49.8	110	70-135	

Lab Batch #: 861507 **Sample:** 420862-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 18:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.8	99.7	75	70-135	
o-Terphenyl	35.2	49.9	71	70-135	

Lab Batch #: 861507 **Sample:** 420862-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 19:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	58.7	50.0	117	70-135	

Lab Batch #: 861507 **Sample:** 420862-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 19:39

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	61.0	50.2	122	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861507 **Sample:** 420862-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 20:09

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	145	200	73	70-135	
o-Terphenyl	76.6	99.8	77	70-135	

Lab Batch #: 861507 **Sample:** 420862-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 21:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	100	110	70-135	
o-Terphenyl	59.6	50.1	119	70-135	

Lab Batch #: 861507 **Sample:** 420862-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 21:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	61.0	50.1	122	70-135	

Lab Batch #: 861507 **Sample:** 420862-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 22:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	56.7	50.2	113	70-135	

Lab Batch #: 861507 **Sample:** 420862-014 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 22:34

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.5	110	70-135	
o-Terphenyl	57.3	49.8	115	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 420862,

Project ID:

Lab Batch #: 861507 **Sample:** 420862-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 23:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	101	112	70-135	
o-Terphenyl	60.5	50.3	120	70-135	

Lab Batch #: 861507 **Sample:** 420862-016 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/24/11 23:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	59.2	50.2	118	70-135	

Lab Batch #: 861507 **Sample:** 420862-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/11 00:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	60.8	50.2	121	70-135	

Lab Batch #: 861507 **Sample:** 420862-017 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/11 00:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	61.3	50.0	123	70-135	

Lab Batch #: 861507 **Sample:** 420862-017 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/25/11 00:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.7	118	70-135	
o-Terphenyl	55.2	49.9	111	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 420862 **Project ID:**

Analyst: ASA **Date Prepared:** 06/24/2011 **Date Analyzed:** 06/24/2011

Lab Batch ID: 861584 **Sample:** 606039-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.104	104	0.100	0.101	101	3	70-130	35	
Toluene	<0.00200	0.100	0.0950	95	0.100	0.0948	95	0	70-130	35	
Ethylbenzene	<0.00100	0.100	0.107	107	0.100	0.103	103	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.209	105	0.200	0.198	99	5	70-135	35	
o-Xylene	<0.00100	0.100	0.103	103	0.100	0.0973	97	6	71-133	35	

Analyst: ASA **Date Prepared:** 06/28/2011 **Date Analyzed:** 06/28/2011

Lab Batch ID: 861924 **Sample:** 606224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.113	113	0.100	0.107	107	5	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.100	100	5	70-130	35	
Ethylbenzene	<0.00100	0.100	0.115	115	0.100	0.110	110	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.222	111	0.200	0.212	106	5	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.103	103	7	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 420862
Analyst: BEV
Lab Batch ID: 861507 **Sample:** 605982-1-BKS
Units: mg/kg

Date Prepared: 06/23/2011
Batch #: 1

Project ID:
Date Analyzed: 06/24/2011
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<14.9	996	848	85	999	877	88	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<14.9	996	834	84	999	825	83	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 420862 **Project ID:**

Lab Batch ID: 861584 **QC- Sample ID:** 420862-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/24/2011 **Date Prepared:** 06/24/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.101	0.0669	66	0.101	0.0760	75	13	70-130	35	X
Toluene	<0.00201	0.101	0.0584	58	0.101	0.0648	64	10	70-130	35	X
Ethylbenzene	<0.00101	0.101	0.0601	60	0.101	0.0622	62	3	71-129	35	X
m_p-Xylenes	<0.00201	0.201	0.112	56	0.201	0.115	57	3	70-135	35	X
o-Xylene	0.00171	0.101	0.0520	50	0.101	0.0529	51	2	71-133	35	X

Lab Batch ID: 861924 **QC- Sample ID:** 420862-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2011 **Date Prepared:** 06/28/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.101	0.0771	76	0.101	0.0752	74	2	70-130	35	
Toluene	0.00425	0.101	0.0678	63	0.101	0.0668	62	1	70-130	35	X
Ethylbenzene	0.00328	0.101	0.0661	62	0.101	0.0641	60	3	71-129	35	X
m_p-Xylenes	0.00360	0.202	0.122	59	0.202	0.118	57	3	70-135	35	X
o-Xylene	0.00393	0.101	0.0568	52	0.101	0.0557	51	2	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 420862 **Project ID:**

Lab Batch ID: 861507 **QC- Sample ID:** 420862-017 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/25/2011 **Date Prepared:** 06/23/2011 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.7	1050	903	86	1040	825	79	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.7	1050	803	76	1040	887	85	10	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000

Sample Duplicate Recovery

Project Name: Loco Hills Gathering

Work Order #: 420862

Lab Batch #: 861304 **Project ID:**

Date Analyzed: 06/23/2011 17:00 **Date Prepared:** 06/23/2011 **Analyst:** WRU

QC- Sample ID: 420815-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.74	3.97	6	20	

Lab Batch #: 861307

Date Analyzed: 06/23/2011 17:00 **Date Prepared:** 06/23/2011 **Analyst:** WRU

QC- Sample ID: 420862-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	3.31	4.02	19	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

1 of 2

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: Loco Hills Gathering

Project #:

Project Loc: Eddy County, New Mexico

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)

ORDER #: 420862

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	South S/W-1 @ 1'			6/22/2011	1300		1	X								Soil	X								X				X
02	South S/W-2 @ 4'				1305		1	X								Soil	X								X				X
03	Floor-1 @ 1'				1310		1	X								Soil	X								X				X
04	Floor-2 @ 2'				1315		1	X								Soil	X								X				X
05	East S/W-1 @ 1.5'				1320		1	X								Soil	X								X				X
06	West S/W-1 @ 1.5'				1325		1	X								Soil	X								X				X
07	Floor-3 @ 1'				1330		1	X								Soil	X								X				X
08	Floor-4 @ 1'				1335		1	X								Soil	X								X				X
09	Floor-5 @ 7'				1340		1	X								Soil	X								X				X
10	North S/W-1 @ 6'				1345		1	X								Soil	X								X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant	6/23/11	0852	Matt Green	6-23-11	0952
Relinquished by: Matt Green	Date 6-23-11	Time 1930	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT: Linda Ellen	Date 6-23-11	Time 9:30

