3R-325

Site Investigation Report

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Site Investigation Report
Jicarilla 147-6

CDX Gas, LLC
NE¼ NW¼ of Section 6, T25N, R5W
Rio Arriba County, New Mexico

July 11, 2008

Prepared on behalf of:
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1.0 Introduction

Animas Environmental Services, LLC (AES), on behalf of CDX Rio, LLC (CDX), has prepared this Site Investigation Report for the Jicarilla 147-6 condensate, oil, and water spill, which was discovered on November 30, 2007.

2.0 Site Information

2.1 Site Location

The Jicarilla 147-6 well location is located within the NE¼ NW¼ of Section 6, T25N, R5W, Rio Arriba County, New Mexico,(latitude and longitude recorded as N36° 26.034' and W107° 24.183'). A topographical location map is included as Figure 1, and a map of the spill excavation and investigation area is presented as Figure 2.

2.2 Spill History

On November 30, 2007, CDX discovered that a drain valve on a production tank at the Jicarilla 147-6 had frozen and broke, releasing approximately 100 barrels (bbls) of condensate, oil, and water. The spill was discovered during normal monthly strapping of the production tank and was immediately reported to Brandon Powell of the New Mexico Oil Conservation Division (NMOCD), Herman Lujan of the Bureau of Land Management (BLM), and the Jicarilla Apache Tribal Environmental Protection Office (JEPO). The spilled material soaked into the ground around the production tank and some of it migrated to the sump around the pit tank and collected. Following the discovery of the spill, the facility was shut down and approximately 15 bbls of spilled liquids were removed from the sump around the pit tank and the production tank, pit tank, and sump were removed. The faulty drain valve on the production tank was replaced and the tank and separator were relocated to a new lined and bermed area. A copy of the C-141 Release Notification and Corrective Action form filed by CDX with the NMOCD has been included as Appendix A. At the request of JEPO and due to the wet winter and inaccessible roads, contaminated soil was not excavated until the spring of 2008.

During the spring of 2008, a total of approximately 3,000 cubic yards of contaminated soils were excavated and transported by B&B Trucking to the TNT Landfarm facility for disposal. The average depth of the excavation was approximately 15 feet below ground surface (bgs). The excavation was completed in stages until all contaminated soils were removed to the satisfaction of JEPO.

AES performed site investigation activities during several visits to the site from March through June 2008. Site investigation activities were performed in order to delineate the extent of petroleum hydrocarbon impact on surface and subsurface soils and groundwater resulting from the spill.

3.0 Geology and Hydrogeology

3.1 Geology

Rio Arriba County, New Mexico, is located along the southeastern margin of the San Juan Basin portion of the Colorado Plateau physiographic province. The San Juan Basin is a large structural depression encompassing approximately 22,000 square miles and contains deep Tertiary fill resting on rocks of Late Cretaceous age. The lithography consists primarily of the Mesa Verde Formation, composed primarily of sandstones. The topography is broad and mostly flat, surrounded by mountains and deep canyons. Major rivers carved deep canyons and mesas, and physical erosion from wind and water chipped and polished the exposed rocks in the canyons.

The regional geology of the Tapacitos area is predominately Late Cretaceous coastal plains and shoreline and marine units that were deposited along the western margin of the interior seaway. The shallow inland sea transgressed and regressed over a period of 250 million years, depositing the Dakota Sandstone and Mancos Shale units. The Dakota Sandstone records the alternating rise (shale) and fall (sandstones) of sea level as the shoreline moved back and forth across the area about 98 to 100 million years ago. The long-term rise in sea level deposited rocks of the Mancos Group, which from oldest to youngest, include the Graneros Shale, Greenhorn Limestone, and Carlile Shale. Gradually the sea level dropped again, and the shoreline retreated to the northeast, as deposition of the Mesaverde Group began. The Mesaverde Group consists of alternating sandstones, siltstones, and coal deposited by rivers flowing into the shallow sea.

3.2 Hydrogeology

The Jicarilla 147-6 well location drains to an unnamed arroyo which in turn drains to Tapicito Creek, then to Largo Canyon, and ultimately to the San Juan River.

Locally, shallow groundwater is encountered within the valleys and canyons at depths less than 50 feet and is typically associated with arroyos, which can be incised as much as 20 feet below the valley floor. Groundwater was encountered at the site between approximately 17 and 20 feet below ground surface (bgs).

4.0 Site Investigation – March through June 2008

AES performed site investigation activities during several visits to the site from March through June 2008. Site investigation activities were performed in order to delineate the extent of petroleum hydrocarbon impact on surface and subsurface soils and groundwater resulting from the spill. The investigation procedures included the collection of soil samples from the excavation; collection of soil samples from soil borings installed along the north, east, and west excavation perimeter; and collection of soil samples from pot-hole/trenches excavated with a backhoe along the southern perimeter of the excavation as well as down-gradient of the excavation at two locations near a previous Williams Production Company pipeline spill. Additionally, groundwater samples were collected from three of the five soil borings/temporary monitoring wells installed along the north, east, and west excavation perimeter. All work was completed in accordance with U.S. Environmental Protection

Agency (USEPA) Environmental Response Team's Standard Operating Procedures (SOPs) and applicable American Society of Testing and Materials (ASTM) standards

4.1 Health and Safety Plan

Prior to the start of the site investigation activities, AES prepared and implemented a comprehensive site-specific Health and Safety Plan (HASP) addressing the site investigation activities and associated soil and groundwater sampling. All employees and subcontractors were required to read and sign the HASP to acknowledge their understanding of the information contained within the HASP. The HASP was implemented and enforced on site by the assigned Site Safety and Health Officer. Daily tailgate meetings were held and documented during field activities and addressed site-specific health and safety concerns or issues.

4.2 Initial Soil Sample Collection

On March 27, 2008, AES visited the site and obtained soil samples from each corner and the mid-point of the north and south sides of the excavation in order to determine if the vertical and horizontal extents of the contamination had been excavated. In order to obtain the samples, a backhoe operated by a contractor of CDX was utilized. Two buckets of soil were removed from each of the sampling locations and then the samples were collected from the third bucket by AES personnel. Soil sampling locations are shown on Figure 2.

Once collected, sample containers were packed with ice in insulated coolers and shipped via Greyhound bus at less than 6°C to the analyzing laboratory. For all laboratory samples, quality assurance and quality control (QA/QC) procedures, sample preservation, apparatus required, and analyses performed were in accordance with USEPA Document EPA-600, "Methods for Chemical Analysis for Water and Wastes" dated July 1982; and USEPA document SW-846, 3rd Edition, "Test Methods for Evaluating Solid Waste: Physical Chemical Methods", dated November 1986.

4.3 Utilities Notification

AES utilized the New Mexico One-Call system to identify and mark all underground utilities at the site before initiating drilling activities.

4.4 Notification

AES notified Lee Gardner of CDX, Brandon Powell of NMOCD, and Dixon Sandoval of JEPO, on April 11, 2008, via letter before starting drilling activities.

4.5 Installation and Sampling of Soil Borings and Temporary Groundwater Monitoring Wells

On April 17, 2008, AES installed one soil boring 8 feet west and 20 feet north of the northeastern corner of the excavation. The boring (TH-1) was installed with a direct push rig to a depth of 20 feet bgs. Mr. Lee Gardner of CDX was present for the installation of the soil boring.

On May 7, 2008, AES returned to the site and installed five soil borings on the north, east, and west sides of the excavations. Each of the borings was completed as a temporary groundwater monitoring well. The borings (TH-2 through TH-6) were installed with a CME-75 truck-mounted drilling rig to depths of 21 feet bgs. Mr. Lee Gardner of CDX and Mr. Dixon Sandoval of JEPO were present for the installation of the soil borings and temporary monitoring wells. The locations of soil borings are presented on Figure 2.

4.5.1 Drilling Methods

Soil boring TH-1 was advanced with a DT 6620 track-mounted direct push rig, manufactured by Geoprobe®, and equipped with a 2-inch outer diameter (OD) core barrel. Earth Worx, Los Lunas, New Mexico, completed the direct push drilling.

Soil borings TH-2 through TH-6 were advanced with a CME-75 Hollow-Stem Auger drilling rig. Enviro-Drill, Albuquerque, New Mexico, provided the drilling services.

4.5.2 Soil Sample Collection

Soil samples from TH-1 were collected with a 4-foot disposable sleeve and samples from TH-2 through TH-6 were collected with stainless steel split spoon samplers. Each boring was logged for lithology and sampled continuously for field screening of volatile organic compounds (VOCs) with a photo-ionization detector (PID) organic vapor meter (OVM). Additionally, soil samples were collected from the borings for laboratory analysis.

For each soil boring, a Soil Boring Log was completed. These logs recorded sample depth and method of collection, as well as observations of soil moisture, color, density, grain size, plasticity, contaminant presence, and overall stratigraphy.

Soil sample collection was completed in strict accordance with USEPA Environmental Response Team's SOPs. Field soil boring logs are included in Appendix B.

4.5.3 Field Screening

Samples were collected at intervals of five feet from TH-1 through TH-6. These samples were field screened for volatile organic vapors utilizing a PID-OVM calibrated with isobutylene gas.

Once collected, the soil samples to be field screened were immediately placed in a clean one-gallon Ziploc bag and allowed to warm up to approximately 80°F. Approximately ten minutes was allowed for the soil to be heated and for any VOCs in the soil to accumulate in the headspace of the Ziploc bag. During the initial stages of headspace development, the sample was gently shaken for one minute to promote vapor development and disaggregate the sample. Volatile gases were then measured by carefully opening the Ziploc bag and inserting the sample probe of the PID-OVM. The highest (peak) measurements were recorded onto the Soil Boring Logs. All field screening was completed in strict accordance with the SAP and USEPA Environmental Response Team's SOPs.

4.6 Final Soil Sample Collection

On June 11, 2008, AES returned to the site to collect soil samples from the west and south sides of the excavation. In order to obtain the samples, a backhoe operated by a contractor of CDX was utilized. AES personnel collected samples from the bucket after the operator had dug down from 7 to 15 feet bgs. Soil sampling locations are shown on Figure 2.

Soil samples collected were submitted to an EPA-approved laboratory, Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico, for laboratory analysis of the following parameters:

- Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) – EPA Method 8021
- Total Petroleum Hydrocarbons (TPH) (C_6-C_{36}) Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) – EPA Method 8015 Modified

Once collected, sample containers were packed with ice in insulated coolers and shipped via Greyhound bus at less than 6°C to the analyzing laboratory. For all laboratory samples, quality assurance and quality control (QA/QC) procedures, sample preservation, apparatus required, and analyses performed were in accordance with USEPA Document EPA-600, "Methods for Chemical Analysis for Water and Wastes" dated July 1982; and USEPA document SW-846, 3rd Edition, "Test Methods for Evaluating Solid Waste: Physical Chemical Methods", dated November 1986.

4.7 Groundwater Monitor Well Installation

4.7.1 Groundwater Monitor Well Installation and Construction

A total of five temporary monitoring wells (TH-2 through TH-6) were installed at the site. Monitoring wells were positioned on the north, east, and west sides of the excavations in order to define any horizontal migration of contaminants in groundwater. Groundwater was encountered between approximately 17 to 20 feet bgs.

Temporary monitoring well construction for all wells consisted of 2-inch outside diameter (OD) Schedule 40 PVC screen (0.010 inch slot), and 2-inch diameter blank riser casing. The screened intervals extend at least 10 feet across the water table in each of the wells. A bentonite seal was placed above the sand pack of each well, and the drill cuttings were placed from the top of the bentonite plug up to within a foot of ground surface. Monitoring wells were installed in strict accordance USEPA Environmental Response Team's SOPs. Temporary monitoring well construction diagrams for TH-2 through TH-6 are included on the Boring Logs in Appendix B.

4.7.2 Groundwater Monitor Well Development

Following monitor well installation and completion, each well was developed in order to remove fine-grained sediments from the sand pack and to increase hydraulic conductivity through the well screen. Monitoring wells were developed in strict accordance with USEPA Environmental Response Team's SOPs.

