

GW - 28

REPORTS

YEAR(S):

2004

2 of 2

Volume II Appendices
NAVAJO REFINING COMPANY
ARTESIA REFINERY

THREE MILE DITCH AND EVAPORATION PONDS
CORRECTIVE ACTION INVESTIGATION REPORT
RCRA Permit No. D048918817



December 2004

Navajo Refining Company
501 East Main Street, P.O. Drawer 159
Artesia, New Mexico 88210
505-748-3311

APPENDICES



APPENDICES

APPENDIX A

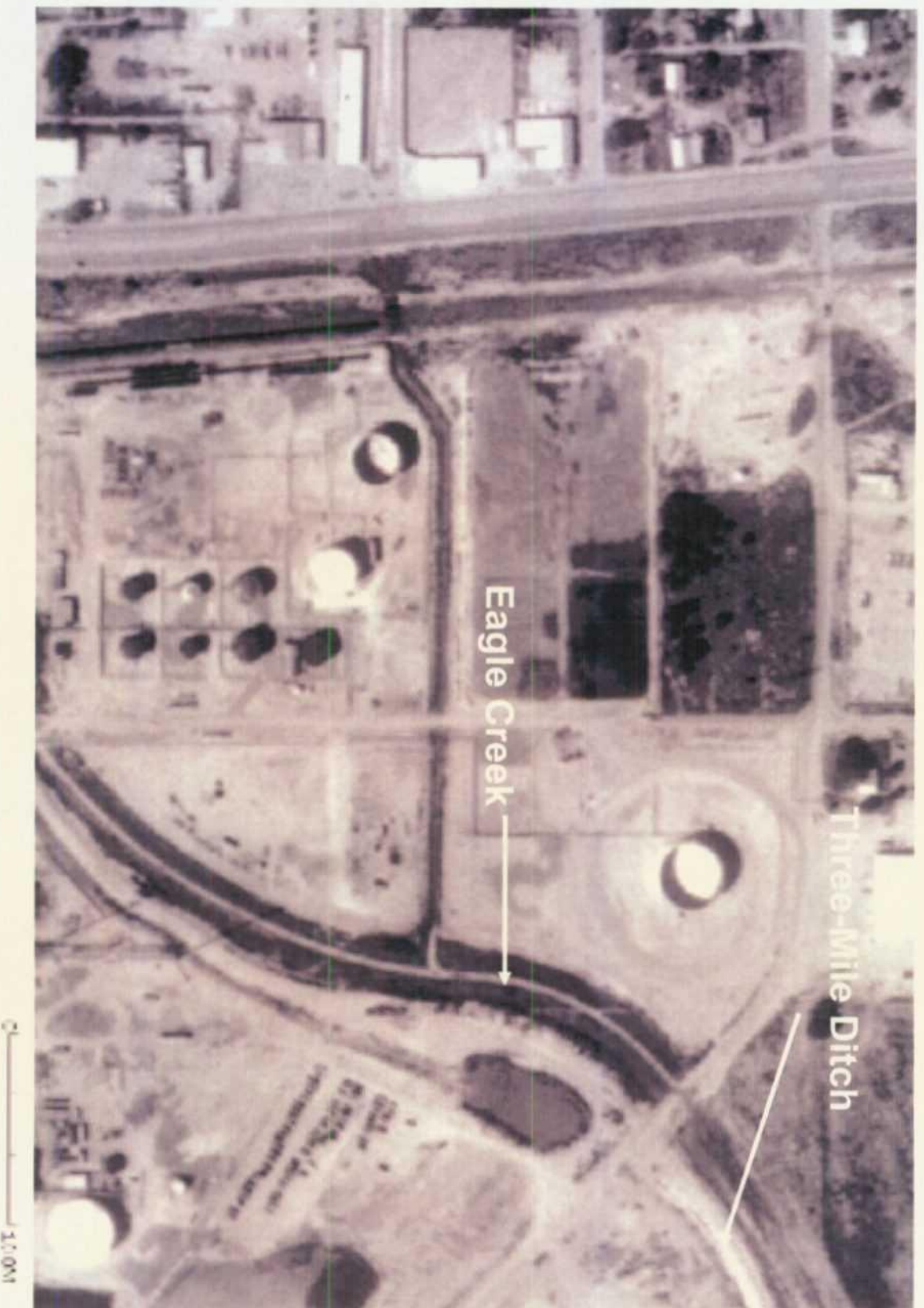


Appendix A

AERIAL PHOTOGRAPHS

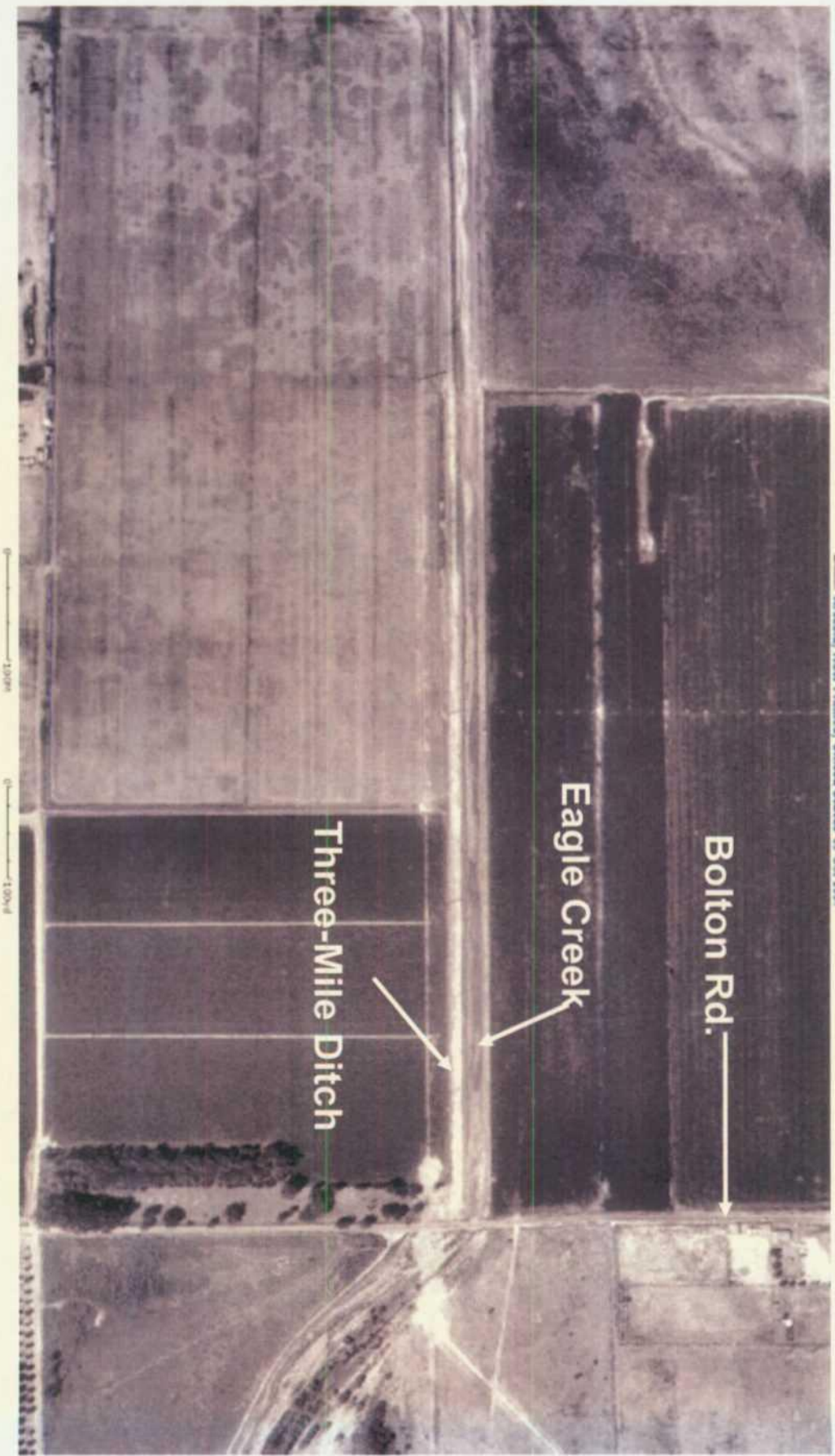


General Area of Refinery, Three-Mile Ditch and Evaporation Ponds



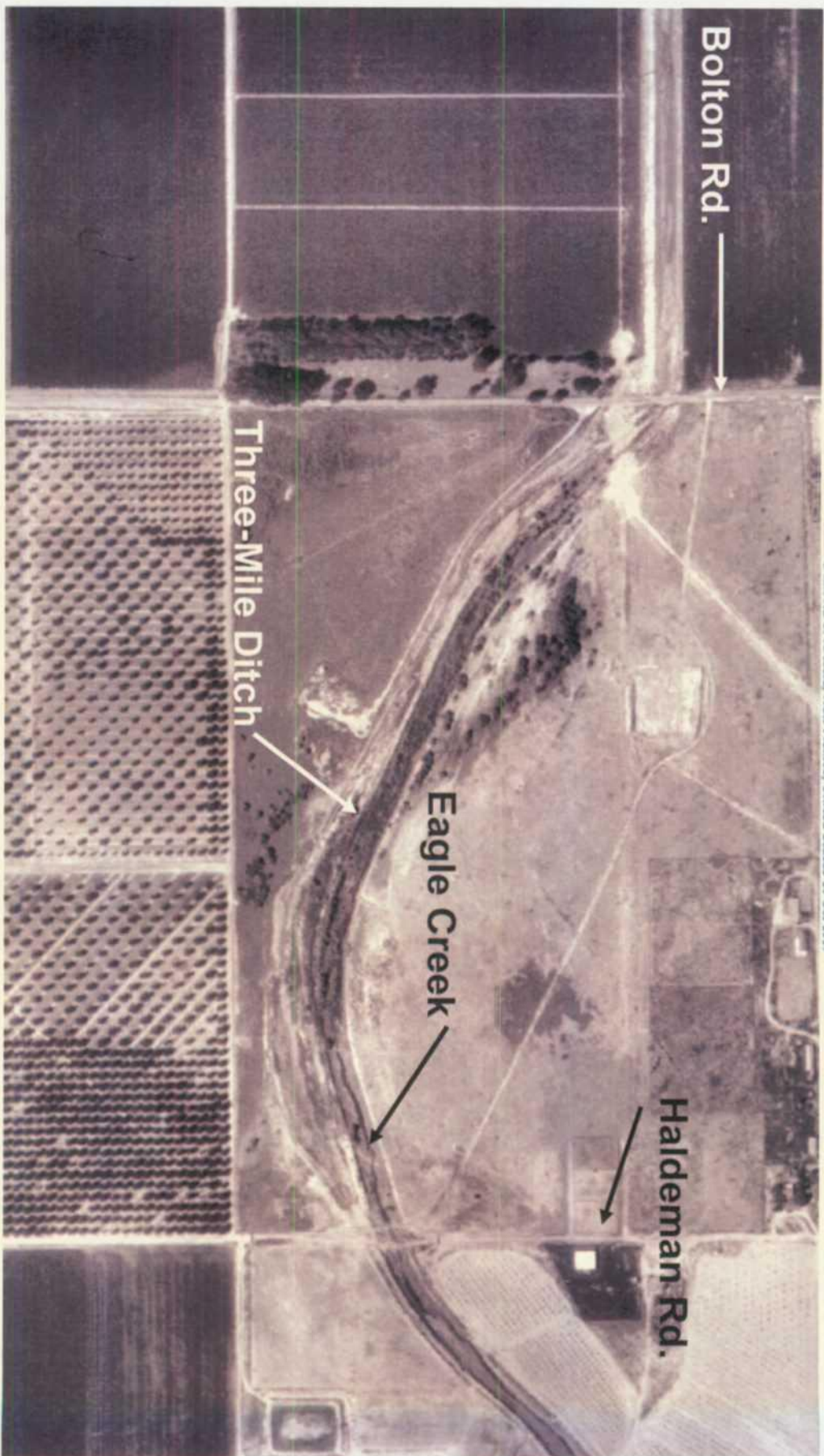
Three-Mile Ditch at Origination Point in Refinery

218000 Aerials, New Mexico, United States 19 Oct 1997



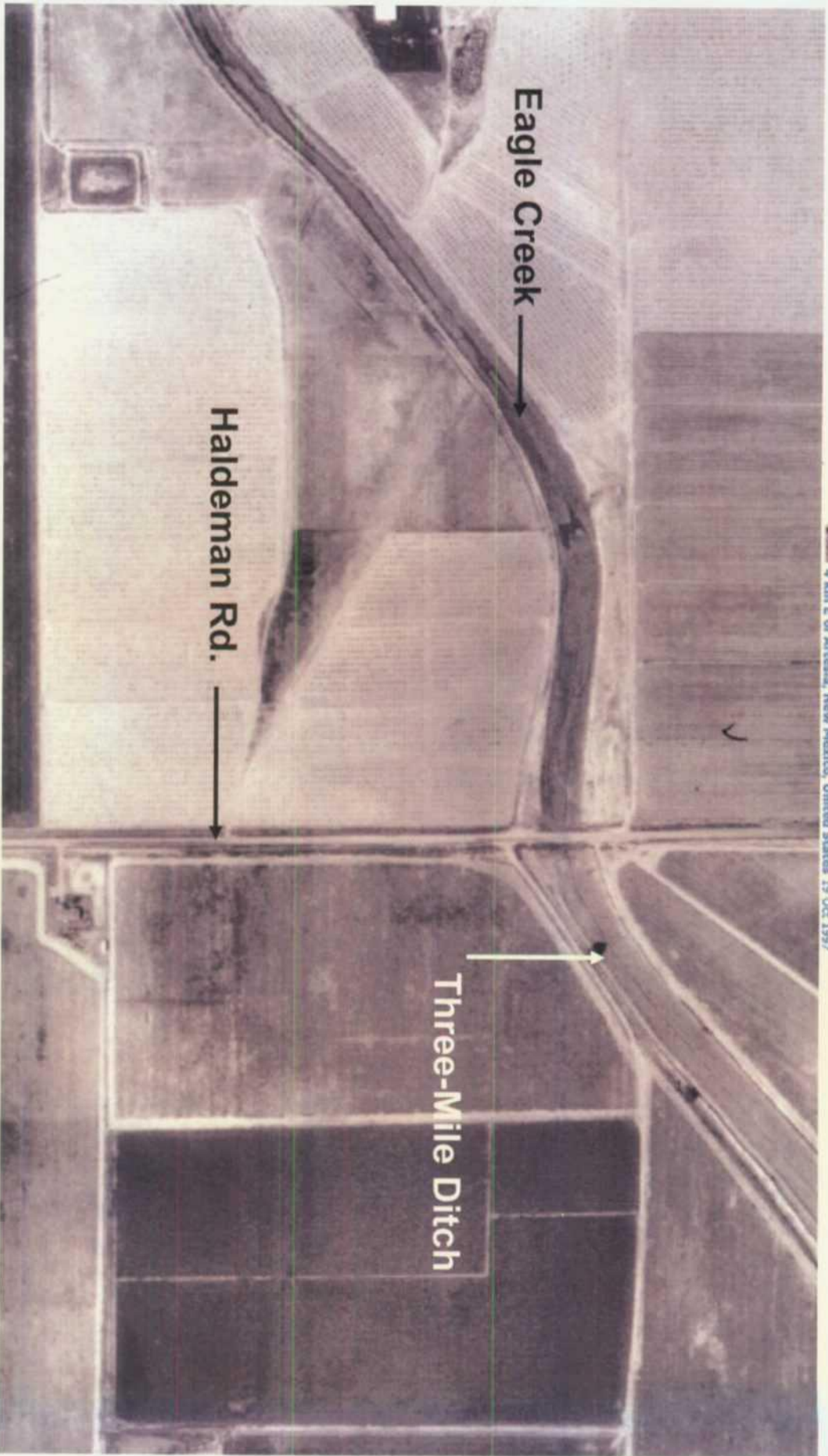
Three-Mile Ditch East From Refinery to Bolton Road

21000 3 km NE of Artesia, New Mexico, United States 19 Oct 1997



Three-Mile Ditch East from Bolton Road, Halfway to Haldeman Road

Figure 4 km E of Artesia, New Mexico, United States 19 Oct 1997



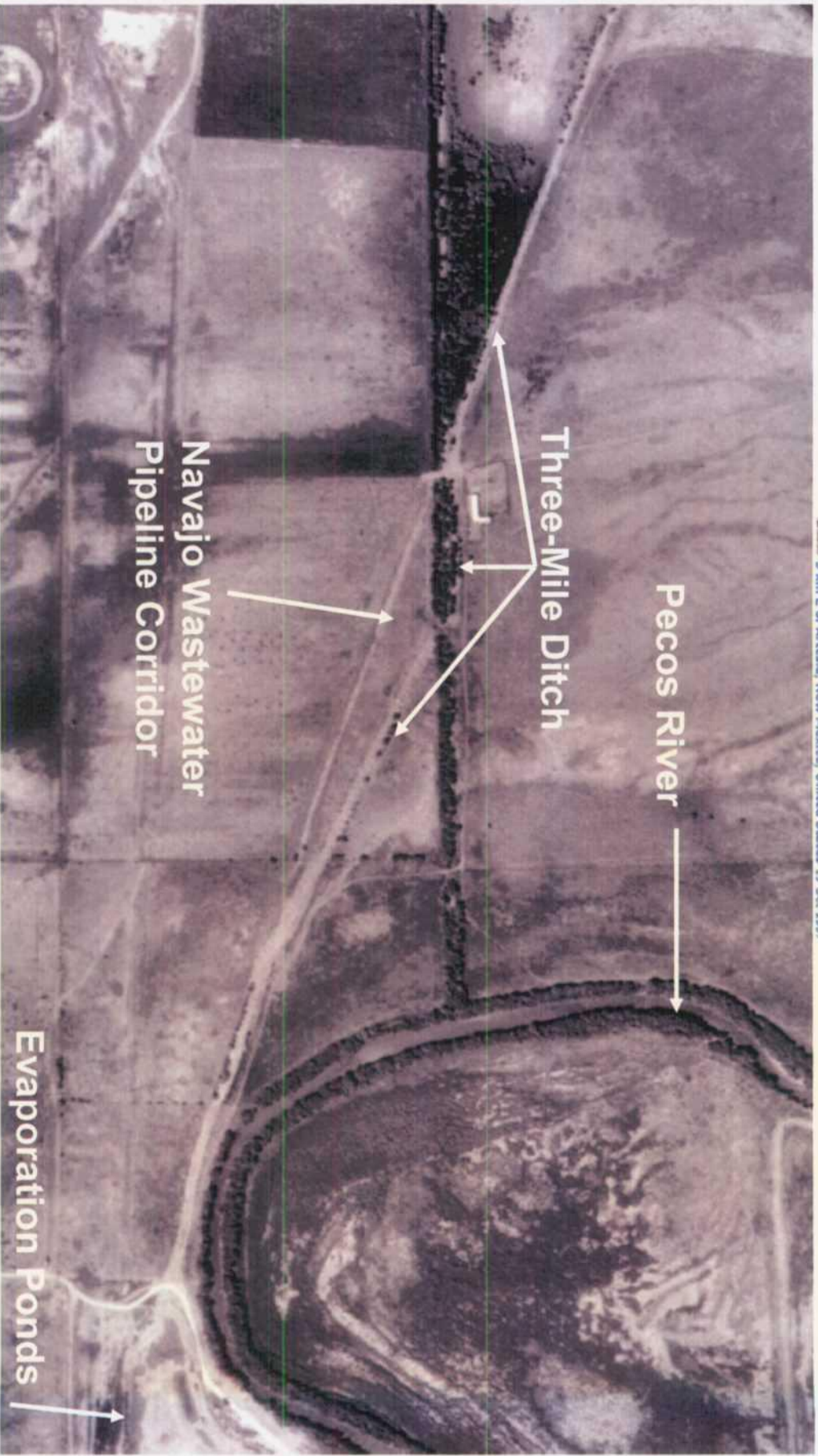
Three-Mile Ditch East and West of Haldeman Road

ESR001 5 km NLE of Artesia, New Mexico, United States 19 Oct 1997



Three-Mile Ditch East from Haldeman Road

215021 5 km E of Artesia, New Mexico, United States 19 Oct 1997



Pecos River

Three-Mile Ditch

Navajo Wastewater
Pipeline Corridor

Evaporation Ponds

Three-Mile Ditch West of Evaporation Ponds

ESRI 6 km E of Artesia, New Mexico, United States 19 Oct 1997



Pecos River

Three-Mile Ditch

Evaporation Pond 1
(inactive)

Evaporation Pond 2
(inactive)

Evaporation Ponds 3-5
(active)

Three-Mile Ditch, West of Evaporation Ponds, and Evaporation Ponds



Evaporation Ponds

APPENDIX B



Appendix B

SOIL SAMPLING METHODOLOGY

APPENDIX -B SOIL SAMPLING METHODOLOGY (from Workplan)

Drilling and Soil Sampling

Drilling

Exploratory borings will be installed using Direct Push Technology or a rotary auger drill rig. All drilling equipment will be in good working condition and capable of performing the assigned task. Drilling rigs and equipment will be operated by properly trained, experienced and responsible crews. The drilling equipment will be decontaminated before drilling each boring.

Exploratory borings will be advanced to location and specific depths specified in the Corrective Action Investigation Workplan.

The Secretary will be notified as early as is practicable if conditions arise or are encountered that do not allow the advancement of borings to the depths specified in the workplan so that alternative actions may be discussed. Precautions will be taken to prevent the migration of contaminants between geologic, hydrologic or other identifiable zones during drilling and well installation activities.

The drilling and sampling will be accomplished under the direction of a qualified engineer or geologist who will maintain a detailed log of the materials and conditions encountered in each boring. Sample information and visual observations of the cuttings and core samples will be recorded on the boring log. Known site features and/or site survey grid markers will be used as references to locate each boring prior to surveying the location. The boring locations will be measured to the nearest foot, and locations will be recorded on a scaled site map upon completion of each investigation.

Soil Sampling

Relatively undisturbed discrete soil samples will be obtained during the advancement of each boring for the purpose of logging, field screening and analytical testing. Generally, the samples will be collected at the following intervals and depths:

Utilizing direct-push technology, borings will be advanced to a depth of five feet below the maximum depth of contamination as detected by field screening but not deeper than the ground water interface (except for borings from which a groundwater sample will be obtained as noted in the next section). Soil samples will be collected every two feet from the ground surface to the maximum depth of the boring. Samples will be field screened with a PID, through visual observations of staining and by odor.

The following samples from each boring will be submitted for laboratory chemical analysis:

- from the 0-1 foot interval,
- from any observed sludge or sediment layer, just above the native soil,

APPENDIX B - SOIL SAMPLING METHODOLOGY

- from the interval in the native soil having the highest PID reading, and
- from 5 feet below the deepest positive PID reading, observation of visual staining or noticeable hydrocarbon odor, but not deeper than just above the saturated zone (water table interface)
- for borings from which a groundwater sample is to be taken, a soil sample will be taken from just above the saturated zone.

If no staining, odor or PID detection is observed (or is observed only in the surface sample), a sample will be taken from the 5-6 foot interval and the boring will be terminated at that depth (except for borings from which groundwater samples will be obtained as noted in the next section.).

The sampling interval for the borings may be modified, or samples may be obtained from a specific depth, based on field observations. A decontaminated split-barrel sampler lined with brass sleeves, a continuous coring device or other method approved by the Secretary will be used to obtain samples during the drilling of each boring.

The split barrel sampler lined with brass sleeves or a coring device is the preferred sampling method for borehole soil, rock and sediment sampling. Depending on the type of equipment available by the direct push contractor, one of these sampling methods will be employed. The following procedures will be followed if a split barrel sampler is used. Upon recovery of the sample, one or more brass sleeves will be removed from the split barrel sampler and the open ends of the sleeves will be covered with Teflon tape or foil and sealed with plastic caps fastened to the sleeves with tape for shipment to the analytical laboratory. If brass sleeves are not used, a portion of the sample will be placed in precleaned, laboratory-prepared sample containers for laboratory chemical analysis. The remaining portions of the sample will be used for logging and field screening.

Discrete samples will be collected for field screening and laboratory analyses. Homogenization of discrete samples collected for analyses other than for VOC analyses will be performed by the analytical laboratory, if necessary.

Samples to be submitted for laboratory analyses will be selected based on: (1) the results of the field screening, (2) the position of the sample relative to groundwater, suspected releases, and/or site structures or features, (3) the sample location relative to former or altered site features or structures, (4) the stratigraphy encountered in the boring as proposed in the workplan. The work plans allows for flexibility in modifying the project-specific tasks based on information obtained during course of the investigation.

The physical characteristics of the sediment (such as mineralogy, ASTM or AGI classification, moisture content, texture, color, presence of stains or odors, and/or field screening results), depth where each sample was obtained, method of sample collection and other observations will be recorded in the field log.

APPENDIX B - SOIL SAMPLING METHODOLOGY

Logging of Soil Samples

Samples obtained from all exploratory borings will be visually inspected and the soil or rock type classified in general accordance with ASTM (American Society for Testing and Materials) D2487 [Unified Soil Classification System] and D2488 and/or AGI (American Geological Institute) Methods for soil and rock classification. Detailed logs of each boring will be completed in the field by a qualified engineer or geologist. Additional information, such as the presence of water-bearing zones and any unusual or noticeable conditions encountered during drilling will be recorded on the logs. Field boring, test pit logs and field well construction diagrams will be converted to the format acceptable for use in final reports submitted to the Secretary.

Soil Sample Field Screening

Samples obtained from the borings will be screened in the field for evidence of the presence of contaminants. Field screening results will be recorded on the exploratory boring and excavation logs. Field screening results are used as a general guideline to determine the nature and extent of possible contamination as described in the workplan. In addition, screening results will be used to aid in the selection of soil samples for laboratory analysis.

The primary screening methods to be used will include visual examination and headspace vapor screening for volatile organic compounds. Presence of odor will also be noted.

Visual screening includes examination of soil samples for evidence of staining caused by petroleum-related compounds or other substances that may cause staining of natural soils such as elemental sulfur or cyanide compounds.

Headspace vapor screening targets volatile organic compounds and will be conducted by placing a soil sample in a plastic sample bag or foil sealed container allowing space for ambient air. The container will be sealed and then shaken gently to expose the soil to the air trapped in the container. The sealed container will be allowed to rest for a minimum of 5 minutes while vapors equilibrate. Vapors present within the sample bag's headspace will then be measured by inserting the probe of the photo-ionization detector (PID) in a small opening in the bag or through the foil. The maximum value and the ambient air temperature will be recorded on the field boring for each sample. The PID will be calibrated each day to the manufacturers' standard for instrument operation.

Soil Sample Types

Soil samples will be obtained at the depths described in the investigation workplan. The samples collected will be representative of the media and site conditions being investigated or monitored. QA/QC samples will be collected to monitor the validity of the soil sample collection procedures. Field duplicates will be collected at a rate of 10 percent. Equipment blanks will be collected from all sampling apparatus at a frequency of 10 percent for chemical analysis. Equipment blanks will be collected at a frequency of one-per-day if disposable sampling equipment is used. Field blanks will be collected at a frequency of one per day. The resulting data will provide information on the

APPENDIX B - SOIL SAMPLING METHODOLOGY

variability associated with sample collection, handling and laboratory analysis operations. The blanks and duplicates will be submitted for laboratory analyses associated with the project-specific contaminants, data quality concerns and media being sampled as described in the workplan.

APPENDIX C



Appendix C

GROUNDWATER SAMPLING METHODOLOGY

APPENDIX -C GROUNDWATER SAMPLING METHODOLOGY (from Workplan)

Boring Groundwater Samples

Groundwater samples will be collected from selected boring locations as shown in Figure 2 and 3 of the investigation workplan, as practicable. Borings from which a water sample is to be recovered will be installed five feet into the saturated zone. Prior to sampling, water levels will be measured using a water level indicator. Samples will be collected by bailing or geoprobe collection. Sample collection methodology will be dependent on the type of equipment available from the direct push contractor. Temporary groundwater monitoring wells will not be installed. Groundwater samples from selected borings will be analyzed for VOC, SVOC and TDS as noted in the workplan.

Monitor Well Groundwater Samples

Groundwater samples will be collected from 31 existing monitoring wells associated with the Evaporation Ponds and Three Mile Ditch (OCD-1, -2A, -3, -4, -5, -6, 7AR and 8A; MW-1, -2A, -3, -4A, -5A, -6A, -7, -8, -9, -10, -11A, -15, -16, -18A, -19, -20, -21, -22A, -25, -26, -27, -28 and -29) using low-flow sampling methods. The samples will be submitted for laboratory analysis for VOCs, SVOCs, RCRA metals, major cations/anions (Ca, Mg, K, Na, Cl, Fl, sulfates) and other general water quality parameters (specific conductance, ph, TDS) using USEPA methods 8260B, 8270C, 160.1 and 6000 series, respectively.

Prior to sampling, groundwater levels will be measured in all monitoring wells using a water level indicator. Measurement data and the date and time of each measurement will be recorded on a site monitoring data sheet. The depth to ground water will be measured to the nearest 0.01 foot. The depth to groundwater will be recorded relative to the surveyed well casing rim or other surveyed datum.

Each monitoring well will be purged by removing groundwater prior to sampling in order to ensure that formation water is being sampled. Purge volumes will be determined by monitoring, at a minimum, groundwater pH, specific conductance, temperature and dissolved oxygen concentrations during purging. Water samples will be obtained from the well after the measured parameters of the purge water have stabilized to within ten percent for three consecutive measurements. A minimum of one well volume will be purged from each monitoring well prior to obtaining measurements for use in determining whether the groundwater parameters have stabilized. The groundwater quality parameters will be measured using a Hariba multimeter instrument. The volume of groundwater purged, the instruments used and the readings obtained at each interval will be recorded on the field monitoring log. Well purging will be conducted in accordance with the NMED HWB Draft Position Paper "Use of Micropurging and Low-flow Sampling Techniques for Compliance Groundwater Monitoring" (October 2001).

Groundwater samples will be obtained from each well after a sufficient amount of water has been removed from the well casing to ensure that the sample is representative of formation water. Groundwater samples will be obtained using methods described in this workplan and the NMED HWB Draft Position Paper "Use of Micropurging and Low-flow Sampling Techniques for Compliance Groundwater Monitoring" within 24 hours of the completion of well purging. Sample

APPENDIX C - GROUNDWATER SAMPLING METHODOLOGY

collection methods will be documented in the field monitoring reports. The samples will be transferred to the appropriate, clean, laboratory-prepared containers provided by the analytical laboratory.

Groundwater samples intended for metals analysis will be submitted to the laboratory as total metals samples. Groundwater samples also may be obtained for dissolved metals analysis and will be filtered using 0.45 micron disposable in-line filters.

Groundwater Sample Types

Field duplicates, field blanks, equipment rinseate blanks and trip blanks will be obtained for quality assurance during ground water and surface water sampling activities.

Field duplicate groundwater samples will be obtained at a frequency of ten percent. At a minimum, one duplicate sample per sampling event will always be obtained.

Field blanks will be obtained at a minimum frequency of one per day per site or unit. Field blanks will be generated by filling sample containers in the field with deionized water and submitting the samples with the groundwater samples to the analytical laboratory for the appropriate analyses.

Equipment rinseate blanks will be obtained for chemical analysis at the rate of ten percent or a minimum of one rinseate blank per sampling day. Equipment rinseate blanks will be collected at a rate of one per sampling day if disposable sampling apparatus is used. Rinseate sample will be generated by rinsing deionized water through unused or decontaminated sampling equipment. The rinseate sample then will be placed in the appropriate sample container and submitted with the groundwater samples to the analytical laboratory for the appropriate analyses.

Trip blanks will accompany laboratory sample bottles and shipping and storage containers intended for VOC analyses. Trip blanks will consist of a sample of analyte-free deionized water prepared by the laboratory and placed in an appropriate sample container. The trip blank will be prepared by the analytical laboratory prior to the sampling event and will be kept with the shipping containers and placed with other water samples obtained from the site each day. Trip blanks will be analyzed at a frequency of one for each shipping container of samples.

APPENDIX D



Appendix D

BORING LOGS



BORING NO.

BSB-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00093

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

[illegible]



BORING NO.

BSB-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang

DATE COMPLETED: 6/22/04

[illegible]



ARCADIS

BORING LOG

BORING NO.

BSB-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00095

FILE NAME: BSB-3.dat

DATE BEGUN: 6/22/04

DATE COMPLETED: 6/22/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						0.0			SAND: 5 YR 6/6 reddish yellow, fine grained, subangular, well sorted, loose, dry.
		Core			4.5	0.0			
-5						0.0			CLAY: 5 YR 5/4 reddish brown, moist.
		Core				0.0			CLAY: 5 YR 5/4 reddish brown, moist.
-10						0.0			



BORING NO.

BSB-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/23/04 DATE COMPLETED: 6/23/04

[illegible]



BORING NO.

BSB-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00097

FILE NAME: BSB-5.dat

DATE BEGUN: 6/23/04

DATE COMPLETED: 6/23/04

[illegible]

**ARCADIS**

BORING LOG

BORING NO.

BSB-6

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00098

FILE NAME: BSB-6.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/22/04 DATE COMPLETED: 6/22/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						0.0			SAND: 2.5 YR 4/4 reddish brown, dry, fine grained, subangular, well sorted, loose.
		Core			4.0	0.0			
-5						0.0			SAND: 2.5 YR 4/4 reddish brown, wet, fine grained, subangular, well sorted, loose.
		Core				0.0			
-10									SAND: GLEY 2 4/1 dark bluish gray, fine grained, subangular, well sorted, soft.



BORING NO.

BSB-7

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00099

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/30/04 DATE COMPLETED: 6/30/04

[illegible]



BORING NO.

BSB-8

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DATE COMPLETED: 6/30/04

[illegible]



ARCADIS

BORING LOG

BORING NO.

BSB-9

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001	DRILLING CO:	ESN
CLIENT NAME:	Navajo Refinery	DRILLING METHOD:	Geoprobe
PROJECT NAME:	Artesia Investigation	DRILLER:	Zack Beck
SITE LOCATION:	Artesia, New Mexico	LOGGER:	R. Lang
UNIQUE NUMBER:	31-009-00101	FILE NAME:	BSB-9.dat
		DATE BEGUN:	7/16/04
		DATE COMPLETED:	7/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						3.9			
					4.5				
						4.4			
-5									

CLAY: 7.5 YR 6/4 light brown, firm, dry from 0.0' to -3.0', moist -3.0' to -4.0', wet -4.0' to -5.0'.

Core



BORING NO.

BSB-10

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00102

FILE NAME: BSB-10.dat

DATE BEGUN: 7/16/04

DATE COMPLETED: 7/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-3.9		Core			4.0	3.9			CLAY: 7.5 YR 7/4 pink, dry to moist, firm.
-8.9		Core			4.5	8.9			
-10.4						5.0			CALICHE: 7.5 YR pinkish white, dry.
-12.4		Core			5.0	72.0			CLAY: 2.5 YR 5/4 red, firm, moist.
-15									CLAY: 7.5 YR 7/4 pink, wet, firm.

**ARCADIS**

BORING LOG

BORING NO.

TMD-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00184

FILE NAME: TMD-1.dat

DATE BEGUN: 6/10/04

DATE COMPLETED: 6/10/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						1.8			CLAY: 5 YR 8/3 pink arenaceous.
		Core		2.4		4.9			CLAY: 5 YR 5/4 reddish brown, moist, PID background 1.8 becoming wet and plastic with depth.
-5						3.7			
		Core		5.0		5.2			
-10						5.7			CLAY: GLEY 2 8/1 light greenish gray, wet, odor, arenaceous.
		Core		5.0		180.2			
-15						428			
		Core		3.0		526			
-20						573			CLAY: GLEY 1 8/1 10 Y light greenish gray, moist, slightly arenaceous.
		Core		4.0		361			
-25						23.5			
		Core		3.0		3.3			CLAY: 10 R 7/4 pale red, arenaceous.
-30						10.9			
		Core		5.0		7.5			
-35						3.3			CLAY: 10 R 7/6 light red, moist, plastic, CALICHE nodules 8/2 pink.
		Core		5.0		3.9			
						3.3			
						1.1			
						3.1			
						2.6			



BORING NO.

TMD-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/10/04 DATE COMPLETED: 6/10/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-3.6		Core			5.0	3.6			CLAY: 5 YR 6/3 light reddish brown, soft, arenaceous.
-5.1						1.3			
-8.4		Core				3.3			CLAY: 10 YR 8/2 very pale yellow, CALICHE nodules, moist.
-9.9						1.8			
-11.7						1.3			CLAY: GLEY 2 8/1 light blueish gray, molted with CALICHE wet, well dry when drilled.
-13.8		Core				4.1			
-15.3						1.5			



BORING NO.

TMD-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00186

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/10/04 DATE COMPLETED: 6/10/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						2.0			CLAY: 2.5 YR 5/3 reddish brown, arenaceous
					5.0	2.3			
	Core					1.8			CLAY: 2.5 YR 5/3 reddish brown, CALICHE nodules, 5 YR 8/1 white, soft, moist.
-5						2.6			
					5.0	1.8			
	Core					2.0			CALICHE: GLEY 2 light blueish gray, soft, moist, arenaceous.
-10					4.0	1.0			
						0.7			
	Core				5.0	0.7			
						0.5			
-20						1.0			CLAY: 10 R 6/6 light red, plastic, moist.
					5.0	2.6			
-25						1.3			

**ARCADIS**

BORING LOG

BORING NO.

TMD-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001	DRILLING CO:	ESN
CLIENT NAME:	Navajo Refinery	DRILLING METHOD:	Geoprobe
PROJECT NAME:	Artesia Investigation	DRILLER:	Zack Beck
SITE LOCATION:	Artesia, New Mexico	LOGGER:	R. Lang
UNIQUE NUMBER:	31-009-00187	FILE NAME:	TMD-4.dat
		DATE BEGUN:	6/18/04
		DATE COMPLETED:	6/18/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						2.2			CLAY: 5 YR 5/3 reddish brown.
						2.2			CLAY: 5 YR 4/3 reddish brown.
	Core				5.0	2.2			CLAY: 5 YR 4/4 reddish brown, wet.
-5						2.2			CLAY: 5 YR 4/3 reddish brown, wet.
	Core				5.0	1.9			CLAY: 5 YR 4/3 reddish brown, extremely wet.
-10						2.2			SANDY CLAY: 5 YR 6/3 light reddish brown, wet.
						4.0			SANDY CLAY: 2.5 YR 8/1 white, wet, GRAVELLY.
	Core				5.0	3.3			GRAVELLY CLAY: 2.5 YR 7/2 pale red, wet.
-15						3.6			GRAVELLY CLAY: 2.5 YR 5/4 reddish brown, wet.



BORING NO.

TMD-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/10/04 DATE COMPLETED: 6/10/04

UNIQUE NUMBER: 31-009-00188 FILE NAME: TMD-5.dat

[illegible]



BORING NO.

TMD-6

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 6/10/04

DATE COMPLETED: 6/10/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						1.2			CLAY: 5 YR 6/4 light reddish brown, dry.
					5.0	2.0			
-5						1.5			CLAY: 5 YR 3/4 dark reddish brown, plastic, wet.
					5.0	0.0			
-10						2.3			CALICHE: 5 YR 8/2 pinkish white, soft, moist.
					5.0	0.2			
						0.2			
-15						0.7			CLAY: 10 R 8/3 pink, soft, wet. WL -5.75' from TOC.
					5.0	0.5			
						0.5			
-20						0.5			



BORING NO.

TMD-7

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/10/04 DATE COMPLETED: 6/10/04

UNIQUE NUMBER: 31-009-00190 FILE NAME: TMD-7.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-0.7						0.7			CLAY: 5 YR 6/4 light reddish brown, dry.
-0.5						0.5			
-2.3						2.3			
-5.0						5.0			CLAY: 5 YR 3/4 dark reddish brown, wet, soft, plastic.
-10.0						18.0			CLAY: 7.5 YR 2.5/2 very dark brown, impacted, no odor.
-12.0						20.0			CALICHE: 7.5 YR 8/1 white, soft to sticky, wet, HALITE crystals.
-15.0						20.0			CLAY: 10 R 5/6 red, soft, wet.