Laboratory Comments:

Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered Y N
by Sampler/Client Rep. ? Y N
by Courier? UPS DHL FedEx Lone Star
4 oz glass
Temperature Upon Receipt: 5.6 °C

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant e-mail: cbryant@novatraining.cc

Project Name: Loco Hills Gathering

Project #:

Project Loc: Eddy County, New Mexico

PO #:

Report Format: ☐ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 420902

Analyze For:

TCLP:
TOTAL:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other	8015M: TPH 418.1	TPH TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
11	West S/W-2 @ 6'			6/22/2011	1350		1	X								Soil	X									X							X
12	East S/W-2 @ 6'				1355		1	X								Soil	X									X							X
13	South S/W-3 @ 6'				1400		1	X								Soil	X									X							X
14	Floor-6 @ 2'				1405		1	X								Soil	X									X							X
15	West S/W-3 @ 1.5'				1410		1	X								Soil	X									X							X
16	East S/W-3 @ 1.5'				1415		1	X								Soil	X									X							X
17	Floor-7 @ 1'			↓	1420		1	X								Soil	X									X							X

Special Instructions:

	Date	Time		Date	Time
Relinquished by: Camille Bryant	6/23/11	0852	Received by: Matt Green	6-23-11	0852
Relinquished by: Matt Green	6-23-11	0930	Received by:		
Relinquished by:			Received by ELOT: Andrea Cram	6-23-11	9:30

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

4 coolers

Temperature Upon Receipt: 3.6 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety & Env.

Date/Time: 6.23.11 9:30

Lab ID # : 420862

Initials: AE

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	No	(N/A)	
17. VOC sample have zero head space?	(Yes)	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	3.6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

_____

Corrective Action Taken:_____

_____

_____

_____

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.

☐ Initial and Backup Temperature confirm out of temperature conditions

☐ Client understands and would like to proceed with analysis

Analytical Report 421119

for

Nova Safety & Environmental

Project Manager: Camille Bryant

Loco Hills Gathering

01-JUL-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

01-JUL-11

Project Manager: **Camille Bryant**
Nova Safety & Environmental
2057 Commerce Street
Midland, TX 79703

Reference: XENCO Report No: **421119**
Loco Hills Gathering
Project Address: Eddy County, New Mexico

Camille Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 421119. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 421119 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 421119

Nova Safety & Environmental, Midland, TX

Loco Hills Gathering

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
North S/W- 2 @3'	S	Jun-24-11 11:00	3 ft	421119-001
North S/W- 3 @8'	S	Jun-24-11 11:05	8 ft	421119-002
West S/W-4 @8'	S	Jun-24-11 11:10	8 ft	421119-003
East S/W-4 @8'	S	Jun-24-11 11:15	8 ft	421119-004
South S/W- 4 @6'	S	Jun-24-11 11:20	6 ft	421119-005
RP. Floor @8'	S	Jun-24-11 11:25	8 ft	421119-006

Project ID:
Work Order Number: 421119

Report Date: 01-JUL-11
Date Received: 06/24/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-861718 TPH By SW8015 Mod
SW8015MOD_NM

Batch 861718, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 421119-001,421119-003,421119-006,421119-005,421119-004.

Batch: LBA-861924 BTEX by EPA 8021B
SW8021BM

Batch 861924, Ethylbenzene, Toluene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 421119-003, -001, -002.
The Laboratory Control Sample for Toluene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

SW8021BM

Batch 861924, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis
Samples affected are: 421119-003.

Batch: LBA-862159 BTEX by EPA 8021B
SW8021BM

Batch 862159, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 421119-006, -005, -004.
The Laboratory Control Sample for o-Xylene is within laboratory Control Limits

Certificate of Analysis Summary 421119

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:
Contact: Camille Bryant
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri Jun-24-11 03:49 pm
Report Date: 01-JUL-11
Project Manager: Brent Barron, II

Analysis Requested													
	Lab Id:	421119-001		421119-002		421119-003		421119-004		421119-005		421119-006	
	Field Id:	North S/W- 2 @3'		North S/W- 3 @8'		West S/W-4 @8'		East S/W-4 @8'		South S/W- 4 @6'		RP. Floor @8'	
	Depth:	3 ft		8 ft		8 ft		8 ft		6 ft		8 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-24-11 11:00		Jun-24-11 11:05		Jun-24-11 11:10		Jun-24-11 11:15		Jun-24-11 11:20		Jun-24-11 11:25	
BTEX by EPA 8021B	***Extracted:***	Jun-28-11 08:20		Jun-28-11 08:20		Jun-28-11 08:20		Jun-29-11 14:43		Jun-29-11 14:43		Jun-29-11 14:43	
	Analyzed:	Jun-28-11 21:49		Jun-28-11 22:11		Jun-28-11 22:34		Jun-30-11 09:35		Jun-30-11 01:18		Jun-30-11 01:40	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		0.00114	0.0010	0.0171	0.0010	0.0111	0.0010	0.00160	0.0010	ND	0.0011	ND	0.0010
Toluene		0.0105	0.0021	0.0807	0.0021	0.120	0.0021	0.0135	0.0021	ND	0.0021	0.00393	0.0021
Ethylbenzene		0.0119	0.0010	0.0643	0.0010	0.125	0.0010	0.0144	0.0010	ND	0.0011	0.00864	0.0010
m_p-Xylenes		0.0200	0.0021	0.0775	0.0021	0.228	0.0021	0.0206	0.0021	ND	0.0021	0.0147	0.0021
o-Xylene		0.00829	0.0010	0.0259	0.0010	0.0940	0.0010	0.00946	0.0010	ND	0.0011	0.00555	0.0010
Total Xylenes		0.0283	0.0010	0.103	0.0010	0.322	0.0010	0.0301	0.0010	ND	0.0011	0.0203	0.0010
Total BTEX		0.0518	0.0010	0.266	0.0010	0.578	0.0010	0.0596	0.0010	ND	0.0011	0.0328	0.0010
Percent Moisture	***Extracted:***												
	Analyzed:	Jun-27-11 11:30		Jun-27-11 11:30		Jun-27-11 11:30		Jun-27-11 11:43		Jun-27-11 11:43		Jun-27-11 11:43	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.62	1.00	3.26	1.00	4.22	1.00	2.89	1.00	5.46	1.00	4.48	1.00
TPH By SW8015 Mod	***Extracted:***	Jun-27-11 10:30		Jun-27-11 10:30		Jun-27-11 10:30		Jun-27-11 10:30		Jun-27-11 10:30		Jun-27-11 10:30	
	Analyzed:	Jun-27-11 15:37		Jun-27-11 16:07		Jun-27-11 16:37		Jun-27-11 17:08		Jun-27-11 17:38		Jun-27-11 18:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.8	ND	15.5	64.8	15.7	36.8	15.5	ND	15.9	ND	15.7
C12-C28 Diesel Range Hydrocarbons		21.6	15.8	36.1	15.5	1100	15.7	1020	15.5	51.3	15.9	18.5	15.7
C28-C35 Oil Range Hydrocarbons		ND	15.8	ND	15.5	ND	15.7	34.4	15.5	ND	15.9	ND	15.7
Total TPH		21.6	15.8	36.1	15.5	1160	15.7	1090	15.5	51.3	15.9	18.5	15.7