4.7.3 Monitoring Well Survey

The location and elevation of the top of each well casing was surveyed by AES personnel using two mobile Global Positioning System (GPS) units (Magellan eXplorist 100 and 200) by placing both GPS units on top of the well casing and taking the GPS coordinates and elevations when both units were within 10 percent agreement.

4.7.4 Groundwater Monitor Well Monitoring and Sampling

AES personnel completed groundwater monitoring and sampling of the wells on May 7, 2008. Groundwater samples were collected from a total of three temporary monitoring wells with new disposable bailers and transferred into appropriate sample containers, labeled accordingly, and documented on Water Sample Collection Forms. Water samples were not collected from TH-5 or TH-6 because the wells were dry.

Prior to sample collection, water quality measurements were recorded and included depth to groundwater, pH, temperature, conductivity, and oxidation reduction potential (ORP). The Chain of Custody Record was then completed, and samples were transported to the analyzing laboratory in chilled and insulated coolers at less than 6°C. All samples were analyzed at Hall in Albuquerque, New Mexico.

4.7.5 Laboratory Analyses - Groundwater

All groundwater analytical samples collected from the monitoring wells were submitted to Hall Environmental Analysis Laboratory, Albuquerque, New Mexico, for analysis of the following parameters:

- BTEX – EPA Method 8021
- TPH (C_6-C_{36}) GRO, DRO, and MRO – EPA Method 8015 Modified
- Chloride – EPA Method 300.0

5.0 Results

5.1 Soil

5.1.1 Lithology

Soil lithology was observed to consist of interbedded layers of tan and tan-red sands, brown sandy clays, and brown clayey sands. Soil boring logs are included in Appendix B.

5.1.2 Field Results

Soil samples collected from the soil borings (TH-1 through TH-6) were field-screened for VOCs with a PID-OVM. OVM readings were at or near background levels for all samples collected from TH-1, TH-2, TH-3, TH-5, and TH-6. Background OVM readings ranged from 0.0 parts per million (ppm) to 1.1 ppm. The OVM reading from TH-4 at 17-19 feet bgs was 1,982 ppm. PID readings were recorded on the soil boring logs, which are included in Appendix B.

5.1.3 Laboratory Analysis

Soil samples collected were submitted to an EPA-approved laboratory, Hall Environmental Analysis Laboratory (Hall), Albuquerque, New Mexico, for laboratory analysis of the following parameters:

- Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) – EPA Method 8021
- Total Petroleum Hydrocarbons (TPH) (C_6-C_{36}) Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Motor Oil Range Organics (MRO) – EPA Method 8015 Modified

5.1.4 Analytical Results

Soil samples were collected for laboratory analysis from the terminal depths of the borings. Remediation action levels promulgated by NMOCD for oil spills and releases (August 13, 1993) were utilized as action levels for soil characterization. The NMOCD remediation action levels for total BTEX are 50 mg/kg and 100 mg/kg for TPH.

Soil analytical results showed that soil samples collected during the initial sampling event on March 27, 2008, had total BTEX concentrations above NMOCD Action Levels in the NE Corner of the excavation (423 mg/kg) and the SW Corner of the excavation (236.9 mg/kg). Total BTEX concentrations from remaining soil samples collected on March 27, 2008, were either below laboratory detection limits or well below the applicable action level of 50 mg/kg total BTEX. The NMOCD Action Level for TPH (100 mg/kg) was exceeded in four of the samples collected during the initial soil sampling event on March 27, 2008, including the NE Corner of the excavation (2,776 mg/kg), the SE Corner of the excavation (120 mg/kg), the SW Corner of the excavation (3,120 mg/kg), and the NW Corner of the excavation (135 mg/kg). TPH concentrations in the remaining soil samples collected on March 27, 2008, were below laboratory detection limit.

Soil analytical results for samples collected during the soil boring and temporary monitoring well installation were above the NMOCD Action Levels for total BTEX and TPH in TH-4 at 17 feet bgs with 85.29 mg/kg total BTEX and 632 mg/kg TPH. The remaining samples collected during soil boring installation on April 17 and May 7, 2008, were below laboratory detection limits for total BTEX and TPH. Chloride concentrations during the May 7, 2008, soil boring installation ranged from 2.9 mg/kg in TH-3 at 15 feet bgs to 150 mg/kg in TH-6 at 17 feet bgs.

Each of the soil samples collected during the June 11, 2008, soil sampling event showed total BTEX and TPH concentrations below laboratory detection limits. Chloride concentrations during the June 11, 2008, soil sampling event ranged from 41 mg/kg in SS-1 at 8 feet bgs to 250 mg/kg in SS-5 at 15 feet bgs.

The analytical results for each of the soil sampling events have been tabulated and are presented in Table 1 and on Figure 3. Soil analytical laboratory reports are presented in Appendix C.

5.2 Groundwater

AES personnel collected groundwater samples from three temporary monitor wells for laboratory analysis on May 7, 2008. Laboratory analytical data are included in Appendix C, and Water Sample Collection forms are presented in Appendix D.

5.2.1 Measurement Data

Following depth to water measurement, each well was purged with a disposable bailer until recorded temperature, pH, conductivity, and oxidation reduction potential (ORP) measurements were stabilized. All data was recorded onto Water Sample Collection Forms. Groundwater temperature ranged from 11.91°C in TH-2 to 13.16°C in TH-4. Conductivity ranged from 1.23 mS in TH-2 to 23.68 mS in TH-4, and ORP was measured between -86.9 mV in TH-4 and 98.0 mV in TH-3. Depth to groundwater measurements and water quality data are summarized in Table 2, and Water Sample Collection forms are presented in Appendix D.

5.2.2 Analytical Results

Analytical results from groundwater samples collected during the May 2008 sampling event show that benzene concentrations exceeded the New Mexico Water Quality Control Commission (WQCC) standard of 10 µg/L in TH-4 with 900 µg/L. TH-4 also exceeded the WQCC standard of 620 µg/L for total xylene with 9,200 µg/L. BTEX concentrations were below laboratory detection limits in each of the other wells sampled.

WQCC standards have not been established for TPH GRO, DRO, MRO, or chloride. Two wells had GRO concentrations above the laboratory detection limit, including TH-2 (0.088 mg/L) and TH-4 (29 mg/L). DRO and MRO concentrations were below the laboratory detection limit in each of the wells sampled. Chloride results were 6.3 mg/L in TH-2, 19 mg/L in TH-3, and 280 mg/L in TH-4. The analytical results for the groundwater samples collected during the May 2008 sampling event have been tabulated and are presented in Table 3 and on Figure 3. Groundwater analytical laboratory reports are presented in Appendix C.

6.0 Conclusion and Recommendations

A total of 18 soil samples and three groundwater samples were collected by AES between March 27 and June 11, 2008. Soils were found to consist of interbedded layers of tan and tan-red sands, brown sandy clays, and brown clayey sands. Soil petroleum hydrocarbon contamination was evident in samples obtained from the NE Corner of the excavation, SE Corner of the excavation, SW Corner of the excavation, NW corner of the excavation, and TH-4 at 17 feet bgs. Soil contaminant concentrations exceeded NMOCD action levels for total BTEX in the NE Corner of the excavation, the SW Corner of the excavation, and TH-4 at 17 feet bgs and for TPH in the NE Corner of the excavation, the SE Corner of the excavation, the SW Corner of the excavation, the NW Corner of the excavation, and TH-4 at 17 feet bgs. The highest total BTEX concentration was reported at 423 mg/kg in the NE Corner of the excavation and the highest TPH concentration was reported at 3,120 mg/kg in the SW Corner of the excavation.

Depths to groundwater across the site were encountered at about 20 to 22 feet bgs from the top of the well casing (approximately 17 to 19 feet bgs). A baseline groundwater monitoring and sampling event was conducted by AES on May 7, 2008, and groundwater analytical results showed that groundwater is impacted above the WQCC standard for benzene and total xylene in TH-4. TH-2 and TH-4 have TPH-GRO concentrations above laboratory detection limits.

Following the initial soil sampling event performed by AES, CDX excavated additional contaminated soils from the areas with elevated contaminant concentrations. During the initial groundwater sampling event, TH-4 was observed to be impacted by benzene and total xylene contamination above WQCC standards, however, it is the opinion of AES that this contamination is not associated with the CDX spill, but rather is the result of a much earlier spill or "old" drilling pit as indicated by the types of clays and dark staining encountered during the installation of TH-4. Based on the results of the soil samples collected during test hole installation and the final soil sampling event performed by AES, it appears that the extents of the contaminated soil resulting from the CDX spill have been adequately excavated, and any residual soil or groundwater contaminants can be mitigated through the introduction of nutrients to stimulate natural contaminant biodegradation.

7.0 Certification

I, the undersigned, am personally familiar with the information submitted in this Site Investigation report, prepared on behalf of CDX Gas, LLC for the March through June 2008 site activities associated with the Jicarilla 147-6 spill in Rio Arriba County, New Mexico. I attest that it is true and complete to the best of my knowledge.

Sandrea R. Cupps

Lany Cupps
Project Manager

Ross Kennemer
Environmental Scientist

8.0 References

U.S. Environmental Protection Agency (USEPA). 1982. *Methods for Chemical Analysis for Water and Wastes.* Document EPA-600, July, 1982.

USEPA. 1992. SW-846, 3rd Edition, *Test Methods for Evaluating Solid Waste: Physical Chemical Methods*, dated November, 1986, and as amended by Update One, July, 1992.

USEPA. 1991. *Site Characterization for Subsurface Remediation*, EPA 625/4-91-026, November, 1991.

USEPA. 1997. *Expedited Site Assessment Tools for Underground Storage Tank Sites.* OSWER 5403G and EPA 510B-97-001, March, 1997.

USEPA. 2001. Contract Laboratory Program (CLP) Guidance for Field Samplers. OSWER 9240.0-35, EPA 540-R-00-003. June, 2001.

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
CDX JICARILLA 147-6
Rio Arriba County, New Mexico

Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B	9056A
USEPA Region 6 Screening Levels		1.6	520	230	210	NE	NE	NE	NE
NMOCD Action Level		50*				100			NE
SS-1 @ 8'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	41
SS-2 @ 7'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	79
SS-3 @ 10'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	97
SS-4 @ 15'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	45
SS-5 @ 15'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	250

NOTE: NE = Not Established

*** = The NMOCD Action Level for Benzene is 10 mg/Kg. The NMOCD Action Level for BTEX is 50 mg/Kg.**

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
CDX JICARILLA 147-6
Rio Arriba County, New Mexico

Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B	9056A
USEPA Region 6 Screening Levels		1.6	520	230	210	NE	NE	NE	NE
NMOCD Action Level		50*				100			NE
NE Corner	27-Mar-08	**12**	**140**	**21**	**250**	**2700**	**76**	**<50**	NA
SE Corner	27-Mar-08	0.29	4.0	0.66	7.9	**120**	**<10**	**<50**	NA
N Mid	27-Mar-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
S Mid	27-Mar-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
SW Corner	27-Mar-08	**<1.0**	**18**	**8.9**	**210**	**3,000**	**120**	**<50**	NA
NW Corner	27-Mar-08	<0.10	0.68	0.18	6.0	**63**	**72**	**<50**	NA
TH-1 @ 16-17'	17-Apr-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
TH-2 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	46
TH-3 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	2.9
TH-4 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	40
TH-4 @ 17'	07-May-08	**0.29**	**5.4**	**5.6**	**74**	**620**	**12**	**<50**	57
TH-5 @ 17'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	100
TH-6 @ 17'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	150

TABLE 2
WATER QUALITY AND WELL DATA
CDX JICARILLA 147-6
Rio Arriba County, New Mexico

Well ID	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft)	Depth to Water (ft)	GW Elevation (ft amsl)	Corrected GW Elevation (ft amsl)	Temp. (°C)	Specific Conduct. (mS)	Dissolved Oxygen (mg/L)	pH	ORP (mV)
TH-2	05/07/08	6439.00		20.43	6418.57		11.91	1.23	NM	8.03	-1.50
TH-3	05/07/08	6439.00		21.73	6417.27		12.60	1.72	NM	7.01	98.0
TH-4	05/07/08	6439.00		21.85	6417.15		13.16	23.68	NM	8.15	-86.9
TH-5	05/07/08	6439.00		DRY			NM	NM	NM	NM	NM
TH-5	05/10/08	6439.00		DRY			NM	NM	NM	NM	NM
TH-6	05/07/08	6439.00		DRY			NM	NM	NM	NM	NM
TH-6	05/10/08	6439.00		DRY			NM	NM	NM	NM	NM