BORING NO.

TMD-8

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00191

FILE NAME: TMD-8.dat

DATE BEGUN: 6/10/04

DATE COMPLETED: 6/10/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-2.5		Core			2.5	0.0			CLAY: 5 YR 6/4 light reddish brown, dry.
-5						1.5			
-7.5		Core			5.0	0.2			CALICHE: 7.5 YR 8/1 white, soft, wet.
-10						0.5			
-12.5		Core			5.0	0.2			
-15						0.2			CLAY: 10 R 5/6 red, soft, wet.

**ARCADIS**

BORING LOG

BORING NO.

TMD-9

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001	DRILLING CO:	ESN
CLIENT NAME:	Navajo Refinery	DRILLING METHOD:	Geoprobe
PROJECT NAME:	Artesia Investigation	DRILLER:	Zack Beck
SITE LOCATION:	Artesia, New Mexico	LOGGER:	R. Lang
UNIQUE NUMBER:	31-009-00192	FILE NAME:	TMD-9.dat
		DATE BEGUN:	6/11/04
		DATE COMPLETED:	6/11/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 5 YR 6/4 light reddish brown, dry.
					3.0	50.0			
						50.0			
-5						0.0			CLAY: 2.5 YR 8/4 pink, soft, wet, arenaceous.
					5.0	0.0			
						0.0			CLAY: GLEY 2 8/1 10 B light blueish gray, wet, soft.
-10						0.0			



BORING NO.

TMD-10

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00193

FILE NAME: TMD-10.dat

DATE BEGUN: 6/11/04

DATE COMPLETED: 6/11/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			3.0	0.5			CLAY: 7.5 YR 8/4 pink, soft, dry, contains GRAVEL.
						0.2			
-5						2.3			
		Core			5.0	0.0			
						1.3			CALICHE: 7.5 YR pinkish white, soft, sticky, wet.
-10						0.5			GRAVEL: 7.5 yr 8/6 reddish yellow, SAND to CHERT and LITHIC GRAVEL to 3 cm, subrounded, poorly sorted, loose, wet, refusal @ -11.



ARCADIS

BORING LOG

BORING NO.

TMD-11

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00194

FILE NAME: TMD-11.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/11/04 DATE COMPLETED: 6/11/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 5 YR 4/4 reddish brown, dry, soft.
					3.0	0.0			
	Core					2.0			CLAY: 5 YR 4/2 dark reddish gray, moist.
-5						1.5			
	Core				5.0	0.5			
-10						1.5			CLAY: 5 YR 7/4 pink, soft, moist.
	Core				5.0	1.5			
-15						3.1			
	Core				5.0	3.2			
-20						1.0			GRAVEL: 10 YR light yellowish brown CLAY to CHERT, LITHIC pebbles to 2 cm, well rounded, poorly sorted, soft, wet.

**ARCADIS**

BORING LOG

BORING NO.

TMD-12

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

CLIENT NAME: Navajo Refinery

PROJECT NAME: Artesia Investigation

SITE LOCATION: Artesia, New Mexico

UNIQUE NUMBER: 31-009-00195

FILE NAME: TMD-12.dat

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 6/11/04

DATE COMPLETED: 6/11/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						0.5			CLAY: 5 YR 4/4 reddish brown, dry, soft.
					4.0	0.5			
	Core					0.5			CLAY: 5 YR 4/2 dark reddish gray,
-5						1.3			
	Core				5.0	1.3			CLAY: GLEY 2 2.5/1 blueish black, impacted, moist, no odor.
-10						1.0			
	Core				5.0	0.2			CLAY: 7.5 YR 7/4 pink, moist.
						0.5			
-15						0.0			
	Core				5.0	0.0			
						0.0			
-20						0.0			



BORING NO.

TMD-13

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/14/04 DATE COMPLETED: 6/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						2.3			
		Core			3.0	3.1			CLAY: 10 YR 7/4 very pale brown, dry, soft.
-5						2.8			
		Core			4.0	25.9			CLAY: 10 YR 7/4 very pale brown, moist.
-10						5.2			
		Core			5.0	4.4			
						3.9			
-15						4.1			



BORING NO.

TMD-14

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00197

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/14/04 DATE COMPLETED: 6/14/04

[illegible]

**ARCADIS**

BORING LOG

BORING NO.

TMD-15

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00198

FILE NAME: TMD-15.dat

DATE BEGUN: 6/14/04

DATE COMPLETED: 6/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 10 YR 7/4 very pale brown, soft.
					3.5	4.1			
	Core					4.4			CLAY: 10 YR 4/4 dark yellowish brown.
-5						16.1			CLAY: 10 YR 6/1 gray, moist, odor.
	Core				5.0	36.4			
-10						5.7			CLAY: 10 YR 8/4 very pale brown, moist to wet.
	Core				4.5	4.1			
-15						3.6			



BORING NO.

TMD-16

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

UNIQUE NUMBER: 31-009-00199 FILE NAME: TMD-16.dat

[illegible]



BORING NO.

TMD-17

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

[illegible]



BORING NO.

TMD-18

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00201

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-3.5		Core			2.5	3.5			CLAY: 10 YR 6/3 pale brown, soft, moist.
-5						3.5			
-9.3		Core			5.0	9.3			CLAY: GLEY 2 6/1 blueish gray, wet.
-112.1						112.1			
-17.3						17.3			CLAY: GLEY 2.5/1 blueish black.
-4.7						4.7			
-15						4.5			CLAY: 10 YR 7/3 very pale brown, arenaceous to very SANDY.



BORING NO.

TMD-20

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00203

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.5	1.7			CLAY: 10 YR 6/3 pale brown, soft, dry.
-5						1.5			
						1.2			
-10						1.0			
						1.0			
-15						0.5			



BORING NO.

TMD-21

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

UNIQUE NUMBER: 31-009-00204 FILE NAME: TMD-21.dat

[illegible]



BORING NO.

TMD-22

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00205

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/15/04 DATE COMPLETED: 6/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-0.6		Core			4.8	0.0			CLAY: 10 YR 6/3 pale brown, soft, dry, GYPSUM abundant.
-1.2						1.2			
-1.8						0.0			
-2.4						0.5			
-3.0						0.0			CLAY: 5 YR 4/1 dark gray, wet, soft.
-3.6						0.0			
-4.2						0.0			CLAY: 5 YR 8/3 pink, arenaceous.
-4.8						0.0			
-5.4						0.0			
-6.0						0.0			
-6.6						0.0			
-7.2						0.0			
-7.8						0.0			
-8.4						0.0			
-9.0						0.0			
-9.6						0.0			
-10.2						0.0			
-10.8						0.0			
-11.4						0.0			
-12.0						0.0			
-12.6						0.0			
-13.2						0.0			
-13.8						0.0			
-14.4						0.0			
-15.0						0.0			

**ARCADIS**

BORING LOG

BORING NO.

TMD-24

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

CLIENT NAME: Navajo Refinery

PROJECT NAME: Artesia Investigation

SITE LOCATION: Artesia, New Mexico

UNIQUE NUMBER: 31-009-00207

FILE NAME: TMD-24.dat

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 6/16/04

DATE COMPLETED: 6/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 7.5 YR 5/4 brown, dry.
-5	Core				3.0	0.0			
-10	Core				4.8	0.0			CLAY: 7.5 YR 5/4 brown, moist.
-15	Core				5.0	0.0			CALICHE: 10 YR 8/1 white, soft, wet.
-20	Core				5.0	0.0			CLAY: 5 YR 6/6 reddish yellow, wet.
-25	Core				5.0	3.3			CLAY: 2.5 YR 8/3 pink, firm, wet.
-30	Core				5.0	2.4			
-35	Core					2.9			NO RETURNS: Could not recover core from tool, SAND in tool 10 R 5/6 red, very fine grained, wet at -35.0'.

**ARCADIS**

BORING LOG

BORING NO.

TMD-25

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00208

FILE NAME: TMD-25.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/16/04 DATE COMPLETED: 6/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 7.5 YR 5/4 brown, dry.
-5		Core			3.0	0.0			
-10		Core			3.0	0.0			GRAVEL: 10 YR 5/3 brown, SAND and CHERT and LITHIC GRAVEL to 2 cm, loose, dry, becoming wet at -10.0'.
-15		Core			2.5	0.0			
-20		Core			5.0	0.0			CLAY: GLEY 2 7/1 light blueish gray, rare SAND interbeds, soft, wet.
-25		Core			5.0	3.0			CLAY: 2.5 YR 5/6 red, firm, wet.
-30						2.1			
						2.6			
						2.6			SAND: 2.5 YR 7/3 light reddish brown, fine grained, subrounded, well sorted, loose, wet, some black grains.

**ARCADIS**

BORING LOG

BORING NO.

TMD-26

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00209

FILE NAME: TMD-26.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/16/04 DATE COMPLETED: 6/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 7.5 YR 5/4 brown, dry.
-3.5	Core				3.5	0.0			
-4.0	Core				4.0	0.0			CLAY: 7.5 YR 8/4 pink, soft, wet.
-10.5	Core				3.5	0.0			CLAY: GLEY 2 6/1 blueish gray.
-15.0	Core				5.0	0.0			CLAY: 10 R 7/4 pale red, soft, wet.
-20.0	Core				5.0	0.0			
-25.0	Core				5.0	0.0			
-30.0	Core				5.0	0.0			

**ARCADIS**

BORING LOG

BORING NO.

TMD-27

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/16/04 DATE COMPLETED: 6/16/04

UNIQUE NUMBER: 31-009-00210 FILE NAME: TMD-27.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 7.5 YR 5/4 brown, dry.
					2.0	0.0			
	Core					0.0			SAND: 10 YR reddish yellow, wet.
-5						0.0			
	Core				2.5	0.0			CLAY: GLEY 2 6/1 blueish gray, wet.
-10						0.0			
	Core				5.0	0.0			CLAY: 5 YR 8/4 pink, soft, wet.
-15						0.0			
						0.0			
-20						0.0			
						0.0			CLAY: 10 R 5/6 wet, firm.
-25						0.0			



ARCADIS

BORING LOG

BORING NO.

TMD-28

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

CLIENT NAME: Navajo Refinery

PROJECT NAME: Artesia Investigation

SITE LOCATION: Artesia, New Mexico

UNIQUE NUMBER: 31-009-00211

FILE NAME: TMD-28.dat

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 6/16/04

DATE COMPLETED: 6/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									CLAY: 7.5 YR 5/4 brown, dry.
					3.5	0.0			
						0.0			
-5									CLAY: 7.5 YR 8/4 pink, soft, wet, arenaceous.
						0.0			
					4.0	0.0			CLAY: 7.5 YR 2.5/1 black, wet.
-10						0.0			CLAY: 7.5 YR 8/3 pink, wet.
					5.0	0.0			CLAY: 7.5 YR 7/1 light gray, soft, wet.
-15						0.0			CLAY: 2.5 YR 6/6 light red, soft, firm.
					5.0	0.0			
-20						0.0			



BORING NO.

TMD-29

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00212

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/17/04 DATE COMPLETED: 6/17/04

[illegible]



BORING NO.

TMD-30

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00213

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/17/04 DATE COMPLETED: 6/17/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						1.5			CLAY: 10 YR 4/4 dark yellowish brown, dry.
						1.5			CLAY: 10 YR 4/4 dark yellowish brown, moist.
		Core			3.8				
						2.2			
-5						2.2			CLAY: 2.5 YR 5/6 red, wet, firm, contains GYPSUM crystals.
		Core			5.0				
						2.6			
-10						2.6			
		Core			5.0				CLAY: 2.5 YR 7/3 light reddish brown.
						2.2			
-15						2.2			



BORING NO.

TMD-31

Page 1 of 1

DATE COMPLETED: 6/17/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-1.2		Core			3.0	1.2			CLAY: 10 YR 4/4 dark yellowish brown, dry.
-1.5						1.5			
-5						1.9			
-5.0		Core			5.0	1.5			CLAY: 2.5 YR 5/6 red, wet.
-10						1.5			
-15		Core			5.0	1.8			
-20						2.2		CALICHE: 10 R 8/1 white, firm, wet.	



BORING NO.

TMD-32

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 6/17/04

DATE COMPLETED: 6/17/04

[illegible]



BORING NO.

TMD-33

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/17/04 DATE COMPLETED: 6/17/04

[illegible]



BORING NO.

TMD-34

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00217

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/17/04 DATE COMPLETED: 6/17/04

[illegible]



BORING LOG

BORING NO.

TMD-35

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00218

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/21/04 DATE COMPLETED: 6/21/04

FILE NAME: TMD-35.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						0.8			CLAY: 7.5 YR light brown, soft, dry.
					4.5	0.8			
						0.8			
-5						0.8			CLAY: 2.5 YR 4/4 light reddish brown, moist.
					4.8	1.2			
						0.4			
-10					5.0	0.4			
						0.4			
-15									SAND: 2.5 YR 5/4 reddish brown, fine grained, subrounded to subangular, well sorted, loose, wet.



BORING NO.

TMD-36

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/21/04 DATE COMPLETED: 6/21/04

UNIQUE NUMBER: 31-009-00219 FILE NAME: TMP-36.dat

[illegible]



BORING NO.

TMD-37

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00219

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/21/04 DATE COMPLETED: 6/21/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-	X	Core	■		4.0	0.0		[Stippled Pattern]	SAND: 7.5 YR light brown, fine grained to very fine grained, subangular, fair sorting, loose, dry.
-5	X					0.0			
-	X	Core	■		4.5	0.0		[Horizontal Line Pattern]	CLAY: 5 YR 5/4 reddish brown.
-10	X					7.9			CLAY: GLEY 2 3/1 dark blueish gray, arenaceous, wet.
-	X	Core	■		5.0	2.5			
-15	X					0.0			
-	X	Core	■		4.8	0.0		[Wavy Line Pattern]	CLAY: 2.5 YR 5/6 red and 10 YR 6/4 light yellowish brown, interbedded, firm, wet.
-20	X					0.0			



BORING NO.

TMD-38

Page 1 of 1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/23/04 DATE COMPLETED: 6/23/04

UNIQUE NUMBER: 31-009-00220 FILE NAME: TMD-38.dat

[illegible]



BORING NO.

EPI-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/23/04 DATE COMPLETED: 6/23/04

[illegible]



BORING NO.

EPI-11

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/22/04 DATE COMPLETED: 6/22/04

UNIQUE NUMBER: 31-009-00119 FILE NAME: EPI-11.dat

[illegible]



BORING NO.

EPI-12

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00120

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/24/04 DATE COMPLETED: 6/24/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						15.2			SAND: 10 R 5/6 dark yellowish brown, very fine grained, poorly sorted, argillaceous.
		Core			3.5	6.3			
-5						5.9			CLAY: GLEY 1 2.5/N black, soft, wet, some SANDS, GLEY 1 2.5/N black, as interbeds, impacted, wet.
		Core			3.5	6.7			
-10						2.9			CLAY: 2.5 YR 4/4 reddish brown, soft to firm, wet.
		Core			4.5	3.3			
-15									SAND: GLEY 2 4/1 dark blueish gray, fine grained to SILT, subrounded, fair sorting, loose, wet.



BORING NO.

EP2-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00121

DRILLING CO:	ESN
DRILLING METHOD:	Geoprobe
DRILLER:	Zack Beck
LOGGER:	R. Lang
DATE BEGUN:	6/25/04
DATE COMPLETED:	6/25/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			4.0	24.1			SAND: 10 R 5/4 dark reddish brown, fine grained, poorly sorted, loose, dry.
-5		Core			4.5	259.0			CLAY: GLEY 1 1/2.5 N black, soft, impacted, odor, wet.
		Core				97.3			
-10		Core				138.4			CLAY: GLEY 2 6/1 blueish gray.
		Core				9.7			CLAY: GLEY 1 1/2.5 N black, firm, impacted, odor.
-15		Core				4.2			
		Core				4.2			SAND: GLEY 2 3/1 dark blueish gray, fine grained, subrounded, well sorted, loose, flowing SAND, stopped probe at -20.0'
-20		Core				4.2			



BORING NO.

EP2-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

UNIQUE NUMBER: 31-009-00122 FILE NAME: EP2-2.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.8	2.1			SAND: 10 R 5/4 dark reddish brown, fine grained, poorly sorted, loose, dry.
-5		Core				27.9			
		Core				10.9			CLAY: GLEY 1 1/2.5 N black, soft, odor, moist, SAND: GLEY 1 1/2.5 N black, soft, odor, moist, interbedded.
-10		Core				5.0			
		Core				2.5			CLAY: 5 YR 5/4 brown and GLEY 1 1/2.5 N black, mixed.
-15						5.4			SAND: GLEY 1 1/2.5 N black, fine grained, subrounded, well sorted, loose, wet.



BORING NO.

EP2-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00123

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

[illegible]



BORING NO.

EP2-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00124

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						423			SAND: 10 R 5/4 dark reddish brown, fine grained, poorly sorted, loose, dry.
	Core			4.0					CLAY: 10 R 5/4 dark reddish brown, fine grained, poorly sorted, loose, moist, impacted, odor.
-5						619			CLAY: GLEY 1 1/2.5 N black, soft, odor, moist, some free phase hydrocarbon.
	Core			3.5					
						388			
-10						98.6			
	Core					5.4			
				4.5					
-15						2.4			SAND: GLEY 1 1/2.5 N black, fine grained, subangular, well sorted, loose, wet, flowing SAND, prevented deeper penetration.

**ARCADIS**

BORING LOG

BORING NO.

EP2-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00125

FILE NAME: EP2-5.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						1.2			SAND: 10 R 5/4 dark reddish brown, fine grained, fair sorting, loose, dry.
		Core			4.0	174			SAND: 10 R 5/4 dark reddish brown, fine grained, fair sorting, loose, moist.
-5						121.6			CLAY: GLEY 1 1/2.5 N black, soft, odor, moist, wet below -10.0'.
		Core			4.5	20.6			
-10						1.2			
		Core				4.6			
-15									SAND: GLEY 1 1/2.5 N black, fine grained, subangular, well sorted, loose, wet, flowing SAND, prevented deeper penetration.



BORING NO.

EP2-6

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			3.5	1.2			SAND: 10 R 5/4 dark reddish brown, fine grained, poorly sorting, loose, dry.
-5		Core			4.0	174			CLAY: GLEY 1 1/2.5 N black, soft, odor, moist.
-10		Core			3.9	121.6			
		Core			0.0	20.6			
-15		Core				1.2			SAND: GLEY 1 1/2.5 N black, fine grained, well sorted, loose, wet, core barrel jammed, no recovery from -20.0' to -25.0'.
-20						4.6			



BORING NO.

EP2-7

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00127

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/28/04 DATE COMPLETED: 6/28/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-4.4	X	Core			4.5	4.4		(Stippled pattern)	SAND: 10 R 5/4 dark reddish brown, fine grained, subangular, well sorted, loose, dry.
-4.7	X	Core			4.7	336.0		(Stippled pattern)	SAND: 10 R 5/4 dark reddish brown, fine grained, subangular, well sorted, loose, moist.
-10.1	X	Core			5.0	10.9		(Horizontal hatched pattern)	CLAY: GLEY 2 2.5/1 G black, firm, impacted, odor, wet.
-12.5	X	Core			5.0	10.1		(Horizontal hatched pattern)	
-15.0	X	Core			5.0	7.3		(Horizontal hatched pattern)	
-17.8	X	Core			5.0	7.3		(Horizontal hatched pattern)	
-20.0	X					7.8		(Stippled pattern)	SAND: GLEY 2 4/1 dark blueish gray, fine grained, well rounded, well sorted, loose, some black grains.



BORING NO.

EP2-8

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/28/04 DATE COMPLETED: 6/28/04

[illegible]



BORING NO.

EP2-9

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

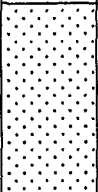
Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO:	ESN
DRILLING METHOD:	Geoprobe
DRILLER:	Zack Beck
LOGGER:	R. Lang

UNIQUE NUMBER: 31-009-00129 FILE NAME: EP2-9.dat

DATE BEGUN: 6/28/04 DATE COMPLETED: 6/28/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			3.0	19.2			SAND: 10 R 5/4 dark reddish brown, fine grained, subangular, well sorted, loose, dry, SAND.
-5		Core			5.0	831.0			CLAY: GLEY 2 2.5/1 10G black, firm, impacted, odor, wet at -14.0'.
-10		Core				19.2			
						5.9			
						13.0			
-15						11.6			CLAY: 2.5 YR 5/4 reddish brown, firm, wet, arenaceous.



BORING NO.

EP2-10

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00130

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 6/25/04 DATE COMPLETED: 6/25/04

[illegible]

**ARCADIS**

BORING LOG

BORING NO.

EP2-11

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00131

FILE NAME: EP2-11.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/28/04 DATE COMPLETED: 6/28/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						157.4			SAND: 10 R 5/4 dark reddish brown, fine grained, subangular, well sorted, loose, dry.
		Core			3.2				SAND: 10 R 5/4 dark reddish brown, fine grained, subangular, well sorted, loose, moist.
						483.0			
-5									CLAY: GLEY 2 2.5/1 10G black, firm, impacted, odor, free phase hydrocarbon, crude oil.
		Core			4.8				
						350.7			
-10									
		Core			4.8	23.0			
						5.9			
-15									SAND: GLEY 2 4/1 dark blueish gray, fine grained, well rounded, well sorted, loose, some black grains.



BORING NO.

EP2-12

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

[illegible]



BORING NO.

EP2-13

Page 1 of 1

DRILLING CO.: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			3.5	63.4			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5		Core			5.0	1030			CLAY: GLEY 1 2.5/1 black, soft, moist.
						38.4			
						11.2			
-10									SAND: GLEY 1 2.5/1 black, fine grained, subrounded, loose, wet.



BORING NO.

EP2-14

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00134

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			4.5	35.7			SAND: 7.5 YR 5/4 brown, fine grained, subangular.
-5						698.0			
		Core				550.0			CLAY: GLEY 1 2.5/1 black, firm, moist.
-10						127.4			
									SAND: GLEY 1 2.5/1 black, fine grained, subrounded, loose, wet.



BORING NO.

EP2-15

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			4.0	18.3			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						490.0			
		Core			5.0	108.1			CLAY: GLEY 1 2.5/1 black, firm, moist.
-10						91.3			SAND: GLEY 1 2.5/1 black, fine grained, subrounded to subangular, well sorted, loose, wet.



ARCADIS

BORING LOG

BORING NO.

EP2-16

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001 DRILLING CO: ESN
CLIENT NAME: Navajo Refinery DRILLING METHOD: Geoprobe
PROJECT NAME: Artesia Investigation DRILLER: Zack Beck
SITE LOCATION: Artesia, New Mexico LOGGER: R. Lang
UNIQUE NUMBER: 31-009-00136 FILE NAME: EP2-16.dat DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						3.4			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
		Core		4.5		3.4			
-5									CLAY: GLEY 2.5 YR 3/4 dark reddish brown, wet.



BORING NO.

EP2-17

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

UNIQUE NUMBER: 31-009-00137 FILE NAME: EP2-17.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			4.0	2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						2.5			CLAY: 2.5 YR 4/6 red, wet soft.

**ARCADIS**

BORING LOG

BORING NO.

EP2-18

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00138

FILE NAME: EP2-18.dat

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, arenaceous, dry.
		Core			4.0	3.4			
									CLAY: 7.5 YR 6/4 light brown, firm.
-5									SAND: 2.5 YR 5/6 red, fine grained, subangular, well sorted, loose, wet.



BORING NO.

EP2-19

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00139

FILE NAME: EP2-19.dat

DATE BEGUN: 7/12/04

DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core				2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, loose, dry.
-5						2.5			CLAY: 2.5 YR 5/6 red, soft, wet.



BORING NO.

EP2-20

Page 1 of 1

DATE COMPLETED: 7/12/04

[illegible]



BORING NO.

EP2-21

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

UNIQUE NUMBER: 31-009-00141 FILE NAME: EP2-21.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-2.5		Core			4.0	2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5.0						2.5			
-7.5		Core			4.5	2.5			CLAY: 2.5 YR 5/6 red, firm, wet.
-10.0						2.5			



BORING NO.

EP2-22

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/12/04 DATE COMPLETED: 7/12/04

[illegible]

**ARCADIS**

BORING LOG

BORING NO.

EP2-23

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00143

FILE NAME: EP2-23.dat

DATE BEGUN: 7/12/04

DATE COMPLETED: 7/12/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, loose, dry.
		Core			3.5	2.5			
-5									CLAY: 2.5 YR 5/6 red, soft, wet.



BORING NO.

EP2-24

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

UNIQUE NUMBER: 31-009-00144 FILE NAME: EP2-24.dat

[illegible]



BORING NO.

EP2-25

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

UNIQUE NUMBER: 31-009-00145 FILE NAME: EP2-25.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.5	2.0			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5		Core			3.0	2.0			CLAY: 2.5 YR 5/6 red, firm, wet.
-10		Core			3.3	4.3			
-15		Core			4.8	3.1			SAND: 2.5 YR 4/1 dark gray, fine grained, subrounded, well sorted, loose, wet.
-20						3.1			



BORING NO.

EP3-1

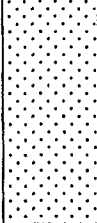
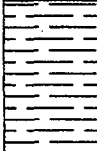
1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

UNIQUE NUMBER: 31-009-00146 FILE NAME: EP3-1.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			2.5	3.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						4.1			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO.

EP3-2

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core		5.0		4.7			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
						4.7			CLAY: 2.5 YR 5/6 fine grained, subrounded, well sorted, loose, wet.
-5									



BORING NO.

EP3-3

Page 1 of 1

DATE COMPLETED: 7/15/04

[illegible]



BORING NO.

EP3-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

UNIQUE NUMBER: 31-009-00149 FILE NAME: EP3-4.dat

[illegible]



BORING NO.

EP3-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00150

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

[illegible]



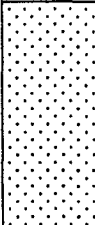
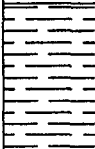
BORING NO.

EP3-6

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION					
0		Core				1.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry, moist and argillaceous below -1.5'.					
								4.5						CLAY: 2.5 YR 5/6 red, soft, wet.
-5														



BORING NO.

EP3-7

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00152

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			4.5	3.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular.
-5						3.5			CLAY: 2.5 YR 5/6 red, soft, wet.



BORING NO.

EP3-8

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

UNIQUE NUMBER: 31-009-00153 FILE NAME: EP3-8.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-5		Core			2.5	4.7		 SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry, moist below -2.0' argillaceous.	
						4.7		 CLAY: 2.5 YR 5/6 red, soft, wet.	



BORING NO.

EP3-9

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00154

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

[illegible]



BORING NO.

EP3-10

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

UNIQUE NUMBER: 31-009-00155 FILE NAME: EP3-10.dat

[illegible]



BORING NO.

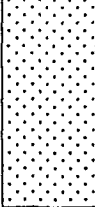
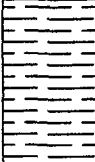
EP3-11

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00156

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-5		Core			3.0	15.5 14.3		 	SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry. CLAY: 2.5 YR 5/6 red, soft, wet.



BORING NO.

EP3-12

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/15/04 DATE COMPLETED: 7/15/04

UNIQUE NUMBER: 31-009-00157 FILE NAME: EP3-12.dat

[illegible]



BORING NO.

EP5-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

UNIQUE NUMBER: 31-009-00158 FILE NAME: EP5-1.dat

[illegible]



BORING NÓ.

EP5-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

UNIQUE NUMBER: 31-009-00159 FILE NAME: EP5-2.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.5	5.4			SAND: 7.5 YR 5/4 brown, fine grained, subangular, moist.
-5						6.0			
		Core			4.1	6.6			CLAY: 2.5 YR 5/6 red, soft, wet, SAND: 2.5 YR 5/6 red, as interbeds, wet.
-10						6.0			

**ARCADIS**

BORING LOG

BORING NO.

EP5-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00160

FILE NAME: EP5-3.dat

DATE BEGUN: 6/30/04

DATE COMPLETED: 6/30/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						5.7			SAND: 7.5 YR 5/4 brown, fine grained, subangular, impacted, moist.
		Core			2.5	5.3			CLAY: 2.5 YR 5/4 reddish brown, wet.
-5						5.3			
		Core			5.0	5.3			
-10						5.3			SAND: 2.5 YR 5/4 reddish brown, fine grained to well rounded, well sorted, loose, wet.



BORING NO.

EP5-4

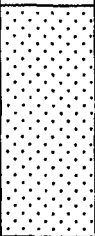
1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO.: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

UNIQUE NUMBER: 31-009-00161 FILE NAME: EP5-4.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			3.8	4.8			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5									CLAY: 2.5 YR 5/4 reddish brown, firm, wet.

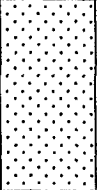


BORING NO.

EP5-6.

Page 1 of 1

DATE COMPLETED: 7/13/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core				2.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
						3.0			CLAY: 2.5 YR 5/6 red, firm, wet.
-5						3.1			



BORING NO.

EP5-7

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

DATE BEGUN: 7/13/04 DATE COMPLETED: 7/13/04

[illegible]



BORING NO.

EP5-8

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383

Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Zack Beck

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00165

FILE NAME: EP5-8.dat

DATE BEGUN: 7/13/04

DATE COMPLETED: 7/13/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.8	4.3			SAND: 7.5 YR 5/4 brown, fine grained, subangular.
						3.7			CLAY: 2.5 YR 5/4 reddish brown, wet.
-5									SAND: 2.5 YR 5/4 reddish brown, fine grained, subangular, well sorted, loose, wet.

**ARCADIS**

BORING LOG

BORING NO.

EP5-9

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00166 FILE NAME: EP5-9.dat

DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0						7.2			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry, becoming wet @ -2.5'.
		Core			2.8	4.0			
-5						4.5			CLAY: 2.5 YR 5/6 red, firm, wet.
		Core			4.5	4.5			
-10						5.0			
		Core			5.0	5.0			
-15									SAND: GLEY 1 4/1 dark greenish gray, fine grained, subrounded, well sorted, loose, wet.



BORING NO.

EP5-10

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00167

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

[illegible]



BORING NO.

EP5-11

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN

DRILLING METHOD: Geoprobe

DRILLER: Zack Beck

LOGGER: R. Lang

DATE BEGUN: 7/13/04

DATE COMPLETED: 7/13/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core				3.1			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						3.1			CLAY: 2.5 YR 5/6 reddish brown, fine grained, subangular, well sorted, loose,wet.



BORING NO.

EP5-12

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001
CLIENT NAME:	Navajo Refinery
PROJECT NAME:	Artesia Investigation
SITE LOCATION:	Artesia, New Mexico
UNIQUE NUMBER:	31-009-00169

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core				2.4			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						3.4			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO.

EP5-13

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-5		Core				5.6			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry, argillaceous.
						4.0			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO.

EP5-14

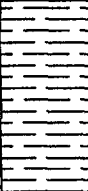
1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

UNIQUE NUMBER: 31-009-00171 FILE NAME: EP5-14.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			2.9	6.1			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						6.1			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO.

EP5-15

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			4.0	4.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry, argillaceous.
						4.5			CLAY: 2.5 YR 5/6 red, firm, wet.
-5									



BORING NO.

EP5-16

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

[illegible]



BORING NO.

EP5-17

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

[illegible]



BORING NO.

EP5-18

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00175

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			2.5	4.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						4.5			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO.

EP5-19

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

UNIQUE NUMBER: 31-009-00176

FILE NAME: EP5-19.dat

DATE BEGUN: 7/14/04

DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core			3.0	6.7			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-5						5.6			CLAY: 2.5 YR 5/6 red, firm, wet.



BORING NO. _____

EP5-21

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001
CLIENT NAME:	Navajo Refinery
PROJECT NAME:	Artesia Investigation
SITE LOCATION:	Artesia, New Mexico
UNIQUE NUMBER:	31-009-00178

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

[illegible]



BORING NO.

EP6-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/14/04 DATE COMPLETED: 7/14/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0		Core			3.8	1.5			SAND: 7.5 YR 5/4 brown, fine grained, subangular, subrounded, dry.
2.2								SAND: 7.5 YR 5/4 brown, fine grained, subangular, subrounded, wet.	
-5									



BORING NO.

EP6-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001
CLIENT NAME:	Navajo Refinery
PROJECT NAME:	Artesia Investigation
SITE LOCATION:	Artesia, New Mexico
UNIQUE NUMBER:	31-009-00180

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/16/04 DATE COMPLETED: 7/16/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
-3.2		Core			2.8	3.2		[Pattern]	SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
-2.2						2.2		[Pattern]	
-5								[Pattern]	SAND: 7.5 YR 5/4 brown, fine grained, subangular, wet.
-6.9		Core			5.0	2.2		[Pattern]	CLAY: 2.5 YR 5/6 red, firm, wet.
-5.0						2.2		[Pattern]	
-10						2.2		[Pattern]	SAND: 2.5 YR 4/4 reddish brown, fine grained, subrounded to well rounded, well sorted, loose.
-15						2.2		[Pattern]	



BORING NO.

EP6-4

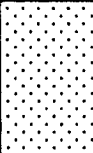
1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER:	MT000839.0001
CLIENT NAME:	Navajo Refinery
PROJECT NAME:	Artesia Investigation
SITE LOCATION:	Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/16/04 DATE COMPLETED: 7/16/04

UNIQUE NUMBER: 31-009-00182 FILE NAME: EP6-4.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
		Core				2.6			SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
						2.7			CLAY: 2.5 YR 4/4 reddish brown, firm to soft, wet.
-5									SAND: 2.5 YR 4/4 fine grained, well rounded, well sorted, soft, argillaceous, wet.



BORING NO.

EP6-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Zack Beck
LOGGER: R. Lang
DATE BEGUN: 7/16/04 DATE COMPLETED: 7/16/04

UNIQUE NUMBER: 31-009-00183 FILE NAME: EP6-5.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION	
0		Core			3.5	2.2				
										SAND: 7.5 YR 5/4 brown, fine grained, subangular, dry.
										SAND: 2.5 YR reddish brown, fine grained, subrounded, well sorted, loose, wet.
-5						2.2				



BORING NO.

EPB-1

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00103

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/29/04 DATE COMPLETED: 6/29/04

[illegible]



BORING NO.

EPB-2

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/29/04 DATE COMPLETED: 6/29/04

[illegible]



BORING NO.

EPB-3

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico
UNIQUE NUMBER: 31-009-00105

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/29/04 DATE COMPLETED: 6/29/04

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
						4.4			SAND: 10 R 5/1 dark reddish brown, fine grained, subangular, well sorted, loose, dry.
	Core				3.1	4.4			
-5									CLAY: 2.5 YR 5/6 red, firm, moist.
	Core				5.0	5.4			
						6.8			CLAY: GLEY 2 3/1 dark blueish gray, some 2.5 YR 4/6 red.
-10						5.9			
	Core					9.7			
-15									SAND: GLEY 2 4/1 dark blueish gray, fine grained, well rounded, well sorted, loose, many black grains.



BORING NO.

EPB-4

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/29/04 DATE COMPLETED: 6/29/04

UNIQUE NUMBER: 31-009-00106 FILE NAME: EPB-4.dat

[illegible]

**ARCADIS**

BORING LOG

BORING NO.

EPB-5

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001
CLIENT NAME: Navajo Refinery
PROJECT NAME: Artesia Investigation
SITE LOCATION: Artesia, New Mexico

DRILLING CO: ESN
DRILLING METHOD: Geoprobe
DRILLER: Eddy Hubbert
LOGGER: R. Lang
DATE BEGUN: 6/29/04 DATE COMPLETED: 6/29/04

UNIQUE NUMBER: 31-009-00107 FILE NAME: EPB-5.dat

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	PID READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									SAND: 10 R 5/1 dark reddish brown, fine grained, subangular, well sorted, loose, dry.
						3.0			CLAY: 2.5 Y 4/6 red, firm, moist, became arenaceous at base.
		Core			4.6	3.0			
-5						3.0			
		Core			4.9	3.0			
-10						4.9			
		Core			5.0	4.4			
-15						4.4			
		Core			5.0	4.4			
-20									SAND: 2.5 YR light reddish gray, fine grained, subrounded to well rounded, well sorted, loose, wet.



BORING NO.