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 861924 **Sample:** 606224-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 09:21

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0295	0.0300	98	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

Lab Batch #: 861924 **Sample:** 606224-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 09:43

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 861924 **Sample:** 606224-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/28/11 10:51

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 861924 **Sample:** 420862-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 18:25

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

Lab Batch #: 861924 **Sample:** 420862-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 18:48

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0268	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 861924 **Sample:** 421119-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 21:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0288	0.0300	96	80-120	

Lab Batch #: 861924 **Sample:** 421119-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 22:11

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 861924 **Sample:** 421119-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/28/11 22:34

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0400	0.0300	133	80-120	**

Lab Batch #: 862159 **Sample:** 606878-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/11 23:24

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 862159 **Sample:** 606878-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/29/11 23:47

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 862159 **Sample:** 606878-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/30/11 00:55

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 862159 **Sample:** 421119-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/30/11 01:18

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 862159 **Sample:** 421119-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/30/11 01:40

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 862159 **Sample:** 421119-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/30/11 05:03

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	80-120	

Lab Batch #: 862159 **Sample:** 421119-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/30/11 05:26

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 862159 **Sample:** 421119-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/30/11 09:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0332	0.0300	111	80-120	

Lab Batch #: 861718 **Sample:** 606101-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/11 14:05

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	110	99.5	111	70-135	
o-Terphenyl	57.5	49.8	115	70-135	

Lab Batch #: 861718 **Sample:** 606101-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/11 14:36

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	58.2	50.2	116	70-135	

Lab Batch #: 861718 **Sample:** 606101-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 06/27/11 15:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	99.8	112	70-135	
o-Terphenyl	62.7	49.9	126	70-135	

Lab Batch #: 861718 **Sample:** 421119-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 15:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	70.3	50.1	140	70-135	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 861718 **Sample:** 421119-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 16:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	99.9	116	70-135	
o-Terphenyl	63.4	50.0	127	70-135	

Lab Batch #: 861718 **Sample:** 421119-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 16:37

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	130	100	130	70-135	
o-Terphenyl	68.8	50.0	138	70-135	*

Lab Batch #: 861718 **Sample:** 421119-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 17:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	68.3	50.2	136	70-135	*

Lab Batch #: 861718 **Sample:** 421119-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 17:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	68.5	50.2	136	70-135	*

Lab Batch #: 861718 **Sample:** 421119-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 18:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	69.8	50.1	139	70-135	*

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421119,

Project ID:

Lab Batch #: 861718 **Sample:** 421119-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 18:38

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	153	201	76	70-135	
o-Terphenyl	81.6	100	82	70-135	

Lab Batch #: 861718 **Sample:** 421119-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 06/27/11 19:08

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	67.4	50.2	134	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 421119 **Project ID:**

Analyst: ASA **Date Prepared:** 06/28/2011 **Date Analyzed:** 06/28/2011

Lab Batch ID: 861924 **Sample:** 606224-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.113	113	0.100	0.107	107	5	70-130	35	
Toluene	<0.00200	0.100	0.105	105	0.100	0.100	100	5	70-130	35	
Ethylbenzene	<0.00100	0.100	0.115	115	0.100	0.110	110	4	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.222	111	0.200	0.212	106	5	70-135	35	
o-Xylene	<0.00100	0.100	0.110	110	0.100	0.103	103	7	71-133	35	

Analyst: ASA **Date Prepared:** 06/29/2011 **Date Analyzed:** 06/29/2011

Lab Batch ID: 862159 **Sample:** 606878-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.106	106	0.100	0.0990	99	7	70-130	35	
Toluene	<0.00200	0.100	0.0974	97	0.100	0.0906	91	7	70-130	35	
Ethylbenzene	<0.00100	0.100	0.105	105	0.100	0.0987	99	6	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.203	102	0.200	0.191	96	6	70-135	35	
o-Xylene	<0.00100	0.100	0.101	101	0.100	0.0959	96	5	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final 1.000

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 421119
Analyst: BEV
Lab Batch ID: 861718 **Sample:** 606101-1-BKS
Units: mg/kg

Date Prepared: 06/27/2011 **Batch #:** 1

Project ID:
Date Analyzed: 06/27/2011
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<14.9	995	837	84	1000	850	85	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<14.9	995	798	80	1000	815	82	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 421119 **Project ID:**