NM - Not Measured

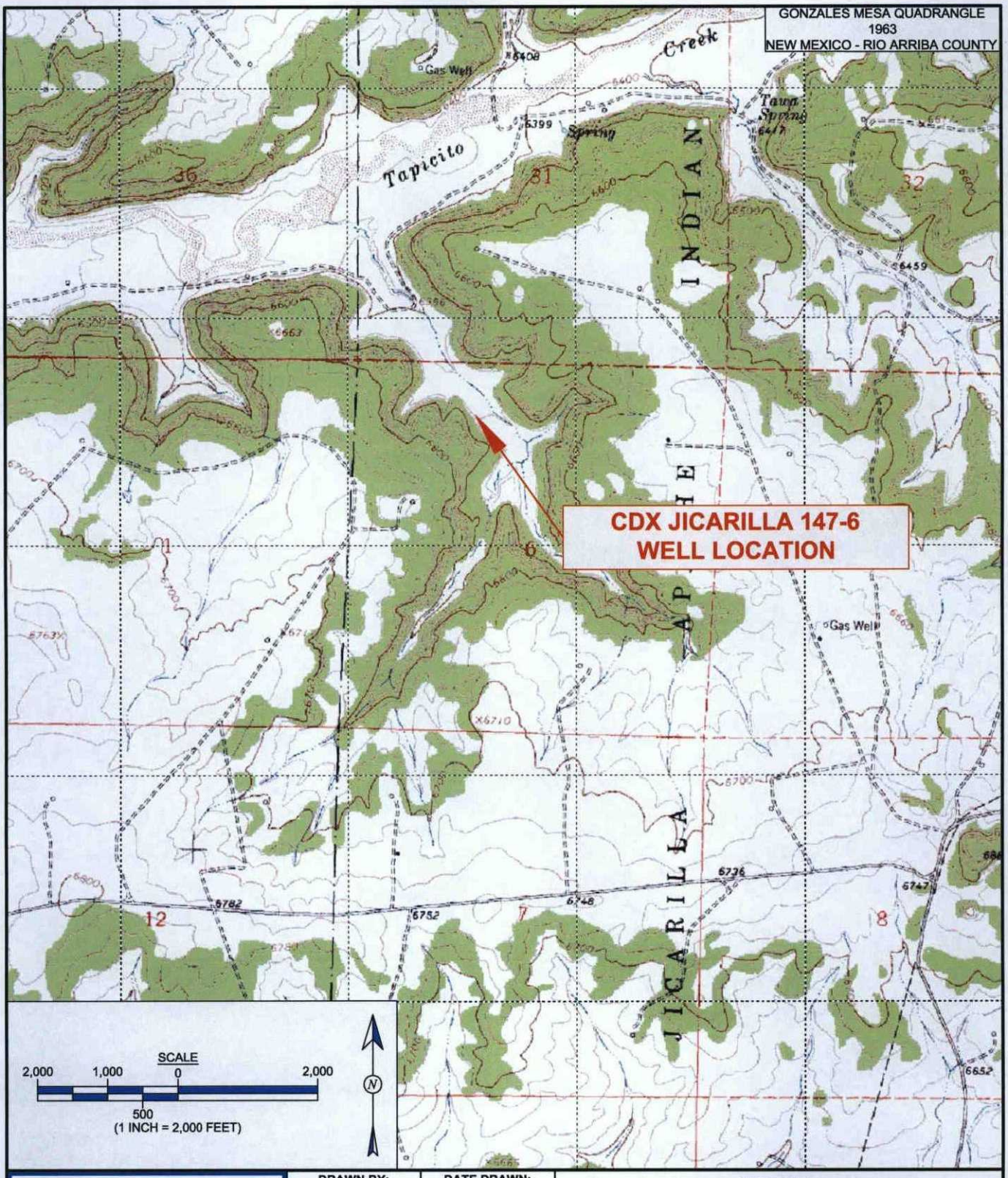
TABLE 3

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

CDX JICARILLA 147-6

Rio Arriba County, New Mexico

Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B	300.0
New Mexico WQCC		*10*	*750*	*750*	*620*	*NE*	*NE*	*NE*	*NE*
TH-2	07-May-08	<1.0	1.0	<1.0	<2.0	0.088	<1.0	<5.0	6.3
TH-3	07-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19
TH-4	07-May-08	**900**	180	740	**9,200**	29	<1.0	<5.0	280



DRAWN BY: L. Cupps	DATE DRAWN: April 23, 2008
REVISIONS BY: N. Willis	DATE REVISED: July 11, 2008
CHECKED BY: R. Kennemer	DATE CHECKED: July 11, 2008
APPROVED BY: R. Kennemer	DATE APPROVED: July 11, 2008

AES
Animas Environmental Services, LLC

FIGURE 1
TOPOGRAPHICAL SITE LOCATION MAP
CDX
JICARILLA 147-6 WELL LOCATION
NE ¼, NW ¼, SEC. 06, T25N, R5W
RIO ARRIBA COUNTY, NEW MEXICO
N36°26.045, W107°24.203'

S:\ANIMAS 2000\2008 PROJECTS\CDX\JICARILLA 147-6\DRAFTING\FIGURE 1 TOPOGRAPHIC LOCATION MAP

LEGEND

- SOIL SAMPLE LOCATIONS, MARCH 2008
- TEST HOLE, INSTALLED IN APRIL 2008
- TEST HOLE, TEMPORARY MONITORING WELL INSTALLED IN MAY 2008
- SOIL SAMPLE LOCATIONS, JUNE 2008

SS-5

CULVERT

SERVICE ROAD

WILLIAMS PIPELINE

WILLIAMS MONITORING WELL

CDX JICARILLA 147-6 WELL HEAD

SS-4

AREA OF WILLIAMS SPILL

TOP OF SLOPE

TH-1 TH-3

TH-4

TH-5

S-1

S-3

S-6

EXCAVATION (AVERAGE DEPTH IS 15 FEET)

TH-2

TH-6

S-5 S-4 S-2

SS-1 SS-2 SS-3

ARROYO →

COMPRESSOR

PRODUCT TANK

WILLIAMS MONITORING WELL

WILLIAMS MONITORING WELL

SCALE
25 15 0 25
5
(1 INCH = 25 FEET)

N

AES
Animas Environmental Services, LLC

DRAWN BY: N. Willis	DATE DRAWN: April 23, 2008
REVISIONS BY: N. Willis	DATE REVISED: July 11, 2008
CHECKED BY: R. Kennemer	DATE CHECKED: July 11, 2008
APPROVED BY: R. Kennemer	DATE APPROVED: July 11, 2008

FIGURE 2
SITE PLAN WITH SOIL AND GROUNDWATER SAMPLING LOCATIONS
CDX
JICARILLA 147-6 WELL LOCATION
NE ¼, NW ¼, SEC. 06, T25N, R5W
RIO ARRIBA COUNTY, NEW MEXICO
N36°26.045, W107°24.203'

S:\ANIMAS 2000\2008 PROJECTS\CDX\JICARILLA 147-6\DRAFTING\FIGURE 2 SITE LOCATION PLAN

SUMMARY OF SOIL ANALYTICAL RESULTS
CDX JICARILLA 147-6
Rio Arriba County, New Mexico

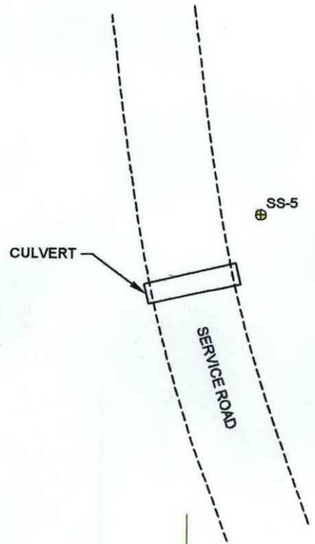
Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B	9056A
USEPA Region 6 Screening Levels		1.6	520	230	210	NE	NE	NE	NE
NMOCD Action Level		50*					100		NE
NE Corner	27-Mar-08	12	140	21	250	2700	76	<50	NA
SE Corner	27-Mar-08	0.29	4.0	0.66	7.9	120	<10	<50	NA
N Mid	27-Mar-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
S Mid	27-Mar-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
SW Corner	27-Mar-08	<1.0	18	8.9	210	3,000	120	<50	NA
NW Corner	27-Mar-08	<0.10	0.68	0.18	6.0	63	72	<50	NA
TH-1 @ 16-17'	17-Apr-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	NA
TH-2 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	46
TH-3 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	2.9
TH-4 @ 15'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	40
TH-4 @ 17'	07-May-08	0.29	5.4	5.6	74	620	12	<50	57
TH-5 @ 17'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	100
TH-6 @ 17'	07-May-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	150
SS-1 @ 8'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	41
SS-2 @ 7'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	79
SS-3 @ 10'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	97
SS-4 @ 15'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	45
SS-5 @ 15'	11-Jun-08	<0.050	<0.050	<0.050	<0.10	<5.0	<10	<50	250

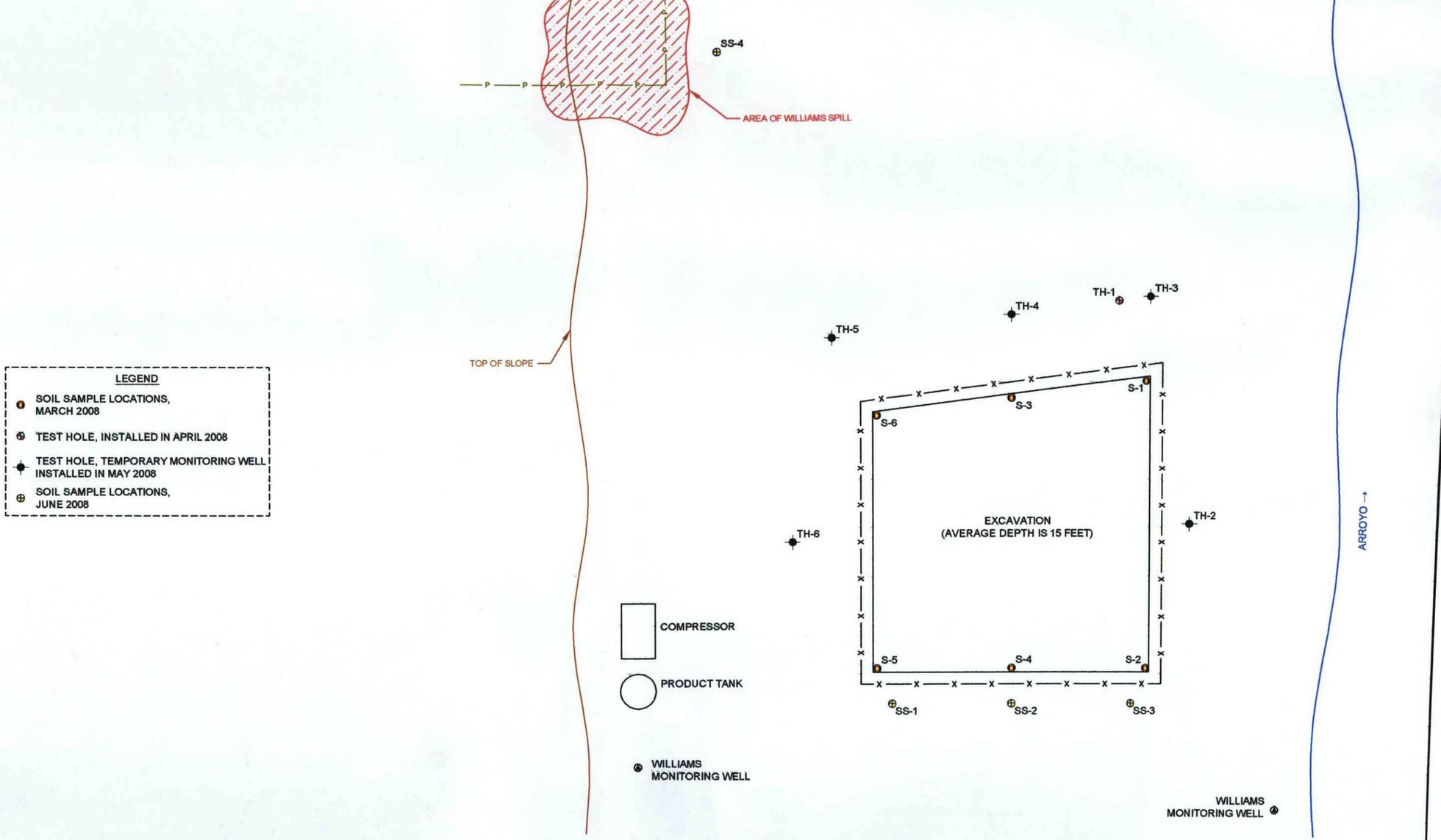
NOTE: NE = Not Established

* = The NMOCD Action Level for Benzene is 10 mg/Kg. The NMOCD Action Level for BTEX is 50 mg/Kg.