EPB-6

1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432 687-5400 Fax: 432 687-5401

Page 1 of 1

PROJECT NUMBER: MT000839.0001

DRILLING CO: ESN

CLIENT NAME: Navajo Refinery

DRILLING METHOD: Geoprobe

PROJECT NAME: Artesia Investigation

DRILLER: Eddy Hubbert

SITE LOCATION: Artesia, New Mexico

LOGGER: R. Lang

UNIQUE NUMBER: 31-009-00108

FILE NAME: EPB-6.dat

DATE BEGUN: 6/29/04

DATE COMPLETED: 6/29/04

[illegible]

APPENDIX E



Appendix E

MATERIAL TESTING RESULTS
for
BACKGROUND SOIL SAMPLES

Pace Analytical EPN#2035423
LABORATORY TEST RESULTS
TABLE 1

Date Tested	Sample ID	Depth (feet)	ASTM D2316	ASTM D4972	ASTM D2974	ASTM D4318			ASTM D422	ASTM D2487
			Moisture Content (%)	Soil pH	Organic Content (%)	Atterberg Limits			Particle Size Analysis	CLASSIFICATION
						LL	PL	PI		
						(%)	(%)	(%)		
12-Jul	202-67123	BSB-1 0-1	7.0	8.02	4.35	28	17	11	*	Brown clayey fine sandy silt w/roots (CL-ML)
12-Jul	202-67124	BSB-1 5-7	34.9	7.48	5.65	72	24	48	*	Grayish Brown clay w/sand & silt (CH)
12-Jul	202-67125	BSB-1 9-11	21.9	8.05	3.95	43	14	28	*	Pink silty clay w/sand traces (CL)
12-Jul	202-67126	BSB-1 13-15	16.2	8.22	1.60	32	15	17	*	White silty clay w/sand traces (CL)
12-Jul	202-68895	BSB-3 0-2	14.4	8.35	2.20	18	14	4	*	Dark Brown clayey silt w/fine sand traces (SM)
12-Jul	202-68896	BSB-3 5-7.5	22.2	8.59	6.70	42	19	24	*	Dark Brown silty clay w/sand (CL)
12-Jul	202-68897	BSB-2 0-2.5	21.6	8.44	8.80	42	21	21	*	Dark Brown silty clay w/sand traces & mica (CL)
12-Jul	202-68898	BSB-2 5-7.5	23.4	8.11	7.40	42	19	23	*	Brown silty clay (CL)
12-Jul	202-68899	BSB-6 0-2.5	7.5	7.87	2.50	23	18	5	*	Brown clayey silt (CL-ML)
12-Jul	202-68900	BSB-6 5-7.5	14.8	8.20	1.10	19	17	2	*	Brown silty fine sand (SM)
12-Jul	202-69458	BSB-4 0-2.5	19.7	8.08	2.90	34	18	16	*	Dark Brown silty clay w/sand traces (CL)
12-Jul	202-69459	BSB-4 5-7.5	22.5	7.80	3.40	28	18	10	*	Dark Brown very silty clay w/sand traces (CL)
12-Jul	202-69460	BSB-5 0-2.5	27.4	7.43	3.90	31	17	14	*	Dark Brown silty clay w/sand & mica (CL)
12-Jul	202-69461	BSB-5 5-7.5	27.4	7.96	3.90	44	19	25	*	Dark Brown silty clay (CL)
12-Jul	202-72613	BSB-7 0-2.5	7.5	7.73	4.10	30	16	14	*	Brown silty clay w/organics & gravel (CL)
12-Jul	202-72615	BSB-7 5-7.5	17.8	8.12	4.10	42	19	23	*	White & Brown silty clay w/gravel (CL)
12-Jul	202-72617	BSB-7 10-12.5	22.3	8.06	3.00	56	18	38	*	White & Tan clay w/silt & sand (CH)
12-Jul	202-72618	BSB-8 0-2.5	17.7	7.82	4.40	34	17	17	*	Brown silty clay (CL)
12-Jul	202-72619	BSB-8 5-7.5	27.1	8.02	5.70	75	28	46	*	White & Tan clay w/silt & sand (CH)

NOTE:* See attached graphs

(1)FOC = Organic content divided by 174

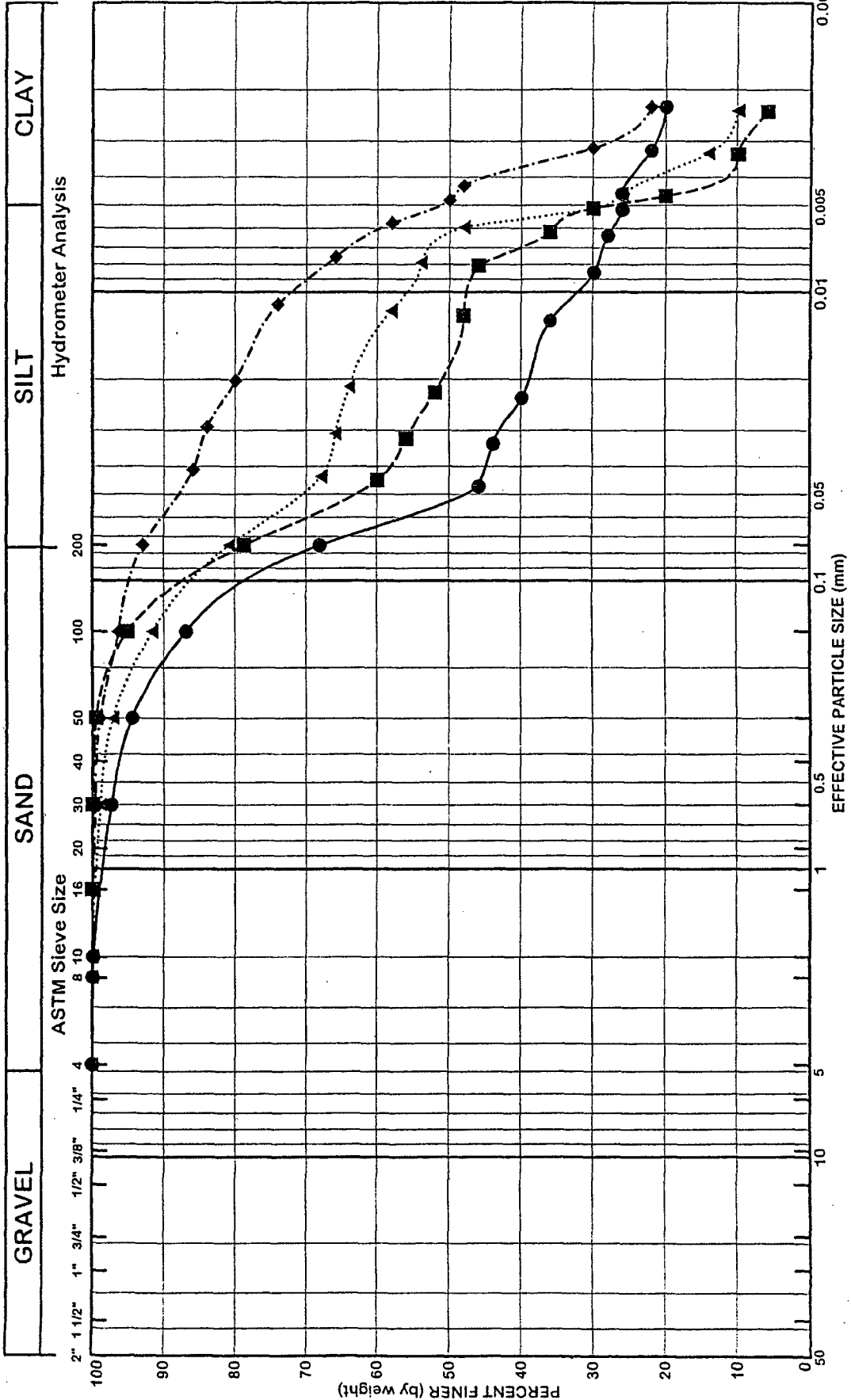
(2)Any optional tests methods used



STE
Soil Testing Engineers, Inc.
316 Highlandia Drive
Baton Rouge, LA

Client:Pace Analytical
Location:

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-1	0.0 - 1.0	0.0	31.9	42.1	26.0
■ BSB-1	5.0 - 7.0	0.0	21.3	51.2	27.5
▲ BSB-1	9.0 - 11.0	0.0	19.2	51.6	29.2
◆ BSB-1	13.0 - 15.0	0.0	7.1	41.1	51.7



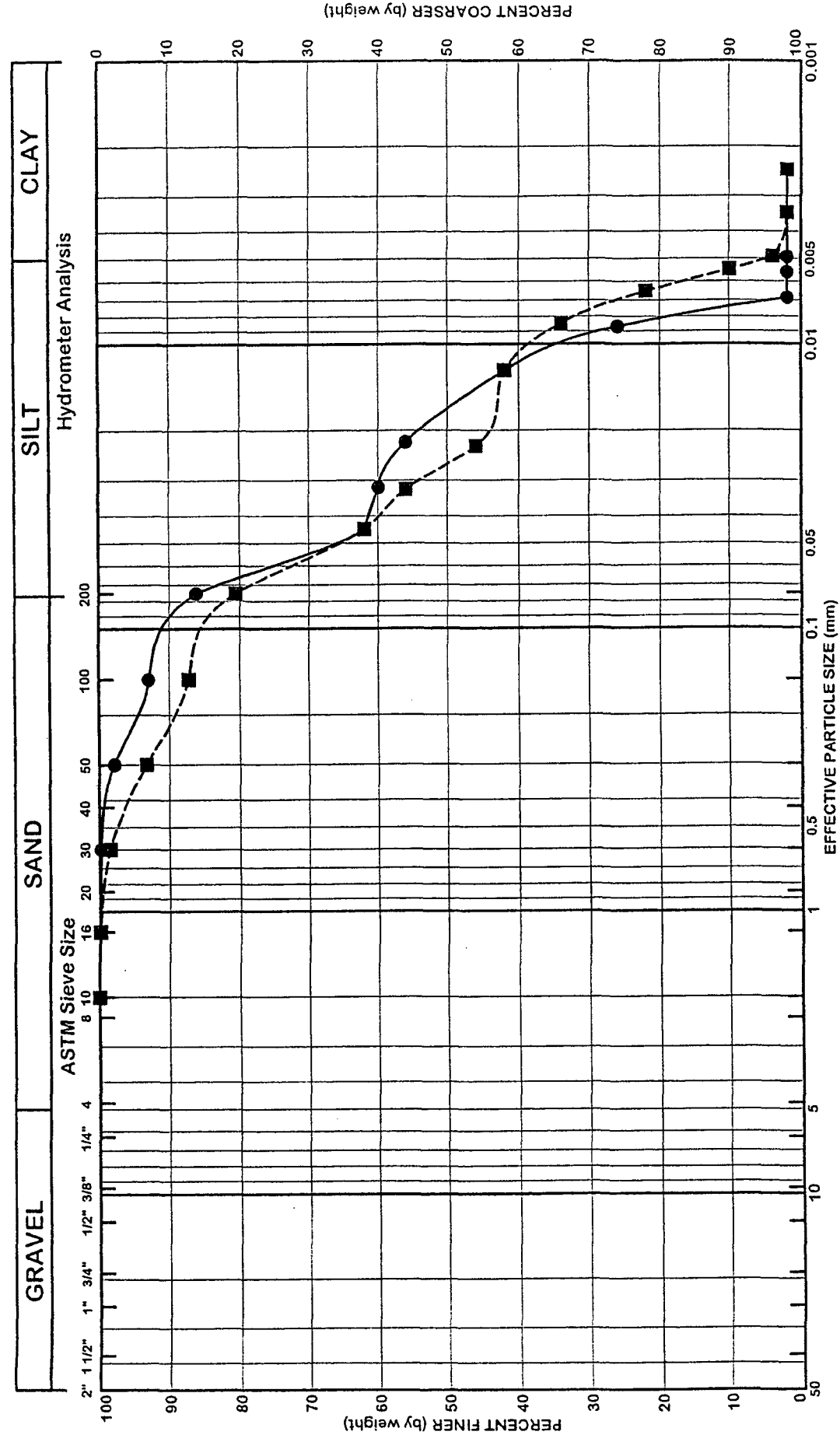
Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

GRAIN SIZE ANALYSIS

File No.: 04-7063
Date: 07/12/2004

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-2	0.0 - 2.5	0.0	13.7	84.3	2.0
■ BSB-2	5.0 - 7.5	0.0	19.3	75.3	5.3



File No.: 04-7063
Date: 07/12/2004

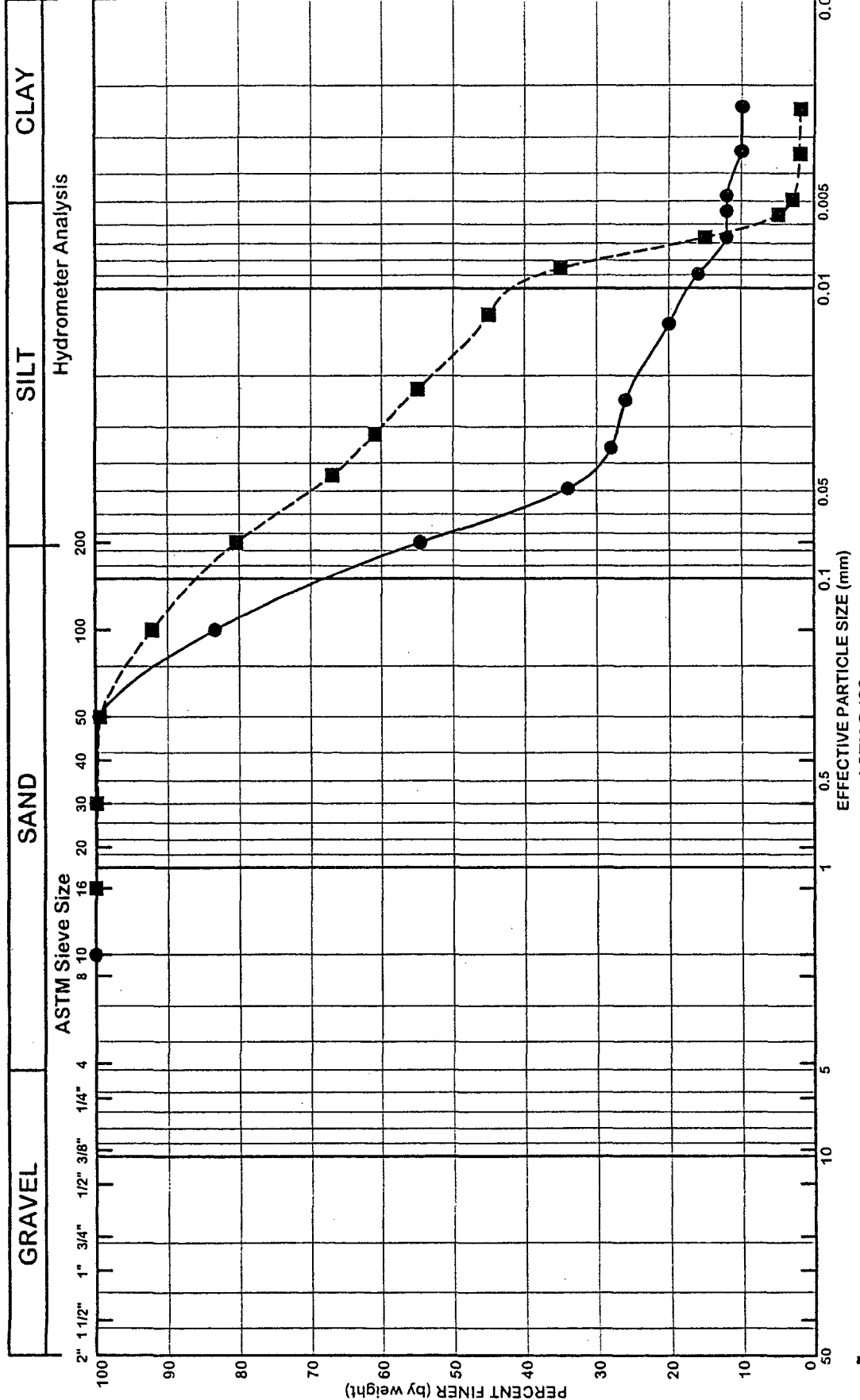
GRAIN SIZE ANALYSIS

ASTM D422

Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-3	0.0 - 2.0	0.0	45.3	42.7	12.0
■ BSB-3	5.0 - 7.5	0.0	19.5	77.3	3.2



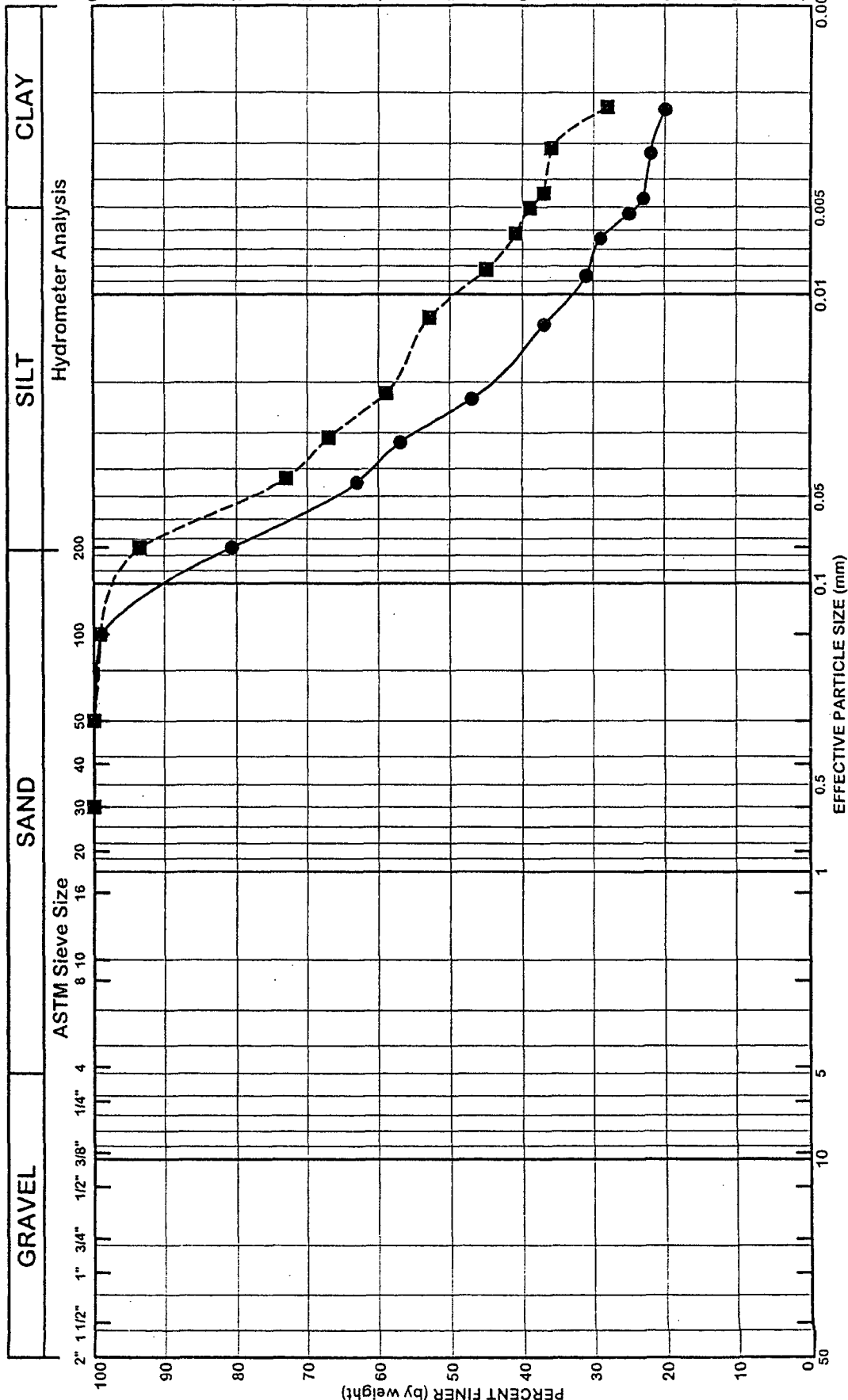
File No.: 04-7063
Date: 07/12/2004

GRAIN SIZE ANALYSIS

Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-5	0.0 - 2.5	0.0	19.3	56.5	24.1
■ BSB-5	5.0 - 7.5	0.0	6.5	54.7	38.9



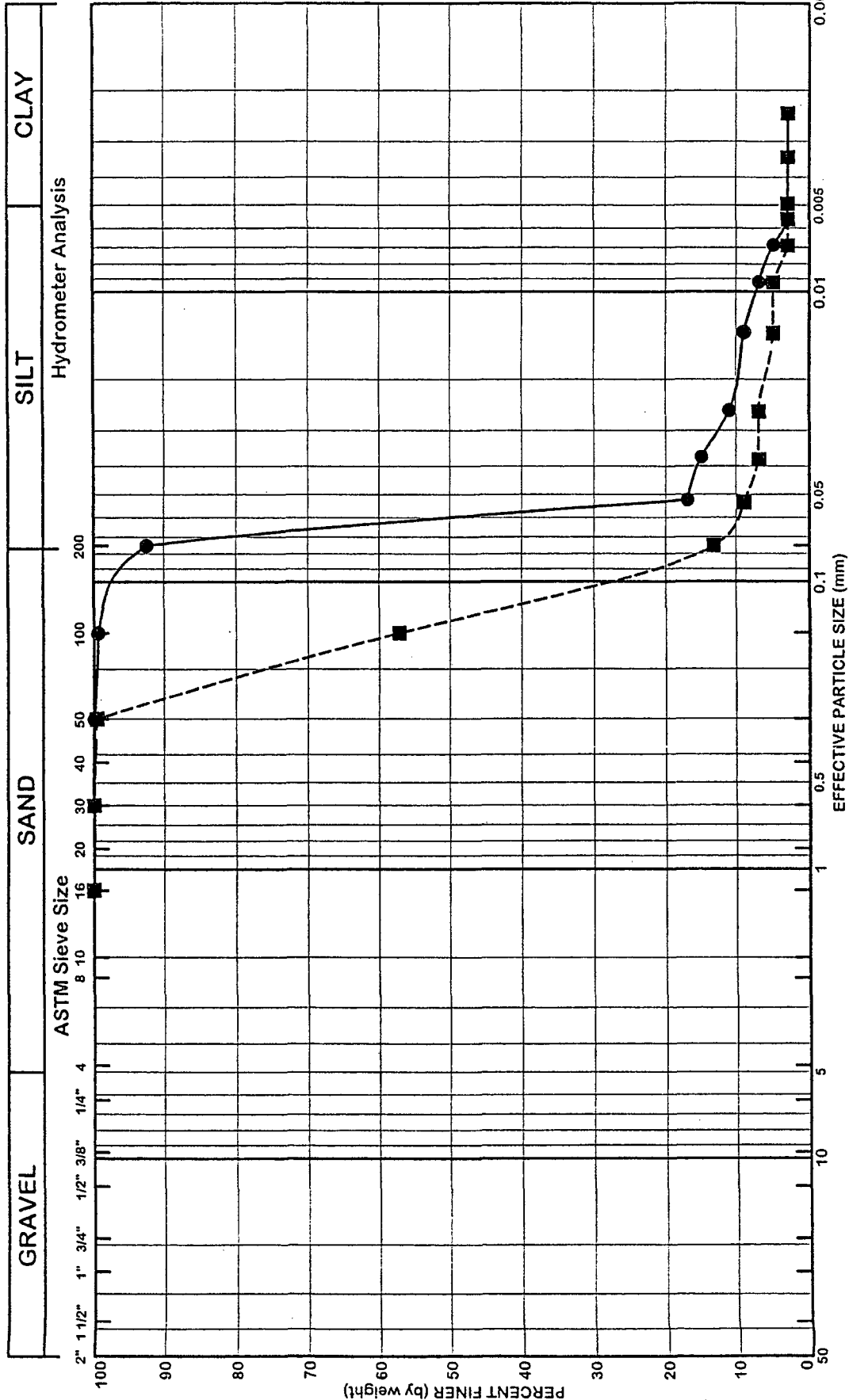
Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

GRAIN SIZE ANALYSIS

File No.: 04-7063
Date: 07/12/2004

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-6	0.0 - 2.5	0.0	7.5	89.5	3.0
■ BSB-6	5.0 - 7.5	0.0	86.8	10.2	3.0



File No.: 04-7063
Date: 07/12/2004

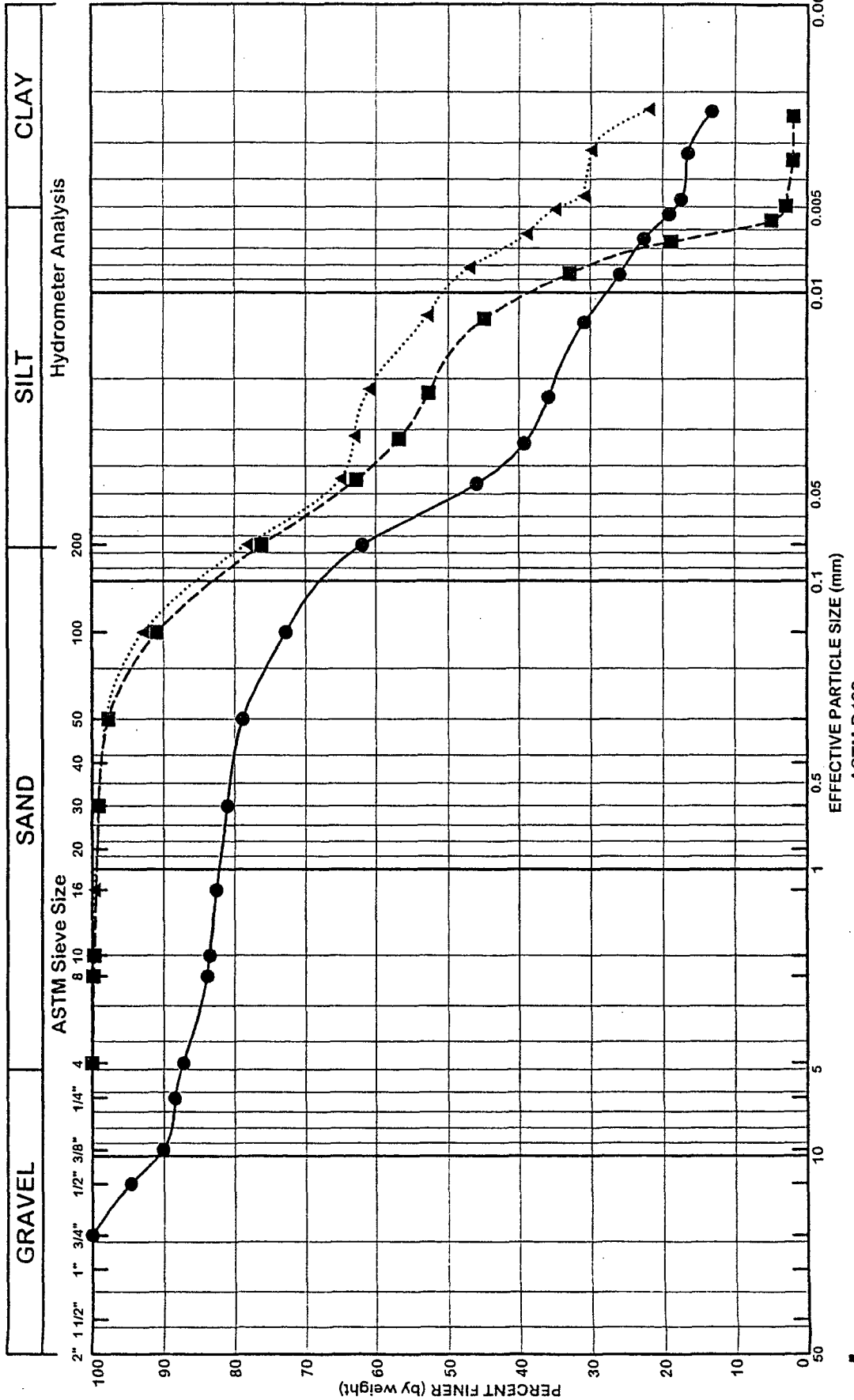
GRAIN SIZE ANALYSIS

ASTM D422

Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-7	0.0 - 2.5	12.7	25.4	43.5	18.4
■ BSB-7	5.0 - 7.5	0.0	23.8	73.0	3.2
▲ BSB-7	10.0 - 12.5	0.0	21.7	44.0	34.3



File No.: 04-7063
Date: 07/12/2004

GRAIN SIZE ANALYSIS

Pace Analytical
Services
PEN 2035423

STE
Soil Testing Engineers, Inc.

PACE ANALYTICAL EPN#2035423
LABORATORY TEST RESULTS
TABLE 1

Date Tested	Sample ID	Depth (feet)	ASTM D2916		Dry Density (pcf)	Volumetric Moisture Content (decimal)	Volumetric Air Content (decimal)	Total Porosity (decimal)	ASTM D854	ASTM D4972	ASTM D5974	ASTM D4318			ASTM D422	CLASSIFICATION
			Moisture Content (%)									Organic Content (%)	LL (%)	PL (%)		
23-Jul	BSB-9	0-2.5		23.7						7.65	4.40	45	21	25	*	Brown silty clay (CL)
23-Jul	BSB-9	2-5.5		25.8						7.77	3.50	34	17	17	*	Brown silty clay (CL)
23-Jul	BSB-10	0-2.5		15.3						7.66	5.80	44	22	22	*	Brown silty clay w/roots & organic traces (CL)
23-Jul	BSB-10	5-7.5		14.1						7.88	2.85	37	15	22	*	Tan silty clay (CL)
23-Jul	BSB-10	10-12.5		23.5						7.49	3.65	56	21	35	*	Brown clay w/silt pocket (CH)

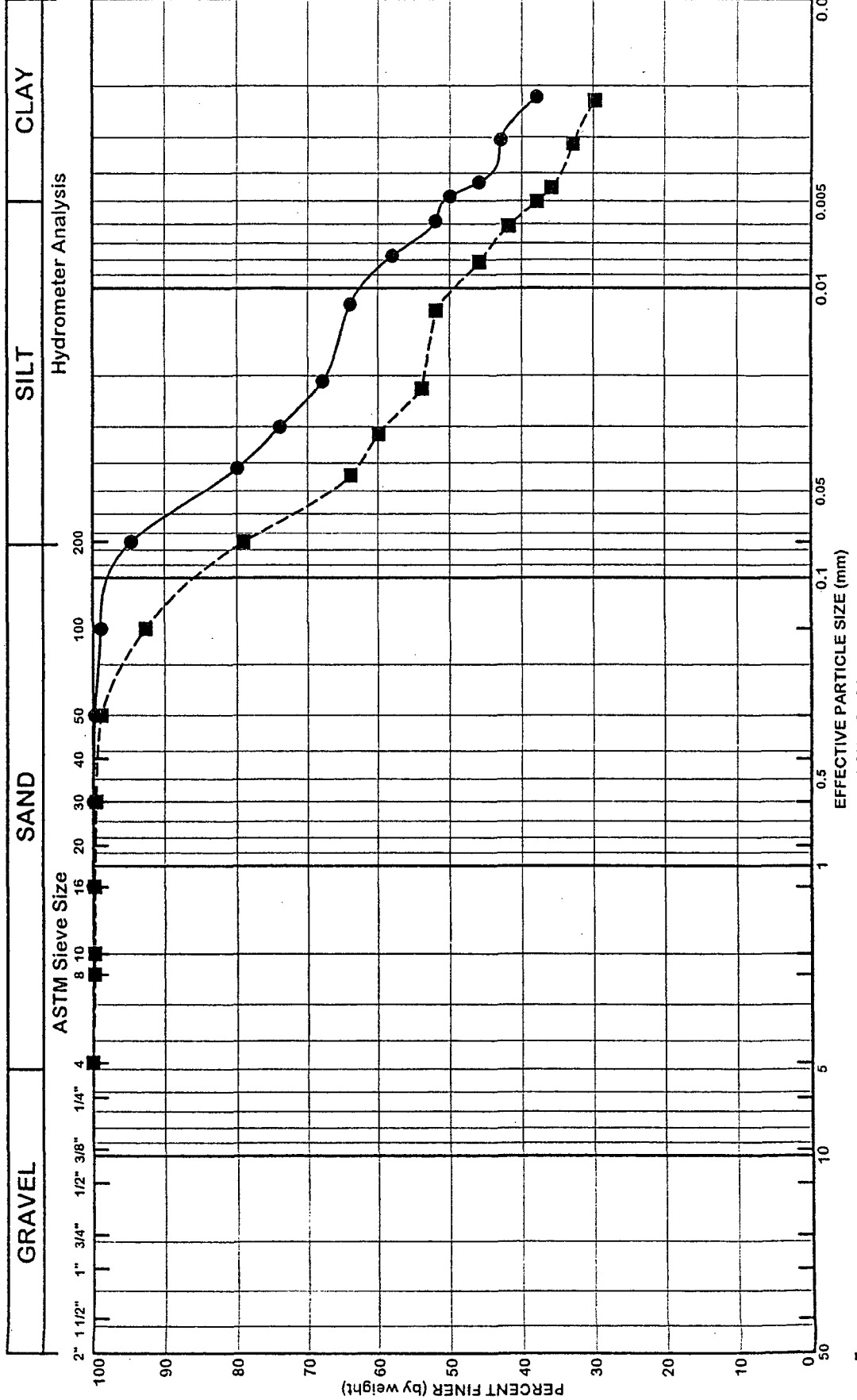
NOTE: See attached graphs

(1) FOC = Organic content divided by 174

(2) Any optional tests methods used ☐ yes ☒ no if yes list.

STE
Soil Testing Engineers, Inc.
316 Highland Drive
Baton Rouge, LA

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-9	0.0 - 2.5	0.0	5.3	44.3	50.4
■ BSB-9	2.0 - 5.5	0.0	20.9	41.2	37.9



Pace Analytical
Services
EPN 2035423

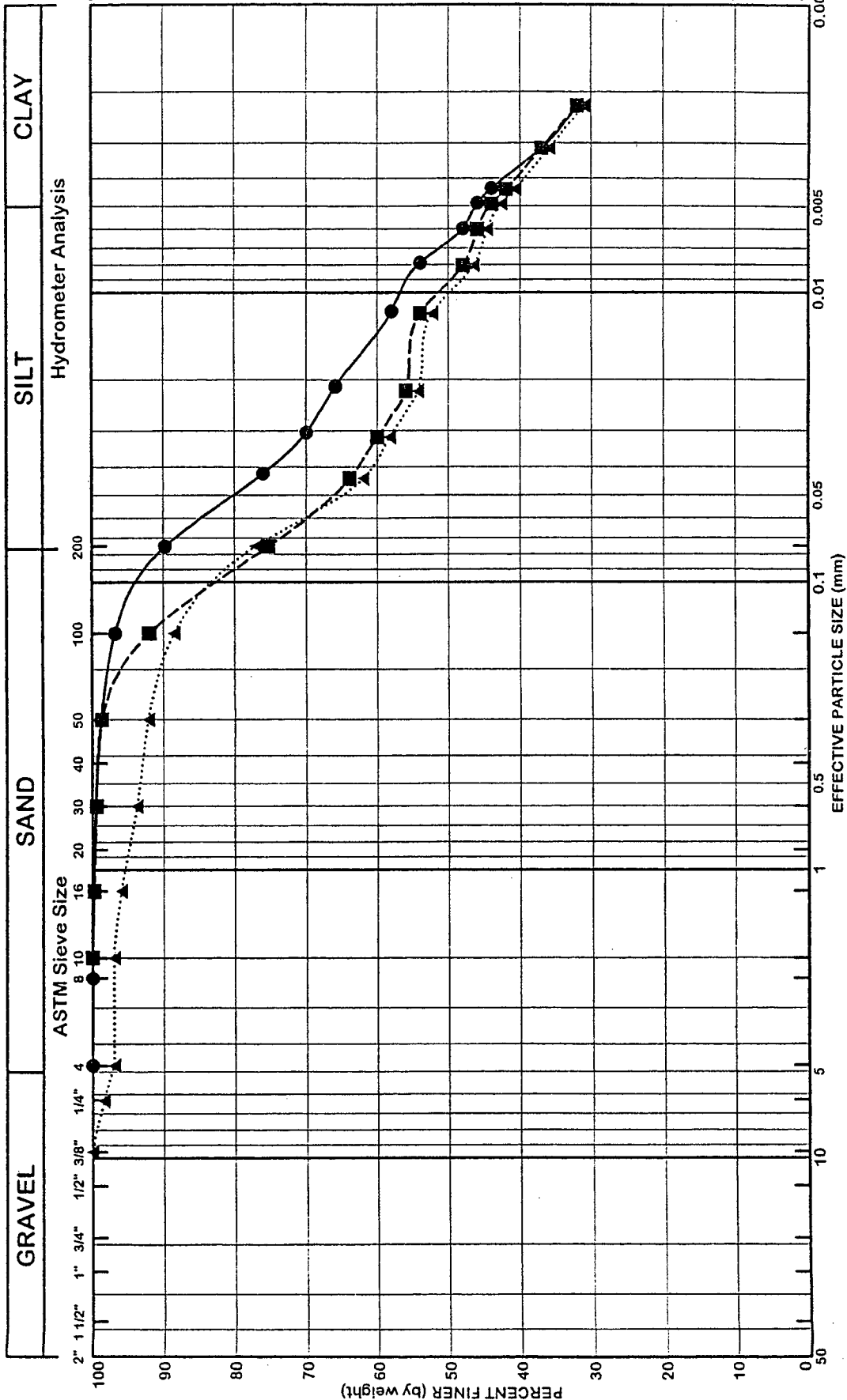
STE
Soil Testing Engineers, Inc.

GRAIN SIZE ANALYSIS

ASTM D422

File No.: 04-7081
Date: 07/26/2004

Boring No.	Depth (ft.)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
● BSB-10	0.0 - 2.5	0.0	10.2	43.6	46.3
■ BSB-10	5.0 - 7.5	0.0	24.7	31.1	44.2
▲ BSB-10	10.0 - 12.5	3.1	19.9	34.2	42.8



Pace Analytical
Services
EPN 2035423

STE
Soil Testing Engineers, Inc.

GRAIN SIZE ANALYSIS

ASTM D422

File No.: 04-7081
Date: 07/26/2004

APPENDIX F



Appendix F

CHEMICAL ANALYTICAL PROGRAM

- | | |
|---------------------|---|
| Attachment 1 | Laboratory Methods and Reporting Limits |
| Attachment 2 | Data Quality Exceptions and Laboratory Case Narratives |

APPENDIX F CHEMICAL ANALYTICAL PROGRAM

F.1 CHEMICAL ANALYSES

The Permittee shall use the most recent standard EPA and industry-accepted analytical methods for chemical analyses for target analytes as the testing methods for each media sampled. Chemical analyses shall be performed in accordance with the most recent EPA standard analytical methodologies and extraction methods.

Based upon the analysis requirements in Appendix A of the Navajo RCRA Post-Closure Permit, and discussions with NMED, the following analyses were approved by NMED.

Soils:

- DRO (diesel range organics) – Method 8015B
- VOC (volatile organic compounds) – Method 8260B
- SVOC (semivolatile organic compounds) – Method 8270C and Method 8310 (if DRO was > 2000mg/kg)
- RCRA Metals – Method 6010 (As, Ba, Cd, Cr, Pb, Hg, Se, Ag); Method 7471 (Hg)

Boring Groundwater:

- SVOC/PAH (polyaromatic hydrocarbons) – Method 8310
- BTEX (benzene, toluene, ethylbenzene, xylenes) – Method 8021C
- VOC – Method 8260B (samples within 50 feet of outfall to Evaporation Ponds 2 and 5)
- TDS (total dissolved solids) – Method 160.1

Monitor Well Groundwater:

- VOC – Method 8260B
- SVOC – Method 8270
- RCRA metals – Method 6010/Method 7471
- Other Metals – Method 6010 (Sb, Be, Cd, Fe, Mn, Ni, V, Zn)
- Cyanide – Method 335.2
- Major Cations – Method 6010 (Ca, Mg, K, Na)
- Major Anions – Method 325.2(Cl); Method 300.0 (F); Method 375.4 (sulfates); Method 353.2 (nitrates/nitrites)
- TDS – Method 160.1

Analytes and laboratory reporting limits for the following methods are in Attachment 1 to this Appendix:

- SW 8260 Low Soil (VOA)
- SW 8260 Water (VOA)
- SW 8270 Low Soil (SVOC)
- Method 8270 Water (SVOC)
- SW 8125B (TPH- DRO)
- SW 6010 Soil (RCRA Metals)
- SW 6010 Water (RCRA Metals)
- SW 6010 Water (Other Metals)
- FIMS Soil (Mercury)
- SW 7471 Water (Mercury)
- SW8310 Water (PAH)

In addition to the analytes listed in Attachment 1, the following analytes were added:

- Method 8260 – 1,4-dioxane
- Method 8270 – 7,2-dimethylbenz(a)anthracene and pyridine

F.2 LABORATORY QA/QC REQUIREMENTS (excerpted from permit attachment D)

The following requirements for laboratory QA/QC procedures shall be considered the minimum QA/QC standards for the laboratories employed by the Facility that provide analytical services for environmental investigation, corrective action and monitoring activities conducted at the Facility.

F.2.a Quality Assurance Procedures

Analytical laboratories shall maintain internal quality assurance programs in accordance with EPA and industry-wide accepted practices and procedures. At a minimum, the laboratories shall use a combination of standards, blanks, surrogates, duplicates, matrix spike/matrix spike duplicate (MS/MSD), blank spike/blank spike duplicate (BS/BSD) and laboratory control samples to demonstrate analytical QA/QC. The laboratories shall establish control limits for individual chemicals or groups of chemicals based on the long-term performance of the test methods. In addition, the laboratories shall establish internal QA/QC that meets EPA's laboratory certification requirements. The specific procedures to be completed are identified in the following subsections.

F.2.b Equipment Calibration Procedures and Frequency

The laboratories' equipment calibration procedures, calibration frequency and calibration standards shall be in accordance with the EPA test methodology requirements and documented in laboratories' quality assurance and SOP manuals. All instruments and equipment used by the laboratory shall be operated, calibrated and maintained according to manufacturers' guidelines and recommendations. Operation, calibration and maintenance shall be performed by personnel who have been properly trained in these procedures. A routine schedule and record of instrument calibration and maintenance shall be kept on file at the laboratory.

F.2.c Laboratory QA/QC Samples

Analytical procedures shall be evaluated by analyzing reagent or method blanks, surrogates, matrix spike/matrix spike duplicates (MS/MSDs), blank spike/blank spike duplicates (BS/BSDs) and/or laboratory duplicates, as appropriate for each method. The laboratory QA/QC samples and frequency of analysis to be completed shall be documented in the cited EPA test methodologies. At a minimum, the laboratory shall analyze laboratory blanks, MS/MSDs, BS/BSDs and laboratory duplicates at a frequency of one in twenty for all batch runs requiring EPA test methods and a frequency of one in ten for non-EPA test methods.

F.2.d Laboratory Deliverables

The analytical data package shall be prepared in accordance with EPA-established Level II analytical support protocol. The following shall be provided in the laboratory reports submitted either electronically or in hard (paper) copy for this project.

1. Transmittal letter, including information about the receipt of samples, the testing methodology performed, any deviations from the required procedures, any problems encountered in the analysis of the samples, any data quality exceptions, and any corrective actions taken by the laboratory relative to the quality of the data contained in the report.
2. Sample analytical results, including sampling date, date of sample extraction or preparation, date of sample analysis, dilution factors and test method identification; soil sample results in consistent units (milligrams per kilogram or micrograms per kilogram) in dry-weight basis, water sample results in consistent units (milligrams per liter or micrograms per liter), vapor sample results in consistent units (parts per million or ppmv) and detection limits for undetected analytes. Results shall be reported for all field samples, including field duplicates and blanks, submitted for analysis.
3. Method blank results, including reporting limits for undetected analytes.
4. Surrogate recovery results and corresponding control limits for samples and method blanks (organic analyses only).
5. MS/MSD and/or BS/BSD spike concentrations, percent recoveries, relative percent differences (RPDs) and corresponding control limits.