Lab Batch ID: 861924 **QC- Sample ID:** 420862-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/28/2011 **Date Prepared:** 06/28/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00101	0.101	0.0771	76	0.101	0.0752	74	2	70-130	35	
Toluene	0.00425	0.101	0.0678	63	0.101	0.0668	62	1	70-130	35	X
Ethylbenzene	0.00328	0.101	0.0661	62	0.101	0.0641	60	3	71-129	35	X
m_p-Xylenes	0.00360	0.202	0.122	59	0.202	0.118	57	3	70-135	35	X
o-Xylene	0.00393	0.101	0.0568	52	0.101	0.0557	51	2	71-133	35	X

Lab Batch ID: 862159 **QC- Sample ID:** 421119-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/30/2011 **Date Prepared:** 06/29/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00105	0.105	0.0864	82	0.105	0.0794	76	8	70-130	35	
Toluene	<0.00209	0.105	0.0772	74	0.105	0.0731	70	5	70-130	35	
Ethylbenzene	<0.00105	0.105	0.0829	79	0.105	0.0781	74	6	71-129	35	
m_p-Xylenes	<0.00209	0.209	0.158	76	0.211	0.147	70	7	70-135	35	
o-Xylene	<0.00105	0.105	0.0771	73	0.105	0.0724	69	6	71-133	35	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 421119 **Project ID:**

Lab Batch ID: 861718 **QC- Sample ID:** 421119-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 06/27/2011 **Date Prepared:** 06/27/2011 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<15.8	1050	1050	100	1050	881	84	18	70-135	35	
C12-C28 Diesel Range Hydrocarbons	18.5	1050	987	92	1050	828	77	18	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Final 1.000

Sample Duplicate Recovery

Project Name: Loco Hills Gathering

Work Order #: 421119

Lab Batch #: 861731 **Project ID:**

Date Analyzed: 06/27/2011 11:30 **Date Prepared:** 06/27/2011 **Analyst:** WRU

QC- Sample ID: 421127-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	13.2	13.0	2	20	

Lab Batch #: 861733

Date Analyzed: 06/27/2011 11:43 **Date Prepared:** 06/27/2011 **Analyst:** WRU

QC- Sample ID: 421119-004 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.89	2.47	16	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant

Company Name: Nova Safety and Environmental

Company Address: 2057 Commerce

City/State/Zip: Midland, TX 79703

Telephone No: 432.520.7720 Fax No: 432.520.7701

Sampler Signature: Camille Bryant for David Lopez e-mail: cbryant@novatraining.cc

Project Name: Loco Hills Gathering

Project #:

Project Loc: Eddy County, New Mexico

PO #:

Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)

ORDER #: 421119

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TCLP: TOTAL: TPH: 418.1 / 8015M	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
001	North S/W-2 @ 3'			6/24/2011	1100		1	X								Soil	X								X				X
002	North S/W-3 @ 8'				1105		1	X								Soil	X								X				X
003	West S/W-1 @ 8'				1110		1	X								Soil	X								X				X
004	East S/W-4 @ 8'				1115		1	X								Soil	X								X				X
005	South S/W-4 @ 6'				1120		1	X								Soil	X								X				X
006	RP. Floor @ 8'				1125		1	X								Soil	X								X				X

Special Instructions:

David Lopez

Relinquished by:	Date	Time	Received by:	Date	Time
Camille Bryant for	6/24	1533	Katie Carbajal	6/24/11	1533
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by: Katie Carbajal	6/24/11	1719	Received by ELOT: Lisa Murdock	6-24-11	3:49

Laboratory Comments:

Sample Containers Intact?	Y
VOCs Free of Headspace?	Y
Labels on container(s)	Y
Custody seals on container(s)	N/A
Custody seals on cooler(s)	N
Sample Hand Delivered by Sampler/Client Rep. ?	N
by Courier? UPS DHL FedEx Lone Star	N

Temperature Upon Receipt: 4 oz c/c 6 °C

Final 1.000

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety
Date/Time: 6-24-11 3:49
Lab ID # : 421119
Initials: LM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	No	(N/A)	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

Analytical Report 421882

for

Nova Safety & Environmental

Project Manager: Camille Bryant

Loco Hills Gathering

06-JUL-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

06-JUL-11

Project Manager: **Camille Bryant**
Nova Safety & Environmental
2057 Commerce Street
Midland, TX 79703

Reference: XENCO Report No: **421882**
Loco Hills Gathering
Project Address: Eddy County, New Mexico

Camille Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 421882. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 421882 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 421882

Nova Safety & Environmental, Midland, TX

Loco Hills Gathering

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	Jul-01-11 11:53		421882-001
SP-2	S	Jul-01-11 11:59		421882-002
SP-3	S	Jul-01-11 12:07		421882-003

CASE NARRATIVE

Client Name: Nova Safety & Environmental
Project Name: Loco Hills Gathering

Project ID:
Work Order Number: 421882

Report Date: 06-JUL-11
Date Received: 07/01/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 421882

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:

Contact: Camille Bryant

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri Jul-01-11 04:53 pm

Report Date: 06-JUL-11

Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	421882-001		421882-002		421882-003			
	Field Id:	SP-1		SP-2		SP-3			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-01-11 11:53		Jul-01-11 11:59		Jul-01-11 12:07			
Percent Moisture	***Extracted:***								
	Analyzed:	Jul-05-11 10:08		Jul-05-11 10:08		Jul-05-11 10:08			
	Units/RL:	%	RL	%	RL	%	RL		
Percent Moisture		2.37	1.00	2.57	1.00	2.44	1.00		
TPH By SW8015 Mod	***Extracted:***	Jul-05-11 10:00		Jul-05-11 10:00		Jul-05-11 10:00			
	Analyzed:	Jul-05-11 13:59		Jul-05-11 14:30		Jul-05-11 15:01			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		169	15.3	219	15.4	213	15.3		
C12-C28 Diesel Range Hydrocarbons		1560	15.3	1640	15.4	1610	15.3		
C28-C35 Oil Range Hydrocarbons		20.6	15.3	ND	15.4	20.8	15.3		
Total TPH		1750	15.3	1860	15.4	1840	15.3		