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
CDX JICARILLA 147-6
Rio Arriba County, New Mexico

Sample I.D.	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	GRO	DRO	MRO	Chloride
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Analytical Method		8021B	8021B	8021B	8021B	8015B	8015B	8015B	300.0
New Mexico WQCC		*10*	*750*	*750*	*620*	*NE*	*NE*	*NE*	*NE*
TH-2	07-May-08	<1.0	1.0	<1.0	<2.0	0.088	<1.0	<5.0	6.3
TH-3	07-May-08	<1.0	<1.0	<1.0	<2.0	<0.050	<1.0	<5.0	19
TH-4	07-May-08	900	180	740	9,200	29	<1.0	<5.0	280





LEGEND

- SOIL SAMPLE LOCATIONS, MARCH 2008
- TEST HOLE, INSTALLED IN APRIL 2008
- TEST HOLE, TEMPORARY MONITORING WELL INSTALLED IN MAY 2008
- SOIL SAMPLE LOCATIONS, JUNE 2008

SCALE
25 15 0 25
5
(1 INCH = 25 FEET)

N

AES
Animas Environmental Services, LLC

DRAWN BY: N. Willis	DATE DRAWN: July 11, 2008
REVISIONS BY: N. Willis	DATE REVISED: July 11, 2008
CHECKED BY: R. Kennemer	DATE CHECKED: July 11, 2008
APPROVED BY:	DATE APPROVED:

FIGURE 3
SITE PLAN AND LABORATORY ANALYSIS RESULTS
CDX
JICARILLA 147-6 WELL LOCATION
NE ¼, NW ¼, SEC. 06, T25N, R5W
RIO ARRIBA COUNTY, NEW MEXICO

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 Report

Name of Company CDX RIO, LLC	Contact Lee Gardner
Address 2700 Farmington Ave, Bldg K, Suite 1, Farmington NM 87401	Telephone No.(505) 326-3003
Facility Name Jicarilla 147 #6	Facility Type Oil & Gas Well

Surface Owner Jicarilla Apache Tribe	Mineral Owner Jicarilla Apache Tribe	Lease No. Jicarilla Contract 147

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	6	25N	5W	790	North	1850	West	Rio Arriba

Latitude 36.43411 **Longitude** 107.40379

NATURE OF RELEASE

Type of Release Condensate, Oil & Water	Volume of Release 100.7 barrels	Volume Recovered 15 barrels
Source of Release Production Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 10:00 a.m. 11-30-07
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Brandon Powell, OCD Herman Lujan, BLM Jicarilla Apache Tribal Environmental Protection Office	
By Whom? Lee Gardner	Date and Hour 11:56 a.m. 11-30-07	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*
Not Applicable

Describe Cause of Problem and Remedial Action Taken.*
Drain valve on tank froze and broke. Drain valve was replaced

Describe Area Affected and Cleanup Action Taken.*

The material soaked into the ground around the production tank. The material migrated to the sump around the pit tank where some of it collected. 15 barrels of material were removed from the sump.

Action plan:
The facility was shutdown
The production tank and pit tank and sump will be emptied and remove from their present location.
The production tank, pit tank and separator will be relocated on the well pad to a new lined dike area. All equipment will be above ground.
The contaminated dirt will be excavated and placed in a lined dike area until weather and road conditions allow for it to be safely hauled to a disposal site.
A third party environmental test firm will be contracted to sample the area to ensure all contamination has been removed.
Dirt from an approved site will be used to replace the contaminated dirt.

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: Lee Gardner	Approved by District Supervisor:

Title: HSE Coordinator	Approval Date:	Expiration Date:	
E-mail Address:lee.gardner@cdxgas.com	Conditions of Approval:		Attached ☐
Date: December 5, 2007 Phone: 505-324-5427			

* Attach Additional Sheets If Necessary

AES
Animas Environmental Services, LLC

LOG OF: TH-1

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 4/17/08	Latitude	: N36°26.045'
Date Completed	: 4/17/08	Longitude	: W107°24.203'
Hole Diameter	: 2.25 in.	Survey By	: GPS
Drilling Method	: Geoprobe	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439	SP		SAND, well sorted, tan, dry.		
2	6437					
		SC		SANDY CLAY, brown, moist, stiff.		
4	6435	SP		SAND, tan-red, fine grained, moist.		
6	6433					
8	6431					
10	6429					
		SC		CLAYEY SAND, brown, moist, soft.		
12	6427	SP		SAND, well sorted, tan-red, moist.		
14	6425					
16	6423					1.1
		SP		SAND, well sorted, tan-red, saturated.		
18	6421					
20						

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AES
Animas Environmental Services, LLC

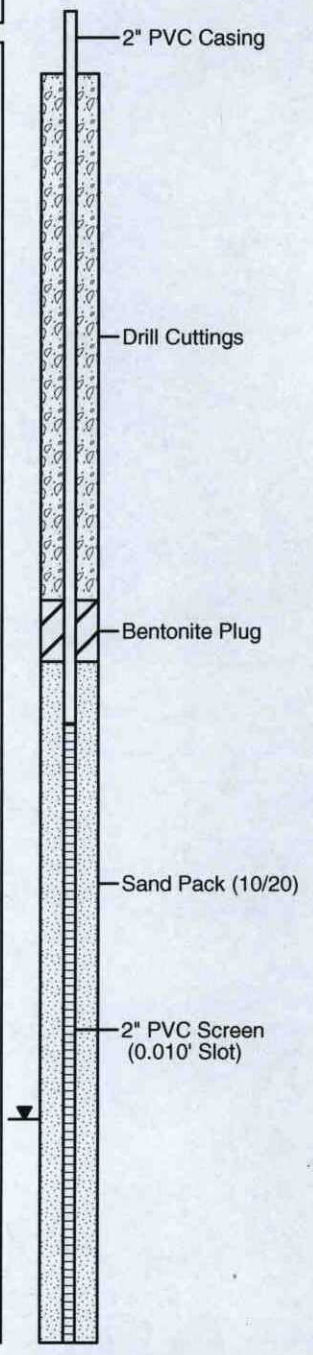
LOG OF: TH-2

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 5/7/08	Latitude	: N36°26.042'
Date Completed	: 5/7/08	Longitude	: W107°24.195'
Hole Diameter	: 7.25"	Survey By	: GPS
Drilling Method	: Hollow Stem Auger	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439	SP		SAND, well sorted, tan, dry.		
3	6436			SANDY CLAY, brown, moist, stiff.		
6	6433	SP		SAND, tan-red, fine grained, moist.	5 3 5 6	0.5
9	6430				1 1 1 1	0.3
12	6427	SC		CLAYEY SAND, brown, moist, soft.		
		SP		SAND, well sorted, tan-red, moist.	1 1 1 1	
15	6424					
18	6421	SP		SAND, well sorted, tan-red, saturated.		
21						

Well: TH-2
Elev.: 6442



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AES
Animas Environmental Services, LLC

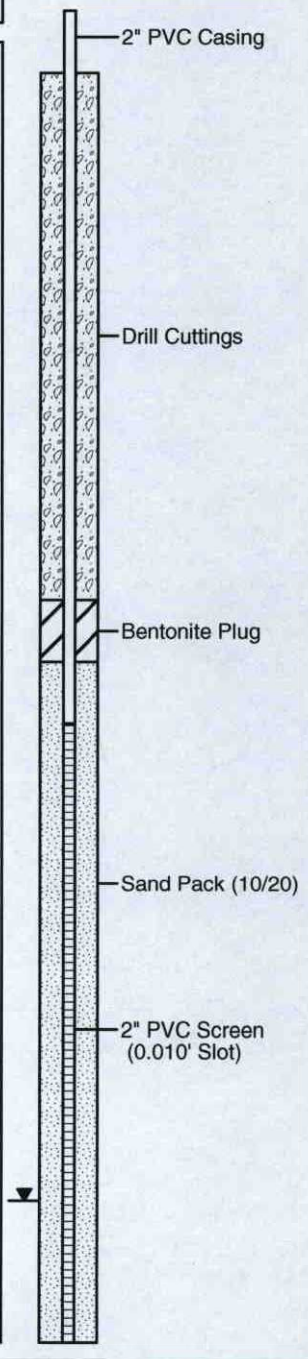
LOG OF: TH-3

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 5/7/08	Latitude	: N36°26.038'
Date Completed	: 5/7/08	Longitude	: W107°24.206'
Hole Diameter	: 7.25"	Survey By	: GPS
Drilling Method	: Hollow Stem Auger	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439	SP		SAND, well sorted, tan, dry.		
3	6436			SANDY CLAY, brown, moist, stiff.		
6	6433	SP		SAND, tan-red, fine grained, moist.	1 1 2 1	0.6
9	6430					
12	6427	SC		CLAYEY SAND, brown, moist, soft.	1 1 1 2	1.0
		SP		SAND, well sorted, tan-red, moist.		
15	6424				1 1 1 1	
18	6421	SP		SAND, well sorted, tan-red, very moist.		
21						

Well: TH-3
Elev.: 6442



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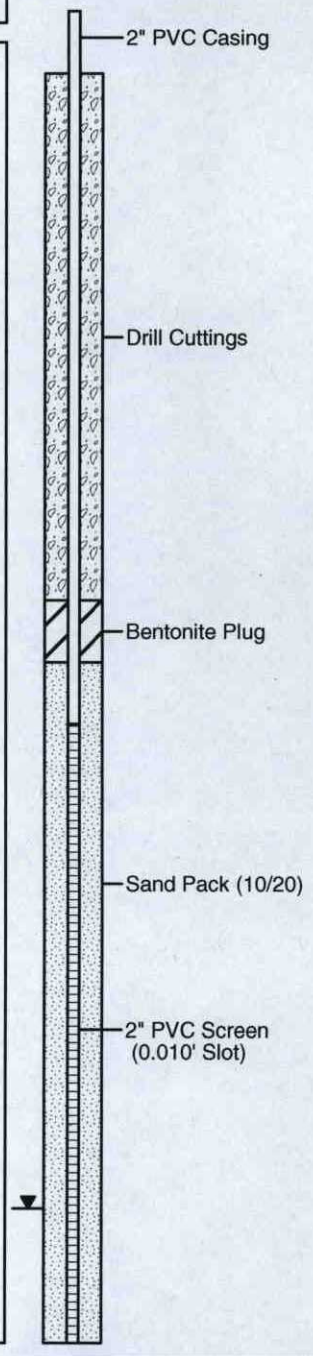
AES
Animas Environmental Services, LLC

LOG OF: TH-4

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 5/7/08	Latitude	: N36°26.040'
Date Completed	: 5/7/08	Longitude	: W107°24.212'
Hole Diameter	: 7.25"	Survey By	: GPS
Drilling Method	: Hollow Stem Auger	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439	SP		SAND, well sorted, tan-brown, dry.		
3	6436					
6	6433	SP		SAND,well sorted, tan-red, moist.	1 1 1 1	1.1
9	6430					
		SC		CLAYEY SAND, tan-brown, moist, soft.	1 3	1.2
12	6427	SP		SAND, well sorted, tan-red, moist.	1	
15	6424					
		SP		SAND, well sorted, tan-red, very moist.	1 1 1	
18	6421	CL		CLAY, brown, wet, very soft, strong hydrocarbon odor and heavy hydrocarbon staining. Observations made from drill cuttings.		1,982
21						