6. Laboratory duplicate results for inorganic analyses, including relative percent differences and corresponding control limits.
7. Sample chain-of-custody documentation.
8. Holding times and conditions.
9. Conformance with required analytical protocol(s).
10. Blanks.
11. Detection/quantitation limits.
12. Recoveries of surrogates and/or matrix spikes (MS/MSDs).
13. Data report formats.
14. The following data deliverables for organic compounds shall be requested of the laboratory:
 - A cover letter referencing the procedure used and discussing any analytical problems, deviations and modifications; including signature from authority representative certifying to the quality and authenticity of data as reported,
 - Report of sample collection, extraction and analysis dates, including sample holding conditions,
 - Tabulated results for samples in units as specified; including data qualification in conformance with EPA protocol, including definition of data descriptor codes,
 - Analyte concentrations with reporting units identified, including data qualification (include definition of data descriptor codes),
 - Quantification of analytes in all blank analyses, as well as identification of method blank associated with each sample,
 - Recovery assessments and a replicate sample summary and all MS/MSD results (recoveries and spike amounts)]
15. The following data deliverables for inorganic compounds shall be requested of the laboratory:
 - A cover letter referencing the procedure used and discussing any analytical problems, deviations and modifications; including signature from authority representative certifying to the quality and authenticity of data as reported,
 - Report of sample collection, digestion and analysis dates, with sample holding conditions,
 - Tabulated results for samples in units as specified; including definition of data descriptor codes,
 - Results of all method QA/QC checks,
 - Quantification of analytes in all blank analyses, as well as identification of method blanks associated with each sample,
 - Recovery assessments and a replicate sample summary

The Permittee shall present summary tables of these data in the formats described in Appendix E of the Permit. The raw analytical data, including calibration curves, instrument calibration data, data calculation work sheets, and other laboratory support data for samples from this project, shall be compiled and kept on file at the Laboratory for reference. The Permittee shall make the data available to the Secretary upon request.

F.3 REVIEW OF FIELD AND LABORATORY QA/QC DATA

The sample data, field and laboratory QA/QC results shall be evaluated for acceptability with respect to the data quality objectives (DQOs). Each group of samples shall be compared with the DQOs and evaluated using data validation guidelines contained in the following EPA guidance documents: *Guidance Document for the Assessment of RCRA Environmental Data Quality*, *National Functional Guidelines for Organic Data Review*, and *Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses*.

The laboratory shall notify the Permittee's project manager of data quality exceptions within 24 hours in order to allow for sample re-analysis, if possible. The Permittee's project manager shall contact the HWB within 24 hours of receipt of laboratory notification of data quality exceptions in order to discuss the implications and determine whether the data will still be considered acceptable or if sample re-analysis or re-sampling is necessary.

F.4 BLANKS, FIELD DUPLICATES, REPORTING LIMITS AND HOLDING TIMES

F.4.a Blanks

The analytical results of field blanks and field rinsate blanks shall be reviewed to evaluate the adequacy of the field handling and equipment decontamination procedures and the possibility of cross-contamination caused by decontamination of sampling equipment. The analytical results of trip blanks shall be reviewed to evaluate the possibility for contamination resulting from the laboratory-prepared sample containers or the sample transport containers. The analytical results of laboratory blanks shall be reviewed to evaluate the possibility of contamination caused by the analytical procedures. If contaminants are detected in field or laboratory blanks, the sample data shall be qualified, as appropriate.

F.4.b Field Duplicates

Field duplicates shall consist of two samples either split from the same sample device or collected sequentially. Field duplicate samples shall be collected at a minimum frequency of ten percent of the total number of samples submitted for analysis.

F.5.c Method Reporting Limits

Method reporting limits for sample analyses for each media shall be established at the lowest level practicable for the method and analyte concentrations and shall not exceed soil, groundwater or vapor emissions background levels, cleanup standards and screening levels. Detection limits that exceed established soil, groundwater or air emissions cleanup standards, screening levels or background levels and are reported as "not detected" shall be considered data quality exceptions and an explanation for the exceedance and its acceptability for use shall be provided.

F.5.d Holding Times

The sampling, extraction and analysis dates shall be reviewed to confirm that extraction and analyses were completed within the recommended holding times as specified by EPA protocol. Appropriate data qualifiers shall be noted if holding times are exceeded.

F.6 REPRESENTATIVENESS AND COMPARABILITY

F.6.a Representativeness

Representativeness is a qualitative parameter related to the degree to which the sample data represent the specific characteristics of concern. Procedures shall be implemented to assure representative samples, such as repeated measurements of the same parameter at the same location over several distinct sampling events. Any procedures or variations that may affect the collection or analysis of representative samples shall be noted and the data qualified, as appropriate. Duplicate samples were used as an indicator of representativeness in this investigation.

F.6.b Comparability

Comparability is a qualitative parameter related to whether similar sample data can be compared. To assure comparability, analytical results shall be reported in appropriate units for comparison with other data (past studies, comparable sites, screening levels and cleanup standards), and standard collection and analytical procedures shall be implemented. Any procedure or variation that may affect comparability shall be noted, and the data shall be qualified, as appropriate.

F.7 LABORATORY REPORTING, DOCUMENTATION, DATA REDUCTION AND CORRECTIVE ACTION

Upon receipt of each laboratory data package, data shall be evaluated against the criteria outlined in the previous sections. Any deviation from the established criteria shall be noted, and the data will be qualified, as appropriate. A full review and discussion of analytical data QA/QC and all data qualifiers shall be submitted as appendices or attachments to reports prepared in accordance with Appendix E of this Permit. Data validation procedures for all samples shall include checking the following, when appropriate:

1. Holding times,
2. Detection limits,
3. Field equipment rinse blanks,
4. Field blanks,
5. Field Duplicates,
6. Trip blanks,
7. Reagent blanks,

8. Laboratory duplicates,
9. Laboratory blanks,
10. Laboratory matrix spikes,
11. Laboratory matrix spike duplicates,
12. Laboratory blank spikes,
13. Laboratory blank spike duplicates, and
14. Surrogate recoveries.

Laboratory Case Narratives are provided in Attachment 2 of this Appendix.

If significant quality assurance problems are encountered, corrective action shall be implemented as appropriate. All corrective action shall be defensible, and the corrected data shall be qualified.

ATTACHMENTS





ATTACHMENT 1
Laboratory Methods and Reporting Limits



Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8260LOW

Prep Level: Low Soil

Protocol: SW 8260 Volatile Organics

Use: 8260 VOAs PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/kg	Reg. Limit ug/kg	LCS Spike ug/kg	LCS Limits %	MS Spike ug/kg	MS Limits %	RPD Max %
MC035LOW	67-64-1	A99	Acetone (2-Propanone, Dimethyl ketone)	10.0		50.0	6 - 170	50.0	1 - 189	50
MC165LOW	71-43-2		Benzene	5.00		50.0	66 - 130	50.0	66 - 142	50
MC130LOW	75-27-4		Bromodichloromethane	5.00		50.0	62 - 132	50.0	15 - 136	50
MC180LOW	75-25-2		Bromoform	5.00		50.0	44 - 148	50.0	1 - 142	50
MC015LOW	74-83-9		Bromomethane (Methyl bromide)	5.00		50.0	36 - 159	50.0	8 - 164	50
MC110LOW	78-93-3	A99	2-Butanone (Methyl ethyl ketone)	10.0		100.	12 - 174	100.	1 - 180	50
MC040LOW	75-15-0	A99	Carbon disulfide	5.00		50.0	42 - 147	50.0	4 - 159	50
MC120LOW	56-23-5		Carbon tetrachloride	5.00		50.0	51 - 156	50.0	21 - 152	50
MC235LOW	108-90-7		Chlorobenzene	5.00		50.0	66 - 128	50.0	60 - 133	50
MC025LOW	75-00-3		Chloroethane	5.00		50.0	25 - 174	50.0	11 - 170	50
MC060LOW	67-66-3		Chloroform	5.00		50.0	64 - 127	50.0	29 - 137	50
MC010LOW	74-87-3		Chloromethane (Methyl chloride)	5.00		50.0	1 - 200	50.0	1 - 189	50
MD060LOW	96-12-8	A99	1,2-Dibromo-3-chloropropane (DBP)	5.00		50.0	50 - 150	50.0	50 - 150	50
MD050LOW	106-93-4		1,2-Dibromoethane (Ethylene dibromide)	5.00		50.0	50 - 150	50.0	50 - 150	50
MV124LOW	75-71-8		Dichlorodifluoromethane (Freon 12)	5.00		50.0	50 - 150	50.0	50 - 150	50
MC155LOW	124-48-1		Dibromochloromethane	5.00		50.0	54 - 140	50.0	1 - 146	50
MC050LOW	75-34-3		1,1-Dichloroethane	5.00		50.0	61 - 135	50.0	24 - 151	50
MC065LOW	107-06-2		1,2-Dichloroethane (Ethylene dichloride)	5.00		50.0	61 - 138	50.0	24 - 138	50
MC045LOW	75-35-4		1,1-Dichloroethene (Dichloroethylene)	5.00		50.0	54 - 150	50.0	59 - 172	50
MC054LOW	156-59-2		cis-1,2-Dichloroethene	5.00		50.0	50 - 150	50.0	50 - 150	50
MC053LOW	156-60-5		trans-1,2-Dichloroethene	5.00		50.0	50 - 150	50.0	50 - 150	50
MC140LOW	78-87-5		1,2-Dichloropropane	5.00		50.0	70 - 125	50.0	29 - 135	50
MC143LOW	10061-01-1		cis-1,3-Dichloropropene	5.00		50.0	58 - 134	50.0	1 - 138	50
MC172LOW	10061-02-1		trans-1,3-Dichloropropene	5.00		50.0	51 - 130	50.0	1 - 136	50
MC240LOW	100-41-4		Ethylbenzene	5.00		50.0	65 - 125	50.0	7 - 141	50
MC210LOW	591-78-6	A99	2-Hexanone	10.0		50.0	18 - 173	50.0	1 - 153	50
MV136LOW	98-82-8		Isopropylbenzene (Cumene)	5.00		50.0	50 - 150	50.0	50 - 150	50
MV173LOW	79-20-9		Methylacetate	10.0		50.0	50 - 150	50.0	50 - 150	50
MC030LOW	75-09-2		Methylene chloride (Dichloromethane)	5.00		50.0	20 - 152	50.0	1 - 146	50
MC205LOW	108-10-1	A99	4-Methyl-2-pentanone (MIBK)	10.0		50.0	1 - 175	50.0	1 - 155	50
MV135LOW	1634-04-4	A99	Methyl tert-butyl ether (MTBE)	5.00		50.0	50 - 150	50.0	50 - 150	50
MC245LOW	100-42-5		Styrene	5.00		50.0	64 - 124	50.0	1 - 137	50
MC225LOW	79-34-5		1,1,2,2-Tetrachloroethane	5.00		50.0	41 - 157	50.0	1 - 166	50
MC220LOW	127-18-4		Tetrachloroethene (Perchloroethylene)	5.00		50.0	48 - 132	50.0	1 - 157	50
MC230LOW	108-88-3		Toluene	5.00		50.0	66 - 128	50.0	59 - 139	50
MC115LOW	71-55-6		1,1,1-Trichloroethane (Methyl chloroform)	5.00		50.0	63 - 137	50.0	35 - 145	50
MC160LOW	79-00-5		1,1,2-Trichloroethane	5.00		50.0	63 - 131	50.0	7 - 145	50
MC150LOW	79-01-6		Trichloroethene (Trichloroethylene)	5.00		50.0	59 - 127	50.0	62 - 137	50
MD010LOW	75-69-4		Trichlorofluoromethane (Freon 11)	5.00		50.0	50 - 150	50.0	33 - 128	50
MC020LOW	75-01-4		Vinyl chloride (Chloroethene)	5.00		50.0	12 - 188	50.0	6 - 177	50
MV163LOW	1330-20-7		m,p-Xylene	5.00		100.	50 - 150	100.	50 - 150	50

Nominal reporting limit is given. Actual sample reporting limits are corrected for sample size, dilution and moisture content as applicable.
* Indicates an alternate value is specified by the protocol code.

6/4/2004 07:20:51

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8260LOW

Prep Level: Low Soil

Protocol: SW 8260 Volatile Organics

Use: 8260 VOAs PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/kg	Reg. Limit ug/kg	LCS Spike ug/kg	LCS Limits %	MS Spike ug/kg	MS Limits %	RPD Max %
MV164LOW	95-47-6		o-Xylene	5.00		50.0	50 - 150	50.0	50 - 150	50
MCS06LOW	2037-26-5		Toluene-d8 (S)			50.0	65 - 124	50.0	65 - 124	
MCS11LOW	460-00-4		4-Bromofluorobenzene (S)			50.0	55 - 160	50.0	55 - 160	
MCS16LOW	1868-53-7		Dibromofluoromethane (S)			50.0	59 - 139	50.0	59 - 139	

45 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8260WAT

Prep Level: Water

Protocol: SW 8260 Volatile Organics

Use: 8260 VOAs PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
MC035WAT	67-64-1	A99	Acetone (2-Propanone, Dimethyl)	10.0		50.0	50 - 150	50.0	50 - 150	25
MC165WAT	71-43-2		Benzene	5.00		50.0	74 - 137	50.0	76 - 127	25
MC130WAT	75-27-4		Bromodichloromethane	5.00		50.0	70 - 130	50.0	61 - 150	25
MC180WAT	75-25-2		Bromoform	5.00		50.0	69 - 150	50.0	63 - 150	25
MC015WAT	74-83-9		Bromomethane (Methyl bromide)	5.00		50.0	53 - 140	50.0	51 - 144	25
MC110WAT	78-93-3	A99	2-Butanone (Methyl ethyl ketone)	10.0		100.	50 - 150	100.	50 - 150	25
MC040WAT	75-15-0	A99	Carbon disulfide	5.00		50.0	50 - 141	50.0	50 - 143	25
MC120WAT	56-23-5		Carbon tetrachloride	5.00		50.0	59 - 150	50.0	50 - 150	25
MC235WAT	108-90-7		Chlorobenzene	5.00		50.0	76 - 131	50.0	75 - 130	25
MC025WAT	75-00-3		Chloroethane	5.00		50.0	50 - 143	50.0	50 - 148	25
MC060WAT	67-66-3		Chloroform	5.00		50.0	74 - 133	50.0	69 - 137	25
MC010WAT	74-87-3		Chloromethane (Methyl chloride)	5.00		50.0	50 - 149	50.0	50 - 150	25
MD060WAT	96-12-8	A99	1,2-Dibromo-3-chloropropane (DBP)	5.00		50.0	50 - 150	50.0	50 - 150	25
MD050WAT	106-93-4		1,2-Dibromoethane (Ethylene dibromide)	5.00		50.0	74 - 141	50.0	50 - 146	25
MV124WAT	75-71-8		Dichlorodifluoromethane (Freon 12)	5.00		50.0	50 - 150	50.0	50 - 150	25
MC155WAT	124-48-1		Dibromochloromethane	5.00		50.0	73 - 150	50.0	68 - 150	25
MC050WAT	75-34-3		1,1-Dichloroethane	5.00		50.0	64 - 136	50.0	61 - 139	25
MC065WAT	107-06-2		1,2-Dichloroethane (Ethylene dichloride)	5.00		50.0	62 - 150	50.0	57 - 150	25
MC045WAT	75-35-4		1,1-Dichloroethene (Dichloroethylidene)	5.00		50.0	50 - 140	50.0	61 - 145	25
MC054WAT	156-59-2		cis-1,2-Dichloroethene	5.00		50.0	52 - 143	50.0	50 - 150	25
MC053WAT	156-60-5		trans-1,2-Dichloroethene	5.00		50.0	52 - 135	50.0	50 - 139	25
MC140WAT	78-87-5		1,2-Dichloropropane	5.00		50.0	70 - 138	50.0	68 - 142	25
MC143WAT	10061-01-		cis-1,3-Dichloropropene	5.00		50.0	73 - 145	50.0	69 - 146	25
MC172WAT	10061-02-		trans-1,3-Dichloropropene	5.00		50.0	65 - 150	50.0	60 - 150	25
MC240WAT	100-41-4		Ethylbenzene	5.00		50.0	65 - 133	50.0	57 - 138	25
MC210WAT	591-78-6	A99	2-Hexanone	10.0		50.0	50 - 150	50.0	50 - 150	25
MV136WAT	98-82-8		Isopropylbenzene (Cumene)	5.00		50.0	62 - 134	50.0	54 - 141	25
MV173WAT	79-20-9		Methylacetate	10.0		50.0	70 - 130	50.0	70 - 130	25
MC030WAT	75-09-2		Methylene chloride (Dichloromethane)	5.00		50.0	50 - 150	50.0	50 - 144	25
MC205WAT	108-10-1	A99	4-Methyl-2-pentanone (MIBK)	10.0		50.0	50 - 150	50.0	50 - 150	25
MV135WAT	1634-04-4	A99	Methyl tert-butyl ether (MTBE)	5.00		50.0	50 - 142	50.0	50 - 150	25
MC245WAT	100-42-5		Styrene	5.00		50.0	50 - 134	50.0	56 - 143	25
MC225WAT	79-34-5		1,1,2,2-Tetrachloroethane	5.00		50.0	56 - 146	50.0	58 - 143	25
MC220WAT	127-18-4		Tetrachloroethene (Perchloroethylene)	5.00		50.0	50 - 150	50.0	50 - 150	25
MC230WAT	108-88-3		Toluene	5.00		50.0	73 - 133	50.0	76 - 125	25
MC115WAT	71-55-6		1,1,1-Trichloroethane (Methyl chloroform)	5.00		50.0	69 - 138	50.0	60 - 143	25
MC160WAT	79-00-5		1,1,2-Trichloroethane	5.00		50.0	75 - 146	50.0	70 - 149	25
MC150WAT	79-01-6		Trichloroethene (Trichloroethylene)	5.00		50.0	76 - 138	50.0	71 - 120	25
MD010WAT	75-69-4		Trichlorofluoromethane (Freon 11)	5.00		50.0	50 - 150	50.0	50 - 150	25
MC020WAT	75-01-4		Vinyl chloride (Chloroethene)	5.00		50.0	50 - 144	50.0	50 - 146	25
MV163WAT	1330-20-7		m,p-Xylene	5.00		100.	72 - 130	100.	70 - 130	25

Nominal reporting limit is given. Actual sample reporting limits are corrected for sample size, dilution and moisture content as applicable.
* Indicates an alternate value is specified by the protocol code.

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8260WAT

Prep Level: Water

Protocol: SW 8260 Volatile Organics

Use: 8260 VOAs PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
MV164WAT	95-47-6		o-Xylene	5.00		50.0	74 - 133	50.0	64 - 141	25
MCS06WAT	2037-26-5		Toluene-d8 (S)			50.0	76 - 120	50.0	76 - 120	
MCS11WAT	460-00-4		4-Bromofluorobenzene (S)			50.0	74 - 127	50.0	74 - 127	
MCS16WAT	1868-53-7		Dibromofluoromethane (S)			50.0	66 - 124	50.0	66 - 124	

45 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8270LOW

Prep Level: Low Soil

Protocol: SW 8270 Semivolatile Organics

Use: 8270 semivolatiles PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/kg	Reg. Limit ug/kg	LCS Spike ug/kg	LCS Limits %	MS Spike ug/kg	MS Limits %	RPD Max %
MC550LOW	83-32-9		Acenaphthene	330.		1660	53 - 104	1660	31 - 137	50
MC540LOW	208-96-8		Acenaphthylene	330.		1660	58 - 102	1660	50 - 102	50
MC645LOW	120-12-7		Anthracene	330.		1660	60 - 106	1660	50 - 108	50
MC730LOW	56-55-3		Benzo(a)anthracene	330.		1660	60 - 106	1660	50 - 115	50
MC765LOW	205-99-2		Benzo(b)fluoranthene	330.		1660	50 - 124	1660	50 - 141	50
MC770LOW	207-08-9		Benzo(k)fluoranthene	330.		1660	50 - 121	1660	50 - 134	50
MC430LOW	65-85-0	A99	Benzoic acid	830.		1660	50 - 148	1660	50 - 129	50
MC790LOW	191-24-2		Benzo(g,h,i)perylene	330.		1660	50 - 127	1660	50 - 117	50
MC775LOW	50-32-8		Benzo(a)pyrene	330.		1660	62 - 114	1660	50 - 124	50
MC345LOW	100-51-6	A99	Benzyl alcohol	330.		1660	50 - 101	1660	50 - 108	50
MC625LOW	101-55-3		4-Bromophenyl-phenylether	330.		1660	58 - 100	1660	50 - 101	50
MC720LOW	85-68-7		Butylbenzylphthalate	330.		1660	58 - 119	1660	50 - 135	50
MC455LOW	106-47-8		4-Chloroaniline (p-Chloroaniline)	330.		1660	50 - 88	1660	50 - 88	50
MC647LOW	86-74-8		Carbazole	330.		1660	70 - 130	1660	50 - 116	
MC435LOW	111-91-1		bis(2-Chloroethoxy)methane	330.		1660	53 - 97	1660	50 - 98	50
MC325LOW	111-44-4		bis(2-Chloroethyl) ether	330.		1660	50 - 94	1660	50 - 95	50
MC357LOW	108-60-1		2,2'-oxybis(1-Chloropropane)	330.		1660	50 - 102	1660	50 - 100	50
MC465LOW	59-50-7	A99	4-Chloro-3-methylphenol (p-Chloro	330.		1660	50 - 114	1660	50 - 116	50
MC525LOW	91-58-7		2-Chloronaphthalene	330.		1660	50 - 100	1660	50 - 99	50
MC330LOW	95-57-8		2-Chlorophenol (o-Chlorophenol)	330.		1660	50 - 103	1660	25 - 102	50
MC585LOW	7005-72-3		4-Chlorophenyl phenyl ether	330.		1660	56 - 106	1660	50 - 109	50
MC735LOW	218-01-9		Chrysene	330.		1660	58 - 106	1660	50 - 115	50
MC785LOW	53-70-3		Dibenz(a,h)anthracene	330.		1660	50 - 126	1660	50 - 115	50
MC565LOW	132-64-9		Dibenzofuran	330.		1660	58 - 103	1660	50 - 108	50
MC650LOW	84-74-2		Di-n-butylphthalate	330.		1660	59 - 112	1660	50 - 120	50
MC350LOW	95-50-1		1,2-Dichlorobenzene (o-Dichlorobenzene)	330.		1660	50 - 88	1660	50 - 94	50
MC335LOW	541-73-1		1,3-Dichlorobenzene (m-Dichlorobenzene)	330.		1660	50 - 85	1660	50 - 81	50
MC340LOW	106-46-7		1,4-Dichlorobenzene (p-Dichlorobenzene)	330.		1660	50 - 86	1660	50 - 93	50
MC725LOW	91-94-1	A99	3,3'-Dichlorobenzidine	667.		1660	50 - 111	1660	50 - 115	50
MC440LOW	120-83-2		2,4-Dichlorophenol	330.		1660	58 - 102	1660	50 - 111	50
MC580LOW	84-66-2		Diethylphthalate	330.		1660	58 - 109	1660	50 - 110	50
MC425LOW	105-67-9		2,4-Dimethylphenol	330.		1660	50 - 102	1660	50 - 104	50
MC535LOW	131-11-3		Dimethylphthalate	330.		1660	59 - 104	1660	50 - 105	50
MC610LOW	534-52-1	A99	4,6-Dinitro-2-methylphenol (4,6-Dinitro	830.		1660	50 - 117	1660	50 - 120	50
MC555LOW	51-28-5	A99	2,4-Dinitrophenol	830.		1660	50 - 127	1660	50 - 121	50
MC570LOW	121-14-2		2,4-Dinitrotoluene	330.		1660	61 - 113	1660	28 - 89	50
MC543LOW	606-20-2		2,6-Dinitrotoluene	330.		1660	58 - 111	1660	50 - 114	50
MC760LOW	117-84-0		Di-n-octylphthalate	330.		1660	50 - 133	1660	50 - 150	50
MC740LOW	117-81-7		bis(2-Ethylhexyl)phthalate	330.		1660	61 - 117	1660	50 - 147	50
MC655LOW	206-44-0		Fluoranthene	330.		1660	59 - 110	1660	50 - 126	50
MC590LOW	86-73-7		Fluorene	330.		1660	58 - 106	1660	50 - 112	50

Nominal reporting limit is given. Actual sample reporting limits are corrected for sample size, dilution and moisture content as applicable.
* Indicates an alternate value is specified by the protocol code

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8270LOW

Prep Level: Low Soil

Protocol: SW 8270 Semivolatile Organics

Use: 8270 semivolatiles PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/kg	Reg. Limit ug/kg	LCS Spike ug/kg	LCS Limits %	MS Spike ug/kg	MS Limits %	RPD Max %
MC630LOW	118-74-1		Hexachlorobenzene	330.		1660	55 - 107	1660	50 - 107	50
MC460LOW	87-68-3		Hexachlorobutadiene	330.		1660	50 - 100	1660	50 - 103	50
MC510LOW	77-47-4	A99	Hexachlorocyclopentadiene	330.		1660	50 - 107	1660	50 - 99	50
MC375LOW	67-72-1		Hexachloroethane	330.		1660	50 - 87	1660	50 - 96	50
MC780LOW	193-39-5		Indeno(1,2,3-cd)pyrene	330.		1660	50 - 123	1660	50 - 113	50
MC415LOW	78-59-1		Isophorone	330.		1660	55 - 106	1660	50 - 105	50
MC470LOW	91-57-6		2-Methylnaphthalene	330.		1660	54 - 102	1660	50 - 113	50
MC355LOW	95-48-7		2-Methylphenol (o-Cresol)	330.		1660	54 - 100	1660	50 - 101	50
MC365LOW	106-44-5	A7	4-Methylphenol (p-Cresol)	330.		1660	56 - 101	1660	50 - 101	50
MC450LOW	91-20-3		Naphthalene	330.		1660	50 - 98	1660	50 - 103	50
MC530LOW	88-74-4	A99	2-Nitroaniline (o-Nitroaniline)	330.		1660	54 - 114	1660	50 - 113	50
MC545LOW	99-09-2	A99	3-Nitroaniline (m-Nitroaniline)	830.		1660	50 - 99	1660	50 - 101	50
MC595LOW	100-01-6	A99	4-Nitroaniline (p-Nitroaniline)	830.		1660	50 - 117	1660	50 - 118	50
MC410LOW	98-95-3		Nitrobenzene	330.		1660	50 - 99	1660	50 - 101	50
MC420LOW	88-75-5		2-Nitrophenol (o-Nitrophenol)	330.		1660	53 - 101	1660	50 - 106	50
MC560LOW	100-02-7	A99	4-Nitrophenol (p-Nitrophenol)	830.		1660	50 - 133	1660	11 - 114	50
MC370LOW	621-64-7		N-Nitroso-di-n-propylamine	330.		1660	50 - 99	1660	41 - 126	50
MC615LOW	86-30-6	A10	N-Nitrosodiphenylamine (Dipheny	330.		1660	55 - 104	1660	50 - 136	50
MC635LOW	87-86-5	A99	Pentachlorophenol	830.		1660	50 - 115	1660	17 - 109	50
MC640LOW	85-01-8		Phenanthrene	330.		1660	60 - 103	1660	50 - 122	50
MC315LOW	108-95-2		Phenol	330.		1660	50 - 106	1660	26 - 90	50
MC715LOW	129-00-0		Pyrene	330.		1660	55 - 109	1660	35 - 142	50
MC445LOW	120-82-1		1,2,4-Trichlorobenzene	330.		1660	50 - 100	1660	50 - 99	50
MC520LOW	95-95-4		2,4,5-Trichlorophenol	830.		1660	58 - 104	1660	50 - 106	50
MC515LOW	88-06-2		2,4,6-Trichlorophenol	330.		1660	57 - 104	1660	50 - 104	50
MCS19LOW	4165-60-0		Nitrobenzene-d5 (S)			1660	30 - 118	1660	30 - 118	
MCS24LOW	321-60-8		2-Fluorobiphenyl (S)			1660	30 - 124	1660	30 - 124	
MCS29LOW	1718-51-0		Terphenyl-d14 (S)			1660	30 - 145	1660	30 - 145	
MCS44LOW	4165-62-2		Phenol-d5 (S)			2500	30 - 106	2500	30 - 106	
MCS49LOW	367-12-4		2-Fluorophenol (S)			2500	30 - 112	2500	30 - 112	
MCS54LOW	118-79-6		2,4,6-Tribromophenol (S)			2500	30 - 128	2500	30 - 128	

77 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8270WAT

Prep Level: Water

Protocol: SW 8270 Semivolatile Organics

Use: 8270 semivolatiles PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
MC550WAT	83-32-9		Acenaphthene	10.0	1.0	50.0	50 - 112	50.0	46 - 118	25
MC540WAT	208-96-8		Acenaphthylene	10.0		50.0	50 - 109	50.0	50 - 109	25
MC645WAT	120-12-7		Anthracene	10.0		50.0	50 - 112	50.0	50 - 110	25
MC730WAT	56-55-3		Benzo(a)anthracene	10.0		50.0	50 - 112	50.0	50 - 114	25
MC765WAT	205-99-2		Benzo(b)fluoranthene	10.0		50.0	50 - 129	50.0	50 - 129	25
MC770WAT	207-08-9		Benzo(k)fluoranthene	10.0		50.0	50 - 127	50.0	50 - 123	25
MC430WAT	65-85-0	A99	Benzoic acid	25.0		50.0	50 - 138	50.0	50 - 150	25
MC790WAT	191-24-2		Benzo(g,h,i)perylene	10.0		50.0	50 - 133	50.0	50 - 132	25
MC775WAT	50-32-8		Benzo(a)pyrene	10.0		50.0	50 - 118	50.0	50 - 150	25
MC345WAT	100-51-6	A99	Benzyl alcohol	10.0		50.0	50 - 110	50.0	50 - 108	25
MC625WAT	101-55-3		4-Bromophenyl-phenylether	10.0		50.0	50 - 111	50.0	50 - 111	25
MC720WAT	85-68-7		Butylbenzylphthalate	10.0		50.0	50 - 124	50.0	50 - 126	25
MC647WAT	86-74-8		Carbazole	10.0		50.0	50 - 138	50.0	50 - 142	25
MC455WAT	106-47-8		4-Chloroaniline (p-Chloroaniline)	10.0		50.0	50 - 116	50.0	50 - 111	25
MC435WAT	111-91-1		bis(2-Chloroethoxy)methane	10.0		50.0	50 - 110	50.0	50 - 108	25
MC325WAT	111-44-4		bis(2-Chloroethyl) ether	10.0		50.0	50 - 109	50.0	50 - 112	25
MC357WAT	108-60-1		2,2'-oxybis(1-Chloropropane)	10.0		50.0	50 - 108	50.0	50 - 105	25
MC465WAT	59-50-7	A99	4-Chloro-3-methylphenol (p-Chloro)	10.0		50.0	50 - 118	50.0	23 - 97	25
MC525WAT	91-58-7		2-Chloronaphthalene	10.0		50.0	50 - 109	50.0	50 - 108	25
MC330WAT	95-57-8		2-Chlorophenol (o-Chlorophenol)	10.0		50.0	50 - 109	50.0	27 - 123	25
MC585WAT	7005-72-3		4-Chlorophenyl phenyl ether	10.0		50.0	50 - 115	50.0	50 - 114	25
MC735WAT	218-01-9		Chrysene	10.0		50.0	50 - 114	50.0	50 - 115	25
MC785WAT	53-70-3		Dibenz(a,h)anthracene	10.0		50.0	50 - 132	50.0	50 - 134	25
MC565WAT	132-64-9		Dibenzofuran	10.0		50.0	50 - 113	50.0	50 - 115	25
MC650WAT	84-74-2		Di-n-butylphthalate	10.0		50.0	50 - 120	50.0	50 - 123	25
MC350WAT	95-50-1		1,2-Dichlorobenzene (o-Dichlorobenzene)	10.0		50.0	50 - 86	50.0	50 - 83	25
MC335WAT	541-73-1		1,3-Dichlorobenzene (m-Dichlorobenzene)	10.0		50.0	50 - 81	50.0	50 - 78	25
MC340WAT	106-46-7		1,4-Dichlorobenzene (p-Dichlorobenzene)	10.0		50.0	50 - 83	50.0	50 - 81	25
MC725WAT	91-94-1	A99	3,3'-Dichlorobenzidine	20.0		50.0	50 - 118	50.0	50 - 95	25
MC440WAT	120-83-2		2,4-Dichlorophenol	10.0		50.0	50 - 113	50.0	50 - 113	25
MC580WAT	84-66-2		Diethylphthalate	10.0		50.0	50 - 119	50.0	50 - 118	25
MC425WAT	105-67-9		2,4-Dimethylphenol	10.0		50.0	50 - 105	50.0	50 - 106	25
MC535WAT	131-11-3		Dimethylphthalate	10.0		50.0	50 - 116	50.0	50 - 114	25
MC610WAT	534-52-1	A99	4,6-Dinitro-2-methylphenol (4,6-Dinitro)	25.0		50.0	50 - 133	50.0	50 - 133	25
MC555WAT	51-28-5	A99	2,4-Dinitrophenol	25.0		50.0	50 - 144	50.0	50 - 150	25
MC570WAT	121-14-2		2,4-Dinitrotoluene	10.0		50.0	50 - 120	50.0	24 - 96	25
MC543WAT	606-20-2		2,6-Dinitrotoluene	10.0		50.0	50 - 119	50.0	50 - 119	25
MC760WAT	117-84-0		Di-n-octylphthalate	10.0		50.0	50 - 140	50.0	50 - 139	25
MC740WAT	117-81-7		bis(2-Ethylhexyl)phthalate	10.0		50.0	50 - 150	50.0	50 - 150	25
MC655WAT	206-44-0		Fluoranthene	10.0		50.0	50 - 120	50.0	50 - 118	25
MC590WAT	86-73-7		Fluorene	10.0		50.0	50 - 116	50.0	50 - 120	25

Nominal reporting limit is given. Actual sample reporting limits are corrected for sample size, dilution and moisture content as applicable.
* Indicates an alternate value is specified by the protocol code.