Brent Barron, II
Odessa Laboratory Manager

Final 1.000

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

LOD Limit of Detection

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421882,

Project ID:

Lab Batch #: 862622 **Sample:** 607157-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/05/11 12:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	99.9	86	70-135	
o-Terphenyl	43.2	50.0	86	70-135	

Lab Batch #: 862622 **Sample:** 607157-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/05/11 12:56

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.4	99.7	89	70-135	
o-Terphenyl	45.6	49.9	91	70-135	

Lab Batch #: 862622 **Sample:** 607157-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/05/11 13:27

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.0	100	85	70-135	
o-Terphenyl	44.3	50.2	88	70-135	

Lab Batch #: 862622 **Sample:** 421882-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/05/11 13:59

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.0	99.7	79	70-135	
o-Terphenyl	39.8	49.9	80	70-135	

Lab Batch #: 862622 **Sample:** 421882-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/05/11 14:30

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.0	100	77	70-135	
o-Terphenyl	38.6	50.0	77	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 421882,

Project ID:

Lab Batch #: 862622 **Sample:** 421882-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/05/11 15:01

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.8	99.8	83	70-135	
o-Terphenyl	41.4	49.9	83	70-135	

Lab Batch #: 862622 **Sample:** 421882-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/05/11 15:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.4	100	77	70-135	
o-Terphenyl	36.7	50.1	73	70-135	

Lab Batch #: 862622 **Sample:** 421882-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/05/11 16:03

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.6	100	77	70-135	
o-Terphenyl	37.3	50.1	74	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 421882
Analyst: BEV
Lab Batch ID: 862622
Sample: 607157-1-BKS
Units: mg/kg

Date Prepared: 07/05/2011
Batch #: 1

Project ID:
Date Analyzed: 07/05/2011
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	999	900	90	997	922	92	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	999	884	88	997	926	93	5	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 421882 **Project ID:**

Lab Batch ID: 862622 **QC- Sample ID:** 421882-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/05/2011 **Date Prepared:** 07/05/2011 **Analyst:** BEV

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	213	1030	943	71	1030	934	70	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	1610	1030	2350	72	1030	2390	76	2	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Loco Hills Gathering

Work Order #: 421882

Lab Batch #: 862627 **Project ID:**

Date Analyzed: 07/05/2011 10:08 **Date Prepared:** 07/05/2011 **Analyst:** WRU

QC- Sample ID: 421882-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	2.37	2.32	2	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant — **Project Name:** Loco Hills Gathering

Company Name: Nova Safety and Environmental — **Project #:**

Company Address: 2057 Commerce — **Project Loc:** Eddy County, New Mexico

City/State/Zip: Midland, TX 79703 — **PO #:**

Telephone No: 432.520.7720 — Fax No: 432.520.7701 — **Report Format:** ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: David Lopez — e-mail: cbryant@novatraining.cc

(lab use only)

ORDER #: 421882

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	Analyze For: TCLP: TPH: 8015B (8015M)	TOTAL: TPH: 418.1	TPH: TX 1005	TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B (5030 or BTEX 8260)	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
001	SP-1			7/1/2011	1153			x								S	x									x				x
002	SP-2			7/1/2011	1159			x								S	x									x				x
003	SP-3			7/1/2011	1207			x								S	x									x				x

Special Instructions:

Hold BTEX Until TPH is finished. If Total TPH is less than 1,000 mg/Kg then run BTEX. If over 1,000 mg/Kg call Camille Bryant.

Relinquished by:	Date	Time	Received by:	Date	Time
David Lopez	7/1/11	1530	Matt Green	7-1-11	15:20
Matt Green	7-1-11	16:53			
			Received by ELOT: Lisa Murdock	7-1-11	16:53

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	Y	(NA)
Labels on container(s)	(Y)	N
Custody seals on container(s)	Y	(N)
Custody seals on cooler(s)	(Y)	N
Sample Hand Delivered	(Y)	N

by Sampler/Client Rep. ? by Courier? UPS DHL FedEx Lone Star

4 oz glc

Temperature Upon Receipt: -1.4 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety & Environmental

Date/Time: 7-1-11 16:53

Lab ID # : 421882

Initials: LM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	No	(N/A)	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	-1.4 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

Analytical Report 422474

for

Nova Safety & Environmental

Project Manager: Camille Bryant

Loco Hills Gathering

19-JUL-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

19-JUL-11

Project Manager: **Camille Bryant**
Nova Safety & Environmental
2057 Commerce Street
Midland, TX 79703

Reference: XENCO Report No: **422474**
Loco Hills Gathering
Project Address: Eddy County, New Mexico

Camille Bryant:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 422474. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 422474 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron, II
Odessa Laboratory Manager

Sample Cross Reference 422474

Nova Safety & Environmental, Midland, TX

Loco Hills Gathering

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East S/W-4A @ 8'	S	Jul-07-11 09:00		422474-001
West S/W-4A @ 8'	S	Jul-07-11 09:10		422474-002
SP-1A	S	Jul-07-11 12:00		422474-003
SP-2A	S	Jul-07-11 12:05		422474-004
SP-3A	S	Jul-07-11 12:10		422474-005
SP-4	S	Jul-07-11 12:15		422474-006
SP-5	S	Jul-07-11 12:20		422474-007
SP-6	S	Jul-07-11 12:25		422474-008
SP-7	S	Jul-07-11 12:30		422474-009

CASE NARRATIVE

Client Name: Nova Safety & Environmental
Project Name: Loco Hills Gathering

Project ID:
Work Order Number: 422474

Report Date: 19-JUL-11
Date Received: 07/08/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-863486 BTEX by EPA 8021B
SW8021BM

Batch 863486, Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Ethylbenzene, m_p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 422474-002, -001.
The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene, m_p-Xylenes , o-Xylene is within laboratory Control Limits

Batch: LBA-864167 BTEX by EPA 8021B
SW8021BM

Batch 864167, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 422474-009.
4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis
Samples affected are: 422474-003.