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AES
Animas Environmental Services, LLC

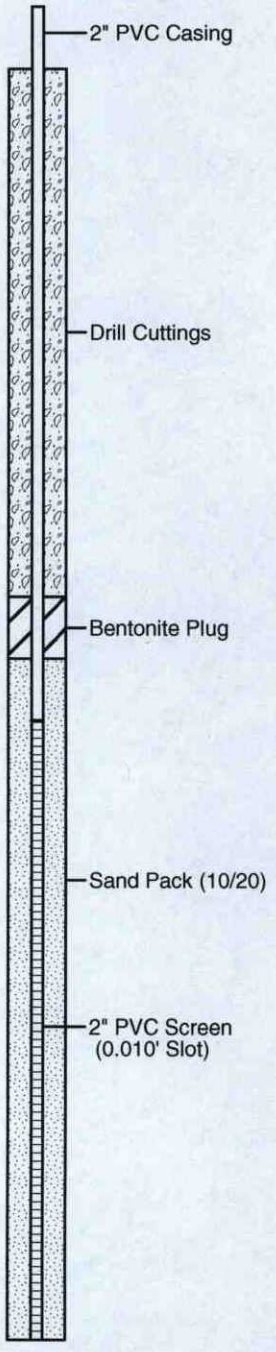
LOG OF: TH-5

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 5/7/08	Latitude	: N36°26.036'
Date Completed	: 5/7/08	Longitude	: W107°24.218'
Hole Diameter	: 7.25"	Survey By	: GPS
Drilling Method	: Hollow Stem Auger	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439					
		SP		SAND, well sorted, tan-brown, dry.		
3	6436					
				SANDY CLAY, brown, dry, stiff.	4 5 6 7	0.7
6	6433					
9	6430				4 6 7 5	1.1
12	6427					
15	6424			SANDY CLAY, brown, moist, stiff.	3 1 1 2	0.4
18	6421				1 2 1 1	
21						

Well: TH-5
Elev.: 6442



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AES
Animas Environmental Services, LLC

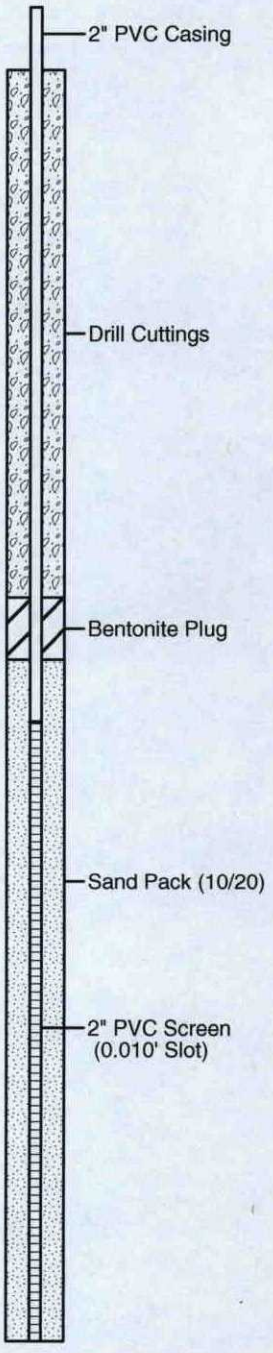
LOG OF: TH-6

CDX GAS, LLC
JICARILLA 147-006 WELL LOCATION
RIO ARRIBA COUNTY, NEW MEXICO

Date Started	: 5/7/08	Latitude	: N36°26.030'
Date Completed	: 5/7/08	Longitude	: W107°24.218'
Hole Diameter	: 7.25"	Survey By	: GPS
Drilling Method	: Hollow Stem Auger	Logged By	: Ross Kennemer
Sampling Method	: Split Spoon		

Depth in Feet	Surf. Elev. 6439	USCS	GRAPHIC	DESCRIPTION	Blow Count	PID (ppm)
0	6439			SANDY CLAY, brown, dry, stiff.	4 6 9 11	0.8
3	6436					
6	6433					
9	6430				6 4 7 8	0.7
12	6427					
15	6424			SANDY CLAY, brown, very moist, stiff.	4 4 5 2	
18	6421					
21						

Well: TH-6
Elev.: 6442



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HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, April 08, 2008

Lany Cupps
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 564-2281
FAX (505) 324-2022

RE: Cox Jicarilla 147-6

Order No.: 0804003

Dear Lany Cupps:

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 4/1/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc. **Date:** *08-Apr-08*

CLIENT: Animas Environmental Services
Project: Cox Jicarilla 147-6
Lab Order: 0804003

CASE NARRATIVE

"S" flags denote that the surrogate recovery was elevated due to sample dilution or matrix interferences.

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #1- NE Corner
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:10:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-01	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	76	10		mg/Kg	1	4/7/2008 1:50:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 1:50:12 PM
Surr: DNOP	98.2	61.7-135		%REC	1	4/7/2008 1:50:12 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	2700	500		mg/Kg	100	4/3/2008 8:44:59 PM
Surr: BFB	121	84-138		%REC	100	4/3/2008 8:44:59 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	12	5.0		mg/Kg	100	4/3/2008 8:44:59 PM
Toluene	140	5.0		mg/Kg	100	4/3/2008 8:44:59 PM
Ethylbenzene	21	5.0		mg/Kg	100	4/3/2008 8:44:59 PM
Xylenes, Total	250	10		mg/Kg	100	4/3/2008 8:44:59 PM
Surr: 4-Bromofluorobenzene	92.0	81.4-117		%REC	100	4/3/2008 8:44:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #2- SE Corner
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:16:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-02	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/7/2008 2:24:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 2:24:38 PM
Surr: DNOP	103	61.7-135		%REC	1	4/7/2008 2:24:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	120	25		mg/Kg	5	4/3/2008 9:15:29 PM
Surr: BFB	129	84-138		%REC	5	4/3/2008 9:15:29 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.29	0.25		mg/Kg	5	4/3/2008 9:15:29 PM
Toluene	4.0	0.25		mg/Kg	5	4/3/2008 9:15:29 PM
Ethylbenzene	0.66	0.25		mg/Kg	5	4/3/2008 9:15:29 PM
Xylenes, Total	7.9	0.50		mg/Kg	5	4/3/2008 9:15:29 PM
Surr: 4-Bromofluorobenzene	98.1	81.4-117		%REC	5	4/3/2008 9:15:29 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #3- N Mid
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:25:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-03	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/7/2008 2:59:02 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 2:59:02 PM
Surr: DNOP	101	61.7-135		%REC	1	4/7/2008 2:59:02 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/3/2008 9:45:58 PM
Surr: BFB	106	84-138		%REC	1	4/3/2008 9:45:58 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/3/2008 9:45:58 PM
Toluene	ND	0.050		mg/Kg	1	4/3/2008 9:45:58 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/3/2008 9:45:58 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/3/2008 9:45:58 PM
Surr: 4-Bromofluorobenzene	91.6	81.4-117		%REC	1	4/3/2008 9:45:58 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #4- S Mid
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:30:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-04	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/7/2008 3:33:25 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 3:33:25 PM
Surr: DNOP	93.7	61.7-135		%REC	1	4/7/2008 3:33:25 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/3/2008 10:16:35 PM
Surr: BFB	104	84-138		%REC	1	4/3/2008 10:16:35 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/3/2008 10:16:35 PM
Toluene	ND	0.050		mg/Kg	1	4/3/2008 10:16:35 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/3/2008 10:16:35 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/3/2008 10:16:35 PM
Surr: 4-Bromofluorobenzene	90.3	81.4-117		%REC	1	4/3/2008 10:16:35 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #5- SW Corner
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:37:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-05	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	120	10		mg/Kg	1	4/7/2008 4:03:59 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 4:03:59 PM
Surr: DNOP	99.2	61.7-135		%REC	1	4/7/2008 4:03:59 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	3000	500		mg/Kg	100	4/4/2008 1:37:07 PM
Surr: BFB	188	84-138	S	%REC	100	4/4/2008 1:37:07 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		mg/Kg	20	4/4/2008 11:34:55 AM
Toluene	18	1.0		mg/Kg	20	4/4/2008 11:34:55 AM
Ethylbenzene	8.9	1.0		mg/Kg	20	4/4/2008 11:34:55 AM
Xylenes, Total	210	10		mg/Kg	100	4/4/2008 1:37:07 PM
Surr: 4-Bromofluorobenzene	104	81.4-117		%REC	100	4/4/2008 1:37:07 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	Sample #6- NW Corner
Lab Order:	0804003	**Collection Date:**	3/27/2008 9:43:00 AM
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-06	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	72	10		mg/Kg	1	4/7/2008 4:38:25 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/7/2008 4:38:25 PM
Surr: DNOP	98.0	61.7-135		%REC	1	4/7/2008 4:38:25 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	63	10		mg/Kg	2	4/4/2008 2:07:35 PM
Surr: BFB	127	84-138		%REC	2	4/4/2008 2:07:35 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.10		mg/Kg	2	4/4/2008 2:07:35 PM
Toluene	0.68	0.10		mg/Kg	2	4/4/2008 2:07:35 PM
Ethylbenzene	0.18	0.10		mg/Kg	2	4/4/2008 2:07:35 PM
Xylenes, Total	6.0	0.20		mg/Kg	2	4/4/2008 2:07:35 PM
Surr: 4-Bromofluorobenzene	105	81.4-117		%REC	2	4/4/2008 2:07:35 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *08-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	MeOH BLANK
Lab Order:	0804003	**Collection Date:**	
Project:	Cox Jicarilla 147-6	**Date Received:**	4/1/2008
Lab ID:	0804003-07	**Matrix:**	MEOH BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/4/2008 12:36:00 PM
Surr: BFB	97.7	84-138		%REC	1	4/4/2008 12:36:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/4/2008 12:36:00 PM
Toluene	ND	0.050		mg/Kg	1	4/4/2008 12:36:00 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/4/2008 12:36:00 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/4/2008 12:36:00 PM
Surr: 4-Bromofluorobenzene	86.4	81.4-117		%REC	1	4/4/2008 12:36:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: Cox Jicarilla 147-6 **Work Order:** 0804003

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-15538		*MBLK*			Batch ID: **15538**		Analysis Date:		4/7/2008 12:07:04 PM
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-15538		*LCS*			Batch ID: **15538**		Analysis Date:		4/7/2008 12:41:29 PM
Diesel Range Organics (DRO)	38.86	mg/Kg	10	77.7	64.6	116			
Sample ID: LCSD-15538		*LCSD*			Batch ID: **15538**		Analysis Date:		4/7/2008 1:15:51 PM
Diesel Range Organics (DRO)	35.27	mg/Kg	10	70.5	64.6	116	9.66	17.4	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R27974**		Analysis Date:		4/3/2008 1:04:11 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 5ML RB		*MBLK*			Batch ID: **R27987**		Analysis Date:		4/4/2008 8:57:57 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: MB-15515		*MBLK*			Batch ID: **15515**		Analysis Date:		4/5/2008 4:55:27 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID: **R27987**		Analysis Date:		4/4/2008 3:08:04 PM
Gasoline Range Organics (GRO)	25.60	mg/Kg	5.0	102	69.5	120			
Sample ID: LCS-15515		*LCS*			Batch ID: **15515**		Analysis Date:		4/5/2008 4:25:17 PM
Gasoline Range Organics (GRO)	24.72	mg/Kg	5.0	98.9	69.5	120			
Sample ID: 2.5UG GRO LCSD		*LCSD*			Batch ID: **R27987**		Analysis Date:		4/4/2008 3:38:16 PM
Gasoline Range Organics (GRO)	25.40	mg/Kg	5.0	102	69.5	120	0.784	11.6	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: Cox Jicarilla 147-6 **Work Order:** 0804003