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8270WAT

Prep Level: Water

Protocol: SW 8270 Semivolatile Organics

Use: 8270 semivolatiles PASI standard list

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
MC630WAT	118-74-1		Hexachlorobenzene	10.0		50.0	50 - 117	50.0	50 - 115	25
MC460WAT	87-68-3		Hexachlorobutadiene	10.0		50.0	50 - 92	50.0	50 - 89	25
MC510WAT	77-47-4	A99	Hexachlorocyclopentadiene	10.0		50.0	50 - 150	50.0	50 - 150	25
MC375WAT	67-72-1		Hexachloroethane	10.0		50.0	50 - 82	50.0	50 - 79	25
MC780WAT	193-39-5		Indeno(1,2,3-cd)pyrene	10.0		50.0	50 - 130	50.0	50 - 130	25
MC415WAT	78-59-1		Isophorone	10.0		50.0	50 - 118	50.0	50 - 116	25
MC470WAT	91-57-6		2-Methylnaphthalene	10.0		50.0	50 - 107	50.0	50 - 106	25
MC355WAT	95-48-7		2-Methylphenol (o-Cresol)	10.0		50.0	50 - 110	50.0	50 - 106	25
MC365WAT	106-44-5	A7	4-Methylphenol (p-Cresol)	10.0		50.0	50 - 110	50.0	50 - 109	25
MC450WAT	91-20-3		Naphthalene	10.0		50.0	50 - 101	50.0	50 - 98	25
MC530WAT	88-74-4	A99	2-Nitroaniline (o-Nitroaniline)	25.0		50.0	50 - 129	50.0	50 - 129	25
MC545WAT	99-09-2	A99	3-Nitroaniline (m-Nitroaniline)	25.0		50.0	50 - 129	50.0	50 - 127	25
MC595WAT	100-01-6	A99	4-Nitroaniline (p-Nitroaniline)	25.0		50.0	50 - 132	50.0	50 - 130	25
MC410WAT	98-95-3		Nitrobenzene	10.0		50.0	50 - 116	50.0	50 - 128	25
MC420WAT	88-75-5		2-Nitrophenol (o-Nitrophenol)	10.0		50.0	50 - 114	50.0	50 - 113	25
MC560WAT	100-02-7	A99	4-Nitrophenol (p-Nitrophenol)	25.0		50.0	50 - 144	50.0	10 - 80	25
MC370WAT	621-64-7		N-Nitroso-di-n-propylamine	10.0		50.0	50 - 108	50.0	41 - 116	25
MC615WAT	86-30-6	A10	N-Nitrosodiphenylamine (Dipheny	10.0		50.0	50 - 108	50.0	50 - 111	25
MC635WAT	87-86-5	A99	Pentachlorophenol	25.0		50.0	50 - 129	50.0	9 - 103	25
MC640WAT	85-01-8		Phenanthrene	10.0		50.0	50 - 112	50.0	50 - 119	25
MC315WAT	108-95-2		Phenol	10.0		50.0	50 - 120	50.0	12 - 110	25
MC715WAT	129-00-0		Pyrene	10.0		50.0	50 - 114	50.0	26 - 127	25
MC445WAT	120-82-1		1,2,4-Trichlorobenzene	10.0		50.0	50 - 94	50.0	50 - 96	25
MC520WAT	95-95-4		2,4,5-Trichlorophenol	25.0		50.0	50 - 119	50.0	50 - 117	25
MC515WAT	88-06-2		2,4,6-Trichlorophenol	10.0		50.0	50 - 119	50.0	50 - 118	25
MCS19WAT	4165-60-0		Nitrobenzene-d5 (S)			50.0	30 - 115	50.0	30 - 115	
MCS24WAT	321-60-8		2-Fluorobiphenyl (S)			50.0	30 - 114	50.0	30 - 114	
MCS29WAT	1718-51-0		Terphenyl-d14 (S)			50.0	33 - 114	50.0	33 - 114	
MCS44WAT	4165-62-2		Phenol-d5 (S)			75.0	30 - 107	75.0	30 - 107	
MCS49WAT	367-12-4		2-Fluorophenol (S)			75.0	30 - 105	75.0	30 - 105	
MCS54WAT	118-79-6		2,4,6-Tribromophenol (S)			75.0	30 - 130	75.0	30 - 130	

77 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: TPHLOW

Prep Level: Low Soil

Protocol: SW 8015B TPH Diesel & Oil Range Organics

Use: SW 8015B TPH Diesel & Oil Range Organics

ParaCode	CAS No.	Qu	Parameter	Reporting Limit mg/kg	Reg. Limit mg/kg	LCS Spike mg/kg	LCS Limits %	MS Spike mg/kg	MS Limits %	RPD Max %
G0046LOW			TPH - Diesel Range Organics (C10-	10.0		40.0	56 - 138	40.0	0 - 178	50
G0047LOW			TPH - Oil Range Organics (>C28-C	50.0						
GSP40LOW			o-Terphenyl (S)			2.00	40 - 140	2.00	40 - 140	

1 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 6010TCLPSOI

Prep Level: Soil

Protocol: SW 6010 Toxicity Characteristic Metals

Use: 6010 report Toxicity Characteristic metals

ParaCode	CAS No.	Qu	Parameter	Reporting Limit mg/kg	Reg. Limit mg/kg	LCS Spike mg/kg	LCS Limits %	MS Spike mg/kg	MS Limits %	RPD Max %
AS-SW-ISOI	7440-38-2		Arsenic	1.00		146.	79 - 122	400.	54 - 128	20
BA-SW-ISOI	7440-39-3		Barium	20.0		140.	78 - 122	400.	50 - 144	20
CD-SW-ISOI	7440-43-9		Cadmium	0.500		244.	80 - 120	10.0	52 - 130	20
CR-SW-ISOI	7440-47-3		Chromium	1.00		99.2	79 - 121	40.0	50 - 150	20
PB-SW-ISOI	7439-92-1		Lead	0.300		72.8	80 - 120	100.	50 - 150	20
SE-SW-ISOI	7782-49-2		Selenium	1.00		86.5	69 - 131	400.	50 - 122	20
AG-SW-ISOI	7440-22-4		Silver	1.00		126.	60 - 140	10.0	50 - 146	20

7 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 6010TCLPSOILEA

Prep Level: Leachate

Protocol: SW 6010 Toxicity Characteristic Metals

Use: 6010 TCLP miscible analyzed as soil, reported as leachate

ParaCode	CAS No.	Qu	Parameter	Reporting Limit mg/L	Reg. Limit mg/L	LCS Spike mg/L	LCS Limits %	MS Spike mg/L	MS Limits %	RPD Max %
AS-SW-ILEA	7440-38-2	C3	Arsenic	1.00	5.00	5.00	75 - 129	5.00	65 - 140	20
BA-SW-ILEA	7440-39-3	C3	Barium	1.00	100.	5.00	78 - 129	5.00	58 - 134	20
CD-SW-ILEA	7440-43-9	C3	Cadmium	0.100	1.00	1.00	76 - 125	1.00	55 - 132	20
CR-SW-ILEA	7440-47-3	C3	Chromium	0.500	5.00	5.00	81 - 129	5.00	62 - 137	20
PB-SW-ILEA	7439-92-1	C3	Lead	0.500	5.00	5.00	79 - 131	5.00	56 - 134	20
SE-SW-ILEA	7782-49-2	C3	Selenium	0.200	1.00	1.00	74 - 121	1.00	59 - 140	20
AG-SW-ILEA	7440-22-4	C3	Silver	0.500	5.00	1.00	60 - 145	1.00	60 - 141	20

7 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 6010WAT

Prep Level: Water

Protocol: SW 6010 Metals

Use: SW 6010 - complete list of metals

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
AL-SW-IWAT 7429-90-5			Aluminum	200.		1000	79 - 122	2000	50 - 150	20
SB-SW-IWAT 7440-36-0			Antimony	60.0		1000	79 - 135	500.	50 - 150	20
AS-SW-IWAT 7440-38-2			Arsenic	10.0		1000	81 - 121	2000	76 - 125	20
BA-SW-IWAT 7440-39-3			Barium	200.		1000	85 - 118	2000	68 - 126	20
BE-SW-IWAT 7440-41-7			Beryllium	5.00		1000	85 - 117	50.0	76 - 126	20
B-SW-IWAT 7440-42-8			Boron	50.0		1000	70 - 130	1000	88 - 125	20
CD-SW-IWAT 7440-43-9			Cadmium	5.00		1000	83 - 120	50.0	71 - 119	20
CA-SW-IWAT 7440-70-2			Calcium ✓	500.		2000	86 - 122		50 - 150	20
CR-SW-IWAT 7440-47-3			Chromium	10.0		1000	85 - 117	200.	60 - 137	20
CO-SW-IWAT 7440-48-4			Cobalt	50.0		1000	89 - 114	500.	72 - 120	20
CU-SW-IWAT 7440-50-8			Copper	10.0		1000	85 - 117	250.	65 - 144	20
GE-SW-IWAT 7440-56-4			Germanium	10.0		500.	70 - 130	50.0	70 - 130	20
AU-SW-IWAT 7440-57-5			Gold	10.0		100.	70 - 130	80.0	70 - 130	20
FE-SW-IWAT 7439-89-6			Iron ✓	100.		1000	83 - 124	1000	50 - 150	20
PB-SW-IWAT 7439-92-1			Lead	3.00		1000	81 - 122	500.	69 - 125	20
LI-SW-IWAT 7439-93-2			Lithium	50.0		200.	70 - 130	10.0	70 - 130	20
MG-SW-IWAT 7439-95-4			Magnesium	500.		2000	88 - 118		50 - 150	20
MN-SW-IWAT 7439-96-5			Manganese ✓	15.0		1000	84 - 119	500.	50 - 150	20
MO-SW-IWAT 7439-98-7			Molybdenum	50.0		1000	91 - 112	1000	85 - 113	20
NI-SW-IWAT 7440-02-0			Nickel	40.0		1000	87 - 117	500.	69 - 121	20
PD-SW-IWAT 7440-05-3			Palladium	0.010			70 - 130		70 - 130	20
K-SW-IWAT 7440-09-7			Potassium	500.		2000	86 - 117		50 - 150	20
SE-SW-IWAT 7782-49-2			Selenium	10.0		1000	84 - 118	2000	75 - 122	20
SI-SW-IWAT 7440-21-3			Silicon	50.0		1000	80 - 120	1000	75 - 125	20
AG-SW-IWAT 7440-22-4			Silver	10.0		500.	72 - 124	50.0	50 - 134	20
NA-SW-IWAT 7440-23-5			Sodium	500.		2000	69 - 130		50 - 150	20
SR-SW-IWAT 7440-24-6			Strontium	50.0		1000	70 - 130	1000	70 - 130	20
TL-SW-IWAT 7440-28-0			Thallium	10.0		1000	84 - 116	2000	69 - 118	20
SN-SW-IWAT 7440-31-5			Tin	20.0		1000	89 - 118	1000	91 - 118	20
TI-SW-IWAT 7440-32-6			Titanium	10.0		1000	70 - 130	1000	70 - 130	20
W-SW-IWAT 7440-33-7			Tungsten	10.0		1000	80 - 120	1000	73 - 125	20
V-SW-IWAT 7440-62-2			Vanadium	50.0		1000	88 - 114	500.	73 - 125	20
ZN-SW-IWAT 7440-66-6			Zinc	20.0		1000	82 - 120	500.	61 - 131	20
ZR-SW-IWAT 7440-67-7			Zirconium	50.0		1000	70 - 130	1000	70 - 130	20

14 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: HG-SW-CVSOI

Prep Level: Soil

Protocol: Mercury by FIMS

Use: Mercury WinLab data transfer

ParaCode	CAS No.	Qu	Parameter	Reporting Limit mg/kg	Reg. Limit mg/kg	LCS Spike mg/kg	LCS Limits %	MS Spike mg/kg	MS Limits %	RPD Max %
HG-SW-CVSO	7439-97-6		Mercury	0.100		9.41	54 - 146	0.500	75 - 125	20

1 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: HG-SW-CVSOILEA

Prep Level: Leachate

Protocol: SW 7471 Toxicity Characteristic Metals

Use: 7471 TCLP miscible analyzed as soil, reported as leachate

ParaCode	CAS No.	Qu	Parameter	Reporting Limit mg/L	Reg. Limit mg/L	LCS Spike mg/L	LCS Limits %	MS Spike mg/L	MS Limits %	RPD Max %
HG-SW-CVLL	7439-97-6	C3	Mercury	0.00020	0.200	0.0010	80 - 120	0.0010	50 - 150	20

1 parameters

Target Analyte List

Analysis Protocol - Single Matrix

Protocol Code: 8310WAT

Prep Level: Water

Protocol: SW 8310 Polyaromatic Hydrocarbons by HPLC

Use: SW 8310 PAH by HPLC

ParaCode	CAS No.	Qu	Parameter	Reporting Limit ug/L	Reg. Limit ug/L	LCS Spike ug/L	LCS Limits %	MS Spike ug/L	MS Limits %	RPD Max %
G1600WAT	83-32-9		Acenaphthene	1.00		3.00	50 - 130	3.00	50 - 148	25
G1601WAT	208-96-8		Acenaphthylene	2.00		6.00	50 - 130	6.00	50 - 150	25
G1602WAT	120-12-7		Anthracene	0.100		0.300	50 - 141	0.300	50 - 150	25
G1603WAT	56-55-3		Benzo(a)anthracene	0.100		0.300	50 - 150	0.300	50 - 150	25
G1605WAT	205-99-2		Benzo(b)fluoranthene	0.200		0.600	50 - 143	0.600	50 - 150	25
G1606WAT	207-08-9		Benzo(k)fluoranthene	0.100		0.300	50 - 146	0.300	50 - 150	25
G1607WAT	191-24-2		Benzo(g,h,i)perylene	0.200		0.600	50 - 150	0.600	50 - 150	25
G1604WAT	50-32-8		Benzo(a)pyrene	0.100		0.300	50 - 143	0.300	50 - 150	25
G1608WAT	218-01-9		Chrysene	0.100		0.300	50 - 142	0.300	50 - 150	25
G1609WAT	53-70-3		Dibenz(a,h)anthracene	0.200		0.600	50 - 136	0.600	50 - 139	25
G1610WAT	206-44-0		Fluoranthene	0.200		0.600	50 - 142	0.600	50 - 150	25
G1611WAT	86-73-7		Fluorene	0.200		0.600	50 - 130	0.600	50 - 147	25
G1612WAT	193-39-5		Indeno(1,2,3-cd)pyrene	0.100		0.300	50 - 141	0.300	50 - 150	25
G1613WAT	91-20-3		Naphthalene	1.00		3.00	50 - 115	3.00	50 - 136	25
G1614WAT	85-01-8		Phenanthrene	0.100		0.300	50 - 150	0.300	50 - 150	25
G1616WAT	129-00-0		Pyrene	0.100		0.300	50 - 150	0.300	50 - 150	25
GSP31WAT	86-74-8		Carbazole (S)			3.00	50 - 148	3.00	34 - 132	
GSP30WAT	92-94-4		p-Terphenyl (d14) (S)			3.00	50 - 147	3.00	20 - 137	
GSS31WAT	86-74-8		Carbazole (Confirmation) (S)			3.00	50 - 150	3.00	42 - 147	
GSS30WAT	92-94-4		p-Terphenyl (d14) (confirmation) (			3.00	50 - 150	3.00	13 - 134	

70 nanometers



ATTACHMENT 2
Data Quality Exceptions and Laboratory Case Narratives

Narrative for Episode 2034482

Semivolatile Organics

Solid samples 20265585, 20265594, 20265612, 20265616, 20267119, 20267120, 20267121, 20267552 and 20267562 had low response for the last internal standard. The sample extracts were viscous in appearance and the chromatograms processed an unresolved complex hump.

Samples 20268722, 20268880, and 20268883 were extracted outside of holding time and the results are not reported. These three samples were re-sampled on 7/22/04 and resubmitted as sample numbers 20280269, 20280268, and 20280267 respectively. These samples were extracted and analyzed within approved holding times.

Sample numbers 20268885, 20268888, and 20268901 were also extracted outside of holding time. The client decided not recollect these samples.

Samples 20268885, 20268888, and 20268901 and re-samples 20280269, 20280268, 20280267 were not charged for 8270 analysis. In addition, samples 20280269, 20280268, and 20280267 were not charged for TPH-Diesel analysis.

Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Pace Analytical™
New Orleans Laboratory

Client: ARCADIS
Project: RFI Phase 1 - TMD Soils
Project No.: 2034482

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
TMD-13(0-1')	20267071	Soil	06/14/2004	15:00	06/16/2004	10:30
TMD-13(12-14')	20267080	Soil	06/14/2004	15:00	06/16/2004	10:30
TMD-13(4-6')	20267077	Soil	06/14/2004	15:00	06/16/2004	10:30
TMD-13(6-8')	20267078	Soil	06/14/2004	15:00	06/16/2004	10:30
TMD-14(0-1')	20267082	Soil	06/14/2004	16:30	06/16/2004	10:30
TMD-14(13-15')	20267084	Soil	06/14/2004	16:30	06/16/2004	10:30
TMD-14(5-7')	20267083	Soil	06/14/2004	16:30	06/16/2004	10:30
TMD-15(0-2.5')	20267085	Soil	06/14/2004	17:22	06/16/2004	10:30
TMD-15(5-7')	20267086	Soil	06/14/2004	17:22	06/16/2004	10:30
TMD-15(7-9')	20267093	Soil	06/14/2004	17:22	06/16/2004	10:30
DUP-3	20267119	Soil	06/15/2004		06/16/2004	10:30
DUP-4	20267118	Soil	06/15/2004		06/16/2004	10:30
TMD-16(0-1')	20267095	Soil	06/15/2004	08:44	06/16/2004	10:30
TMD-16(3-5')	20267096	Soil	06/15/2004	08:44	06/16/2004	10:30
TMD-17(0-2.5')	20267098	Soil	06/15/2004	09:30	06/16/2004	10:30
TMD-17(13-15')	20267100	Soil	06/15/2004	09:30	06/16/2004	10:30
TMD-17(7-9')	20267099	Soil	06/15/2004	09:30	06/16/2004	10:30
TMD-18(0-2.5')	20267101	Soil	06/15/2004	10:30	06/16/2004	10:30
TMD-18(5-7')	20267109	Soil	06/15/2004	10:30	06/16/2004	10:30
TMD-18(7-9')	20267110	Soil	06/15/2004	10:30	06/16/2004	10:30
TMD-19(0-2.5')	20267120	Soil	06/15/2004	14:20	06/16/2004	10:30
TMD-19(13-15')	20267122	Soil	06/15/2004	14:20	06/16/2004	10:30
TMD-19(5-7')	20267121	Soil	06/15/2004	14:20	06/16/2004	10:30
TMD-20(0-2.5')	20267456	Soil	06/15/2004	15:30	06/17/2004	10:30
TMD-20(5-7')	20267458	Soil	06/15/2004	15:30	06/17/2004	10:30
TMD-21(0-2.5')	20267459	Soil	06/15/2004	16:00	06/17/2004	10:30
TMD-21(5-7')	20267461	Soil	06/15/2004	16:00	06/17/2004	10:30
TMD-22(0-1')	20267462	Soil	06/15/2004	17:00	06/17/2004	10:30
TMD-22(5-7')	20267463	Soil	06/15/2004	17:00	06/17/2004	10:30
DUPE 5	20267473	Soil	06/16/2004		06/17/2004	10:30
EB-2S	20267448	Water	06/16/2004	10:04	06/17/2004	10:30
TMD-23(0-1')	20267464	Soil	06/16/2004	08:16	06/17/2004	10:30
TMD-23(5-7')	20267465	Soil	06/16/2004	08:16	06/17/2004	10:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - EB7595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/HZ) - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/8/2004 12:34:31

Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0355

Client: ARCADIS

Project: RFI Phase 1-Boring Waters

Project No.: 2034455

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
TMD-1	20265252	Water	06/09/2004	17:30	06/11/2004	10:20
TMD-3	20265253	Water	06/10/2004	10:15	06/11/2004	10:20
TMD-5	20265255	Water	06/11/2004	09:24	06/12/2004	09:30
TMD-6	20265256	Water	06/11/2004	09:45	06/12/2004	09:30
TMD-7	20265257	Water	06/11/2004	10:00	06/12/2004	09:30
TMD-8	20265258	Water	06/11/2004	10:30	06/12/2004	09:30
TMD-9	20265259	Water	06/11/2004	11:22	06/12/2004	09:30
DUP-1BW	20266878	Water	06/14/2004		06/16/2004	10:30
EB-1BW	20266877	Water	06/14/2004	11:30	06/16/2004	10:30
FB-1BW	20266875	Water	06/14/2004	11:00	06/16/2004	10:30
TMD-10	20266876	Water	06/14/2004	11:15	06/16/2004	10:30
TMD-11	20266871	Water	06/14/2004	14:45	06/16/2004	10:30
TMD-12	20266872	Water	06/14/2004	15:15	06/16/2004	10:30
TMD-13	20266873	Water	06/14/2004	16:00	06/16/2004	10:30
DUP-2BW	20266884	Water	06/15/2004		06/16/2004	10:30
EB-2BW	20266882	Water	06/15/2004	08:30	06/16/2004	10:30
FB-2BW	20266883	Water	06/15/2004	08:30	06/16/2004	10:30
TMD-14	20266874	Water	06/15/2004	08:00	06/16/2004	10:30
TMD-15	20266890	Water	06/15/2004	10:00	06/16/2004	10:30
TMD-16	20266879	Water	06/15/2004	10:30	06/16/2004	10:30
TMD-17	20266880	Water	06/15/2004	11:00	06/16/2004	10:30
TMD-18	20266881	Water	06/15/2004	12:30	06/16/2004	10:30
DUP-3BW	20267447	Water	06/16/2004		06/17/2004	10:30
EB-3BW	20267445	Water	06/16/2004	08:30	06/17/2004	10:30
FB-3BW	20267446	Water	06/16/2004	08:30	06/17/2004	10:30
TMD-19	20267443	Water	06/16/2004	08:30	06/17/2004	10:30
TMD-20	20267450	Water	06/16/2004	10:20	06/17/2004	10:30
TMD-21	20267537	Water	06/16/2004	16:00	06/18/2004	10:30
TRIP BLANK	20267452	Water	06/16/2004	16:30	06/17/2004	10:30
TMD-23	20267544	Water	06/17/2004	12:00	06/18/2004	10:30
TMD-26	20267538	Water	06/17/2004	09:00	06/18/2004	10:30
TMD-27	20267539	Water	06/17/2004	09:50	06/18/2004	10:30
TMD-28	20267540	Water	06/17/2004	10:20	06/18/2004	10:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/HQ) - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

7/28/2004 14:42:24



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverband Blvd. Suite F
Saint Rose, LA 70067

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1-Boring Waters

Project No.: 2034455

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
TMD-29	20267541	Water	06/17/2004	10:50	06/18/2004	10:30
TMD-30	20267542	Water	06/17/2004	11:20	06/18/2004	10:30
TMD-31	20267543	Water	06/17/2004	11:50	06/18/2004	10:30
TMD-32	20267546	Water	06/17/2004	15:15	06/18/2004	10:30
TRIP BLANK	20268308	Water	06/17/2004		06/21/2004	10:05
TMD-4	20268306	Water	06/18/2004	09:30	06/21/2004	10:20
TMD-33	20269073	Water	06/21/2004	15:50	06/23/2004	10:00
TMD-34	20269082	Water	06/21/2004	16:20	06/23/2004	10:00
TMD-2	20269087	Water	06/22/2004	09:00	06/23/2004	10:00
TMD-22	20269090	Water	06/22/2004	15:00	06/23/2004	10:00
TMD-35	20269419	Water	06/23/2004	15:00	06/24/2004	10:15
TMD-36	20270373	Water	06/24/2004	09:00	06/25/2004	10:15
TMD-37	20270374	Water	06/24/2004	09:30	06/25/2004	10:15
TMD-38	20270409	Water	06/24/2004	10:00	06/25/2004	10:15
TMD-24	20271497	Water	06/28/2004	14:30	06/30/2004	10:15
TMD-25	20271498	Water	06/29/2004	09:00	06/30/2004	10:15

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/H2O) - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services.
Foreign Soil Import (U.S. Territories)

7/28/2004 14:42:24

Narrative for Project 2035154 (EP1 Soils)

Volatile Organics

The concentrations reported for acetone in samples 20270656, 20270661, 20270662 may be high biased due to the presence of an interfering non-target hydrocarbon. The concentration reported for acetone for sample 20270662 was calculated using an alternate ion (mass 58 instead of mass 43) due to this interference.

The concentration reported for ethylbenzene for sample 20270656 was slightly above the calibration range. The laboratory reran the sample according to the high level procedure but the re-analysis was completed 7/8/04, with a sample holding time limit of 7/7/04. The result for ethylbenzene was therefore flagged with an E.

The concentrations reported for ethylbenzene, o-xylene, and isopropylbenzene were above the calibration range in the low level analysis of sample 20269430. The sample was reanalyzed according to the high level procedure for these analytes. Since the rerun was outside the holding time the data was qualified.

Semi-volatiles

Solid samples 20270661, 20270664, 20270665 and 20270668 had low response for the last internal standard. The sample extracts were viscous and the chromatograms processed an unresolved complex hump.

Sample 20269429 was extracted outside the hold time for the 8270 analysis, but the results are not reported. EP1-3(0-2.5') was resampled on 7/22/04 and the results are reported for 8270 as sample number 20280258.



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1 - EP1 Soils

Project No.: 2035154

Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
DUPE 8	20269446	Soil	06/22/2004	06/24/2004 10:15
EP1-11(0-2.5)	20269442	Soil	06/22/2004 17:50	06/24/2004 10:15
EP1-11(15-17.5')	20269443	Soil	06/22/2004 17:50	06/24/2004 10:15
EP1-11(17.5-20')	20269445	Soil	06/22/2004 17:50	06/24/2004 10:15
EP1-3(0-2.5')	20269429	Soil	06/22/2004 14:30	06/24/2004 10:15
EP1-3(12.5-15')	20269431	Soil	06/22/2004 14:30	06/24/2004 10:15
EP1-3(2.5-5')	20269430	Soil	06/22/2004 14:30	06/24/2004 10:15
EP1-5(0-2.5)	20269432	Soil	06/22/2004 15:30	06/24/2004 10:15
EP1-5(10-12.5')	20269434	Soil	06/22/2004 15:30	06/24/2004 10:15
EP1-5(2.5-5')	20269433	Soil	06/22/2004 15:30	06/24/2004 10:15
EP1-8(0-2.5')	20269439	Soil	06/22/2004 16:45	06/24/2004 10:15
EP1-8(12.5-15')	20269441	Soil	06/22/2004 16:45	06/24/2004 10:15
EP1-8(5-7.5')	20269440	Soil	06/22/2004 16:45	06/24/2004 10:15
DUP-10	20270660	Soil	06/23/2004 10:00	06/25/2004 10:15
DUPE 9	20269455	Soil	06/23/2004	06/24/2004 10:15
EP1-1 (0-5')	20270655	Soil	06/23/2004 08:30	06/25/2004 10:15
EP1-1 (12.5-15')	20270657	Soil	06/23/2004 08:30	06/25/2004 10:15
EP1-1 (2.5-5')	20270656	Soil	06/23/2004 08:30	06/25/2004 10:15
EP1-10 (0-2.5')	20270661	Soil	06/23/2004 10:45	06/25/2004 10:15
EP1-10 (2.5-5')	20270662	Soil	06/23/2004 10:45	06/25/2004 10:15
EP1-10 (22.5-25')	20270663	Soil	06/23/2004 10:45	06/25/2004 10:15
EP1-12 (0-2.5')	20270664	Soil	06/23/2004 11:30	06/25/2004 10:15
EP1-12 (2.5-5')	20270665	Soil	06/23/2004 11:30	06/25/2004 10:15
EP1-2(0-2.5')	20269447	Soil	06/23/2004 11:00	06/24/2004 10:15
EP1-2(17.5-20)	20269449	Soil	06/23/2004 11:00	06/24/2004 10:15
EP1-2(7.5-10)	20269448	Soil	06/23/2004 11:00	06/24/2004 10:15
EP1-4(0-2.5')	20269451	Soil	06/23/2004 11:45	06/24/2004 10:15
EP1-4(22.5-25')	20269454	Soil	06/23/2004 11:45	06/24/2004 10:15
EP1-4(7.5-10')	20269453	Soil	06/23/2004 11:45	06/24/2004 10:15
EP1-7 (0-2.5')	20270658	Soil	06/23/2004 10:00	06/25/2004 10:15
EP1-7 (2.5-5')	20270659	Soil	06/23/2004 10:00	06/25/2004 10:15
EP1-9 (0-2.5')	20270666	Soil	06/23/2004 14:00	06/25/2004 10:15
EP1-9 (5-7.5')	20270667	Soil	06/23/2004 14:00	06/25/2004 10:15

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP/Drinking Water) LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELWRW - E-10266
LELAP (NELAP WW/HZ) - 02006
EQ8 - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/8/2004 11:25:16

Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0553

 **Pace Analytical™**
New Orleans Laboratory

Client: ARCADIS

Project: RFI Phase 1 - EPI Soils

Project No.: 2035154

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
EB-7S	20270423	Water	06/24/2004	15:30	06/25/2004	10:15
EPI-6 (0-2.5')	20270668	Soil	06/24/2004	15:00	06/25/2004	10:15
EPI-6 (2.5-5')	20270669	Soil	06/24/2004	15:00	06/25/2004	10:15
EPI-3 (0-2.5')	20280258	Soil	07/22/2004	13:13	07/26/2004	09:00

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELW/WW - E-10266
LELAP (NELAP WW/KD) - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/8/2004 11:25:16

Narrative for Project 2035155

Volatile Organics

The concentration reported for acetone for sample 20270681 was slightly above the calibration range in the 1:5 analysis.

Semi-volatiles

Solid samples 20270673, 20270676, 20270680, 2070682 and 2070685 had low response for the last internal standard . The sample extracts were viscous in appearance and the chromatograms processed an unresolved complex hump.

Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd, Suite F
Saint Rose, LA 70087

Phone: 504.469.0335
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1 - EP2 Soils

Project No.: 2035155

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
DUP-11	20270678	Soil	06/25/2004		06/26/2004	08:30
DUP-12	20270688	Soil	06/25/2004		06/26/2004	08:30
EB-8S	20270440	Water	06/25/2004	14:00	06/26/2004	08:30
EP2-1 (0-2.5')	20270670	Soil	06/25/2004	08:30	06/26/2004	08:30
EP2-1 (2.5-5')	20270671	Soil	06/25/2004	08:30	06/26/2004	08:30
EP2-1 (7.5-10')	20270672	Soil	06/25/2004	08:30	06/26/2004	08:30
EP2-10(0-2.5')	20270689	Soil	06/25/2004	15:00	06/26/2004	08:30
EP2-10(5-7.5')	20270690	Soil	06/25/2004	15:00	06/26/2004	08:30
EP2-2 (0-2.5')	20270680	Soil	06/25/2004	11:15	06/26/2004	08:30
EP2-2 (5-7.5')	20270681	Soil	06/25/2004	11:15	06/26/2004	08:30
EP2-3 (0-2.5')	20270676	Soil	06/25/2004	10:30	06/26/2004	08:30
EP2-3 (2.5-5')	20270677	Soil	06/25/2004	10:30	06/26/2004	08:30
EP2-3 (5-7.5')	20270679	Soil	06/25/2004	10:30	06/26/2004	08:30
EP2-4 (0-2.5')	20270682	Soil	06/25/2004	11:50	06/26/2004	08:30
EP2-4 (2-2.5')	20270683	Soil	06/25/2004	11:50	06/26/2004	08:30
EP2-4 (7.5-10')	20270684	Soil	06/25/2004	11:50	06/26/2004	08:30
EP2-5 (0-2.5')	20270685	Soil	06/25/2004	14:30	06/26/2004	08:30
EP2-5 (2.5-5')	20270686	Soil	06/25/2004	14:30	06/26/2004	08:30
EP2-5 (7.5-10')	20270687	Soil	06/25/2004	14:30	06/26/2004	08:30
EP2-6 (0-2.5')	20270673	Soil	06/25/2004	09:30	06/26/2004	08:30
EP2-6 (5-7.5')	20270674	Soil	06/25/2004	09:30	06/26/2004	08:30
EP2-6 (7.5-10')	20270675	Soil	06/25/2004	09:30	06/26/2004	08:30
DUP2 12	20271512	Soil	06/28/2004		06/30/2004	10:15
EB-9S	20271494	Water	06/28/2004	14:00	06/30/2004	10:15
EP2-11 (0-2.5)	20271509	Soil	06/28/2004	16:30	06/30/2004	10:15
EP2-11 (7.5-10)	20271510	Soil	06/28/2004	16:30	06/30/2004	10:15
EP2-7 (0-2.5)	20271502	Soil	06/28/2004	14:40	06/30/2004	10:15
EP2-7 (2.5-5)	20271504	Soil	06/28/2004	14:40	06/30/2004	10:15
EP2-8 (0-2.5)	20271506	Soil	06/28/2004	15:30	06/30/2004	10:15
EP2-8 (15-17.5)	20271508	Soil	06/28/2004	15:30	06/30/2004	10:15
EP2-8 (7.5-10)	20271507	Soil	06/28/2004	15:30	06/30/2004	10:15
EP2-9 (0-2.5)	20271511	Soil	06/28/2004	17:10	06/30/2004	10:15
EP2-9 (2.5-5)	20271514	Soil	06/28/2004	17:10	06/30/2004	10:15

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP): Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELWHW - E-10256
LELAP (NELAP WW/H2O - 02006)
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

7/30/2004 13:59:18



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1 - EP2 Soils

Project No.: 2035155

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
EP2-9 (5-7.5)	20271515	Soil	06/28/2004	17:10	06/30/2004	10:15
DUPE 14	20276438	Soil	07/12/2004		07/15/2004	10:00
DUPE 15	20276466	Soil	07/12/2004		07/15/2004	10:00
EB-10S	20276528	Water	07/12/2004	14:00	07/15/2004	10:00
EP2-12 (0-2.5)	20276432	Soil	07/12/2004	12:15	07/15/2004	10:00
EP2-12 (5-7.5)	20276433	Soil	07/12/2004	12:15	07/15/2004	10:00
EP2-13 (0-2.5)	20276430	Soil	07/12/2004	11:55	07/15/2004	10:00
EP2-13 (2.5-5)	20276431	Soil	07/12/2004	11:55	07/15/2004	10:00
EP2-14 (0-2.5)	20276428	Soil	07/12/2004	11:22	07/15/2004	10:00
EP2-14 (7.5-10)	20276429	Soil	07/12/2004	11:22	07/15/2004	10:00
EP2-15 (0-2.5)	20276424	Soil	07/12/2004	11:00	07/15/2004	10:00
EP2-15 (2.5-5)	20276425	Soil	07/12/2004	11:00	07/15/2004	10:00
EP2-15 (7.5-10)	20276426	Soil	07/12/2004	11:00	07/15/2004	10:00
EP2-16 (0-2.5)	20276434	Soil	07/12/2004	14:30	07/15/2004	10:00
EP2-16 (2.5-5)	20276435	Soil	07/12/2004	14:30	07/15/2004	10:00
EP2-17 (0-2.5)	20276436	Soil	07/12/2004	14:50	07/15/2004	10:00
EP2-17 (2.5-5)	20276437	Soil	07/12/2004	14:50	07/15/2004	10:00
EP2-18 (0-2.5)	20276439	Soil	07/12/2004	15:15	07/15/2004	10:00
EP2-18 (2.5-5)	20276440	Soil	07/12/2004	15:15	07/15/2004	10:00
EP2-19 (0-2.5)	20276441	Soil	07/12/2004	15:25	07/15/2004	10:00
EP2-19 (2.5-5)	20276442	Soil	07/12/2004	15:25	07/15/2004	10:00
EP2-20 (0-2.5)	20276455	Soil	07/12/2004	17:00	07/15/2004	10:00
EP2-20 (5-7.5)	20276462	Soil	07/12/2004	17:00	07/15/2004	10:00
EP2-21 (0-2.5)	20276449	Soil	07/12/2004	16:30	07/15/2004	10:00
EP2-21 (2.5-5)	20276454	Soil	07/12/2004	16:30	07/15/2004	10:00
EP2-22 (0-2.5)	20276447	Soil	07/12/2004	15:15	07/15/2004	10:00
EP2-22 (2.5-5)	20276448	Soil	07/12/2004	16:15	07/15/2004	10:00
EP2-23 (0-2.5)	20276443	Soil	07/12/2004	15:45	07/15/2004	10:00
EP2-23 (2.5-5)	20276446	Soil	07/12/2004	15:45	07/15/2004	10:00
DUPE 16	20276510	Soil	07/13/2004		07/15/2004	10:00
EB-11S	20276529	Water	07/13/2004	08:00	07/15/2004	10:00
EP2-24 (0-2.5)	20276472	Soil	07/13/2004	08:35	07/15/2004	10:00
EP2-24 (2.5-5)	20276473	Soil	07/13/2004	08:35	07/15/2004	10:00

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELAP - E-10266
LELAP (NELAP WW/H2O - 02006)
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

7/30/2004 13:59:18

Narrative for Project 2035420

TPH Extractables

The laboratory control sample associated with samples in batch 46201 yielded 55% recovery for the diesel range hydrocarbons and 61% for the surrogate, indicating that a portion of the LCS extract may have been lost. Surrogate recoveries met QC requirements in the samples and method blank that were extracted concurrently with this LCS, indicating that the problem was isolated to the LCS. Acceptable method performance was demonstrated by the matrix spike recoveries.



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1 - EP5 Soils

Project No.: 2035420

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
EP5-3 (0-2.5)	20272605	Soil	06/30/2004	14:20	07/02/2004	09:00
EP5-3 (5.7.5)	20272606	Soil	06/30/2004	14:20	07/02/2004	09:00
DUP 18	20276519	Soil	07/13/2004		07/15/2004	10:00
DUPE 17	20276511	Soil	07/13/2004		07/15/2004	10:00
EB-12S	20276535	Water	07/13/2004	06:00	07/15/2004	10:00
EP5-1 (0-2.5)	20276505	Soil	07/13/2004	12:00	07/15/2004	10:00
EP5-1 (2.5-5)	20276506	Soil	07/13/2004	12:00	07/15/2004	10:00
EP5-11 (0-2.5)	20276513	Soil	07/13/2004	15:30	07/15/2004	10:00
EP5-11 (2.5-5)	20276514	Soil	07/13/2004	15:30	07/15/2004	10:00
EP5-2 (0-2.5)	20276503	Soil	07/13/2004	11:05	07/15/2004	10:00
EP5-2 (2.5-5)	20276504	Soil	07/13/2004	11:05	07/15/2004	10:00
EP5-4 (0-2.5)	20276507	Soil	07/13/2004	14:20	07/15/2004	10:00
EP5-4 (2.5-5)	20276508	Soil	07/13/2004	14:20	07/15/2004	10:00
EP5-5 (0-2.5)	20276515	Soil	07/13/2004	16:00	07/15/2004	10:00
EP5-5 (2.5-5)	20276516	Soil	07/13/2004	16:00	07/15/2004	10:00
EP5-6 (0-2.5)	20276501	Soil	07/13/2004	10:22	07/15/2004	10:00
EP5-6 (2.5-5)	20276502	Soil	07/13/2004	10:22	07/15/2004	10:00
EP5-7 (0-2.5)	20276517	Soil	07/13/2004	16:40	07/15/2004	10:00
EP5-7 (2.5-5)	20276518	Soil	07/13/2004	16:40	07/15/2004	10:00
EP5-8 (0-2.5)	20276509	Soil	07/13/2004	15:00	07/15/2004	10:00
EP5-8 (2.5-5)	20276512	Soil	07/13/2004	15:00	07/15/2004	10:00
DUPE 19	20276910	Soil	07/14/2004		07/16/2004	10:30
DUPE 20	20276911	Soil	07/14/2004		07/16/2004	10:30
DUPE-21	20276921	Soil	07/14/2004		07/16/2004	10:30
DUPE-22	20276922	Soil	07/14/2004		07/16/2004	10:30
EB-13S	20276536	Water	07/14/2004	08:30	07/15/2004	10:00
EB-14S	20276541	Water	07/14/2004	14:00	07/15/2004	10:00
EP5-10 (0-2.5)	20276905	Soil	07/14/2004	10:35	07/16/2004	10:30
EP5-10 (2.5-5)	20276906	Soil	07/14/2004	10:35	07/16/2004	10:30
EP5-12 (0-2.5)	20276899	Soil	07/14/2004	09:15	07/16/2004	10:30
EP5-12 (2.5-5)	20276900	Soil	07/14/2004	09:15	07/16/2004	10:30
EP5-13 (0-2.5)	20276901	Soil	07/14/2004	09:45	07/16/2004	10:30
EP5-13 (2.5-5)	20276902	Soil	07/14/2004	09:45	07/16/2004	10:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030813
Florida Dept. of Health/Hazardous Waste - E87595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WWA/12) - 02006
EGB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/2/2004 14:40:51



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd, Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase I - EP5 Soils

Project No.: 2035420

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
EP5-14 (0-2.5)	20276907	Soil	07/14/2004	11:00	07/16/2004	10:30
EP5-14 (2.5-5)	20276908	Soil	07/14/2004	11:00	07/16/2004	10:30
EP5-15 (0-2.5)	20276915	Soil	07/14/2004	14:20	07/16/2004	10:30
EP5-15 (2.5-5)	20276916	Soil	07/14/2004	14:20	07/16/2004	10:30
EP5-16 (0-2.5)	20276903	Soil	07/14/2004	10:10	07/16/2004	10:30
EP5-16 (2.5-5)	20276904	Soil	07/14/2004	10:10	07/16/2004	10:30
EP5-17 (0-2.5)	20276909	Soil	07/14/2004	11:20	07/16/2004	10:30
EP5-17 (2.5-5)	20276912	Soil	07/14/2004	11:20	07/16/2004	10:30
EP5-18 (0-2.5)	20276917	Soil	07/14/2004	15:00	07/16/2004	10:30
EP5-18 (2.5-5)	20276918	Soil	07/14/2004	15:00	07/16/2004	10:30
EP5-19 (0-2.5)	20276913	Soil	07/14/2004	11:45	07/16/2004	10:30
EP5-19 (2.5-5)	20276914	Soil	07/14/2004	11:45	07/16/2004	10:30
EP5-20 (0-2.5)	20276919	Soil	07/14/2004	15:30	07/16/2004	10:30
EP5-20 (2.5-5)	20276920	Soil	07/14/2004	15:30	07/16/2004	10:30
EP5-21 (0-2.5)	20276923	Soil	07/14/2004	16:00	07/16/2004	10:30
EP5-21 (2.5-5)	20276924	Soil	07/14/2004	16:00	07/16/2004	10:30
EP5-9 (02.5)	20276897	Soil	07/14/2004	08:45	07/16/2004	10:30
EP5-9 (2.5-5)	20276898	Soil	07/14/2004	08:45	07/16/2004	10:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E87395
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/HQ) - 02006
EQS - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

6/2/2004 14:40:51

Narrative for Project 2034899

8310-PAHs

The laboratory control sample associated with the samples in batch 45160 yielded recoveries between 40 and 50 %for all or most target analytes as well as for the surrogates, indicating that a portion of the LCS extract was lost. Surrogate recoveries that were unaffected by sample interferences or dilutions met QC requirements in the samples and method blank that were extracted concurrently with this LCS, indicating that the problem was isolated to the LCS. The majority of the matrix spike recoveries were acceptable, with the exception of those analytes present at relatively high levels in the parent sample. The data was accepted with qualification since there was insufficient time to perform re-extractions within the extraction holding time limits.

Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087
Phone: 504 469 0333
Fax: 504 469 0335

Pace Analytical
New Orleans Laboratory

Client: ARCADIS
Project: RFI Phase I - Boring Waters
Project No.: 2034899

Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
TRIP BLANK	20269092	Water	06/22/2004	06/23/2004 10:00
TRIP BLANK	20269420	Water	06/23/2004	06/24/2004 10:15
EP1-1	20270410	Water	06/24/2004 10:30	06/25/2004 10:15
EP1-10	20270411	Water	06/24/2004 10:30	06/25/2004 10:15
EP1-9	20270417	Water	06/24/2004 10:30	06/25/2004 10:15
TRIP BLANK	20270429	Water	06/24/2004	06/25/2004 10:15
DUP 4BW	20270439	Water	06/25/2004	06/26/2004 08:30
EB-4BW	20270438	Water	06/25/2004 11:00	06/26/2004 08:30
EP2-1	20270436	Water	06/25/2004 10:00	06/26/2004 08:30
EP2-6	20270437	Water	06/25/2004 11:00	06/26/2004 08:30
FB-4BW	20270435	Water	06/25/2004 14:00	06/26/2004 08:30
TRIP BLANK	20270441	Water	06/25/2004	06/26/2004 08:30
TRIP BLANK	20271501	Water	06/29/2004	06/30/2004 10:15
EP2-12	20276537	Water	07/14/2004 09:30	07/15/2004 10:00
EP2-20	20276538	Water	07/14/2004 10:00	07/15/2004 10:00
EP2-25	20276539	Water	07/14/2004 11:00	07/15/2004 10:00
EP5-1	20276549	Water	07/14/2004 12:30	07/15/2004 10:00
EP5-5	20276545	Water	07/14/2004 11:30	07/15/2004 10:00
EP5-9	20276540	Water	07/14/2004 13:00	07/15/2004 10:00
TRIP BLANK	20276542	Water	07/14/2004	07/15/2004 10:00
EP3-5	20277035	Water	07/15/2004 11:00	07/16/2004 10:30
EP5-16	20277034	Water	07/15/2004 10:00	07/16/2004 10:30
EP5-21	20277033	Water	07/15/2004 09:30	07/16/2004 10:30
TRIP BLANK	20277036	Water	07/15/2004	07/16/2004 10:30
DUP.6BW	20277314	Water	07/16/2004	07/17/2004 08:30
EB-6BW	20277313	Water	07/16/2004 10:15	07/17/2004 08:30
EP3-4BW	20277315	Water	07/16/2004 10:45	07/17/2004 08:30
EP3-9	20277312	Water	07/16/2004 10:00	07/17/2004 08:30
EP6-3	20277316	Water	07/16/2004 10:30	07/17/2004 08:30
FB-6BW	20277311	Water	07/16/2004 09:05	07/17/2004 08:30
TRIP BLANK	20277317	Water	07/16/2004	07/17/2004 08:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E07595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/H2O) - 02006
EQS - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services
Foreign Soil Import (U.S. Territories)

8/3/2004 17:55:52

Narrative for Project 2034454

Volatile Organics

The QC associated with batch 45052 yielded elevated recoveries for several analytes. Most of these analytes were not reported in any of the associated samples. However, carbon disulfide yielded very high recoveries in the QC and was also present in the method blanks (13.9 ppb and 6.2 ppb) that were associated with samples 20267506, 20267507, 20267508, 20267509, 20267510, 20267515, 20267516, 20267517, 20267518, 20267519, and 20267520. The samples also yielded hits for carbon disulfide, between 5 and 10 ppb. %. The data for carbon disulfide was reported with qualification since there was insufficient time to perform re-analyses within the holding time limits.