Certificate of Analysis Summary 422474

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:

Contact: Camille Bryant

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri Jul-08-11 11:08 am

Report Date: 19-JUL-11

Project Manager: Brent Barron, II

Analysis Requested	*Lab Id:*	422474-001		422474-002		422474-003		422474-004		422474-005		422474-006	
	Field Id:	East S/W-4A @ 8'		West S/W-4A @ 8'		SP-1A		SP-2A		SP-3A		SP-4	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jul-07-11 09:00		Jul-07-11 09:10		Jul-07-11 12:00		Jul-07-11 12:05		Jul-07-11 12:10		Jul-07-11 12:15	
BTEX by EPA 8021B	*Extracted:*	Jul-12-11 09:30		Jul-12-11 09:30		Jul-18-11 08:46		Jul-18-11 08:46		Jul-18-11 08:46		Jul-18-11 08:46	
	Analyzed:	Jul-12-11 20:49		Jul-12-11 21:12		Jul-18-11 13:50		Jul-18-11 14:13		Jul-18-11 14:35		Jul-18-11 14:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		*0.00136*	*0.0010*	ND	*0.0010*	ND	*0.0010*	*0.00115*	*0.0010*	ND	*0.00100*	ND	*0.00100*
Toluene		0.00927	0.0020	ND	0.0021	0.0126	0.0020	0.00731	0.0020	0.00648	0.0020	0.0101	0.0020
Ethylbenzene		0.0270	0.0010	ND	0.0010	0.0435	0.0010	0.0294	0.0010	0.0269	0.00100	0.0341	0.00100
m_p-Xylenes		0.0695	0.0020	ND	0.0021	0.0830	0.0020	0.0568	0.0020	0.0529	0.0020	0.0619	0.0020
o-Xylene		0.0428	0.0010	ND	0.0010	0.0497	0.0010	0.0350	0.0010	0.0324	0.00100	0.0352	0.00100
Total Xylenes		0.112	0.0010	ND	0.0010	0.133	0.0010	0.0918	0.0010	0.0853	0.00100	0.0971	0.00100
Total BTEX		0.150	0.0010	ND	0.0010	0.189	0.0010	0.130	0.0010	0.119	0.00100	0.141	0.00100
Percent Moisture	*Extracted:*												
	Analyzed:	Jul-08-11 15:15		Jul-08-11 15:15		Jul-08-11 15:15		Jul-08-11 15:15		Jul-08-11 15:15		Jul-08-11 15:15	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		ND	1.00	3.43	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00
TPH By SW8015 Mod	*Extracted:*	Jul-09-11 11:30		Jul-09-11 11:30		Jul-09-11 11:30		Jul-09-11 11:30		Jul-09-11 11:30		Jul-09-11 11:30	
	Analyzed:	Jul-09-11 20:20		Jul-09-11 20:51		Jul-09-11 21:22		Jul-09-11 21:53		Jul-09-11 22:23		Jul-09-11 22:52	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		34.7	15.0	ND	15.5	115	15.1	55.1	15.1	72.5	15.1	54.6	15.1
C12-C28 Diesel Range Hydrocarbons		163	15.0	139	15.5	1470	15.1	651	15.1	777	15.1	719	15.1
C28-C35 Oil Range Hydrocarbons		ND	15.0	ND	15.5	ND	15.1	ND	15.1	22.6	15.1	23.0	15.1
Total TPH		198	15.0	139	15.5	1590	15.1	706	15.1	872	15.1	797	15.1

Brent Barron, II
Odessa Laboratory Manager

Certificate of Analysis Summary 422474

Nova Safety & Environmental, Midland, TX

Project Name: Loco Hills Gathering

Project Id:

Contact: Camille Bryant

Project Location: Eddy County, New Mexico

Date Received in Lab: Fri Jul-08-11 11:08 am

Report Date: 19-JUL-11

Project Manager: Brent Barron, II

Analysis Requested									
	Lab Id:	422474-007		422474-008		422474-009			
	Field Id:	SP-5		SP-6		SP-7			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-07-11 12:20		Jul-07-11 12:25		Jul-07-11 12:30			
BTEX by EPA 8021B	*Extracted:*	Jul-18-11 08:46		Jul-18-11 08:46		Jul-18-11 08:46			
	Analyzed:	Jul-18-11 15:21		Jul-18-11 15:43		Jul-18-11 16:07			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.0010	ND	0.00100	ND	0.00099		
Toluene		0.0145	0.0020	0.00566	0.0020	0.00549	0.0020		
Ethylbenzene		0.0491	0.0010	0.0168	0.00100	0.0144	0.00099		
m_p-Xylenes		0.0868	0.0020	0.0315	0.0020	0.0265	0.0020		
o-Xylene		0.0508	0.0010	0.0202	0.00100	0.0157	0.00099		
Total Xylenes		0.138	0.0010	0.0517	0.00100	0.0422	0.00099		
Total BTEX		0.201	0.0010	0.0742	0.00100	0.0621	0.00099		
Percent Moisture	*Extracted:*								
	Analyzed:	Jul-08-11 15:15		Jul-08-11 15:15		Jul-08-11 15:15			
	Units/RL:	%	RL	%	RL	%	RL		
Percent Moisture		ND	1.00	ND	1.00	ND	1.00		
TPH By SW8015 Mod	*Extracted:*	Jul-09-11 11:30		Jul-09-11 11:30		Jul-09-11 11:30			
	Analyzed:	Jul-09-11 23:21		Jul-09-11 23:50		Jul-10-11 00:19			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		59.0	15.0	36.5	15.0	25.9	15.1		
C12-C28 Diesel Range Hydrocarbons		705	15.0	409	15.0	300	15.1		
C28-C35 Oil Range Hydrocarbons		20.6	15.0	19.8	15.0	ND	15.1		
Total TPH		785	15.0	465	15.0	326	15.1		

Brent Barron, II
Odessa Laboratory Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 863486 **Sample:** 607677-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/12/11 11:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0275	0.0300	92	80-120	