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**15515**	Analysis Date:	4/3/2008 1:04:11 PM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R27987**	Analysis Date:	4/4/2008 8:57:57 AM	
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: MB-15515		*MBLK*			Batch ID:	**15515**	Analysis Date:	4/5/2008 4:55:27 PM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R27987**	Analysis Date:	4/4/2008 4:38:43 PM	
Benzene	0.9639	mg/Kg	0.050	96.4	78.8	132			
Toluene	0.9946	mg/Kg	0.050	98.1	78.9	112			
Ethylbenzene	0.9878	mg/Kg	0.050	98.8	69.3	125			
Xylenes, Total	2.882	mg/Kg	0.10	96.1	73	128			
Sample ID: LCS-15515		*LCS*			Batch ID:	**15515**	Analysis Date:	4/5/2008 4:25:17 PM	
Methyl tert-butyl ether (MTBE)	0.4842	mg/Kg	0.10	118	67.9	135			
Benzene	0.3310	mg/Kg	0.050	118	78.8	132			
Toluene	2.202	mg/Kg	0.050	109	78.9	112			
Ethylbenzene	0.4651	mg/Kg	0.050	116	69.3	125			
Xylenes, Total	2.763	mg/Kg	0.10	120	73	128			
Sample ID: 100NG BTEX LCSD		*LCSD*			Batch ID:	**R27987**	Analysis Date:	4/4/2008 5:09:13 PM	
Benzene	0.9759	mg/Kg	0.050	97.6	78.8	132	1.24	27	
Toluene	0.9782	mg/Kg	0.050	96.5	78.9	112	1.66	19	
Ethylbenzene	0.9738	mg/Kg	0.050	97.4	69.3	125	1.43	10	
Xylenes, Total	2.883	mg/Kg	0.10	96.1	73	128	0.0278	13	

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 4/1/2008

Work Order Number 0804003 | Received by: TLS

Checklist completed by: Janice Shomin (Signature) 4/1/08 (Date) | Sample ID labels checked by: AS (Initials)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐	
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐		
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Water - VOA vials have zero headspace? No VOA vials submitted	☑	Yes ☐	No ☐		
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑		
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑		
Container/Temp Blank temperature?	5°	*<6° C Acceptable* If given sufficient time to cool.			

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental SVC

Address: 624 E. Comanche
Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: lcupps@animasenvironmental.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CDX Jicarilla 147-6

Project #: 080307

Project Manager: Lany Cupps

Sampler: Chad Dawson

On Ice: ☒ Yes ☐ No

Sample Temperature: 5'

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0804003	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	BTEX 8021	GRO/DRO 8015			Air Bubbles (Y or N)
3/27/08	0910	Sample #1 - NE Corner	1-60z glass 2-5m glass	MeOH/NA	1												X	X			
	0916	#2 - SE Corner			2												X	X			
	0925	#3 - N Mid			3												X	X			
	0930	#4 - S Mid			4												X	X			
	0937	#5 - SW Corner			5												X	X			
	0943	#6 - NW Corner			6												X	X			
		MeOH blank TP 4/1/08			7																

Date:	Time:	Relinquished by:	Received by:
3-31-08	1400	Chad	L. Cupps
3/31/08	1800	Sandra R. Cupps	Jane St 4/1/08 800

Remarks:
8021 - Just BTEX, no MTBE
8015 - GRO/DRO C6-C36

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Thursday, April 24, 2008

Lany Cupps
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 564-2281
FAX (505) 324-2022

RE: COX Jicarilla 147-6

Order No.: 0804219

Dear Lany Cupps:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 4/17/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: *24-Apr-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-1 @ 16'-17'
Lab Order:	0804219	**Collection Date:**	4/17/2008 9:40:00 AM
Project:	COX Jicarilla 147-6	**Date Received:**	4/17/2008
Lab ID:	0804219-01	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	4/23/2008 2:53:38 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	4/23/2008 2:53:38 PM
Surr: DNOP	99.1	61.7-135		%REC	1	4/23/2008 2:53:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	4/23/2008 6:37:04 PM
Surr: BFB	112	84-138		%REC	1	4/23/2008 6:37:04 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	4/23/2008 6:37:04 PM
Toluene	ND	0.050		mg/Kg	1	4/23/2008 6:37:04 PM
Ethylbenzene	ND	0.050		mg/Kg	1	4/23/2008 6:37:04 PM
Xylenes, Total	ND	0.10		mg/Kg	1	4/23/2008 6:37:04 PM
Surr: 4-Bromofluorobenzene	95.3	81.4-117		%REC	1	4/23/2008 6:37:04 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: COX Jicarilla 147-6 **Work Order:** 0804219

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-15712		*MBLK*			Batch ID: **15712**		Analysis Date:	4/22/2008 5:09:03 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-15712		*LCS*			Batch ID: **15712**		Analysis Date:	4/22/2008 5:44:01 PM	
Diesel Range Organics (DRO)	51.10	mg/Kg	10	102	64.6	116			
Sample ID: LCSD-15712		*LCSD*			Batch ID: **15712**		Analysis Date:	4/22/2008 6:18:56 PM	
Diesel Range Organics (DRO)	57.50	mg/Kg	10	115	64.6	116	11.8	17.4	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R28224**		Analysis Date:	4/23/2008 9:02:53 AM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID: **R28224**		Analysis Date:	4/23/2008 11:03:21 AM	
Gasoline Range Organics (GRO)	25.98	mg/Kg	5.0	104	69.5	120			
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R28224**		Analysis Date:	4/23/2008 9:02:53 AM	
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID: **R28224**		Analysis Date:	4/23/2008 11:03:21 AM	
Benzene	0.3128	mg/Kg	0.050	112	78.8	132			
Toluene	2.148	mg/Kg	0.050	107	78.9	112			
Ethylbenzene	0.4437	mg/Kg	0.050	111	69.3	125			
Xylenes, Total	2.592	mg/Kg	0.10	113	73	128			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 4/17/2008

Work Order Number 0804219 | Received by: AMF

Sample ID labels checked by: AT (Initials)

Checklist completed by: Janup Shamin (Signature) 4/17/08 (Date)

Matrix: | Carrier name Client drop-off

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	6°	<6° C Acceptable If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Address: 624 E. Comanche Farmington, NM 87401

Phone #: 505-564-2281

email or Fax#: lcupps@animasenvironmental.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☒ Standard ☐ Rush _____

Project Name: CDX Jicarilla 1476

Project #: 080307

Project Manager: Lany Cupps

Sampler: Ross Kennemer

On Ice: ☒ Yes ☐ No

Sample Temperature: 6°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
4/17/08	0940	TH-1 @ 16'-17'	2 vials + 1-4oz. jar	MeOH/4°C	0804219 -1	X		X									

Analysis Request

Date: 4/17/08 Time: 1435 Relinquished by: Ross Kennemer

Received by: 4/17/08 1435

Date: Time: Relinquished by:

Received by:

Remarks: BTEX 8021
TPH C6-C36 8015

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Tuesday, May 20, 2008

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 564-2281
FAX (505) 324-2022

RE: CDX Jic 147-006

Order No.: 0805174

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 5/13/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-2 @ 15'
Lab Order:	0805174	**Collection Date:**	5/7/2008 10:35:00 AM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-01	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/16/2008 6:27:11 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 6:27:11 AM
Surr: DNOP	101	61.7-135		%REC	1	5/16/2008 6:27:11 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/14/2008 1:20:10 AM
Surr: BFB	90.4	84-138		%REC	1	5/14/2008 1:20:10 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	5/14/2008 1:20:10 AM
Toluene	ND	0.050		mg/Kg	1	5/14/2008 1:20:10 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/14/2008 1:20:10 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/14/2008 1:20:10 AM
Surr: 4-Bromofluorobenzene	89.4	81.4-117		%REC	1	5/14/2008 1:20:10 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	46	1.5		mg/Kg	5	5/16/2008 9:25:14 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

50

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-3 @ 15'
Lab Order:	0805174	**Collection Date:**	5/7/2008 11:25:00 AM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-02	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/16/2008 7:00:56 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 7:00:56 AM
Surr: DNOP	101	61.7-135		%REC	1	5/16/2008 7:00:56 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/14/2008 1:50:13 AM
Surr: BFB	96.6	84-138		%REC	1	5/14/2008 1:50:13 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	5/14/2008 1:50:13 AM
Toluene	ND	0.050		mg/Kg	1	5/14/2008 1:50:13 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/14/2008 1:50:13 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/14/2008 1:50:13 AM
Surr: 4-Bromofluorobenzene	97.0	81.4-117		%REC	1	5/14/2008 1:50:13 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	2.9	1.5		mg/Kg	5	5/16/2008 9:42:39 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-4 @ 15'
Lab Order:	0805174	**Collection Date:**	5/7/2008 12:20:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-03	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/16/2008 7:34:44 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 7:34:44 AM
Surr: DNOP	101	61.7-135		%REC	1	5/16/2008 7:34:44 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/14/2008 2:20:14 AM
Surr: BFB	102	84-138		%REC	1	5/14/2008 2:20:14 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	5/14/2008 2:20:14 AM
Benzene	ND	0.050		mg/Kg	1	5/14/2008 2:20:14 AM
Toluene	ND	0.050		mg/Kg	1	5/14/2008 2:20:14 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/14/2008 2:20:14 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/14/2008 2:20:14 AM
Surr: 4-Bromofluorobenzene	102	81.4-117		%REC	1	5/14/2008 2:20:14 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	40	1.5		mg/Kg	5	5/16/2008 10:00:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-4 @ 17'
Lab Order:	0805174	**Collection Date:**	5/7/2008 12:22:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-04	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	12	10		mg/Kg	1	5/16/2008 8:08:49 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 8:08:49 AM
Surr: DNOP	104	61.7-135		%REC	1	5/16/2008 8:08:49 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	620	250		mg/Kg	50	5/15/2008 1:42:43 AM
Surr: BFB	120	84-138		%REC	50	5/15/2008 1:42:43 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	5	5/14/2008 2:50:22 AM
Benzene	0.29	0.25		mg/Kg	5	5/14/2008 2:50:22 AM
Toluene	5.4	0.25		mg/Kg	5	5/14/2008 2:50:22 AM
Ethylbenzene	5.6	0.25		mg/Kg	5	5/14/2008 2:50:22 AM
Xylenes, Total	74	5.0		mg/Kg	50	5/15/2008 1:42:43 AM
Surr: 4-Bromofluorobenzene	109	81.4-117		%REC	50	5/15/2008 1:42:43 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	57	3.0		mg/Kg	10	5/16/2008 10:17:28 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-5 @ 17'
Lab Order:	0805174	**Collection Date:**	5/7/2008 1:25:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-05	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/16/2008 8:42:54 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 8:42:54 AM
Surr: DNOP	104	61.7-135		%REC	1	5/16/2008 8:42:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/15/2008 2:42:42 AM
Surr: BFB	87.5	84-138		%REC	1	5/15/2008 2:42:42 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	5/15/2008 2:42:42 AM
Benzene	ND	0.050		mg/Kg	1	5/15/2008 2:42:42 AM
Toluene	ND	0.050		mg/Kg	1	5/15/2008 2:42:42 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/15/2008 2:42:42 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/15/2008 2:42:42 AM
Surr: 4-Bromofluorobenzene	87.3	81.4-117		%REC	1	5/15/2008 2:42:42 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	100	3.0		mg/Kg	10	5/16/2008 10:34:52 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-6 @ 17'
Lab Order:	0805174	**Collection Date:**	5/7/2008 2:15:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-06	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	5/16/2008 9:16:57 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	5/16/2008 9:16:57 AM
Surr: DNOP	103	61.7-135		%REC	1	5/16/2008 9:16:57 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	5/14/2008 3:50:31 AM
Surr: BFB	106	84-138		%REC	1	5/14/2008 3:50:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	5/14/2008 3:50:31 AM
Benzene	ND	0.050		mg/Kg	1	5/14/2008 3:50:31 AM
Toluene	ND	0.050		mg/Kg	1	5/14/2008 3:50:31 AM
Ethylbenzene	ND	0.050		mg/Kg	1	5/14/2008 3:50:31 AM
Xylenes, Total	ND	0.10		mg/Kg	1	5/14/2008 3:50:31 AM
Surr: 4-Bromofluorobenzene	104	81.4-117		%REC	1	5/14/2008 3:50:31 AM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	150	3.0		mg/Kg	10	5/16/2008 10:52:16 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-2
Lab Order:	0805174	**Collection Date:**	5/7/2008 3:00:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-07	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/15/2008 9:51:35 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/15/2008 9:51:35 AM
Surr: DNOP	107	58-140		%REC	1	5/15/2008 9:51:35 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	0.088	0.050		mg/L	1	5/14/2008 3:38:46 PM
Surr: BFB	106	79.2-121		%REC	1	5/14/2008 3:38:46 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/14/2008 3:38:46 PM
Toluene	1.0	1.0		µg/L	1	5/14/2008 3:38:46 PM
Ethylbenzene	ND	1.0		µg/L	1	5/14/2008 3:38:46 PM
Xylenes, Total	ND	2.0		µg/L	1	5/14/2008 3:38:46 PM
Surr: 4-Bromofluorobenzene	105	68.9-122		%REC	1	5/14/2008 3:38:46 PM
EPA METHOD 300.0: ANIONS						Analyst: **SLB**
Chloride	6.3	1.0		mg/L	10	5/19/2008 2:07:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-3
Lab Order:	0805174	**Collection Date:**	5/7/2008 3:40:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-08	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/15/2008 10:17:28 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/15/2008 10:17:28 AM
Surr: DNOP	112	58-140		%REC	1	5/15/2008 10:17:28 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	5/14/2008 4:08:52 PM
Surr: BFB	101	79.2-121		%REC	1	5/14/2008 4:08:52 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	1.0		µg/L	1	5/14/2008 4:08:52 PM
Toluene	ND	1.0		µg/L	1	5/14/2008 4:08:52 PM
Ethylbenzene	ND	1.0		µg/L	1	5/14/2008 4:08:52 PM
Xylenes, Total	ND	2.0		µg/L	1	5/14/2008 4:08:52 PM
Surr: 4-Bromofluorobenzene	98.9	68.9-122		%REC	1	5/14/2008 4:08:52 PM
EPA METHOD 300.0: ANIONS						Analyst: **SLB**
Chloride	19	1.0		mg/L	10	5/19/2008 2:25:21 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *20-May-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	TH-4
Lab Order:	0805174	**Collection Date:**	5/7/2008 4:05:00 PM
Project:	CDX Jic 147-006	**Date Received:**	5/13/2008
Lab ID:	0805174-09	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	5/15/2008 10:46:16 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	5/15/2008 10:46:16 AM
Surr: DNOP	127	58-140		%REC	1	5/15/2008 10:46:16 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	29	2.5		mg/L	50	5/15/2008 12:25:05 PM
Surr: BFB	101	79.2-121		%REC	50	5/15/2008 12:25:05 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	900	50		µg/L	50	5/15/2008 12:25:05 PM
Toluene	180	50		µg/L	50	5/15/2008 12:25:05 PM
Ethylbenzene	740	50		µg/L	50	5/15/2008 12:25:05 PM
Xylenes, Total	9200	100		µg/L	50	5/15/2008 12:25:05 PM
Surr: 4-Bromofluorobenzene	105	68.9-122		%REC	50	5/15/2008 12:25:05 PM
EPA METHOD 300.0: ANIONS						Analyst: **SLB**
Chloride	280	1.0		mg/L	10	5/19/2008 2:42:45 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: CDX Jic 147-006 **Work Order:** 0805174