PAHs by 8310

The laboratory control sample associated with these samples yielded poor recoveries for all or most target analytes as well as for the surrogates, indicating that a portion of the LCS extract was lost. Surrogate recoveries met QC requirements in the samples and method blank that were extracted concurrently with this LCS, indicating that the problem was isolated to the LCS. After careful evaluation of recoveries determined for other batch-associated laboratory control samples and matrix spikes, the data was accepted with qualification.

There was insufficient sample volume for sample 20266682 to perform 8310. An aliquot of the 8270 extract was solvent exchanged to acetonitrile and analyzed on the HPLC. The 8270 and 8310 sample preparations are based on the same extraction procedure, although different surrogate and QC standards are used for spiking. Therefore although analytical results were included for the 8310 for this sample, they were qualified since the laboratory is unable to report surrogate or LCS recoveries. Acceptable method performance was demonstrated by the 8270 QC recoveries.



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1-Monitoring Wells

Project No.: 2034454

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
MW-20	20265238	Water	06/09/2004	16:10	06/11/2004	10:20
MW-21	20265234	Water	06/09/2004	18:20	06/11/2004	10:20
MW-8	20265236	Water	06/09/2004	17:20	06/11/2004	10:20
DUP-2GW	20265242	Water	06/10/2004		06/11/2004	10:20
EB-1GW	20265240	Water	06/10/2004	10:00	06/11/2004	10:20
FB-1GW	20265241	Water	06/10/2004	11:00	06/11/2004	10:20
MW-16	20265247	Water	06/10/2004	18:20	06/12/2004	09:30
MW-28	20265235	Water	06/10/2004	14:25	06/11/2004	10:20
MW-29	20265239	Water	06/10/2004	10:40	06/11/2004	10:20
MW-9	20265237	Water	06/10/2004	09:40	06/11/2004	10:20
TRIP BLANK	20265243	Water	06/10/2004		06/11/2004	10:20
DUP-3GW	20265250	Water	06/11/2004		06/12/2004	09:30
EB-2GW	20265249	Water	06/11/2004	09:45	06/12/2004	09:30
FB-2GW	20265248	Water	06/11/2004	08:50	06/12/2004	09:30
MW-15	20265244	Water	06/11/2004	11:40	06/12/2004	09:30
MW-1R	20265246	Water	06/11/2004	10:45	06/12/2004	09:30
MW-26	20265245	Water	06/11/2004	09:15	06/12/2004	09:30
TRIP BLANK	20265251	Water	06/11/2004		06/12/2004	09:30
DUP-4GW	20266683	Water	06/14/2004		06/16/2004	10:30
EB-3GW	20266687	Water	06/14/2004	11:30	06/16/2004	10:30
FB-3GW	20266686	Water	06/14/2004	11:50	06/16/2004	10:30
OCD-1	20266682	Water	06/14/2004	12:10	06/16/2004	10:30
OCD-2A	20266685	Water	06/14/2004	15:30	06/16/2004	10:30
OCD-3	20266684	Water	06/14/2004	16:30	06/16/2004	10:30
DUP-5GW	20266677	Water	06/15/2004		06/16/2004	10:30
DUP-6GW	20266670	Water	06/15/2004		06/16/2004	10:30
EB-4GWW	20266678	Water	06/15/2004	08:00	06/16/2004	10:30
EB-5GW	20266669	Water	06/15/2004	11:20	06/16/2004	10:30
FB-4GW	20266679	Water	06/15/2004	08:30	06/16/2004	10:30
MW-11A	20266676	Water	06/15/2004	10:00	06/16/2004	10:30
MW-4A	20266681	Water	06/15/2004	15:20	06/16/2004	10:30
MW-5A	20266668	Water	06/15/2004	13:30	06/16/2004	10:30
MW-7A	20266680	Water	06/15/2004	14:20	06/16/2004	10:30

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - EB7595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP WW/H2O) - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/2/2004 12:31:04



Sample Cross Reference Report

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
Saint Rose, LA 70087

Phone: 504.469.0333
Fax: 504.469.0555

Client: ARCADIS

Project: RFI Phase 1-Monitoring Wells

Project No.: 2034454

Sample ID	Lab ID	Matrix	Collection Date/Time		Received Date/Time	
OCD-4	20266688	Water	06/15/2004	08:45	06/16/2004	10:30
OCD-5	20266689	Water	06/15/2004	11:00	06/16/2004	10:30
OCD-8A	20266667	Water	06/15/2004	12:00	06/16/2004	10:30
TRIP BLANK	20267008	Water	06/15/2004		06/16/2004	10:30
DUP-7GW	20267511	Water	06/16/2004		06/18/2004	10:30
DUP-8 GW	20267516	Water	06/16/2004		06/18/2004	10:30
DUP-9 GW	20267519	Water	06/16/2004		06/18/2004	10:30
EB-6GW	20267518	Water	06/16/2004	11:15	06/18/2004	10:30
EB-7 GW	20267515	Water	06/16/2004	13:35	06/18/2004	10:30
EB-8GW	20267520	Water	06/16/2004		06/18/2004	10:30
FB-5GW	20267517	Water	06/16/2004	10:30	06/18/2004	10:30
MW-18A	20267507	Water	06/16/2004	16:00	06/18/2004	10:30
MW-22A	20267513	Water	06/16/2004	18:00	06/18/2004	10:30
MW-3	20267508	Water	06/16/2004	11:55	06/18/2004	10:30
MW-6A	20267510	Water	06/16/2004	10:45	06/18/2004	10:30
OCD-6	20267509	Water	06/16/2004	13:15	06/18/2004	10:30
OCD-7AR	20267506	Water	06/16/2004	14:15	06/18/2004	10:30
DUP-10GW	20267523	Water	06/17/2004		06/18/2004	10:30
EB-9GW	20267522	Water	06/17/2004	09:50	06/18/2004	10:30
FB-7GW	20267531	Water	06/17/2004	10:10	06/18/2004	10:30
MW-10	20267514	Water	06/17/2004	09:00	06/18/2004	10:30
MW-19	20267521	Water	06/17/2004	10:30	06/18/2004	10:30
MW-25	20267530	Water	06/17/2004	11:30	06/18/2004	10:30
MW-27	20267529	Water	06/17/2004	12:40	06/18/2004	10:30
TRIP BLANK	20267532	Water	06/17/2004		06/18/2004	10:30
MW-2A	20277962	Water	07/15/2004	16:00	07/17/2004	08:30
MW-21	20277997	Water	07/16/2004	14:20	07/20/2004	10:15
TRIP BLANK	20277998	Water	07/16/2004		07/20/2004	10:15

Laboratory Certifications:
Louisiana Dept. of Health and Hospitals (ELAP)/Drinking Water LA 030013
Florida Dept. of Health/Hazardous Waste - E07595
Kansas Dept. of Health & Environment/ELWHW - E-10266
LELAP (NELAP) WWH/120 - 02006
EQB - Certified Puerto Rico Chemist
U.S. Dept. of Agriculture Animal & Plant Health Inspection Services -
Foreign Soil Import (U.S. Territories)

8/2/2004 12:31:04

Appendix G

Laboratory Analytical Reports

Attachment 1 CD Containing Laboratory Reports

Attachment 2 Chain of Custody Records

Chain of Custody Records

Navajo Refining Co.
Three Mile Ditch and Evaporation Ponds
Corrective Action Investigation Report

Chain of Custody Forms

- 1 Background Soil Borings (BSB Soils)
- 2 Three Mile Ditch Soils (TMD Soils)
- 3 Three Mile Ditch Boring Groundwater (Boring Water TMD)
- 4 Evaporation Pond 1 Soils (EP1 Soils)
- 5 Evaporation Pond 2 Soils (EP2 Soils)
- 6 Evaporation Pond 3 Soils (EP3 Soils)
- 7 Evaporation Pond 5 Soils (EP5 Soils)
- 8 Evaporation Pond 6 Soils (EP6 Soils)
- 9 Evaporation Pond Berm Soils (EPB Soils)
- 10 Evaporation Pond Boring Groundwater (Evap Pond Boring Water)
- 11 Evaporation Pond Berm Groundwater (EPB Water)
- 12 Monitor Well Groundwater (Monitor Wells)

Background Soil Borings
(BSB Soils)



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No. _____ of _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Face Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, KL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/R270	(1) 4 oz Jar RCH 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar VOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab/ID	(1) 4 oz Jar TPH-DRO/R270	(1) 4 oz Jar RCH 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar VOC	(1) 4 oz Jar Particle Size	Remarks	Total
TMND-17C-2-31	S	6/13/04	9:30	1	1	1	1	1	20267095	3
TMND-17C-7-7	S	6/13/04	9:30	1	1	1	1	1	0979	3
TMND-17C-13-15	S	6/15/04	9:30	1	1	1	1	1	1000	3
TMND-18C-2-5	S	6/15/04	10:30	1	1	1	1	1	101	3
TMND-18C-7-1	S	6/15/04	10:30	1	1	1	1	1	107	3
TMND-18C-7-7	S	6/15/04	10:30	1	1	1	1	1	110	3
BSB-1 (O-1)	S	6/15/04	12:00	1	1	1	1	1	123	3
BSB-1 (S-2)	S	6/15/04	12:00	1	1	1	1	1	124	3
BSB-1 (9-11)	S	6/15/04	12:00	1	1	1	1	1	125	3
BSB-1 (13-15)	S	6/15/04	12:00	1	1	1	1	1	126	3
Dupe 4	S	6/15/04	12:00	1	1	1	1	1	118	3
Dupe -3	S	6/15/04	12:00	1	1	1	1	1	119	3
TMND-19 (O-2)	S	6/15/04	14:20	1	1	1	1	1	120	3
TMND-11 (S-7)	S	6/15/04	14:20	1	1	1	1	1	121	3
TMND-17 (13-15)	S	6/15/04	14:20	1	1	1	1	1	122	3
Total No. of Bottles/Containers										45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Reggie King</u>	Organization: <u>ARCADIS</u>	Date: <u>6/13/04</u>	Time: <u>10:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Reggie King</u>	Organization: <u>ARCADIS</u>	Date: <u>6/13/04</u>	Time: <u>10:30</u>	Seal Intact? <u>Yes</u>
Relinquished by: <u>Mike Norman</u>	Organization: <u>ARCADIS</u>	Date: <u>6/13/04</u>	Time: <u>10:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Mike Norman</u>	Organization: <u>ARCADIS</u>	Date: <u>6/13/04</u>	Time: <u>10:30</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Specify AG 05/2001



CHAIN-OF-CUSTODY RECORD

Page 6 of 6

Laboratory Task Order No./P.O. No. _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar PPH-DRO/8270	(1) 4 oz Jar RCRA 6 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab/ID	(1) 4 oz Jar PPH-DRO/8270	(1) 4 oz Jar RCRA 6 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
THD-35 (C-1)	S	6/21/04	11:12	1	1	1	1	1	5024.220	3
THD-35 (7-9)	S	6/21/04	11:12	1	1	1	1	1	881	3
THD-36 (C-7.5)	S	6/21/04	12:47	1	1	1	1	1	873	3
THD-36 (C-10.75)	S	6/21/04	12:47	1	1	1	1	1	885	3
THD-36 (7.5-7.5)	S	6/21/04	12:47	1	1	1	1	1	886	3
THD-37 (C-2.5)	S	6/21/04	15:45	1	1	1	1	1	887	3
THD-37 (7.5-12)	S	6/21/04	15:45	1	1	1	1	1	888	3
THD-37 (15-17.5)	S	6/21/04	15:45	1	1	1	1	1	894	3
BSB-3 (C-2.5)	S	6/21/04	9:00	1	1	1	1	1	895	3
BSB-3 (C-5-7.5)	S	6/21/04	9:00	1	1	1	1	1	896	3
BSB-2 (C-2.5)	S	6/21/04	10:15	1	1	1	1	1	897	3
Dupe 7	S	6/21/04	10:15	1	1	1	1	1	901	3
BSB-2 (C-7.5)	S	6/21/04	10:15	1	1	1	1	1	898	3
BSB-6 (C-2.5)	S	6/21/04	11:30	1	1	1	1	1	899	3
BSB-6 (C-7.5)	S	6/21/04	11:30	1	1	1	1	1	900	3
Total No. of Bottles/Containers										45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Mike Norman</u>	Organization: <u>ARCADIS</u>	Date: <u>6/23/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Ed Ex</u>	Organization: <u></u>	Date: <u>1</u>	Time: <u></u>	Seal Intact? <u>N/A</u>
Relinquished by: <u>Ed Ex</u>	Organization: <u></u>	Date: <u>6/23/04</u>	Time: <u>1000</u>	Seal Intact? <u>Yes</u>
Received by: <u>Mike Norman</u>	Organization: <u></u>	Date: <u>6/23/04</u>	Time: <u>1000</u>	Seal Intact? <u>N/A</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

SPECIFY

☐ Lab Courier

☐ Other

SPECIFY

AG 05-12001



Laboratory Task Order No./P.C. No.

Page ____ of ____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Laboratory Pace Analytical

Project Manager
Mike Horman

Sampler(s)/Affiliation

Relinquished by: <u>Philip Lang</u>	Organization: <u>ARCADIS</u>	Date	Time <u>15:00</u>	Seal Intact?
Received by: <u>Eden</u>	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>Eden</u>	Organization:	Date	Time <u>1015</u>	Seal Intact?
Received by: <u>Velvet Finch</u>	Organization:	Date	Time <u>1015</u>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person☒ Common Carrier Fed-Ex CARRIER☐ Lab Courier☐ Other

SPECIFY

AG 05-1201

Laboratory Task Order No./P.O. No.:

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location

Pace Analytical Laboratory

Project Manager Mike Norman

Sampler(s)/Affiliation

Sample ID/Location	Matrix	Date/ TIME	Time
	Sampled		TIME

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Robert H. Jones, Organization: ARCADIS

Received by: _____
Organization: _____

Relinquished by: FED Organization: GA

Received by: Dennis W. Plush Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person☐ Lab Courier ☐ Other

SPECIFY

SPF-15V

AG 05-12/01



CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Laboratory Task Order No./P.O. No. _____

Project Number/Name MT000839.0001
Project Location Navajo
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCs/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
EP6-1(0-2.5)	S	7/16/04	8:40		3
EP6-1(2.5-5)	S	7/16/04	8:40		
EP6-2(0-2.5)	S	7/16/04	9:10		
EP6-2(2.5-5)	S	7/16/04	9:10		
EP6-3(0-2.5)	S	7/16/04	9:30		
EP6-3(2.5-5)	S	7/16/04	9:30		
EP6-4(0-2.5)	S	7/16/04	10:36		
EP6-4(2.5-5)	S	7/16/04	10:36		
EP6-5(0-2.5)	S	7/16/04	11:20		
EP6-5(2.5-5)	S	7/16/04	11:20		
Pupe 2.6	S	7/16/04			
Pupe 2.7	S	7/16/04			
BSEB-10(0-2.5)	S	7/16/04	14:07	20278094	
BSEB-10(5-7.5)	S	7/16/04	14:07	097	
BSEB-10(10-12.5)	S	7/16/04	14:07	098	
Total No. of Bottles/ Containers					45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Mike Norman</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fred EXX</u>	Organization: _____	Date: _____	Time: _____	Seal Intact? <u>No</u>
Relinquished by: <u>Fred EXX</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>10:15</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Hach</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>10:15</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____

SPECIFY

SPECIFY

AG 05 12/01



ARCADIS

Laboratory Task Order No./P.O. No. _____ Page _____ of _____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation / ARCADIS/RL

Relinquished by: <u>B. Long</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>16:00</u>	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>Fad EY</u>	Organization: _____	Date: <u> </u>	Time: <u> </u>	
Relinquished by: <u>Fad EY</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>1015</u>	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>Melissa Finch</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>1015</u>	

Special instructions/remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Temp 30

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other

APPLY SPECIFY	APPLY	SPECIFY
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31
32	32	32
33	33	33
34	34	34
35	35	35
36	36	36
37	37	37
38	38	38
39	39	39
40	40	40
41	41	41
42	42	42
43	43	43
44	44	44
45	45	45
46	46	46
47	47	47
48	48	48
49	49	49
50	50	50
51	51	51
52	52	52
53	53	53
54	54	54
55	55	55
56	56	56
57	57	57
58	58	58
59	59	59
60	60	60
61	61	61
62	62	62
63	63	63
64	64	64
65	65	65
66	66	66
67	67	67
68	68	68
69	69	69
70	70	70
71	71	71
72	72	72
73	73	73
74	74	74
75	75	75
76	76	76
77	77	77
78	78	78
79	79	79
80	80	80
81	81	81
82	82	82
83	83	83
84	84	84
85	85	85
86	86	86
87	87	87
88	88	88
89	89	89
90	90	90
91	91	91
92	92	92
93	93	93
94	94	94
95	95	95
96	96	96
97	97	97
98	98	98
99	99	99
100	100	100

Three Mile Ditch Soils
(TMD Soils)



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001/Navajo

Project Location Artesia NM

Laboratory _____ Page _____

Project Manager Sharon Hall

Sampler(s)/Affiliation

Sample Matrix: L = Liquid; S = Solid; A = Air

ARCADIS

Beliggenheid by: Reykjavik Land: Iceland Organization:

12/25/20

Date 1/6/64 Time 13100

Seal intact?

Received by: _____
 Requisitioned by: _____
 Organization: _____

of

Date 07/21/21 Time 13:00

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100

received by. — Fed Ex

121 NO N/A

Relinquished by: _____
Received by: _____
Special Instructions/Remarks: _____

2023

Delivery Method: ☐ In Person

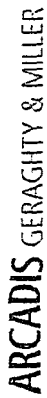
☒ Common Carrier Fedex

☐ Lab Courier☐ Other _____

specify

SPECIES

AG 05-0597



Laboratory Task Order No./P.C. No.

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	MT 000839.0001
---------------------	----------------

Project Location Navajo

Laboratory

Project Manager Sharon Hall

Sampler(s)/Affiliation *P L4MS*

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab-D	Yp	Mn	11/10	Remarks	Total
TMD-11 (0-2.5')	S	6/11/04	11:09	1	1	1	20205616	3
TMD-11 (2.5-5')	S	6/11/04	11:09	1	1	1	617	3
TMD-12 (0-1')	S	6/11/04	13:30	1	1	1	618	3
TMD-12 (1-3')	S	6/11/04	13:30	1	1	1	619	3
TMD-12 (5-7')	S	6/11/04	13:30	1	1	1	620	3
TMD-12 (11-13')	S	6/11/04	13:30	1	1	1	621	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Ralph Lums Organization: Area 415

Received by: Red Ex 6 Organization: Red Ex 6

Relinquished by: red ex Organization: Red
 Received by: 1422111 Organization: Red

Special Instructions/Remarks:

Temp 32

Delivery Method: ☐ In Person

☐ Common Carrier...☐ Lab Courier☐ Other _____

Species

45 132 4481-12



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001Project Location Navajo - ArtesiaLaboratory Pace AnalyticalProject Manager Mike NormanSampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE

TPH-DRO/8270 (1) 4 oz Jar	RCRA 8 Metals (1) 4 oz Jar	8260/VOC (1) 2 oz Jar	FOC (1) 4 oz Jar	Particle Size (1) 4 oz Jar
------------------------------	-------------------------------	--------------------------	---------------------	-------------------------------

Sample ID/Location

Matrix

Date/Time
Sampled

Time

Remarks

Total

TMD-13(0-1)	S	6/14/04	15:00	1	1	1	1	1	20267071	3
TMD-13(4-6)	S	6/14/04	15:00	1	1	1	1	1	077	3
TMD-13(6-8)	S	6/14/04	15:00	1	1	1	1	1	078	3
TMD-13(8-12)	S	6/14/04	15:00	1	1	1	1	1	080	3
TMD-14(0-1)	S	6/14/04	16:30	1	1	1	1	1	082	3
TMD-14(5-7)	S	6/14/04	16:30	1	1	1	1	1	083	3
TMD-14(13-15)	S	6/14/04	16:30	1	1	1	1	1	084	3
TMD-15(0-2.5)	S	6/14/04	17:22	1	1	1	1	1	085	3
TMD-15(5-7)	S	6/14/04	17:22	1	1	1	1	1	086	3
TMD-15(7-9)	S	6/14/04	17:22	1	1	1	1	1	093	3
TMD-16(0-1)	S	6/14/04	8:44	1	1	1	1	1	095	3
TMD-16(3-5)	S	6/14/04	8:44	1	1	1	1	1	096	3
EP-82	S	6/14/04		1	1	1	1	1	097	3
Total No. of Bottles/Containers										39

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Ralph Lang</u>	Organization: <u>ARCADIS</u>	Date: <u>6/15/04</u>	Time: <u>16:30</u>	Seal Intact? Yes No N/A
Received by: <u>Pace</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	
Relinquished by: <u>FEDOX</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	Seal Intact? Yes No N/A
Received by: <u>Annex Walsh</u>	Organization: <u>Pace</u>	Date: <u>6/16/04</u>	Time: <u>10:30</u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No. _____ Page _____ of _____

Project Number/Name MT000839.0001
 Project Location Navajo - Artesia
 Laboratory Pace Analytical
 Project Manager Mike Norman
 Sampler(s)/Affiliation ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Analyzed	Remarks	Total
TMD-17(0-2.5')	S	6/13/04	9:30	20267098	3
TMD-17(0-7')	S	6/13/04	9:30	099	3
TMD-17(13-15')	S	6/15/04	9:30	100	3
TMD-18(0-2.5')	S	6/15/04	10:30	101	3
TMD-18(5-7')	S	6/15/04	10:30	109	3
TMD-18(7-9')	S	6/15/04	10:30	110	3
B5B-1(0-1')	S	6/15/04	12:00	123	3
B5B-1(5-7')	S	6/15/04	12:00	124	3
B5B-1(9-11')	S	6/15/04	12:00	125	3
B5B-1(13-15')	S	6/15/04	12:00	126	3
Dupe 4	S	6/15/04	12:00	118	3
Dupe -3	S	6/15/04	12:00	119	3
TMD-19(0-2.5')	S	6/15/04	14:20	120	3
TMD-19(5-7')	S	6/15/04	14:20	121	3
TMD-19(13-15')	S	6/15/04	14:20	122	3
Total No. of Bottles/Containers					45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Relish Curry Organization: ARCADIS Date: 6/15/04 Time: 16:30 Seal Intact? Yes No N/A

Received by: FEDER Organization: _____ Date: _____ Time: _____

Relinquished by: FEDER Organization: _____ Date: _____ Time: _____ Seal Intact? Yes No N/A

Received by: Amni Welsh Organization: Pace Date: 6/16/04 Time: 10:30

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person, ☒ Common Carrier, ☐ Lab Courier, ☐ Other _____



Project Number/Name MT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

2034482

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	Time Received	(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar 8260/VOC	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size	Remarks	Total
TMD 20 (0-2.5)	S	6/15/04	13:30	1	1	1			2067456	3
TMD 20 (5-7.5)	S	6/15/04	15:30	1	1	1			458	3
TMD 21 (0-2.5)	S	6/15/04	16:00	1	1	1			459	3
TMD 21 (5-7.5)	S	6/15/04	16:00	1	1	1			461	3
TMD -22 (0-1')	S	6/15/04	17:00	1	1	1			462	3
TMD -22 (5-7.5)	S	6/15/04	17:00	1	1	1			463	3
TMD -23 (0-1')	S	6/16/04	8:16	1	1	1			464	3
TMD -23 (5-7.5)	S	6/16/04	8:16	1	1	1			465	3
TMD -24 (0-2.5)	S	6/16/04	10:31	1	1	1			469	3
TMD -24 (7-9')	S	6/16/04	10:51	1	1	1			470	3
TMD -25 (0-2.5)	S	6/16/04	12:00	1	1	1			471	3
TMD -25 (10-12.5)	S	6/16/04	12:00	1	1	1			472	3
Dupe 3	S	6/16/04		1	1	1			473	3
TMD -26 (0-2.5)	S	6/16/04	14:30	1	1	1			474	3
TMD -26 (7.5-10')	S	6/16/04	14:30	1	1	1			475	3

Sample Matrix: L = Liquid; S = Solid; A = Air
Total No. of Bottles/Containers 45

Relinquished by: Relinquish Organization: ARCADIS Date: 6/16/04 Time: 16:00 Seal Intact? Yes No N/A
Received by: Fed Ex Organization: Date: 1 Time:
Relinquished by: Fed Ex Organization: Date: 6/17/04 Time: 10:30 Seal Intact? Yes No N/A
Received by: Melissa French Organization: Pace Date: 6/17/04 Time: 10:30

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other
Signature: Tim 30
SPECIFY



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
TMD-27(0-2.5')	S	6/16/04 15:50	1	1	1			20267 552	3
TMD-27(2.5-5')	S	6/16/04 15:50	1	1	1			558	3
TMD-28(0-2.5')	S	6/16/04 17:00	1	1	1			559	3
TMD-28(5-7.5')	S	6/16/04 17:00	1	1	1			560	3
TMD-29(0-1')	S	6/17/04 8:50	1	1	1			562	3
TMD-29(7-16')	S	6/17/04 8:50	1	1	1			563	3
TMD-30(0-1')	S	6/17/04 9:40	1	1	1			564	3
TMD-30(5-7')	S	6/17/04 9:40	1	1	1			565	3
TMD-30(0-2.5')	S	6/17/04 10:30	1	1	1			566	3
TMD-31(0-2.5')	S	6/17/04 10:30	1	1	1			567	3
TMD-31(7.5-10')	S	6/17/04 11:45	1	1	1			568	3
Dupe 6	S	6/17/04 11:45	1	1	1			570	3
TMD-32(0-2.5')	S	6/17/04 11:45	1	1	1			571	3
TMD-32(2.5-5.0')	S	6/17/04 11:45	1	1	1			571	3
Total No. of Bottles/Containers									37

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Jeffery Organization: ARCADIS Date: 6/17/04 Time: 15:00 Seal Intact? Yes No N/A
Received by: Paul Organization: Pace Date: 6/18/04 Time: 10:30 Seal Intact? Yes No N/A
Relinquished by: Mike Norman Organization: ARCADIS Date: 6/18/04 Time: 10:30 Seal Intact? Yes No N/A
Received by: Paul Organization: Pace Date: 6/18/04 Time: 10:30 Seal Intact? Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

AC 05-1201



CHAIN-OF-CUSTODY RECORD

Page of

Laboratory Task Order No./P.O. No.

Project Number/Name MT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, KL

ANALYSIS / METHOD / SIZE									
Sample ID/Location	Matrix	Date/Time Sampled	TPH-DRO/8270 (1) 4 oz jar	RCRA 8 Metals (1) 4 oz jar	8260/VOC (1) 2 oz jar	FOC (1) 4 oz jar	(1) 4 oz jar Particle Size	Remarks	Total
TMD-38(0-2.5')	S	6/23/04 15:50	/	/	/	/	/	20270734	3
TMD-38(5-7.5')	S	6/23/04 15:50	/	/	/	/	/	735	3
EPI-1(0-5')	S	6/23/04 8:30	/	/	/	/	/		3
EPI-1(2.5-5')	S	6/23/04 8:30	/	/	/	/	/		3
EPI-1(12.5-15')	S	6/23/04 8:36	/	/	/	/	/		3
EPI-7(0-2.5')	S	6/23/04 10:00	/	/	/	/	/		3
EPI-7(2.5-5')	S	6/23/04 10:00	/	/	/	/	/		3
Dupe 10	S	6/23/04 10:00	/	/	/	/	/		3
EPI-10(0-2.5')	S	6/23/04 10:45	/	/	/	/	/		3
EPI-10(2.5-5')	S	6/23/04 10:45	/	/	/	/	/		3
EPI-10(22.5-25')	S	6/23/04 10:45	/	/	/	/	/		3
EPI-12(0-2.5')	S	6/23/04 11:30	/	/	/	/	/		3
EPI-12(2.5-5')	S	6/23/04 11:30	/	/	/	/	/		3
EPI-9(0-2.5')	S	6/23/04 14:00	/	/	/	/	/		3
EPI-9(5-7.5')	S	6/23/04 14:00	/	/	/	/	/		3
Total No. of Bottles/ Containers									45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Robert Wang Organization: ARCADIS Date: 6/24/04 Time: 16:00 Seal Intact? Yes No N/A
Received by: Fed Ex Organization: Date: Time:
Relinquished by: Fed Ex Organization: Date: 6/25/04 Time: 10:15 Seal Intact? Yes No N/A
Received by: Melrose Arch Organization: Date: 6/25/04 Time: 10:15

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other Temp
SPECIFY



Project Number/Name MT000839.0001 ✓

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE
(1) 4 oz Jar Particle Size
(1) 4 oz Jar FOC
(1) 2 oz Jar 8260/VOC
(1) 4 oz Jar RCRA 8 Metals
(1) 4 oz Jar TPH-DRO/8270

2034863

Sample ID/Location	Matrix	Date/TIME Sampled	Time RATED	(1) TPH-	(1) RCRA	(1) 6260	(1) FOC	(1) Partic.	Remarks	Total
TMD-33(0-1')	S	6/17/04	15:00	1	1	1			20268722	3
TMD-33(5-7')	S	6/17/04	15:00	1	1	1			724	3
TMD-34(0-1')	S	6/17/04	16:14	1	1	1			725	3
TMD-34(1.5-5')	S	6/17/04	16:14	1	1	1			726	3
TMD-4(0-1')	S	6/17/04	8:30	1	1	1			727	3
TMD-4(10-12')	S	6/17/04	8:30	1	1	1			728	3
Dupe 7	S	6/17/04		1	1	1			729	3
Sample Matrix:	L = Liquid; S = Solid; A = Air								Total No. of Bottles/ Containers	Z /

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date: <u>6/18/04</u>	Time: <u>9:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Felix</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	
Relinquished by: <u>[Signature]</u>	Organization: <u>Pave</u>	Date: <u>6/18/04</u>	Time: _____	Seal Intact? <u>Yes</u> No N/A
Received by: <u>[Signature]</u>	Organization: _____	Date: _____	Time: <u>1005</u>	

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY SPECIFY



ARCADIS

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Laboratory Task Order No./P.O. No. _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
--------------------	--------	----------------------	------------------------------	-------------------------------	--------------------------	---------------------	-------------------------------	---------	-------

TMD-35 (0-1)	S	6/21/04 11:12	1	1	1	1		20268820	3
TMD-35 (7-9)	S	6/21/04 11:12	1	1	1	1		881	3
TMD-36 (0.25)	S	6/21/04 12:17	1	1	1	1		883	3
TMD-36 (16-22.5)	S	6/21/04 12:47	1	1	1	1		885	3
TMD-36 (17.5-20)	S	6/21/04 12:47	1	1	1	1		886	3
TMD-37 (0-2.5)	S	6/21/04 15:15	1	1	1	1		887	3
TMD-37 (7.5-16)	S	6/21/04 15:45	1	1	1	1		888	3
TMD-37 15-17.5	S	6/21/04 15:45	1	1	1	1		894	3
B5B-3 (0-2.5)	S	6/22/04 9:00	1	1	1	1	1	895	3
B5B-3 (5-7.5)	S	6/22/04 9:20	1	1	1	1	1	896	3
B5B-2 (0-2.5)	S	6/22/04 10:15	1	1	1	1	1	897	3
Deple 7	S	6/21/04 10:15	1	1	1	1	1	901	3
B5B-2 (5-7.5)	S	6/22/04 10:15	1	1	1	1	1	898	3
B5B-6 (0-2.5)	S	6/22/04 11:30	1	1	1	1	1	899	3
B5B-6 (5-7.5)	S	6/22/04 11:30	1	1	1	1	1	900	3
Total No. of Bottles/Containers									45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Ralph H. Long</u>	Organization: <u>ARCADIS</u>	Date: <u>6/22/04</u>	Time: <u>16:00</u>	Seal Intact? Yes No N/A
Received by: <u>Paula</u>	Organization: <u></u>	Date: <u>1</u>	Time: <u></u>	
Relinquished by: <u>Paula</u>	Organization: <u></u>	Date: <u>6/23/04</u>	Time: <u>1000</u>	Seal Intact? Yes No N/A
Received by: <u>Mike Norman</u>	Organization: <u></u>	Date: <u>6/23/04</u>	Time: <u>1000</u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Fed-Ex SPECIFY

Other



Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo

Pace Analytical
Laboratory

Project Manager Mike Norman

Sampler(s)/Affiliation **ARCADIS/RL**

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Kelley H. Jany Organization: ARCADIS

Received by: F. B. D. C. Organization:

Reinquished by FEDtx 1 Organization: _____

Received by: Mr. M. L. Smith Organization:

Spécial Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Re-sample for SUVOL samples past hold time

Delivery Method: ☒ In Person☒ Common Carrier _____ Fee _____☐ Lab Courier☐ Other



AG 05-17m

AC OF AREA



CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE

(2) IL amber jar
8310 SVOCS
Neat

Sample ID/Location	Matrix	Date/TIME	Time Sampled

Remarks	Total
---------	-------

FB-35	L	6/17/04	1:30	2	1	20267545	3
TMD-32	L	6/17/04	3:15	2	1	546	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>R. Grant</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/04</u>	Time <u>4:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fed Ex</u>	Organization: _____	Date <u>1/1</u>	Time _____	Seal Intact? <u>No</u>
Relinquished by: <u>Fed Ex</u>	Organization: <u>Pave</u>	Date <u>6/18/04</u>	Time <u>1030</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Finch</u>	Organization: _____	Date <u>6/18/04</u>	Time <u>1030</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY SPECIFY

Project Number/Name MT005 B39 0001
Project Location Nasirpur - Arki, H.P.
Laboratory Pace Analytical
Project Manager M. K. Sharma
Sampler(s)/Affiliation AECADIS / SGT LLC

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>Fed Ex</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/2004</u>	Time <u>4:06</u>	Seal Intact?
Received by: <u>Fed Ex</u>	Organization:	Date <u>1/1</u>	Time	Yes No N/A
Relinquished by: <u>Fed Ex</u>	Organization:	Date <u>6/23/04</u>	Time <u>1000</u>	Seal Intact?
Received by: <u>Melissa Finch</u>	Organization:	Date <u>6/23/04</u>	Time <u>1000</u>	Yes No N/A

Special Instructions/Remarks: Please contact Mike Alcaraz at (281) 509-6489 with any questions J.D.

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex SPECIFY ☐ Lab Courier ☐ Other SPECIFY



GERAGHTY & MILLER

Laboratory Task Order No./P.C. No.:

CHAIN-OF-CUSTODY RECORD

Page of

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sample(s)/Affiliation

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/12/2004</u>	Time <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Red EV</u>	Organization:	Date <u>1/1</u>	Time	Yes No N/A
Relinquished by: <u>Red EV</u>	Organization:	Date <u>6/12/2004</u>	Time <u>1:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melrose Finch</u>	Organization:	Date <u>6/12/2004</u>	Time <u>1:00</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

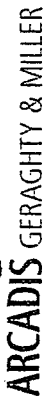
☒ Common Carrier	Fed-Ex
--	--------

☐ Other

SPECIFY

SPECIES

650 50 5M



Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name WT000839.0001Project Location Nasir - Artesian

Laboratory Fluor Analysis

Project Manager Mike Norman

Sampler(s)/Affiliation Aradys / SGRL

[illegible]

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>R. G. G. G. G.</u>	Organization: <u>APC/ADP</u>	Date <u>6/12/10</u>	Time <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Ed EV</u>	Organization:	Date <u>1/1</u>	Time	Yes No N/A
Relinquished by: <u>Ed EV</u>	Organization:	Date <u>6/23/10</u>	Time <u>1000</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Finch</u>	Organization:	Date <u>6/23/10</u>	Time <u>1000</u>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at (281)-509-6439 with any questions

Delivery Method: ☐ In Person

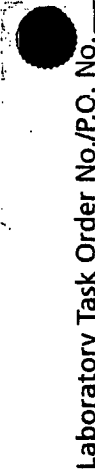
☒ Common Carrier Fed. Ex.