Lab Batch #: 863486 **Sample:** 607677-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/12/11 11:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 863486 **Sample:** 607677-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/12/11 12:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 863486 **Sample:** 422474-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/12/11 20:49

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 863486 **Sample:** 422474-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/12/11 21:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0293	0.0300	98	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 863486 **Sample:** 422474-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/13/11 02:09

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0297	0.0300	99	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	80-120	

Lab Batch #: 863486 **Sample:** 422474-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/13/11 02:32

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0326	0.0300	109	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 864167 **Sample:** 608076-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/11 09:42

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0332	0.0300	111	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 864167 **Sample:** 608076-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/11 10:04

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 864167 **Sample:** 608076-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/11 11:12

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 864167 **Sample:** 423105-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 12:19

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

Lab Batch #: 864167 **Sample:** 423105-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 12:41

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 864167 **Sample:** 422474-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 13:50

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0371	0.0300	124	80-120	*

Lab Batch #: 864167 **Sample:** 422474-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 14:13

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 864167 **Sample:** 422474-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 14:35

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0254	0.0300	85	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 864167 **Sample:** 422474-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 14:58

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0325	0.0300	108	80-120	

Lab Batch #: 864167 **Sample:** 422474-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 15:21

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 864167 **Sample:** 422474-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 15:43

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 864167 **Sample:** 422474-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/11 16:07

BTEX by EPA 8021B	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0234	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 863227 **Sample:** 607509-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/11 18:45

TPH By SW8015 Mod	SURROGATE RECOVERY STUDY				
Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	59.8	50.1	119	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 863227 **Sample:** 607509-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/11 19:17

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	99.6	128	70-135	
o-Terphenyl	66.0	49.8	133	70-135	

Lab Batch #: 863227 **Sample:** 607509-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/09/11 19:49

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	99.8	109	70-135	
o-Terphenyl	60.6	49.9	121	70-135	

Lab Batch #: 863227 **Sample:** 422474-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 20:20

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	80.6	99.6	81	70-135	
o-Terphenyl	41.1	49.8	83	70-135	

Lab Batch #: 863227 **Sample:** 422474-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 20:51

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	58.5	50.0	117	70-135	

Lab Batch #: 863227 **Sample:** 422474-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 21:22

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.7	100	70-135	
o-Terphenyl	54.3	49.9	109	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 863227 **Sample:** 422474-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 21:53

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	54.6	50.2	109	70-135	

Lab Batch #: 863227 **Sample:** 422474-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 22:23

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	111	100	111	70-135	
o-Terphenyl	59.9	50.0	120	70-135	

Lab Batch #: 863227 **Sample:** 422474-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 22:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	65.1	50.1	130	70-135	

Lab Batch #: 863227 **Sample:** 422474-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 23:21

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.8	119	70-135	
o-Terphenyl	64.7	49.9	130	70-135	

Lab Batch #: 863227 **Sample:** 422474-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/09/11 23:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.7	117	70-135	
o-Terphenyl	63.1	49.9	126	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Loco Hills Gathering

Work Orders : 422474,

Project ID:

Lab Batch #: 863227 **Sample:** 422474-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/11 00:19

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	114	101	113	70-135	
o-Terphenyl	62.6	50.3	124	70-135	

Lab Batch #: 863227 **Sample:** 422474-009 D / MD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/10/11 05:41

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	101	118	70-135	
o-Terphenyl	64.1	50.3	127	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 422474 **Project ID:**

Analyst: ASA **Date Prepared:** 07/12/2011 **Date Analyzed:** 07/12/2011

Lab Batch ID: 863486 **Sample:** 607677-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.111	111	0.100	0.115	115	4	70-130	35	
Toluene	<0.00200	0.100	0.101	101	0.100	0.107	107	6	70-130	35	
Ethylbenzene	<0.00100	0.100	0.106	106	0.100	0.113	113	6	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.206	103	0.200	0.218	109	6	70-135	35	
o-Xylene	<0.00100	0.100	0.101	101	0.100	0.108	108	7	71-133	35	

Analyst: ASA **Date Prepared:** 07/18/2011 **Date Analyzed:** 07/18/2011

Lab Batch ID: 864167 **Sample:** 608076-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.100	0.108	108	0.100	0.108	108	0	70-130	35	
Toluene	<0.00200	0.100	0.102	102	0.100	0.101	101	1	70-130	35	
Ethylbenzene	<0.00100	0.100	0.110	110	0.100	0.111	111	1	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.214	107	0.200	0.215	108	0	70-135	35	
o-Xylene	<0.00100	0.100	0.106	106	0.100	0.109	109	3	71-133	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Loco Hills Gathering

Work Order #: 422474
Analyst: BEV
Lab Batch ID: 863227
Sample: 607509-1-BKS
Units: mg/kg

Date Prepared: 07/09/2011
Batch #: 1

Project ID:
Date Analyzed: 07/09/2011
Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	879	88	996	964	97	9	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	864	86	996	950	95	9	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Loco Hills Gathering

Work Order # : 422474 **Project ID:**

Lab Batch ID: 863486 **QC- Sample ID:** 422474-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/13/2011 **Date Prepared:** 07/12/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00136	0.0999	0.0733	72	0.0999	0.0622	61	16	70-130	35	X
Toluene	0.00927	0.0999	0.0773	68	0.0999	0.0664	57	15	70-130	35	X
Ethylbenzene	0.0270	0.0999	0.106	79	0.0999	0.0927	66	13	71-129	35	X
m_p-Xylenes	0.0695	0.200	0.225	78	0.200	0.198	64	13	70-135	35	X
o-Xylene	0.0428	0.0999	0.121	78	0.0999	0.108	65	11	71-133	35	X

Lab Batch ID: 864167 **QC- Sample ID:** 423105-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/18/2011 **Date Prepared:** 07/18/2011 **Analyst:** ASA

Reporting Units: mg/kg

BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00106	0.106	0.103	97	0.106	0.102	96	1	70-130	35	
Toluene	<0.00212	0.106	0.0951	90	0.106	0.0953	90	0	70-130	35	
Ethylbenzene	<0.00106	0.106	0.101	95	0.106	0.102	96	1	71-129	35	
m_p-Xylenes	<0.00212	0.212	0.196	92	0.212	0.193	91	2	70-135	35	
o-Xylene	<0.00106	0.106	0.0960	91	0.106	0.0948	89	1	71-133	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Loco Hills Gathering