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 9056A: Anions									
Sample ID: MB-15967		*MBLK*			Batch ID: **15967**		Analysis Date:	5/16/2008 8:50:25 PM	
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-15967		*LCS*			Batch ID: **15967**		Analysis Date:	5/16/2008 9:07:50 PM	
Chloride	14.48	mg/Kg	0.30	96.5	90	110			
Method: EPA Method 300.0: Anions									
Sample ID: MB		*MBLK*			Batch ID: **R28572**		Analysis Date:	5/19/2008 9:29:23 AM	
Chloride	ND	mg/L	0.10						
Sample ID: LCS		*LCS*			Batch ID: **R28572**		Analysis Date:	5/19/2008 9:46:48 AM	
Chloride	4.837	mg/L	0.10	96.7	90	110			
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-15918		*MBLK*			Batch ID: **15918**		Analysis Date:	5/13/2008 7:04:53 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-15918		*LCS*			Batch ID: **15918**		Analysis Date:	5/13/2008 7:39:19 PM	
Diesel Range Organics (DRO)	47.95	mg/Kg	10	95.9	64.6	116			
Sample ID: LCSD-15918		*LCSD*			Batch ID: **15918**		Analysis Date:	5/13/2008 8:13:39 PM	
Diesel Range Organics (DRO)	44.12	mg/Kg	10	88.2	64.6	116	8.31	17.4	
Method: EPA Method 8015B: Diesel Range									
Sample ID: MB-15916		*MBLK*			Batch ID: **15916**		Analysis Date:	5/13/2008 3:38:37 PM	
Diesel Range Organics (DRO)	ND	mg/L	1.0						
Motor Oil Range Organics (MRO)	ND	mg/L	5.0						
Sample ID: LCS-15916		*LCS*			Batch ID: **15916**		Analysis Date:	5/13/2008 4:12:58 PM	
Diesel Range Organics (DRO)	5.745	mg/L	1.0	115	74	157			
Sample ID: LCSD-15916		*LCSD*			Batch ID: **15916**		Analysis Date:	5/13/2008 4:47:21 PM	
Diesel Range Organics (DRO)	5.346	mg/L	1.0	107	74	157	7.19	23	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-15890		*MBLK*			Batch ID: **15890**		Analysis Date:	5/13/2008 10:49:44 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-15890		*LCS*			Batch ID: **R28509**		Analysis Date:	5/13/2008 9:49:26 PM	
Gasoline Range Organics (GRO)	27.24	mg/Kg	5.0	109	69.5	120			
Method: EPA Method 8015B: Gasoline Range									
Sample ID: 5ML RB		*MBLK*			Batch ID: **R28526**		Analysis Date:	5/14/2008 9:13:56 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 5ML RB		*MBLK*			Batch ID: **R28550**		Analysis Date:	5/15/2008 8:42:06 AM	
Gasoline Range Organics (GRO)	ND	mg/L	0.050						
Sample ID: 2.5UG GRO LCS		*LCS*			Batch ID: **R28526**		Analysis Date:	5/14/2008 9:42:10 PM	
Gasoline Range Organics (GRO)	0.5046	mg/L	0.050	101	80	115			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: CDX Jic 147-006 **Work Order:** 0805174

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: Volatiles									
Sample ID: MB-15890		*MBLK*			Batch ID:	**15890**	Analysis Date:	5/13/2008 10:49:44 PM	
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: LCS-15890		*LCS*			Batch ID:	**R28509**	Analysis Date:	5/13/2008 9:49:26 PM	
Methyl tert-butyl ether (MTBE)	0.4973	mg/Kg	0.10	121	67.9	135			
Benzene	0.3262	mg/Kg	0.050	117	78.8	132			
Toluene	2.173	mg/Kg	0.050	107	78.9	112			
Ethylbenzene	0.4519	mg/Kg	0.050	113	69.3	125			
Xylenes, Total	2.686	mg/Kg	0.10	117	73	128			
Method: EPA Method 8021B: Volatiles									
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R28526**	Analysis Date:	5/14/2008 9:13:56 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 5ML RB		*MBLK*			Batch ID:	**R28550**	Analysis Date:	5/15/2008 8:42:06 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	2.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID:	**R28526**	Analysis Date:	5/14/2008 7:41:35 PM	
Benzene	20.52	µg/L	1.0	103	85.9	113			
Toluene	20.63	µg/L	1.0	103	86.4	113			
Ethylbenzene	20.86	µg/L	1.0	104	83.5	118			
Xylenes, Total	64.89	µg/L	2.0	108	83.4	122			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 5/13/2008

Work Order Number 0805174 | Received by: ARS

Checklist completed by: _____ (Signature) 5/13/08 (Date) | Sample ID labels checked by: _____ (Initials)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	2°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Chain-of-Custody Record

Client: Animas Environmental Services

Address: 624 Comanche

Farmington, NM 87401

Phone #: 564-2281

email or Fax#: 324-2022

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CDX Jic 147-006

Project #:

Project Manager: Ross Kennemer

Sampler: Ross Kennemer

On Ice: ☒ Yes ☐ No

Sample Temperature: 2°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0805174	BTEX ~~+ MTBE + TMB's (8021)~~	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
5-7-08	1035	TH-2 @ 15'	Mesh Kit 4°2		1	X		X									X				
5-7-08	1125	TH-3 @ 15'			2	X		X									X				
5-7-08	1220	TH-4 @ 15'			3	X		X									X				
5-7-08	1222	TH-4 @ 17'			4	X		X									X				
5-7-08	1325	TH-5 @ 17'			5	X		X									X				
5-7-08	1415	TH-6 @ 17'			6	X		X									X				
5-7-08	1500	TH-2	4 40ml Ag 1 500 ml Ag		7	X		X									X				
5-7-08	1540	TH-3			8	X		X									X				
5-7-08	1605	TH-4			9	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Remarks:
5-12-08	1510	Ross Kennemer	8:30 5/13/08	
Date:	Time:	Relinquished by:	Received by:	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

Monday, June 23, 2008

Ross Kennemer
Animas Environmental Services
624 East Comanche
Farmington, NM 87401

TEL: (505) 486-1776
FAX (505) 324-2022

RE: CDX 147-6

Order No.: 0806203

Dear Ross Kennemer:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 6/13/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001

Hall Environmental Analysis Laboratory, Inc.

Date: *23-Jun-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	SS-1
Lab Order:	0806203	**Collection Date:**	6/11/2008 9:45:00 AM
Project:	CDX 147-6	**Date Received:**	6/13/2008
Lab ID:	0806203-01	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/16/2008 9:17:36 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/16/2008 9:17:36 PM
Surr: DNOP	65.1	61.7-135		%REC	1	6/16/2008 9:17:36 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2008 1:08:38 PM
Surr: BFB	96.0	84-138		%REC	1	6/19/2008 1:08:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/19/2008 1:08:38 PM
Toluene	ND	0.050		mg/Kg	1	6/19/2008 1:08:38 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2008 1:08:38 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2008 1:08:38 PM
Surr: 4-Bromofluorobenzene	98.3	81.4-117		%REC	1	6/19/2008 1:08:38 PM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	41	1.5		mg/Kg	5	6/19/2008 6:11:50 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *23-Jun-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	SS-2
Lab Order:	0806203	**Collection Date:**	6/11/2008 9:56:00 AM
Project:	CDX 147-6	**Date Received:**	6/13/2008
Lab ID:	0806203-02	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/16/2008 9:52:10 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/16/2008 9:52:10 PM
Surr: DNOP	72.0	61.7-135		%REC	1	6/16/2008 9:52:10 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2008 1:38:47 PM
Surr: BFB	93.0	84-138		%REC	1	6/19/2008 1:38:47 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/19/2008 1:38:47 PM
Toluene	ND	0.050		mg/Kg	1	6/19/2008 1:38:47 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2008 1:38:47 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2008 1:38:47 PM
Surr: 4-Bromofluorobenzene	93.6	81.4-117		%REC	1	6/19/2008 1:38:47 PM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	79	1.5		mg/Kg	5	6/19/2008 6:29:15 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: *23-Jun-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	SS-3
Lab Order:	0806203	**Collection Date:**	6/11/2008 10:06:00 AM
Project:	CDX 147-6	**Date Received:**	6/13/2008
Lab ID:	0806203-03	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/18/2008 3:11:37 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/18/2008 3:11:37 AM
Surr: DNOP	65.6	61.7-135		%REC	1	6/18/2008 3:11:37 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2008 2:08:51 PM
Surr: BFB	86.5	84-138		%REC	1	6/19/2008 2:08:51 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/19/2008 2:08:51 PM
Toluene	ND	0.050		mg/Kg	1	6/19/2008 2:08:51 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2008 2:08:51 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2008 2:08:51 PM
Surr: 4-Bromofluorobenzene	85.6	81.4-117		%REC	1	6/19/2008 2:08:51 PM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	97	1.5		mg/Kg	5	6/19/2008 7:21:28 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *23-Jun-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	SS-4
Lab Order:	0806203	**Collection Date:**	6/11/2008 10:57:00 AM
Project:	CDX 147-6	**Date Received:**	6/13/2008
Lab ID:	0806203-04	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/16/2008 11:01:33 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/16/2008 11:01:33 PM
Surr: DNOP	77.7	61.7-135		%REC	1	6/16/2008 11:01:33 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2008 2:39:02 PM
Surr: BFB	98.5	84-138		%REC	1	6/19/2008 2:39:02 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/19/2008 2:39:02 PM
Toluene	ND	0.050		mg/Kg	1	6/19/2008 2:39:02 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2008 2:39:02 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2008 2:39:02 PM
Surr: 4-Bromofluorobenzene	99.8	81.4-117		%REC	1	6/19/2008 2:39:02 PM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	45	1.5		mg/Kg	5	6/19/2008 7:38:53 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