☐ Lab Courier ☐ Other

Species

Aspects

AG 05-0597



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	MT0000839.0001
---------------------	----------------

Project Location	Navajo - Artesia

Pace Analytical Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation

Relinquished by: <u>AECADIS</u>	Organization: <u>AECADIS</u>	Date: <u>6/23/04</u>	Time: <u>4:00</u>	Seal Intact?
Received by: <u>Fed EN</u>	Organization: <u>Fed EN</u>	Date: <u>1/1</u>	Time: <u></u>	Yes No N/A
Relinquished by: <u>Fed EN</u>	Organization: <u>Fed EN</u>	Date: <u>6/24/04</u>	Time: <u>1015</u>	Seal Intact?
Received by: <u>Melissa Finch</u>	Organization: <u>Melissa Finch</u>	Date: <u>6/24/04</u>	Time: <u>1015</u>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

Common Carrier

XU-PH

☐ Lab Courier☐ Other

SPECIFY

SPECIALS

AG 05-12MI



GERAGHTY & MILLER

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page of

Project Number/Name Navajo / MT000839.0001

Project Location Artesia, NM

Laboratory Pace

Project Manager Sharon Hall

Sampler(s)/Affiliation ARCADIS

ANALYSIS / METHOD / SIZE

8021/3TEX
403
0928
403
12M

TIME

Date Sampled

Matrix

Sample ID/Location

Sample ID/Location	Matrix	Date Sampled	TIME	Remarks	Total
TM0-1	L	6/9/04	1730		6
TM0-3	L	6/10/04	1115		6
EB-15	L	6/10/04	1045	20265254	6
MW-20	L	6/9/04	1610	238	3
MW-8	L	6/9/04	1720	2369	3
MW-24	L	6/9/04	1820	234	3
MW-9	L	6/10/04	940	237	3
MW-29	L	6/10/04	1040	239	3
EB-1GW	L	6/10/04	1000	240	3
FB-1GW	L	6/10/04	1100	241	3
Dup-2	L	6/10/04	—	242	3
MW-28	L	6/10/04	1425	235	3
Trip Blank	L	6/10/04	—	243	2
Total No. of Bottles/ Containers					44

Sample Matrix: L = Liquid; S = Solid; A = Air

Organization: ARCADIS

Organization: ARCADIS

Organization: Pace

Organization: CH2M

Date 6/11/04 Time 1000

Date 6/11/04 Time 1000

Date 6/11/04 Time 1000

Date 6/11/04 Time 1000

Seal Intact? (Yes) No N/A

Seal Intact? (Yes) No N/A

Seal Intact? (Yes) No N/A

Seal Intact? (Yes) No N/A

Special Instructions/Remarks:

Temp 23

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Signature: FedEx

SPECIFY

SPECIFY

Project Number/Name MT00839 0001 Navajo

Project Location Artesia NM

Laboratory Page

Project Manager Sharon Hill

Sampler(s)/Affiliation
ARCADIS

[illegible]

Sample Matrix: $\text{L} = \text{Liquid}; \text{S} = \text{Solid}; \text{A} = \text{Air}$

Sample Matrix: L = Liquid; S = Solid; A = Air
Relinquished by: Donal Organization: NRCD

Relinquished by: [Signature] Organization: WCAAD
 Received by: [Signature] Organization: WCAAD

Relinquished by: Red Ex U Organization: PASA
 Relinquished by: VHBA Organization: VHBA

Special Instructions/Remarks:

Delivery Method: ☐ In Person☒ Common Carrier LeDex☐ Lab Courier☐ Other:

Three Mile Ditch Boring
Groundwater (Boring
Water TMD)



Sample ID/Location	Matrix	Date/Time	Sampled	Time
--------------------	--------	-----------	---------	------

AG 05-12/01



GERAGHTY & MILLER

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page 1 of 1Project Number/Name Navajo/MT000837.0001Project Location Artesia, NMLaboratory PaceProject Manager Sharon HallSampler(s)/Affiliation ARCADIS

ANALYSIS / METHOD / SIZE

8021/BTEX
1011
40 M
0928
12H 1W ON

Sample ID/Location Matrix Date/Time Sampled TIME Lab ID

Sample ID/Location	Matrix	Date/Time Sampled	TIME Lab ID	Remarks	Total
TM0-1	L	6/9/04	1730	20265252	6
TM0-3	L	6/10/04	1115	253	6
FB-15	L	6/10/04	1045	254	6
MW-20	L	6/9/04	1610		3
MW-8	L	6/9/04	1720		3
MW-21	L	6/9/04	1820		3
MW-9	L	6/10/04	940		3
MW-29	L	6/10/04	1040		3
EB-1GW	L	6/10/04	1000		3
FB-1GW	L	6/10/04	1100		3
Dup-2	L	6/10/04	—		3
MW-28	L	6/10/04	1425		3
Top Blank	L	—	—		7

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/Containers 44

Relinquished by: <u>Sharon Hall</u>	Organization: <u>ARCADIS</u>	Date: <u>1/1</u>	Time: <u>11:00</u>	Seal Intact? Yes No N/A
Received by: <u>Feder</u>	Organization: <u>Feder</u>	Date: <u>1/1</u>	Time: <u>11:00</u>	Seal Intact? Yes No N/A
Relinquished by: <u>Feder</u>	Organization: <u>Feder</u>	Date: <u>1/1</u>	Time: <u>11:00</u>	Seal Intact? Yes No N/A
Received by: <u>KHFS</u>	Organization: <u>KHFS</u>	Date: <u>1/1</u>	Time: <u>11:00</u>	Seal Intact? Yes No N/A

Special Instructions/Remarks: Temp 80Delivery Method: ☐ In Person☒ Common Carrier☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05 0597

ARCADIS

Sample Matrix: $U =$ Liquid; $S =$ Solid; $A =$ Air

Received by: W. J. O. O. Organization: W. J. O. O. Date: 10/12/10 Time: 01:30

Temp 30

AG 05-0597



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE

(3) 40 ml VOCs
HCL
8021/BTEX
HCL
VOCs
(3) 40 ml VOCs

Sample ID/Location Matrix Date/Time Sampled Time

Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
TMD-21	L	6/16/04	4:00	20267537	3
TMD-26	L	6/17/04	7:00	538	3
TMD-27	L	6/17/04	9:50	539	3
TMD-28	L	6/17/04	10:20	540	3
TMD-29	L	6/17/04	10:50	541	3
TMD-30	L	6/17/04	11:20	542	3
TMD-31	L	6/17/04	11:50	543	3
TMD-23	L	6/17/04	12:00	544	3
Trip Blank	L				2
FE3-35	L	6/17/04	1:30	545	3
TMD-32	L	6/17/04	3:15		3
TMD-4	L	6/18/04	9:30	20268306	3
Total No. of Bottles/Containers					35

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: R. Gorman Organization: ARCADIS

Received by: FedEx Organization: _____

Relinquished by: FedEx Organization: Pace

Received by: K. P. P. P. Organization: _____

Special Instructions/Remarks: _____

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier

☐ Other

SPECIFY

SPECIFY



Project Number/Name NT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

ANALYSIS / METHOD / SIZE

Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RMC

Laboratory Pace Analytical
Project Manager Mike Norman

Sampler(s)/Affiliation

Sample ID/Location	Matrix	Date/Time Sampled	Time Matrix	(2) 831 Neat	(1) TDS Neat	Remarks	Total
TMD-4	L	6/18/04	9:30	2	1	20263306	3
Sample Matrix: L = Liquid; S = Solid; A = Air							3

Relinquished by: <u>R. G. G. G.</u>	Organization: <u>ARCADIS</u>	Date: <u>6/18/04</u>	Time: <u>5:45</u>	Seal Intact? Yes No N/A
Received by: <u>FedEx</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	
Relinquished by: <u>FedEx</u>	Organization: <u>Pace</u>	Date: <u>6/24/04</u>	Time: <u>1005</u>	Seal Intact? Yes No N/A
Received by: <u>KIPPNO</u>	Organization: _____	Date: _____	Time: _____	

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY SPECIFY



ARCADIS

Laboratory Task Order No./P.O. No.:

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	NT000839.0001
---------------------	---------------

Project Location

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: A. Crabb Organization: ARCADIS

Received by: Ed EV
Organization: _____

Relinquished by: Ed & V Organization: Ed & V

Received by: Melissa Finch
Organization: Finch

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier☐ Other _____

species

SPECIES

AG 05-12/01



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

Relinquished by: <u>6 Goodwin</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/04</u>	Time <u>9:30</u>	Seal Intact?
Received by: <u>Feed Ex</u>	Organization: _____	Date <u>1/1</u>	Time _____	Yes No N/A
Relinquished by: <u>Feed Ex</u>	Organization: <u>Pace</u>	Date <u>6/18/04</u>	Time <u>10:30</u>	Seal Intact?
Received by: <u>Melrose Truck</u>	Organization: _____	Date <u>6/18/04</u>	Time <u>10:30</u>	Yes No N/A

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY



Laboratory Task Order No./P.O. No.:

Project Number/Name
MT000839.0001

Project Location	Navajo - Artesia
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Pace Analytical Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation · **ARCADIS/SG, RL**

[illegible]

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/04</u>	Time <u>4:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Feed EN</u>	Organization: _____	Date <u>1/1</u>	Time _____	Seal Intact? <u>No</u>
Relinquished by: <u>Feed EN</u>	Organization: <u>Pave</u>	Date <u>6/18/04</u>	Time <u>6:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Trach</u>	Organization: _____	Date <u>6/18/04</u>	Time <u>10:30</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY

CHAIN-OF-CUSTODY RECORD

Sampler(s)/Affiliation ARCAIDS

Sample Matrix:	L = Liquid; S = Solid; A = Air	Total No. of Bottles/ Containers
Relinquished by: <u>Janet [Signature]</u>	Organization: <u>ARCAD</u>	Time <u>1715</u>
Received by: <u>Fidelix</u>	Organization: _____	Time _____
Relinquished by: <u>Relex</u>	Organization: _____	Time _____
Received by: <u>KHP [Signature]</u>	Organization: <u>Pace</u>	Time <u>1030</u>

33

☐ Other

SPECIFY

AG 05 0547



Laboratory Task Order No./P.O. No. _____

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT 00839.0001/Navajo

Project Location Artesia, Nm

Laboratory Pace

Project Manager Sharon Hall

Sampler(s)/Affiliation ARCAOLS

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Rick Gendron Organization:

Received by: EW 1/1/81
Organization: _____

Relinquished by: Red Ex Organization: Red Ex

Received by: KLP Organization: KLP

Special Instructions/Remarks:

Temp 33°

Delivery Method: ☐ In Person

☒ Common Carrier *fed ex* SPECIAL

☐ Lab Courier☐ Other

SPECIFY

Specifics

AC 05 0597



Project Number/Name	MT060839.0001
---------------------	---------------

Project Location	Navajo - Artesia
------------------	------------------

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

ANALYSIS / METHOD / SIZE						Total
Sample ID/Location	Date/TIME Sampled	Matrix	(2) IL amber Jar 8310 SVOCs	(1) IDS 250 ml Nest	Remarks	
TMD-11	6/14/04	BW	2	1	20266871	3
TMD-12	6/14/04	BW	2	1	872	3
TMD-13	6/14/04	BW	2	1	873	3
TMD-14	6/15/04	BW	2	1	874	3
						Total No. of Bottles/ Containers
						12

Project Number/Name Navajo - Artesia

Project Location Pace Analytical

Laboratory Mike Norman

Project Manager ARCADIS/SG, RL

Sampler(s)/Affiliation

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Seal Intact?
Relinquished by: <u>Rick Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/15/04</u>	Time <u>5:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>FED EX</u>	Organization:	Date <u>1/1</u>	Time	Seal Intact? <u>No</u>
Relinquished by: <u>FED EX</u>	Organization:	Date <u>1/1</u>	Time	Seal Intact? <u>No</u>
Received by: <u>Shane Walsh</u>	Organization: <u>PACE</u>	Date <u>6/16/04</u>	Time <u>10:30</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Specify

Specify



Project Number/Name NT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

[illegible]

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>5/15/04</u>	Time <u>5:00</u>	Seal Intact?
Received by: <u>FEDER</u>	Organization:	Date <u>1/1</u>	Time	Yes No N/A
Relinquished by: <u>FEDER</u>	Organization: <u>PAGE</u>	Date <u>1/1</u>	Time	Seal Intact?
Received by: <u>Amie W. Jasha</u>	Organization:	Date <u>6/16/04</u>	Time <u>10:30</u>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

End

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____

Fed-Ex
SOCIETY

SOCIETY



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/SG, RL
[Detailed description of the sampler and its affiliation, including any relevant details about the sampling process and the organization involved.	[Detailed description of the sampler and its affiliation, including any relevant details about the sampling process and the organization involved.

Sample ID/Location	Matrix	Date/Time		Neat (1)	TDS (1)	Neat (2)	8310	Remarks	Total
		Sampled	Time						
FB-2 BW	BW	6/15	8:30	2	1			20260882	3
FB-2 BW	BW	6/15	8:30	2	1			883	3
Dup-2 BW	BW	6/15		2	1			884	3
TMD-15	BW	6/15	10:00	2	1			890	3
Sample Matrix: L = Liquid; S = Solid; A = Air									Total No. of Bottles/Containers
									12

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Rick Graham Organization: ARCADIS

Received by: FedEx Organization: _____

Relinquished by: bed Organization: bed

Received by: Elbow Organization: Pae

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

Common Carrier	Fed-Ex
----------------	--------

☐ Lab Courier☐ Other _____

SPECIFY

Capacity

AC 95 17001



Project Number/Name	NT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG,RL

[illegible]

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/16/04</u> Time <u>4:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fel Ex</u>	Organization: _____	Date <u>1/1</u> Time _____	Seal Intact? <u>No</u>
Relinquished by: <u>Fel Ex</u>	Organization: <u>L</u>	Date <u>6/17/04</u> Time <u>1030</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melrose Finc'n</u>	Organization: <u>Price</u>	Date <u>6/17/04</u> Time <u>1030</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____

Specify



ARCADIS

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name
KT000839.0001

Project Location	Navajo - Artesia
------------------	------------------

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/SG, RL
ARCADIS/SG, RL	

[illegible]

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/16/04</u>	Time <u>4:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Paul Ex</u>	Organization: _____	Date <u>1/1/04</u>	Time _____	Seal Intact? <u>No</u>
Relinquished by: <u>Paul Ex</u>	Organization: _____	Date <u>6/17/04</u>	Time <u>1030</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Ancl</u>	Organization: _____	Date <u>6/17/04</u>	Time <u>1030</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

ARCADIS GERAGHTY & MILLER
Laboratory Task Order No./P.O. No. _____ Page _____ of _____
CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No.

Project Number/Name	WT000839.0001

Project Location	Navajo--Artesia

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

DISCARD

Relinquished by: R. Buchanan Organization: _____

Received by: _____ Organization: _____

Relinquished by: FEDERAL Organization: _____

Received by: _____
Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

TEMP 20

Delivery Method: ☐ In Person

Common Carrier:

PRECISION

☐ Lab Courier☐ Other

specify



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name	MT0000839.0001

Project Location	Navajo Artesia
------------------	----------------

Laboratory Page Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ~~ARCADIS/PL~~

Sample ID/Location	Matrix	Date/ ^{Year} Time	Sampled	Time	Lab ID
--------------------	--------	----------------------------	---------	------	--------

[illegible]

Organization: ARCADIS

Organization:

Organization:

Organization:

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

Common Carrier ~~FEEL-Ex~~☐ Lab Courier☐ Other: _____

SPECIFY

Species

AG 05.0507

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Special Instructions/Remarks:

☐ Other



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	KT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Laboratory Pace Analytical

Project Manager

Mike Norman

Sampler(s)/Affiliation	ARCADIS/SG, RL
ARCADIS/SG, RL	

[illegible]

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by:	Organization:		Date	Time	Yes No N/A
Relinquished by: <u>Ed EN</u>	Organization: <u>Ed EN</u>		Date <u>6/23/04</u>	Time <u>4:00</u>	
Received by: <u>Ed EN</u>	Organization: <u>Ed EN</u>		Date <u>6/23/04</u>	Time <u>1</u>	
Relinquished by: <u>Ed EN</u>	Organization: <u>Ed EN</u>		Date <u>6/24/04</u>	Time <u>1015</u>	
Received by: <u>Ed EN</u>	Organization: <u>Ed EN</u>		Date <u>6/24/04</u>	Time <u>1015</u>	

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions. Temp. ϕ

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other _____

SPECIFY _____



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page of

Project Number/Name	WT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

1000-638000TH

Navajo - Artesia

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

Sample ID/Location	Matrix	Date/Time		Time Lab/DX	(3) 8021 HCL	(3) VOCs	(3) ID				Remarks	Total
		Sampled	Time									
TMD-36	L	6/24/04	9:00		3						20270373	3
TMD-37	L	6/24/04	9:30		3						374	3
TMD-38	L	6/24/04	10:00		3						419	3
EPBI-1	L	6/24/04	10:30		3						410	3
EPBI-10	L	6/24/04	11:45		3						411	3
TRIP BLANK	L				2						129	2
EPBI-9	L	6/24/04	3:15		3						417	3
ER-75	L	6/24/04	3:30		3						423	3
Sample Matrix: L = Liquid; S = Solid; A = Air												Total No. of Bottles/ Containers
												23

Relinquished by: <u>L. Buckman</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/11</u> Time <u>0400</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Fred EX</u>	Organization: _____	Date <u>1/1</u> Time _____	
Relinquished by: <u>Fred EX</u>	Organization: _____	Date <u>6/25/04</u> Time <u>1615</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Melmore Truck</u>	Organization: _____	Date <u>6/25/04</u> Time <u>1615</u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Q. 2.1

Delivery Method: ☐ In Person

Common Carrier:

بکتاب

☐ Lab Courier☐ Other

SPECIFY

AG 05-12m



Page ____ of ____

Sampler(s)/Affiliation

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

☐ Other

SPECIFY

צוה

Evaporation Pond 1 Soils
(EP1 Soils)



Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time DELIVER	Remarks	Total
TMD-38(0-2.5)	S	6/23/04	15:56		3
TMD-38(5-7.5)	S	6/23/04	15:58		3
EPI-1(0-5')	S	6/23/04	8:30	20270655	3
EPI-1(2.5-5')	S	6/23/04	8:30	656	3
EPI-1(12.5-15')	S	6/23/04	8:36	657	3
EPI-7(0-2.5)	S	6/23/04	10:00	658	3
EPI-7(2.5-5')	S	6/23/04	10:00	659	3
Dupe 10	S	6/23/04	10:00	660	3
EPI-10(0-2.5)	S	6/23/04	10:45	661	3
EPI-10(2.5-5')	S	6/23/04	10:45	662	3
EPI-10(22.5-25')	S	6/23/04	10:45	663	3
EPI-12(0-2.5)	S	6/23/04	11:30	664	3
EPI-12(2.5-5')	S	6/23/04	11:30	665	3
EPI-9(0-2.5)	S	6/23/04	14:00	666	3
EPI-9(5-7.5')	S	6/23/04	14:00	667	3
Total No. of Bottles/ Containers					45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Robert Wang</u>	Organization: <u>ARCADIS</u>	Date: <u>6/24/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Eden</u>	Organization: _____	Date: <u>6/25/04</u>	Time: <u>10:15</u>	Seal Intact? <u>Yes</u>
Relinquished by: <u>Eden</u>	Organization: _____	Date: <u>6/25/04</u>	Time: <u>10:15</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melrose Anch</u>	Organization: _____	Date: <u>6/25/04</u>	Time: <u>10:15</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks: Please contact Mike Norman at 201-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Temp 28



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No. _____ of _____

Project Number/Name NT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar 8260/VOC	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab/EX	Remarks	Total
EP1-6 (0-2.5)	S	6/24/04	15:00	20270668	3
EP1-6 (2.5-5)	S	6/24/04	15:00	669	3
EP2-1 (0-2.5)	S	6/25/04	8:30		3
EP2-1 (2.5-5)	S	6/25/04	8:30		3
EP2-1 (7.5-10)	S	6/25/04	8:30		3
EP2-6 (0-2.5)	S	6/25/04	9:30		3
EP2-6 (5-7.5)	S	6/25/04	9:30		3
EP2-6 (7.5-10)	S	6/25/04	9:30		3
EP2-3 (0-2.5)	S	6/25/04	10:30		3
EP2-3 (2.5-5)	S	6/25/04	10:30		3
Dupe 11	S	6/25/04	10:30		3
EP2-3 (5-7.5)	S	6/25/04	10:30		3
EP2-2 (0-2.5)	S	6/25/04	11:15		3
EP2-2 (2.5-7.5)	S	6/25/04	11:15		3
Total No. of Bottles/ Containers					42

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>R. Lopez</u>	Organization: <u>ARCADIS</u>	Date: <u>6/25/04</u>	Time: <u>15:30</u>	Seal Intact? Yes No N/A
Received by: <u>F. Cal</u>	Organization: _____	Date: <u>6/26/04</u>	Time: <u>08:30</u>	Seal Intact? Yes No N/A
Relinquished by: <u>F. Cal</u>	Organization: _____	Date: <u>6/26/04</u>	Time: <u>08:30</u>	Seal Intact? Yes No N/A
Received by: <u>Melissa Finch</u>	Organization: _____	Date: <u>6/26/04</u>	Time: <u>08:30</u>	Seal Intact? Yes No N/A

Special Instructions/Remarks: _____

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

AG 05-1201



Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name KT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Analysis	Remarks	Total
EP1-3 (0-2.5')	S	6/22/04 14:30	14:30	30269429	3
EP1-3 (2.5-5')	S	6/22/04 14:30	14:30	430	3
EP1-3 (12.5-15')	S	6/22/04 14:30	14:30	431	3
EP1-5 (0-2.5')	S	6/22/04 15:30	15:30	432	3
EP1-5 (2.5-5')	S	6/22/04 15:30	15:30	433	3
EP1-5 (10-12.5')	S	6/22/04 15:30	15:30	434	3
EP1-8 (0-2.5')	S	6/22/04 16:45	16:45	439	3
EP1-8 (5-7.5')	S	6/22/04 16:45	16:45	440	3
EP1-8 (12.5-15')	S	6/22/04 16:45	16:45	441	3
EP1-11 (0-2.5')	S	6/22/04 17:50	17:50	442	3
EP1-11 (5-17.5')	S	6/22/04 17:50	17:50	443	3
EP1-11 (17.5-20')	S	6/22/04 17:50	17:50	445	3
Dupe 8	S	6/22/04		446	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Ralph Lums Organization: ARCADIS Date: 6/23/04 Time: 15:00
Received by: Fred Ex Organization: _____ Date: _____ Time: _____
Relinquished by: Fred Ex Organization: _____ Date: 6/24/04 Time: 10:15
Received by: Melissa Finch Organization: _____ Date: 6/24/04 Time: 10:15

Special Instructions/Remarks: _____

Please contact Mike Norman at 281-509-6439 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier

☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001
Project Location Navajo - Artesia
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/SG, RL

Sample ID/Location	Matrix	Date/Time Sampled	ANALYSIS / METHOD / SIZE					Remarks	Total
			(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size		
BSB-4 (0-2.5')	S	6/23/04 8:30						458	3
BSB-4 (5-7.5')	S	6/23/04 8:30						459	3
BSB-5 (0-2.5')	S	6/23/04 9:30						460	3
BSB-5 (5-7.5')	S	6/23/04 9:30						461	3
EP1-2 (0-2.5')	S	6/23/04 11:00						20269447	3
EP1-2 (7.5-10')	S	6/23/04 11:00						442	3
EP1-2 (17.5-20')	S	6/23/04 11:00						449	3
EP1-4 (0-2.5')	S	6/23/04 11:45						451	3
EP1-4 (7.5-10')	S	6/23/04 11:45						453	3
EP1-4 (22.5-25')	S	6/23/04 11:45						454	3
Dupe 9	S	6/23/04						455	3
Total No. of Bottles/Containers									33

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Paul Lang Organization: ARCADIS Date: 6/23/04 Time: 15:00 Seal Intact? Yes No N/A
Received by: Paul Lang Organization: _____ Date: _____ Time: _____

Relinquished by: Paul Lang Organization: ARCADIS Date: 6/24/04 Time: 10:15 Seal Intact? Yes No N/A
Received by: Paul Lang Organization: _____ Date: 6/24/04 Time: 10:15

Special Instructions/Remarks: _____



Project Number/Name	MT000839.0001
Project Location	Navajo
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	APCADIS/RL

ANALYSIS / METHOD / SIZE

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: _____
Organization: ARCADIS

Received by: 1606/
 Requisitioned by: 1606/
 Organization:

Polina Michailovna	24.05	AK
--------------------	-------	----

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Re-sample for	SVOC samples	past	bold	fine
---------------	--------------	------	------	------

Delivery Method: ☐ In Person☒ Common Carrier Fed-Ex ☐ Lab Courier☐ Other

Species

SPECIES

AG 05 12/01



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE

(3) HCL
8021/BTEX
40 ml vol

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab/XX	(3) EC	(3) VC	Remarks	Total
TMD-36a	L	6/24/04	9:00	3		20270373	3
TMD-37	L	6/24/04	9:30	3		374	3
TMD-38	L	6/24/04	10:00	3		409	3
EPBI-1	L	6/24/04	10:30	3		410	3
EPBI-10	L	6/24/04	11:05	3		411	3
TRIP BLANK	L			2		429	2
EPBI-9	L	6/24/04	3:15	3		417 417	3
EP-75	L	6/24/04	3:30	3		20270423	3

Sample Matrix:	L = Liquid;	S = Solid;	A = Air

Relinquished by: P. G. Gribben Organization: ARCADIS
 Received by: Feed EX Organization: _____
 Relinquished by: Feed EX Organization: _____
 Received by: Melrose Truck Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier☐ Other

SPECIES

ADDENDUM

AG US 17/01



Project Number/Name:

Project Location

Laboratory:

Project Manager

Sampler(s)/Affiliation[illegible]

Relinquished by: <u>L. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>6/24/04</u>	Time <u>4:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Fred EX</u>	Organization: _____	Date <u>1/1</u>	Time _____	
Relinquished by: <u>Fred EX</u>	Organization: _____	Date <u>6/25/04</u>	Time <u>1615</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Michael Finch</u>	Organization: _____	Date <u>6/25/04</u>	Time <u>1615</u>	

Special Instructions/Remarks: Please contact Mike Norman at 231-509-6489 with any questions.

[illegible]

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Fed-Ex SPECIFY

SPECIFY

Evaporation Pond 2
Soils (EP2 Soils)



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001Project Location Navajo - ArtesiaLaboratory Pace AnalyticalProject Manager Mike NormanSampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/TIME Sampled	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
EP1-6 (0-2.5)	S	6/24/04 15:00	1	1	1				3
EP1-6 (2.5-5)	S	6/24/04 15:00	1	1	1				3
EP2-1 (0-2.5)	S	6/25/04 8:30	1	1	1			20270670	3
EP2-1 (2.5-5)	S	6/25/04 8:30	1	1	1			671	3
EP2-1 (38.4)	S	6/25/04 8:30	ALL	+					3
EP2-1 (7.5-10)	S	6/25/04 8:30	1	1	1			672	3
EP2-6 (0-2.5)	S	6/25/04 9:30	1	1	1			673	3
EP2-6 (5-7.5)	S	6/25/04 9:30	1	1	1			674	3
EP2-6 (7.5-10)	S	6/25/04 9:30	1	1	1			675	3
EP2-3 (0-2.5)	S	6/25/04 10:30	1	1	1			674	3
EP2-3 (2.5-5)	S	6/25/04 10:30	1	1	1			677	3
Dupe 11	S	6/25/04	1	1	1			678	3
EP2-3 (5-7.5)	S	6/25/04 10:30	1	1	1			679	3
EP2-2 (0-2.5)	S	6/25/04 11:15	1	1	1			680	3
EP2-2 (7.5-10)	S	6/25/04 11:15	1	1	1			681	3
Total No. of Bottles/Containers									42

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Reliquis Lundy</u>	Organization: <u>ARCADIS</u>	Date: <u>6/25/04</u>	Time: <u>15:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fcd EX</u>	Organization: <u> </u>	Date: <u>1/1/04</u>	Time: <u> </u>	Seal Intact? <u>N/A</u>
Relinquished by: <u>Fcd EX</u>	Organization: <u> </u>	Date: <u>6/26/04</u>	Time: <u>08:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melissa Finch</u>	Organization: <u> </u>	Date: <u>6/26/04</u>	Time: <u>08:30</u>	Seal Intact? <u>N/A</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person☒ Common Carrier

Fed-Ex

☐ Lab Courier☐ OtherTemp 20



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	NT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/SG, RL
ARCADIS/SG, RL	

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Kyle Lang</u>	Organization: <u>ARCADIS</u>	Date <u>6/25/04</u>	Time <u>13:00</u>	Seal Intact?
Received by: <u>Col EX</u>	Organization: _____	Date <u>1/1</u>	Time _____	Yes No N/A
Relinquished by: <u>Red EX</u>	Organization: _____	Date <u>6/26/04</u>	Time <u>0830</u>	Seal Intact?
Received by: <u>Melrose Finch</u>	Organization: _____	Date <u>6/26/04</u>	Time <u>0830</u>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex

☐ Lab Courier☐ Other

人312365

specific

4415 + 50.75



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001Project Location Navajo - ArtesiaLaboratory Pace AnalyticalProject Manager Mike NormanSampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar 8260/VOC	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location Matrix Date/TIME Sampled Time

Sample ID/Location	Matrix	Date/TIME Sampled	Time	TPH-DRO/8270	RCRA 8 Metals	(1) 2 oz jar 8260/VOC	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size	Remarks	Total
EP2-7(0-2.5)	S	6/28/04	14:40	1	1	1			50371502	3
EP2-7(2.5-5)	S	6/28/04	14:40	1	1	1			504	3
EP2-8(0-2.5)	S	6/28/04	15:30	1	1	1			504	3
EP2-8(2.5-10)	S	6/28/04	15:30	1	1	1			507	3
EP2-8(15-17.5)	S	6/28/04	15:30	1	1	1			508	3
EP2-11(0-2.5)	S	6/28/04	16:30	1	1	1			509	3
EP2-11(7.5-10)	S	6/28/04	16:30	1	1	1			510	3
EP2-9(0-2.5)	S	6/28/04	17:10	1	1	1			511	3
Dupe 12	S	6/28/04		1	1	1			512	3
EP2-9(2.5-5)	S	6/28/04	17:10	1	1	1			514	3
EP2-9(5-7.5)	S	6/28/04	17:10	1	1	1			515	3
EPB-1(0-2.5)	S	6/29/04	9:00	1	1	1				3
EPB-2(5-7.5)	S	6/29/04	9:00	1	1	1				3
EPB-2(0-2.5)	S	6/29/04	10:00	1	1	1				3
EPB-2(5-7.5)	S	6/29/04	10:00	1	1	1				3
Total No. of Bottles/Containers										45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Rylee Lundy</u>	Organization: <u>ARCADIS</u>	Date: <u>6/29/04</u>	Time: <u>15:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Pace</u>	Organization: <u>Pace</u>	Date: <u>6/29/04</u>	Time: <u>10:15</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar VOCs/8260	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time KAXKX	(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar VOCs/8260	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size	Remarks	Total
EP2-15(0-2.5)	S	7/12/04	11:05	✓	✓	✓	✓	✓	20076424	3
EP2-15(2.5-5)	S	7/12/04	11:00	✓	✓	✓	✓	✓	435	1
EP2-15(7.5-10)	S	7/12/04	11:08	✓	✓	✓	✓	✓	434	1
EP2-14(0-2.5)	S	7/12/04	11:22	✓	✓	✓	✓	✓	438	1
EP2-14(7.5-10)	S	7/12/04	11:22	✓	✓	✓	✓	✓	439	1
EP2-13(0-2.5)	S	7/12/04	11:55	✓	✓	✓	✓	✓	430	1
EP2-13(7.5-10)	S	7/12/04	11:55	✓	✓	✓	✓	✓	431	1
EP2-12(0-2.5)	S	7/12/04	12:15	✓	✓	✓	✓	✓	432	1
EP2-12(7.5-10)	S	7/12/04	12:15	✓	✓	✓	✓	✓	433	1
EP2-16(0-2.5)	S	7/12/04	14:30	✓	✓	✓	✓	✓	434	1
EP2-16(7.5-10)	S	7/12/04	14:30	✓	✓	✓	✓	✓	435	1
EP2-17(0-2.5)	S	7/12/04	14:56	✓	✓	✓	✓	✓	436	1
EP2-17(7.5-10)	S	7/12/04	14:56	✓	✓	✓	✓	✓	437	1
Dube 14	S	7/12/04		✓	✓	✓	✓	✓	438	1
EP2-18(0-2.5)	S	7/12/04	15:15	✓	✓	✓	✓	✓	430	✓
Total No. of Bottles/Containers										45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Ryan Lerry</u>	Organization: <u>ARCADIS</u>	Date: <u>7/12/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>	No <u>N/A</u>
Received by: <u>FEDER</u>	Organization: <u> </u>	Date: <u>1/1</u>	Time: <u> </u>	Seal Intact? <u>Yes</u>	No <u>N/A</u>
Relinquished by: <u>FEDER</u>	Organization: <u>FACE</u>	Date: <u>7/12/04</u>	Time: <u>10:00</u>	Seal Intact? <u>Yes</u>	No <u>N/A</u>
Received by: <u> </u>	Organization: <u> </u>	Date: <u>1/1</u>	Time: <u> </u>	Seal Intact? <u>Yes</u>	No <u>N/A</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 30

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCE/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled Lab/DX	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCE/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
EP2-18 (2.5-5')	S	7/12/04 15:15	↓	↓	↓	↓	↓	440	3
EP2-19 (0.25-1')	S	7/12/04 15:25	↓	↓	↓	↓	↓	441	1
EP2-19 (2.5-5')	S	7/12/04 15:25	↓	↓	↓	↓	↓	442	1
EP2-23 (0.2-2')	S	7/12/04 15:45	↓	↓	↓	↓	↓	443	1
EP2-23 (2.5-5')	S	7/12/04 15:45	↓	↓	↓	↓	↓	444	1
EP2-22 (0.2-3')	S	7/12/04 16:15	↓	↓	↓	↓	↓	447	1
EP2-22 (2.5-5')	S	7/12/04 16:15	↓	↓	↓	↓	↓	448	1
EP2-21 (0.2-2.5')	S	7/12/04 16:30	↓	↓	↓	↓	↓	449	1
EP2-21 (2.5-5')	S	7/12/04 16:30	↓	↓	↓	↓	↓	454	1
EP2-20 (0.2-2.5')	S	7/12/04 17:00	↓	↓	↓	↓	↓	455	1
EP2-20 (5-7.5')	S	7/12/04 17:00	↓	↓	↓	↓	↓	462	1
Pupe 15	S	7/12/04	↓	↓	↓	↓	↓	466	1
Total No. of Bottles/ Containers									36

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Ryan Long</u>	Organization: <u>ARCADIS</u>	Date: <u>7/14/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>FEDER</u>	Organization: <u> </u>	Date: <u>1/1</u>	Time: <u> </u>	
Relinquished by: <u>FEDER</u>	Organization: <u>Pace</u>	Date: <u>7/15/04</u>	Time: <u>10:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u> </u>	Organization: <u> </u>	Date: <u>1/1</u>	Time: <u> </u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 20

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other



Sampler(s)/Affiliation

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>01/1/01</u>	Time <u>1030</u>	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>FedEx</u>	Organization: _____	Date <u>1/1</u>	Time _____	
Relinquished by: <u>[Signature]</u>	Organization: <u>Pace</u>	Date <u>6/18/04</u>	Time <u>1030</u>	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>McLuskey-Inch</u>	Organization: _____	Date <u>6/18/04</u>	Time <u>1030</u>	

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY



Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				Total
Sample ID/Location	Date/Time	Matrix	Remarks	
MW-25	6/17/01 11:30	L	(1) 500 ml plastic Metals+Cations	20267530 531
PB-96W	6/17/01 10:10	L	(1) 250 ml plastic HNO3	
			(1) 250 ml plastic Total Cyanide	
			(1) 250 ml plastic Anions (Cl, F, SO4)	
			(1) 125 ml plastic Nitrate+Nitrite	
			(1) 250 ml plastic H2SO4	
			(1) 250 ml plastic PH, Spec. Cond, TDS	
			(3) 1 L amber Neat 8270/8310	

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature] Organization: ARCADIS
Received by: FedEx Organization:

Relinquished by: Eed Ev Organization: _____
Received by: Melbae Jnck Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier.

Fed-Ex

4. SPECIFY

☐ Lab Courier☐ Other

SPECIFY

AG 05-12701



GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____

of _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE

HC1 (3) 40 ml VOA
HC1 (3) 40 ml VOA

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab	HC1 (3) 40 ml VOA	HC1 (3) 40 ml VOA	Remarks	Total
MW-10	L	6/17/04	900	3	3	514	3
MW-22A	L	6/16/04	1800	3	3	513	3
EB-8GW	L	6/16/04	1720	3	3	520	3
EB-9GW	L	6/17/04	950	3	3	522	3
FB-9GW	L	6/17/04	1010	3	3	531	3
MLW-19	L	6/17/04	1030	3	3	521	3
MW-25	L	6/17/04	1130	3	3	530	3
MW-27	L	6/17/04	1210	3	3	529	3
Dup-10GW	L	6/17/04	-	3	3	523	3
MW-18A	L	6/18/04	1600	3	3	508	3
QCD-7AK	L	6/16/04	1415	3	3	506	3
EB-7GW	L	6/16/04	1335	3	3	515	3
QCD-6	L	6/16/04	1315	3	3	509	3
MW-3	L	6/16/04	1155	3	3	508	3
EB-6GW	L	6/16/04	1115	3	3	518	3
Total No. of Bottles/Containers							1630

Sample Matrix: L Liquid; S Solid; Air

Relinquished by: Enoch Organization: ARCADIS

Received by: Fed Ex Organization:

Relinquished by: Fed Ex Organization: Pace

Received by: Melrose Tech Organization:

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 3°

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier

☐ Other

SPECIFY

SPECIFY



Project Number/Name MT000839.0001

Project Location Navajo -- Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG,RL

ANALYSIS / METHOD / SIZE

(3) 40 07 12
 HCL
 VOCS
 40 07 12
 20A 12 12

Remarks	Total

sample identification	matrix	date received	date analyzed	method	results	comments
Dup-8 GW	L	6/16/04	—		3	516
Dup-9 GW	L	6/16/04	—		3	519
MW-6A	L	6/16/04	1045		3	510
Dup-7 GW	L	6/16/04	—		3	511
FB-5 GW	L	6/16/04	1030		3	517
FCP Blank	L	—	—		2	530

Sample Matrix:	L = Liquid;	S = Solid;	A = Air
----------------	-------------	------------	---------

Total No. of Bottles/
Containers 12

ARCADIS

Date 6/1/18 Time 1830

Seal Intact?	Yes: No	N/A
--------------	---------	-----

Agg

Date	6/18/64	Time	1030
Date	6/18/64	Time	1030

Seal Intact?	Yes	No	N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier _____ Fed-Ex _____☐ Lab Courier ☐ Other

SPECIFY

AG 05-12/01



GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

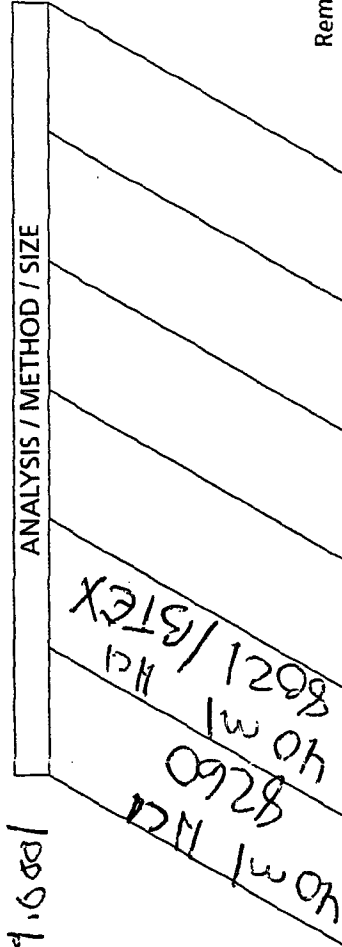
Project Number/Name Newajo / MT000839.0001

Project Location Artesia, NM

Laboratory Pace

Project Manager Sharon Hall

Sampler(s)/Affiliation ARCADIS



Sample ID/Location	Matrix	Date/Time Sampled	TIME Lab	ANALYSIS / METHOD / SIZE	Remarks	Total
TMD-1	L	6/9/04	1730	3		6
TMD-3	L	6/10/04	1115	3		6
EB-15	L	6/10/04	1045	3		6
MW-20	L	6/9/04	1610	3	238	3
MW-8	L	6/9/04	1720	3	236	3
MW-21	L	6/9/04	1820	3	234	3
MW-9	L	6/10/04	940	3	237	3
MW-29	L	6/10/04	1040	3	239	3
EB-1GW	L	6/10/04	1000	3	240	3
FB-1GW	L	6/10/04	1100	3	241	3
Dup-2	L	6/10/04	---	3	242	3
MW-28	L	6/10/04	1425	3	235	3
Tip Bottle	L	---	---	2	243	2

Sample Matrix: L = Liquid; S = Slight; A = Air

Relinquished by: Sharon Hall Organization: ARCADIS Date: 6/10/04 Time: 1715 Seal Intact? Yes No N/A

Received by: FedEx Organization: Pace Date: 6/11/04 Time: 1030 Seal Intact? Yes No N/A

Relinquished by: FedEx Organization: Pace Date: 6/11/04 Time: 1030 Seal Intact? Yes No N/A

Received by: KH Brown Organization: Pace Date: 6/11/04 Time: 1030 Seal Intact? Yes No N/A

Special Instructions/Remarks: Temp 3

Delivery Method: ☐ In Person ☒ Common Carrier FedEx ☐ Lab Courier ☐ Other

SPECIFY _____



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. WT000839 cool/Navajo

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project Number/Name WT000839 cool/Navajo

Project Location Artesia, NM

Laboratory Pace

Project Manager Sharon Hall

Sampler(s)/Affiliation ARCADIS

ANALYSIS / METHOD / SIZE			
40 µm	40 µm	40 µm	40 µm
PH	PH	PH	PH
09/28	09/28	09/28	09/28
02/19/2008	02/19/2008	02/19/2008	02/19/2008