Work Order #: 422474

Lab Batch #: 863289 **Project ID:**

Date Analyzed: 07/08/2011 15:15 **Date Prepared:** 07/08/2011 **Analyst:** WRU

QC- Sample ID: 422475-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	<1.00	<1.00	0	20	

Lab Batch #: 863227

Date Analyzed: 07/10/2011 05:41 **Date Prepared:** 07/09/2011 **Analyst:** BEV

QC- Sample ID: 422474-009 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

TPH By SW8015 Mod Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	25.9	26.6	3	35	
C12-C28 Diesel Range Hydrocarbons	300	316	5	35	
C28-C35 Oil Range Hydrocarbons	<15.1	<15.1	0	35	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Xenco Laboratories

The Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Camille Bryant

Project Name: Loco Hills Gathering

Company Name: Nova Safety and Environmental

Project #:

Company Address: 2057 Commerce

Project Loc: Eddy County, New Mexico

City/State/Zip: Midland, TX 79703

PO #:

Telephone No: 432.520.7720 Fax No: 432.520.7701

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature: David Lopez e-mail: cbryant@novatraining.cc

(lab use only)

ORDER #: 422494

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge GW = Groundwater S=Soil/Solid NP=Non-Potable Specify Other	Analyze For: TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
001	East S/W-4A @ 8'			7/7/2011	900		1	X								Soil	X								X				X
002	West S/W-4A @ 8'			7/7/2011	910		1	X								Soil	X								X				X
003	SP-1A			7/7/2011	1200		1	X								Soil	X												X
004	SP-2A			7/7/2011	1205		1	X								Soil	X												X
005	SP-3A			7/7/2011	1210		1	X								Soil	X												X
006	SP-4			7/7/2011	1215		1	X								Soil	X												X
007	SP-5			7/7/2011	1220		1	X								Soil	X												X
008	SP-6			7/7/2011	1225		1	X								Soil	X												X
009	SP-7			7/7/2011	1230		1	X								Soil	X												X
~~010~~																													

Special Instructions: Please hold SP-1A through SP-7 for BTEX analysis— Call w/ TPH results

Relinquished by:	Date	Time	Received by:	Date	Time
David Lopez	7/8/11	1000	Katie Carbajal	7/8/11	1000
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
Katie Carbajal	7/8/11	1108	Lisa Murdock	7-8-11	11:08

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	Y	(N/A)
Labels on container(s)	(Y)	N
Custody seals on container(s)	Y	(N/A)
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N

by Courier? UPS DHL FedEx Lone Star

4.0 2 c/c

Temperature Upon Receipt: 6 °C

XENCO Laboratories	Document Title: Sample Receipt Checklist
Atlanta, Boca Raton, Corpus Christi, Dallas	Document No.: SYS-SRC
Houston, Miami, Odessa, Philadelphia	Revision/Date: No. 01, 5/27/2010
Phoenix, San Antonio, Tampa	Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Nova Safety & Env.
Date/Time: 7-8-11 11:08
Lab ID # : 422594
Initials: LM

Sample Receipt Checklist

1. Samples on ice?	Blue	(Water)	No	
2. Shipping container in good condition?	(Yes)	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	(N/A)	
4. Chain of Custody present?	(Yes)	No		
5. Sample instructions complete on chain of custody?	(Yes)	No		
6. Any missing / extra samples?	Yes	(No)		
7. Chain of custody signed when relinquished / received?	(Yes)	No		
8. Chain of custody agrees with sample label(s)?	(Yes)	No		
9. Container labels legible and intact?	(Yes)	No		
10. Sample matrix / properties agree with chain of custody?	(Yes)	No		
11. Samples in proper container / bottle?	(Yes)	No		
12. Samples properly preserved?	(Yes)	No	N/A	
13. Sample container intact?	(Yes)	No		
14. Sufficient sample amount for indicated test(s)?	(Yes)	No		
15. All samples received within sufficient hold time?	(Yes)	No		
16. Subcontract of sample(s)?	Yes	(No)	N/A	
17. VOC sample have zero head space?	Yes	No	(N/A)	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	6 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact: _____ **Contacted by:** _____ **Date/Time:** _____

Regarding: _____

Corrective Action Taken: _____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Repor

Name of Company DCP Midstream, LP	Contact Jon D. Bebbington
Address 10 Desta Drive, Suite 400 West	Telephone No. 432-620-4207
Facility Name Loco Hills Gathering System	Facility Type Pipeline

Surface Owner BLM / State	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	3	17S	29E					EDDY

Latitude N32.86394 _____ Longitude W104.06673

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 16	Volume Recovered 11
Source of Release Pipeline	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 06-03-2011 16:00
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Oil Conservation Division - Artesia	
By Whom? Johnnie Bradford/DCP	Date and Hour June 6, 2011 1600	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.* No water course was impacted.

Describe Cause of Problem and Remedial Action Taken.*

On June 3, 2011 at approximately 1600 a field operator discovered that a pipeline had leaked crude oil. The leak is attributed to corrosion.

Describe Area Affected and Cleanup Action Taken.*

A vacuum truck was dispatched and recovered approximately 11 bbls of oil. OCD was notified by telephone and e-mail on June 6 and BLM was notified by telephone on June 6. BLM's Paul Evans visited the site and requested that an arc survey be performed as the spill had progressed on the lease road 150 yards down a dry creek bed. The cleanup by DCP contractor NOVA will be performed once the archeological survey delineates the area. Approx 80 feet of the pipeline was replaced.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Jon D. Bebbington	Approved by District Supervisor:	
Title: Sr. Environmental Engineer	Approval Date:	Expiration Date:
E-mail Address: jdbebbington@dcpmidstream.com	Conditions of Approval:	Attached ☐
Date: Phone: 432-620-4207		