Date: *23-Jun-08*

CLIENT:	Animas Environmental Services	**Client Sample ID:**	SS-5
Lab Order:	0806203	**Collection Date:**	6/11/2008 11:35:00 AM
Project:	CDX 147-6	**Date Received:**	6/13/2008
Lab ID:	0806203-05	**Matrix:**	MEOH (SOIL)

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **SCC**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	6/16/2008 11:36:12 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	6/16/2008 11:36:12 PM
Surr: DNOP	75.1	61.7-135		%REC	1	6/16/2008 11:36:12 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	6/19/2008 3:09:09 PM
Surr: BFB	92.9	84-138		%REC	1	6/19/2008 3:09:09 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.050		mg/Kg	1	6/19/2008 3:09:09 PM
Toluene	ND	0.050		mg/Kg	1	6/19/2008 3:09:09 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/19/2008 3:09:09 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/19/2008 3:09:09 PM
Surr: 4-Bromofluorobenzene	92.9	81.4-117		%REC	1	6/19/2008 3:09:09 PM
EPA METHOD 9056A: ANIONS						Analyst: **SLB**
Chloride	250	1.5		mg/Kg	5	6/19/2008 7:56:18 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level
E	Value above quantitation range
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
MCL	Maximum Contaminant Level
RL	Reporting Limit

QA/QC SUMMARY REPORT

Client: Animas Environmental Services
Project: CDX 147-6 **Work Order:** 0806203

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 9056A: Anions									
Sample ID: MB-16221		*MBLK*			Batch ID:	**16221**	Analysis Date:	6/16/2008 10:53:20 PM	
Chloride	ND	mg/Kg	0.30						
Sample ID: LCS-16221		*LCS*			Batch ID:	**16221**	Analysis Date:	6/16/2008 11:10:45 PM	
Chloride	14.86	mg/Kg	0.30	99.1	90	110			
Method: EPA Method 8015B: Diesel Range Organics									
Sample ID: MB-16211		*MBLK*			Batch ID:	**16211**	Analysis Date:	6/16/2008 2:56:17 PM	
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-16211		*LCS*			Batch ID:	**16211**	Analysis Date:	6/16/2008 3:31:15 PM	
Diesel Range Organics (DRO)	35.05	mg/Kg	10	70.1	64.6	116			
Sample ID: LCSD-16211		*LCSD*			Batch ID:	**16211**	Analysis Date:	6/16/2008 4:05:58 PM	
Diesel Range Organics (DRO)	35.34	mg/Kg	10	70.7	64.6	116	0.827	17.4	
Method: EPA Method 8015B: Gasoline Range									
Sample ID: MB-16224		*MBLK*			Batch ID:	**16224**	Analysis Date:	6/19/2008 10:41:04 PM	
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0						
Sample ID: LCS-16224		*LCS*			Batch ID:	**16224**	Analysis Date:	6/19/2008 8:10:34 PM	
Gasoline Range Organics (GRO)	26.72	mg/Kg	5.0	96.8	69.5	120			
Method: EPA Method 8021B: Volatiles									
Sample ID: MB-16224		*MBLK*			Batch ID:	**16224**	Analysis Date:	6/19/2008 10:41:04 PM	
Benzene	ND	mg/Kg	0.050						
Toluene	ND	mg/Kg	0.050						
Ethylbenzene	ND	mg/Kg	0.050						
Xylenes, Total	ND	mg/Kg	0.10						
Sample ID: LCS-16224		*LCS*			Batch ID:	**16224**	Analysis Date:	6/19/2008 8:10:34 PM	
Benzene	0.3093	mg/Kg	0.050	110	78.8	132			
Toluene	2.162	mg/Kg	0.050	107	78.9	112			
Ethylbenzene	0.4444	mg/Kg	0.050	111	69.3	125			
Xylenes, Total	2.658	mg/Kg	0.10	116	73	128			

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	S	Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name ANIMAS ENVIRONMENTAL | Date Received: 6/13/2008

Work Order Number 0806203 | Received by: ARS

Sample ID labels checked by: R (Initials)

Checklist completed by: Jamie Shomi - June 13, 08 (Signature / Date)

Matrix: | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☑	No ☐	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - Preservation labels on bottle and cap match?	Yes ☐	No ☐	N/A ☑	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	4°	*<6° C Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

70

Chain-of-Custody Record

Client: Animas Environmental Services

Address: 624 E. Comanche St. Farmington, NM 87401

Phone #: (505) 564-2280

email or Fax#: (505) 324-2022

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: CDX 147-6

Project #:

Project Manager: Ross Kennemer

Sampler: Chad Dawson

On Ice: ☒ Yes ☐ No

Sample Temperature: 4°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 0806203	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8260)	8310 (PNA or PAH)	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chlorides				Air Bubbles (Y or N)
6-11-08	945	SS-1	1 4oz Jar & Meth Kit	Meth	1	X		X									X				
6-11-08	956	SS-2			2	X		X									X				
6-11-08	1006	SS-3			3	X		X									X				
6-11-08	1057	SS-4			4	X		X									X				
6-11-08	1135	SS-5			5	X		X									X				

Date	Time	Relinquished by:	Received by:
6-11-08	1500	Chad Dawson	L. Cupps
6/12/08	1630	Sandra R. Cupps	9:25 6/13/08

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Water Sampling Record

Monitor Well No: TH-2

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Site Assessment of Pit Spill
Site: CDX Sic 147-006 well location
Location:
Sampler: R. Kennemer
Sampling Method: Disp. Bailer
Depth of Well (ft): ≈ 25'
Depth to Water (ft): 20.43

Project No.:
Date: 5-7-08
Time: 1435
Weather: Clear-Windy
Air Temperature: ≈ 65°F
Well Diam. (in.): 2"
Site Elevation (ft): 6439 (GPS)

Time	Temp (deg C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (gallons)	Notes/Observations
1435	12.99	1.24		8.36	93.4	.25 gal	
	12.04	1.26		8.02	81.4	.25 gal	
	11.86	1.22		8.02	37.5	1 gal	
	11.91	1.23		8.03	-1.5	1 gal	
1500						.25 gal	Samples Collected
						2.75 gallons Purged	

Analytical Parameters Sampled For (include Method #): BTEX (8021); TPH C_6-C_{36} (8015) Chlorides

Disposal of Purged Water: On ground surface
Chain of Custody Record Complete? (Y/N) Yes
Analytical Laboratory: Hall, Albuquerque, NM
Equipment Used During Sampling: Water level, Disposable bailer, Slow release Sampling tube, YSI Water Quality Meter.

Other Notes/Comments

Water Sampling Record

Monitor Well No: TH-3

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Site Assessment of Pit Spill
Site: CDX Jic 147-006 Well location
Location:
Sampler: R. Kennemer
Sampling Method: Disp. Bailer
Depth of Well (ft): ≈ 25'
Depth to Water (ft): 21.73'

Project No.:
Date: 5-7-08
Time: 1508
Weather: clear-windy
Air Temperature: ≈ 65°F
Well Diam. (in.): 2"
Site Elevation (ft): 6439 (GPS)

Time	Temp (deg C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (gallons)	Notes/Observations
1508	13.34	1.27		7.68	57.7	.25 gal	
	13.11	1.29		7.30	84.7	.25 gal	
	12.67	1.68		7.27	87.8	1 gal	
	12.60	1.72		7.01	98.0	1 gal	
						.25 gal	Samples Collected
						2.75 Gallons Purged	

Analytical Parameters Sampled For (include Method #): BTEX (8021) TPH C_6-C_{36} (8015) Chlorides

Disposal of Purged Water: On ground Surface
Chain of Custody Record Complete? (Y/N) Yes
Analytical Laboratory: Hall, Albuquerque, NM
Equipment Used During Sampling: Water level; Disposable bailer; slow release Sampling tube; YSI Water Quality Meter.

Other Notes/Comments

Water Sampling Record

Monitor Well No: TH-4

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Site Assessment of Pit Spill
Site: CDX Sic 147-006 Well location
Location:
Sampler: R. Kennemer
Sampling Method: Disp. Bailer
Depth of Well (ft): ≈ 25'
Depth to Water (ft): 21.85'

Project No.:
Date: 5-7-08
Time: 1546
Weather: clear-windy
Air Temperature: ≈ 65°F
Well Diam. (in.): 2"
Site Elevation (ft): 6439 (GPS)

Time	Temp (deg C)	Conductivity (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (gallons)	Notes/Observations
1546	13.50	23.06		7.94	-95.8	.25 gal	
	13.28	23.09		8.05	-118.5	.25 gal	
	13.16	23.68		8.15	-86.9	1 gal	
						.25 gal	Samples collected
						1.75 Gallons	
						Purged, low	
						Yield Well	

Analytical Parameters Sampled For (include Method #): BTEX (8021) TPH C_6-C_{36} (8015) Chlorides

Disposal of Purged Water: On ground Surface
Chain of Custody Record Complete? (Y/N) Yes
Analytical Laboratory: Hall, Albuquerque, NM
Equipment Used During Sampling: Water level; Disposable Bailer; Slow release Sampling Tube; YSI water Quality meter.

Other Notes/Comments

Well is very low yield. Water Stained black and had weathered hydrocarbon odor.

Water Sampling Record

Monitor Well No: TH-5

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Site Assessment of Pit Spill
Site: CDX Sic 147-006 Well location
Location:
Sampler: R. Kennemer
Sampling Method: NA
Depth of Well (ft): ~~Well~~ ≈ 25'
Depth to Water (ft): Well Dry

Project No.:
Date: 5-7-08 & 5-10-08
Time: 1618 & 1705
Weather: Clear-Windy
Air Temperature: ≈ 65°F
Well Diam. (in.): 2"
Site Elevation (ft): 6439 (GPS)

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (gallons)	Notes/Observations

NO SAMPLE Collected

Analytical Parameters Sampled For (include Method #): NA

Disposal of Purged Water: NA

Chain of Custody Record Complete? (Y/N) NA

Analytical Laboratory: NA

Equipment Used During Sampling: Water level

Other Notes/Comments Well was dry at 1618 on 5-7-08. Rechecked well at 1705 on 5-10-08 and no water had accumulated in casing. Due to clay content within Saturated zone and short screen, well may take up to a week to have standing water.

Water Sampling Record

Monitor Well No: TH-6

Animas Environmental Services
624 E. Comanche, Farmington NM 87401
Tel. (505) 564-2281 Fax (505) 324-2022

Project: Site Assessment of Pit Spill
Site: CDX Jic 147-006 Well location
Location:
Sampler: R. Kennemer
Sampling Method: NA
Depth of Well (ft): ≈ 25'
Depth to Water (ft): Well Dry

Project No.:
Date: 5-7-08 & 5-10-08
Time: 1622 & 1706
Weather: Clear - Windy
Air Temperature: ≈ 65°F
Well Diam. (in.): 2"
Site Elevation (ft): 6439 (GPS)

Time	Temp (deg C)	Conductivity (µS) (mS)	DO (mg/L)	pH	ORP (mV)	PURGED VOLUME (gallons)	Notes/Observations

NO SAMPLE COLLECTED

Analytical Parameters Sampled For (include Method #): NA

Disposal of Purged Water: NA

Chain of Custody Record Complete? (Y/N) NA

Analytical Laboratory: NA

Equipment Used During Sampling: Water level

Other Notes/Comments Well was dry at 1622 on 5-7-08. Rechecked well at 1706 on 5-10-08 and no water had accumulated in casing. Due to heavy clay content within saturated zone and short screen, well may take up to a week to have standing water.