Sample ID/Location Matrix Date/Time Sampled

Sample ID/Location	Matrix	Date/Time Sampled	Remarks	Total
TMD-7	L	6/11/04 1122		3
TMD-2	L	6/11/04 905		3
TMD-5	L	6/11/04 924		3
TMD-6	L	6/11/04 945		3
TMD-7	L	6/11/04 1000		3
TMD-8	L	6/11/04 1030		3
MW-15	L	6/11/04 1140	244	3
MW-1R	L	6/11/04 1045	246	3
MW-26	L	6/11/04 915	245	3
MW-16	L	6/10/04 1820	247	3
EB-2GW	L	6/11/04 945	249	3
FB-2GW	L	6/11/04 950	248	3
Op-3GW	L	6/11/04	250	3
Trip Blank	L	6/11/04	251	3

Sample Matrix: ☒ Liquid; ☐ Solid; ☐ Air

Relinquished by: <u>Sharon Hall</u>	Organization: <u>ARCADIS</u>	Date: <u>6/11/04</u>	Time: <u>1700</u>	Seal Intact? <u>Yes</u>
Received by: <u>FedEx</u>	Organization: <u>FedEx</u>	Date: <u>6/11/04</u>	Time: <u>1700</u>	Seal Intact? <u>Yes</u>
Relinquished by: <u>Sharon Hall</u>	Organization: <u>ARCADIS</u>	Date: <u>6/11/04</u>	Time: <u>1700</u>	Seal Intact? <u>Yes</u>
Received by: <u>Sharon Hall</u>	Organization: <u>ARCADIS</u>	Date: <u>6/11/04</u>	Time: <u>1700</u>	Seal Intact? <u>Yes</u>

Total No. of Bottles/Containers 2492

Special Instructions/Remarks: Temp 30

Delivery Method: ☐ In Person ☒ Common Carrier FedEx ☐ Lab Courier ☐ Other



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of 3

Project Number/Name MT000839.0001
 Project Location Navajo - Artesia
 Laboratory Pace Analytical
 Project Manager Mike Norman
 Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE	
(3) 40 ml VOCs HCL	(3) 40 ml VOCs HCL
(3) 40 ml VOCs HCL	(3) 40 ml VOCs HCL

Sample ID/Location	Matrix	Date/Time Sampled	Time LAB	Remarks	Total
OC0-3	L	6/14/04	1630	20266684	3
OC0-2A	L	6/14/04	1530	685	3
EB-3GW	L	6/14/04	1150	686	3
EB-3GW	L	6/14/04	1130	687	3
OC0-1	L	6/14/04	1210	682	3
OC0-4	L	6/14/04	845	683	3
OC0-5	L	6/15/04	1100	688	3
MW-11A	L	6/15/04	1000	676	3
OC0-5GW	L	6/15/04	1200	677	3
MW-5A	L	6/15/04	1330	667	3
MW-7A	L	6/15/04	1420	668	3
MW-4A	L	6/15/04	1520	680	3
EB-4GW	L	6/15/04	800	681	3
				678	3
Sample Matrix: <u>L</u> = Liquid; <u>S</u> = Solid; <u>A</u> = Air				Total No. of Bottles/ Containers	3

Relinquished by: [Signature] Date: 6/15/04 Time: 1700 Seal Intact? Yes No N/A

Received by: FED-EX Date: 6/16/04 Time: 10:30 Seal Intact? Yes No N/A

Relinquished by: [Signature] Date: 6/16/04 Time: 10:30 Seal Intact? Yes No N/A

Received by: ARCADIS Date: 6/16/04 Time: 10:30 Seal Intact? Yes No N/A

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Temp: 72



Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical Laboratory

Project Manager _____ **Mike Norman**

Sampler(s)/Affiliation	ARCADIS/SG, RL

Laboratory Task Order No./P.O. No.:

CHAIN-OF-CUSTODY RECORD

Page

of-

ANALYSIS / METHOD / SIZE

Sample Matrix: $\text{D} = \text{Liquid}; \text{S} \neq \text{Solid}; \text{A} \neq \text{Air}$

Bilingualised by: W. C. K. Organization: ARCADIS

Received by: Edler Organization: Edler

Relinquished by: Fedex Organization:

Received by: Annie Wolkstein Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier

Fed-Ex

☐ Lab Courier☐ Other

SPECIFY

SPECIES



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

CHAIN-OF-CUSTODY RECORD

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>4:00</u>	Seal Intact? Yes No N/A
Received by: <u>FEDEx</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Seal Intact? Yes No N/A
Relinquished by: <u>FEDEx</u>	Organization: <u>ACE</u>	Date: <u>1/1</u>	Time: _____	Seal Intact? Yes No N/A
Received by: <u>Kevin Walsh</u>	Organization: <u>ACE</u>	Date: <u>7/17/04</u>	Time: <u>0830</u>	Seal Intact? Yes No N/A

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with questions.
7/20/20

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

AG 05-1201



Project Number/Name NTC00839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>P. Lewis</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>16:00</u>	Seal Intact? <u>(Yes)</u>	No	N/A
Received by: <u>Fred EX</u>	Organization: _____	Date: <u>7/16/04</u>	Time: _____	Seal Intact? <u>(Yes)</u>	No	N/A
Relinquished by: <u>Fred EX</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>10:15</u>	Seal Intact? <u>(Yes)</u>	No	N/A
Received by: <u>Melrose Truck</u>	Organization: _____	Date: <u>7/20/04</u>	Time: <u>10:15</u>	Seal Intact? <u>(Yes)</u>	No	N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex
SPECIFY



CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Laboratory Task Order No./P.O. No.:

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: R. Graham Organization: ARCADIS
Received by: LEPOT Organization: _____

Relinquished by: FDO Organization: _____
Received by: Michael W. Lister Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Temp 20

Delivery Method: ☐ In Person

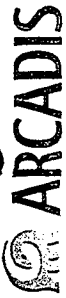
Common Carrier	Fed-Ex
XX	

☐ Lab Courier☐ Other

SPECIFY

ADDs

AG 05:13m



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DR0/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar VOCs/8260	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time KAT/EX	Total
EP2-24(0-2.5)	S	7/13/04	8:35	472
EP2-24(2.5-5)	S	7/13/04	8:35	473
EP2-25(0-2.5)	S	7/13/04	9:20	474
EP2-25(2.5-5)	S	7/13/04	9:20	475
EP5-6(0-2.5)	S	7/13/04	10:22	
EP5-6(2.5-5)	S	7/13/04	10:22	
EP5-2(0-2.5)	S	7/13/04	11:05	
EP5-2(2.5-5)	S	7/13/04	11:05	
EP5-1(0-2.5)	S	7/13/04	12:06	
EP5-1(2.5-5)	S	7/13/04	12:06	
EP5-4(0-2.5)	S	7/13/04	14:20	
EP5-4(2.5-5)	S	7/13/04	14:20	
EP5-8(0-2.5)	S	7/13/04	15:06	
Dupe 16	S	7/13/04		
Dupe 17	S	7/13/04		

Sample Matrix: L = Liquid; S = Solid; A = Air Total No. of Bottles/Containers 45

Relinquished by: Rachel Long Organization: ARCADIS Date: 7/14/04 Time: 16:00 Seal Intact? Yes No N/A

Received by: FedEx Organization: Pace Date: 7/15/04 Time: 10:00 Seal Intact? Yes No N/A

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other Temp

Project Number/Name MT000839.0001

Project Location	Navajo-Artesia
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sample ID/Location	Matrix	Date/Time		SVOCs (2)	Nea (1)	IDS	Nea	Remarks	Total
		Sampled	Time						
EB-95	L	6/28/04	2:00	2	1			20571494	3
TMD-24	L	6/28/04	2:30	2	1			497	3
TMD-25	L	6/29/04	9:00	2	1			498	3
Sample Matrix: L = Liquid; S = Solid; A = Air									Total No. of Bottles/ Containers
									4

~~ARCADIS~~

Relinquished by: R. Graham Organization: _____

Received by: _____
Organization: _____

Relinquished by: F. L. DeLo Organization: _____

Received by: Yanni W. L. L. Organization:

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier ☐ Fed-Ex☐ Lab Courier.☐ Other

SPECIES

Subjects

AG 05-0507



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Sampler(s)/Affiliation ~~ARCADIS/RL~~

[illegible]

Sample Matrix:	L = Liquid;	S = Solid;	A = Air

Relinquished by: L. Graham Organization: ARCADIS

Received by: _____
Organization: _____

Received by: _____

Relinquished by: FEBAC
Organization: Febac

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other

SPECIFY

AG 05 11507



Laboratory Task Order No./P.O. No. _____ Page _____ of _____

Sampler(s)/Affiliation

[illegible]

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <u>A. Graham</u>	Organization: <u>ARCADIS</u>	Date <u>7/14/04</u>	Time <u>4:00P</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDex</u>	Organization:	Date <u>1/1</u>	Time	Yes No N/A
Relinquished by: <u>FEDex</u>	Organization: <u>PACER</u>	Date <u>1/1</u>	Time	Seal Intact? <u>Yes</u>
Received by: <u>Ann: Walsh</u>	Organization:	Date <u>7/15/04</u>	Time <u>10:00</u>	Yes No N/A

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with questions.

Temp 20

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Fed-Ex SPECIFY

Evaporation Pond 3 Soils
(EP3 Soils)



CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Laboratory Task Order No./P.O. No. _____

Project Number/Name MT000839-0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE

Sample ID/Location	Matrix	Date/Time Sampled	TPH-DRO/8270 (1) 4 oz Jar	RCRA 8 Metals (1) 4 oz Jar	VOCs/8260 (1) 2 oz Jar	FOC (1) 4 oz Jar	(1) 4 oz Jar Particle Size	Remarks	Total
EP3-5 (0-2.5)	S	7/15/04 8:57	↓	↓	↓	↓	↓	20977575	3
EP3-5 (2.5-5)	S	7/15/04 8:57	↓	↓	↓	↓	↓	274	1
EP3-6 (0-2.5)	S	7/15/04 9:25	↓	↓	↓	↓	↓	277	1
EP3-6 (2.5-5)	S	7/15/04 9:25	↓	↓	↓	↓	↓	278	1
EP3-7 (0-2.5)	S	7/15/04 9:45	↓	↓	↓	↓	↓	279	1
EP3-7 (2.5-5)	S	7/15/04 9:45	↓	↓	↓	↓	↓	280	1
EP3-8 (0-2.5)	S	7/15/04 10:10	↓	↓	↓	↓	↓	281	1
EP3-8 (2.5-5)	S	7/15/04 10:10	↓	↓	↓	↓	↓	282	1
EP3-12 (0-2.5)	S	7/15/04 11:30	↓	↓	↓	↓	↓	285	1
EP3-12 (2.5-5)	S	7/15/04 11:30	↓	↓	↓	↓	↓	289	1
EP3-11 (0-2.5)	S	7/15/04 14:15	↓	↓	↓	↓	↓	291	1
EP3-11 (2.5-5)	S	7/15/04 14:15	↓	↓	↓	↓	↓	292	1
Dupe 23	S	7/15/04	↓	↓	↓	↓	↓	293	1
Dupe 24	S	7/15/04	↓	↓	↓	↓	↓	295	1
EP3-10 (0-2.5)	S	7/15/04 14:45	↓	↓	↓	↓	↓	297	1
Total No. of Bottles/Containers									45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Rachel Lang</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>6:00</u>	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>Feder</u>	Organization: _____	Date: <u>1</u>	Time: _____	
Relinquished by: <u>Feder</u>	Organization: _____	Date: <u>1</u>	Time: _____	Seal Intact? <u>(Yes)</u> No N/A
Received by: <u>Mike Norman</u>	Organization: <u>Pace</u>	Date: <u>7/17/04</u>	Time: <u>0830</u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 40

Delivery Method: ☐ In Person

☒ Common Carrier

☐ Lab Courier

☐ Other

SPECIFY

SPECIFY



GERAGHTY & MILLER

Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE

(2) 1 L Amber Jar
Neat / 8310
TS
(1) 250 ml
Neat

Sample ID/Location Matrix Date/Time
Sampled

EB-15	L	7/15/04	6:00	2	1	200217309	3
EB-16.5	L	7/16/04	9:00	2	1		3
FB-6 BL	L	7/16/04	9:05	2	1	311	3
EB-6 BL	L	7/16/04	10:15	2	1	313	3

Remarks

Total

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers

Relinquished by: Relinquish Organization: ARCADIS
Received by: FEDER Organization: _____

Seal Intact?
Yes No N/A

Date 7/16/04 Time 4:00
Date 1/1 Time _____

Relinquished by: FEDER Organization: _____
Received by: Ami White Organization: Pace

Seal Intact?
Yes No N/A

Date 1/1 Time _____
Date 7/17/04 Time 08:30

Special Instructions/Remarks: _____

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier

☐ Lab Courier

☐ Other

SPECIFY

SPECIFY



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE	
(3) 40mL VOA Vials	HCL
(3) 40mL VOA Vials	VOC/8260
(3) 40mL VOA Vials	HCL
(3) 40mL VOA Vials	8021/BTEX

Sample ID/Location	Matrix	Date/Time Sampled	Time XREF	Remarks	Total
FB-15 S	L	7/15/04	6:00	30277309	3
FB-16 S	L	7/16/04	7:00	310	3
FB-6 BW	L	7/16/04	9:15	311	3
MW-2A	L	7/15/04	4:00		3
TRIP BLANK	L	7/15/04		317	2
EP3-9	L	7/16/04	10:00	312	3
FB-6 BW	L	7/16/04	10:15	313	3
Dip 6 BW	L	7/16/04		314	3
EP3-4	L	7/16/04	10:45	315	3
EP6-3	L	7/16/04	11:30	316	3
Total No. of Bottles/Containers					29

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDAX</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	No N/A
Relinquished by: <u>FEDAX</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	Seal Intact? <u>Yes</u>
Received by: <u>Mike Norman</u>	Organization: <u>Pace</u>	Date: <u>7/17/04</u>	Time: <u>0830</u>	No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other Temp

Evaporation Pond 5 Soils
(EP5 Soils)



Laboratory Task Order No./P.O. No. _____ Page _____ of _____

CHAIN-OF-CUSTODY RECORD

Page of

Project Number/Name	MT0000839.0001
---------------------	----------------

Project Location	Navajo

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation

Sample ID/Location	Matrix	Date/Time Sampled	Time Lab ID	(2) IP		(2) RC		(1) VOC		(2) FOC		(2) Pat	Remarks	Total
B5B-A0-2.5)	S	6/30/04	8:45							1	1	1		3
B5B-7(5-7.5)	S	6/30/04	8:45							1	1	1		3
B5B-7(10-12.5)	S	6/30/04	8:45							1	1	1		3
B5B-8(0-2.5)	S	6/30/04	9:30							1	1	1		3
B5B-8(5-7.5)	S	6/30/04	9:30							1	1	1		3
EP5-3(0-2.5)	S	6/30/04	14:20	1					1				50572105	3
EP5-3(5-7.5)	S	6/30/04	14:20						1				606	3
Sample Matrix:	L = Liquid; S = Solid; A = Air												Total No. of Bottles/ Containers	21

Relinquished by: <u>Joseph H. P...</u>	Organization: <u>ARCADIS</u>	Date <u>7/1/07</u> Time <u>13:32</u>	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date _____ Time _____	
Relinquished by: <u>Robert</u>	Organization: <u>PWC</u>	Date <u>7/2/07</u> Time <u>09:00</u>	Seal Intact? Yes No N/A
Received by: <u>Kevin L. Delish</u>	Organization: _____	Date _____ Time _____	

Special Instructions/Remarks:
Please contact Mike Norman at 281-309-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Fed-Ex SPECIFY

704845

AG 05 1201



Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA & Metals	(1) 2 oz jar VOCs/8260	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time KAT/KX	Remarks	Total
EP2-24(0-2.5)	S	7/13/04	8:35		3
EP2-24(2.5-5)	S	7/13/04	8:35		
EP2-25(0-2.5)	S	7/13/04	9:20		
EP2-25(2.5-5)	S	7/13/04	9:20		
EP5-6(0-2.5)	S	7/13/04	10:22	50276-501	
EP5-6(2.5-5)	S	7/13/04	10:22	502	
EP5-2(0-2.5)	S	7/13/04	11:05	503	
EP5-2(2.5-5)	S	7/13/04	11:05	504	
EP5-1(0-2.5)	S	7/13/04	12:06	505	
EP5-1(2.5-5)	S	7/13/04	12:06	506	
EP5-4(0-2.5)	S	7/13/04	14:20	507	
EP5-4(2.5-5)	S	7/13/04	14:20	508	
EP5-8(0-2.5)	S	7/13/04	15:08	509	
Dupe 16	S	7/13/04		510	
Dupe 17	S	7/13/04		511	

Sample Matrix: L = Liquid; S = Solid; A = Air

Total No. of Bottles/
Containers 45

Relinquished by: <u>Ralph Lang</u>	Organization: <u>ARCADIS</u>	Date: <u>7/14/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDEx</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	No N/A
Relinquished by: <u>FEDEx</u>	Organization: <u>Pace</u>	Date: <u>7/15/04</u>	Time: <u>10:00</u>	Seal Intact? <u>Yes</u>
Received by: <u></u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 32Delivery Method: ☐ In Person☒ Common Carrier☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05-1201



Project Number/Name MT000839.0001
Project Location Navajo
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCs/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
EP5-8(2.5-5)	S	7/13/04	15:00	2276512	3
EP5-11(0-2.5)	S	7/13/04	15:36	513	1
EP5-11(2.5-5)	S	7/13/04	15:30	514	1
EP5-5(0-2.5)	S	7/13/04	16:00	515	1
EP5-5(2.5-5)	S	7/13/04	16:00	516	1
EP5-7(0-2.5)	S	7/13/04	16:40	517	1
EP5-7(2.5-5)	S	7/13/04	16:40	518	1
Dupe 18	S	7/13/04		519	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Ralph Lary Organization: ARCADIS Date: 7/14/04 Time: 16:00 Seal Intact? Yes No N/A

Received by: FED EX Organization: Date: Time:

Relinquished by: FED EX Organization: Pace Date: 7/15/04 Time: 10:00 Seal Intact? Yes No N/A

Received by: Organization: Date: Time:

Special Instructions/Remarks: _____

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other _____

Temp 30



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001
 Project Location Navejo
 Laboratory Pace Analytical
 Project Manager Mike Norman
 Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz jar TPH-DRO/8270	(1) 4 oz jar RCRA 8 Metals	(1) 2 oz jar VOCs/8260	(1) 4 oz jar FOC	(1) 4 oz jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Matrix	Remarks	Total
EP 5-9(0-2.5)	S	7/14/04	8:45	20576897	3
EP 5-7(2.5-5)	S	7/14/04	8:45	8990	1
EP 5-12(0-2.5)	S	7/14/04	9:15	899	1
EP 5-12(2.5-5)	S	7/14/04	9:15	900	1
EP 5-13(0-2.5)	S	7/14/04	9:45	901	1
EP 5-13(2.5-5)	S	7/14/04	9:45	902	1
EP 5-16(0-2.5)	S	7/14/04	10:10	903	1
EP 5-16(2.5-5)	S	7/14/04	10:10	904	1
EP 5-10(0-2.5)	S	7/14/04	10:35	905	1
EP 5-10(2.5-5)	S	7/14/04	10:35	904	1
EP 5-14(0-2.5)	S	7/14/04	11:05	907	1
EP 5-14(2.5-5)	S	7/14/04	11:05	908	1
EP 5-17(0-2.5)	S	7/14/04	11:20	909	1
Dupe 19	S	7/14/04		910	1
Dupe 20	S	7/14/04		911	1
Total No. of Bottles/Containers					45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Ralph Lundy Organization: ARCADIS Date: 7/15/04 Time: 16:00 Seal Intact? Yes No N/A

Received by: F. D. Ex Organization: Date: 1/1 Time:

Relinquished by: F. D. Ex Organization: PACE Date: 7/16/04 Time: 10:30 Seal Intact? Yes No N/A

Received by: Organization: Date: 1/1 Time:

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other Temp 46



CHAIN-OF-CUSTODY RECORD

Page of

Laboratory Task Order No./P.O. No.

Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCs/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/Time Sampled	Time Kiosk	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar VOCs/8260	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
EP5-17(2.5-5)	S	7/14/04	11:20	1	1	1	1	1	20276912	3
EP5-19(0-2.5)	S	7/14/04	11:45	1	1	1	1	1	913	1
EP5-19(5-5)	S	7/14/04	11:45	1	1	1	1	1	914	1
EP5-15(0-2.5)	S	7/14/04	14:20	1	1	1	1	1	915	1
EP5-15(2.5-5)	S	7/14/04	14:20	1	1	1	1	1	916	1
EP5-18(0-2.5)	S	7/14/04	15:00	1	1	1	1	1	917	1
EP5-18(2.5-5)	S	7/14/04	15:00	1	1	1	1	1	918	1
EP5-20(0-2.5)	S	7/14/04	15:30	1	1	1	1	1	919	1
EP5-20(2.5-5)	S	7/14/04	15:30	1	1	1	1	1	920	1
Dupe 21	S	7/14/04		1	1	1	1	1	921	1
Dupe 22	S	7/14/04		1	1	1	1	1	922	1
EP5-21(0-2.5)	S	7/14/04	16:00	1	1	1	1	1	923	1
EP5-21(2.5-5)	S	7/14/04	16:00	1	1	1	1	1	924	1
Total No. of Bottles/Containers										39

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Ralph Long</u>	Organization: <u>ARCADIS</u>	Date: <u>7/15/04</u>	Time: <u>16:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Feder</u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	Seal Intact? <u>N/A</u>
Relinquished by: <u>Andrew Delish</u>	Organization: <u>Pace</u>	Date: <u>7/16/04</u>	Time: <u>10:30</u>	Seal Intact? <u>Yes</u>
Received by: <u></u>	Organization: <u></u>	Date: <u>1/1</u>	Time: <u></u>	Seal Intact? <u>N/A</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 16

Delivery Method: ☐ In Person

☒ Common Carrier

☐ Lab Courier

☐ Other

SPECIFY



CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Laboratory Task Order No./P.O. No.:

Project Number/Name	MT0000839.0001
---------------------	----------------

Project Location	Navajo - Artesia

**Face Analytical
Laboratory**

Project Manager
Mike Norman

Sampler(s)/Affiliation

[illegible]

Relinquished by: [Signature] Organization: ARCADIS

Received by: FELIX Organization: _____

Polinausiched by	FLAN	Organization:
------------------	------	---------------

Received by: From: w. elsh Organization: PLC

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

Common Carrier:

Ted-Lex

☐ Lab Courier☐ Other

22 July

SPECIFY

AG 05.17M1

Project Number/Name	MTD00839_0001
---------------------	---------------

Project Location Nauvajo-Artesia

Pace Analytical
Laboratory

Project Manager Mike Norman

**AR
Sampler(s)/Affiliation**

[illegible]

Relinquished by: H. G. G. G. G. Organization: ARCADIS

Received by: F. E. D. C. L. Organization: _____

Relinquished by: F. E. D. L. Organization: P. H. C. S.

Received by: _____
Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Med-Ex☐ Lab Courier☐ Other

SPECIES

SPECIFY

AG 05-0597

Evaporation Pond 6 Soils
(EP6 Soils)

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo

Pace Analytical
Laboratory

Project Manager Mike Norman

Sampler(s)/Affiliation

Sample ID/Location	Matrix	Dated/Sampled	Time
EP6-1(0-2.5)	S	7/16/04	8:14
EP6-1(2.5-5)	S	7/16/04	8:44
EP6-2(0-2.5)	S	7/16/04	9:10
EP6-2(2.5-5)	S	7/16/04	9:10
EP6-3(0-2.5)	S	7/16/04	9:30
EP6-3(2.5-5)	S	7/16/04	9:30
EP6-4(0-2.5)	S	7/16/04	10:30
EP6-4(2.5-5)	S	7/16/04	10:30
EP6-5(0-2.5)	S	7/16/04	11:2
EP6-5(2.5-5)	S	7/16/04	11:20
Dupe 2 6	S	7/16/04	
Dupe 2 7	S	7/16/04	
B5B-10(0-2.5)	S	7/16/04	14:00
B5B-10(5-7.5)	S	7/16/04	14:04
B5B-10(10-12.5)	S	7/16/04	14:07

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Rejuvenated by: LucyReceived by: 
Received by: 
Received by: 
Received by: 
Received by: 
Received by: 

Received by: 1501

Relinquished by: Lee - OrgReceived by: Melissa Trach Org: _____

Special Instructions/Remarks:

Please contact Mike No

1

Delivery Method: ☐ In Person ☒ Online

100



CHAIN-OF-CUSTODY RECORD

Page of

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation **ARCADIS/RL**

[illegible]

Relinquished by: <u>R. Graham</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>4:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>FEDAX</u>	Organization: _____	Date: <u>7/17/04</u>	Time: _____	Seal Intact? <u>Yes</u> No N/A
Relinquished by: <u>FEDERL</u>	Organization: <u>PAGE</u>	Date: <u>7/17/04</u>	Time: <u>0830</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Ann White</u>	Organization: _____	Date: _____	Time: _____	Seal Intact? <u>Yes</u> No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Temp 2

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY SPECIFY

AG 05.0597

Evaporation Pond Berm
Soils (EPB Soils)



CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Laboratory Task Order No./P.O. No. MT000839.0001

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

EPN

2035277

ANALYSIS / METHOD / SIZE				
(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size

Sample ID/Location	Matrix	Date/TIME Sampled	Time KAYIX	(1) 4 oz Jar TPH-DRO/8270	(1) 4 oz Jar RCRA 8 Metals	(1) 2 oz Jar 8260/VOC	(1) 4 oz Jar FOC	(1) 4 oz Jar Particle Size	Remarks	Total
EP2-7(0-2.5)	S	6/28/04	14:40	1	1	1	1	1		3
EP2-7(2.5-5)	S	6/28/04	14:46	1	1	1	1	1		3
EP2-8(0-2.5)	S	6/28/04	15:30	1	1	1	1	1		3
EP2-8(2.5-10)	S	6/28/04	15:30	1	1	1	1	1		3
EP2-8(15-17.5)	S	6/28/04	15:30	1	1	1	1	1		3
EP2-11(0-2.5)	S	6/28/04	16:30	1	1	1	1	1		3
EP2-11(7.5-10)	S	6/28/04	16:30	1	1	1	1	1		3
EP2-9(0-2.5)	S	6/28/04	17:16	1	1	1	1	1		3
Dupe 12	S	6/28/04		1	1	1	1	1		3
EP2-9(2.5-5)	S	6/28/04	17:10	1	1	1	1	1		3
EP2-9(5-7.5)	S	6/28/04	17:10	1	1	1	1	1		3
EPB-10(0-2.5)	S	6/25/04	9:00	1	1	1	1	1	20271510	3
EPB-1(5-7.5)	S	6/25/04	9:00	1	1	1	1	1	519	3
EPB-2(0-2.5)	S	6/25/04	10:00	1	1	1	1	1	521	3
EPB-2(5-7.5)	S	6/25/04	10:00	1	1	1	1	1	522	3
Total No. of Bottles/ Containers										45

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>Rylee Lamy</u>	Organization: <u>ARCADIS</u>	Date: <u>6/29/04</u>	Time: <u>15:00</u>	Seal Intact? Yes No N/A
Received by:	Organization:	Date:	Time:	
Relinquished by: <u>FEDER</u>	Organization: <u>Pace</u>	Date: <u>6/30/04</u>	Time: <u>10:15</u>	Seal Intact? Yes No N/A
Received by: <u>Armani Walsh</u>	Organization:	Date:	Time:	

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY



Project Number/Name MT000839.0001

Project Location Navajo

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

CHAIN-OF-CUSTODY RECORD

ANALYSIS / METHOD / SIZE															
Project Number/Name	Project Location	Laboratory	Project Manager	Sampler(s)/Affiliation	Sample ID/Location	Matrix	Date/Time Sampled	ANALYSIS / METHOD / SIZE					Remarks	Total	
								TPH-DRO/8270 (1) 4 oz jar	RCRA 8 Metals (1) 4 oz jar	VOCs/8260 (1) 2 oz jar	FOC (1) 4 oz jar	Particle Size (1) 4 oz jar			
MT000839.0001	Navajo	Pace Analytical	Mike Norman	ARCADIS/RL	EPB-3(0-2.5)	S	6/29/04 10:30	1	1	1				534	3
					EPB-3(5-7.5)	S	6/29/04 10:30	1	1	1				537	3
					EPB-4(0-2.5)	S	6/29/04 11:15	1	1	1				531	3
					EPB-4(5-7.5)	S	6/29/04 11:15	1	1	1				534	3
					EPB-5(0-2.5)	S	6/29/04 13:40	1	1	1				536	3
					EPB-5(5-7.5)	S	6/29/04 13:40	1	1	1				537	3
					EPB-6(0-2.5)	S	6/29/04 14:30	1	1	1				538	3
					EPB-6(2.5-5)	S	6/29/04 14:30	1	1	1				541	3
					DepB-13	S	6/29/04	1	1	1				544	3
Sample Matrix:							L = Liquid; S = Solid; A = Air	Total No. of Bottles/Containers		27					

Relinquished by: <u>Rafael Lamy</u>	Organization: <u>ARCADIS</u>	Date <u>6/29/04</u> Time <u>15:00</u>	Seal Intact? Yes No N/A
Received by:	Organization:	Date <u>1/1</u> Time	
Relinquished by: <u>FEDEx</u>	Organization: <u>PAGE</u>	Date <u>1/1</u> Time	Seal Intact? ☒ Yes No N/A
Received by: <u>Alvin Webster</u>	Organization:	Date <u>6/29/04</u> Time <u>10:15</u>	

Special Instructions/Remarks:	Please contact Mike Norman at 281-509-6489 with any questions.
	Temp'd

Delivery Method: ☐ In Person ☒ Common Carrier Wed-Ex ☐ Lab Courier ☐ Other SPECIFY

Evaporation Pond Boring
Groundwater (Evap Pond
Boring Water)



Project Number/Name	MT000839.0001
---------------------	---------------

Navajo - Artesia

Laboratory Pace Analytical.

Project Manager
Mike Norman

Sampler(s)/Affiliation

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>R. Gradson</u>	Organization: <u>ARCADIS</u>	Date: <u>7/16/04</u>	Time: <u>4:00</u>	Seal Intact? <u>Yes</u> No N/A
Received by: <u>FEDOX</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	
Relinquished by: <u>FEDOX</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Seal Intact? <u>Yes</u> No N/A
Received by: <u>Annie W. Wink</u>	Organization: <u>Paco</u>	Date: <u>7/17/04</u>	Time: <u>0830</u>	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

XXIX	Common Carrier	Fed-Ex

☐ Lab Courier ☐ Other

Specimen

SPECIFY

AG 05-12M1



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT0000839.0001Project Location Navajo-Artesia

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Requisitioned by: R. Gosselin
Ord

Received by: Lead EX

Received by: 1-1-70

Relinquished by: [Signature]

Received by: Melissa Finch Org: Org

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other: _____

SPECIFY

AG 05-0597



ARCADIS GERAGHTY & MILLER
Laboratory Task Order No./P.O. No. _____ Page _____ of _____
CHAIN-OF-CUSTODY RECORD

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo-Artesia
1	2
3	4
5	6
7	8
9	10
11	12
13	14
15	16
17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
35	36
37	38
39	40
41	42
43	44
45	46
47	48
49	50
51	52
53	54
55	56
57	58
59	60
61	62
63	64
65	66
67	68
69	70
71	72
73	74
75	76
77	78
79	80
81	82
83	84
85	86
87	88
89	90
91	92
93	94
95	96
97	98
99	100

Pace Analytical
Laboratory

Project Manager **Mike Norman**

Sampler(s)/Affiliation

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

~~ARCADIS~~

Relinquished by: R. Robinson Organization: _____

Relinquished by: R. G. G. G. G. G. Organization: _____
Received by: EX Organization: _____

Relinquished by: Fred EV. Organization:

Relinquished by: Fred Evans Organization: _____
Received by: Melissa Finch Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

	Fed-Ex
☒ Common Carrier	

☐ Lab Courier☐ Other

SPECIES

ASICS

AG 05-0597

CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No. _____

ARCADIS GERAGHTY & MALLER

Project Number/Name MT000937.dv1
Project Location Namajo - Artesian
Laboratory Pace Analytical
Project Manager Mika Norman
Sampler(s)/Affiliation Arceus / SG, RL

ANALYSIS / METHOD / SIZE

[illegible]

Relinquished by: <u>P. C. C. C. C. C.</u>	Organization: <u>ABC P. C. C.</u>	Date: <u>6/12/01</u>	Time: <u>4:00</u>	Seal Intact?
Received by: <u>Paul C. C.</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Yes No N/A
Relinquished by: <u>Paul C. C.</u>	Organization: _____	Date: <u>6/25/04</u>	Time: <u>10:15</u>	Seal Intact?
Received by: <u>Melissa Finch</u>	Organization: _____	Date: <u>6/25/04</u>	Time: <u>10:15</u>	Yes No N/A

Special Instructions/Remarks: Temp 20

Delivery Method: ☐ In Person ☐ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY _____

SPECIFY _____



Project Number/Name

Project Location

Pace Analytical
Laboratory

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE									

Relinquished by: <u>P. G. [Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>6/24/04</u>	Time <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>Ed EX</u>	Organization:	Date <u>1/1</u>	Time	No N/A
Relinquished by: <u>Ed EX</u>	Organization:	Date <u>6/25/04</u>	Time <u>1615</u>	Seal Intact? <u>Yes</u>
Received by: <u>Melanie Juch</u>	Organization:	Date <u>6/25/04</u>	Time <u>1015</u>	No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Two 2's

Delivery Method: ☐ In Person

Common Carrier	Fed. Ex.
☒	

☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05-12701



ARCADIS GERAGHTY & MILLER
Laboratory Task Order No./P.O. No. _____ Page _____ of _____
CHAIN-OF-CUSTODY RECORD

Project Location	Navajo - Artesia

Project Manager
Mike Norman

Sampler(s)/Affiliation

Sample ID/Location	Matrix	Date/TIME Sampled	Time XAXXXX	(2) SVOCS	Near (1)	TDS	Near		Remarks	Total
EPB-9	L	6/24/04	11:15	20 2	1				417-453	3
EPB-10	L	6/24/04	11:45	10 2	1				411	3
EB-75	L	6/24/04	1:00	15 2	1				423	3
FB-4C6W	L	6/25/04	2:00	2	1				435	3

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by: <i>6/6/2014</i>	Organization:		Date	Time	Seal Intact?
Received by: <i>6/6/2014</i>	Organization:		Date	Time	Seal Intact?
Received by: <i>6/6/2014</i>	Organization:		Date	Time	Seal Intact?
Received by: <i>6/6/2014</i>	Organization:		Date	Time	Seal Intact?

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY _____

SPECIFY _____

SPECIFY _____

AC INS 0502



AG 05-12/01

Project Number/Name NT000939 0001
Project Location Navyajo - Artesian
Laboratory Pace Analytical
Project Manager Mike Norman
Sampler(s)/Affiliation Analys/SLC, PL

[illegible]

Relinquished by:	Organization:	Date	Time	Seal Intact?
<i>[Signature]</i>	AKCADIS	6/23/04	4:00	Yes
Received by: Fed Ex	Organization:	Date	Time	N/A
Relinquished by: Fed Ex	Organization:	Date	Time	Seal Intact?
Received by: Melissa Finck	Organization:	Date	Time	Yes

Special Instructions/Remarks:

Please contact Mike Abner at (201) 509-6439 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier *Fed-Ex* ☐ Lab Courier ☐ Other

SPECIFY _____

SPECIFY _____



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location Navajo-Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation	ARCADIS/RL

Date/Time ~~XXXX~~

[illegible]

Relinquished by: K. Crabtree Organization: ARCADIS

Received by: _____ Organization: _____

Reinquished by: FEDER Organization:

Received by: Amber White Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other

SPECIFY

specify

AG 05-0597



Laboratory Task Order No./P.O. No.:

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/RL
ARCADIS/RL	ARCADIS/RL

[illegible]

Relinquished by:	Organization:	Date	Time	Seal Intact?
Received by:	Organization:	Date	Time	Yes No N/A
Relinquished by: <i>A. Graham</i>	Organization: <i>ARCADIS</i>	Date <i>7/14/04</i>	Time <i>4:00</i>	Seal Intact? <i>(Yes)</i>
Received by: <i>FED EX</i>	Organization:	Date <i>1/1</i>	Time	Yes No N/A
Relinquished by: <i>FED EX</i>	Organization: <i>PAGE</i>	Date <i>7/15/08</i>	Time <i>10:00</i>	Seal Intact? <i>(Yes)</i>
Received by: <i>Ami White</i>	Organization:	Date	Time	Yes No N/A

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with questions.

Temp 20°

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

Ped-Ex

SPECIFY



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name MT0000839.0001

Project Location Navajo- Artesia

Pace Analytical
Laboratory

Project Manager Mike Norman

Sampler(s)/Affiliation	ARCADIS/RL

Sample ID/Location	Matrix	Date XXXX		Time	(2) SVOCs	Near IDS (1)				Remarks	Total
		Sampled									
EP5-E	L	7/14/04		11:30	2	1				20276545	3
EP5-1	L	7/14/04		12:30	2	1				549	3
EP5-9	L	7/14/04		1:00	2	1				540	3
Sample Matrix:	L = Liquid; S = Solid; A = Air										
Total No. of Bottles/Containers											7

Relinquished by: <u>A. Carbone</u>	Organization: <u>ARCADIS</u>	Date: <u>7/11/14</u>	Time: <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDex</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	No N/A
Relinquished by: <u>FEDex</u>	Organization: <u>PAGE</u>	Date: <u>7/11/14</u>	Time: <u>10:00</u>	Seal Intact? <u>Yes</u>
Received by: _____	Organization: _____	Date: <u>1/1</u>	Time: _____	No N/A

Special Instructions/Remarks:	Please contact Mike Norman at 281-509-6489 with questions.	Temp
-------------------------------	--	------

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other _____

SPECIFY

SPECIFY _____

AG 05-0507

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo-Artesia
1	2

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/RL

Sample ID/Location	Matrix	Date/ XXXX	Time
		Sampled	XXXX

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Bilingualished by: L. Crabb ARCADIS
Organization:

Received by: F-EDT
Organization: _____

Organization: Pact
Relinquished by: FEDAY

Received by: _____ : Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other

specify

Subjects

AG 05-0597

Laboratory Task Order No./P.O. No.: _____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation

Project Number/Name MT000839.0001							ANALYSIS / METHOD / SIZE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Project Location Navajo - Artesia																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Laboratory Pace Analytical																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Project Manager Mike Norman																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Sampler(s)/Affiliation ARCADIS/RL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Sample ID/Location	Matrix	Date Sampled	Time	(3) 40mL VOA Vials HCL 8021/BTEX	(3) 40mL VOA Vials HCL VOC/8260																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

Relinquished by: <u>L. Carbone</u>	Organization: <u>ARCADIS</u>	Date <u>7 15 10⁴</u>	Time <u>4:00</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDER</u>	Organization: _____	Date <u>1 1</u>	Time _____	No N/A
Relinquished by: <u>FEDER</u>	Organization: <u>Pace</u>	Date <u>7 16 10⁴</u>	Time <u>10:30</u>	Seal Intact? <u>Yes</u>
Received by: _____	Organization: _____	Date <u>1 1</u>	Time _____	No N/A

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with questions.
Temp 20

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other _____
SPECIFY SPECIFY



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page ____ of ____

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location

Pace Analytical
Laboratory

Project Manager
Mike Norman

ARCADIS/RL	
Sampler(s)/Affiliation	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Project Number/Name				MT000839.0001			
Project Location				Navajo - Artesia			
Laboratory				Pace Analytical			
Project Manager				Mike Norman			
Sampler(s)/Affiliation				ARCADIS/RL			

ANALYSIS / METHOD / SIZE						Remarks	Total
(2) 1 L Amber jar Neat / 8310 SVOCs /	(1) 250 ml Neat TDs						
EP S-21	L	7/15/04	9:30	2	1	20277033	3
EP S-16	L	7/15/04	10:00	2	1	034	3

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: D. Graham Organization: ARCADIS
Received by: F. D. Turk Organization: _____

Relinquished by: Fidel Organization: Pace
Received by: _____ Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other

specify

SPECIFY

AG 05-0597

Evaporation Pond Berm
Groundwater (EPB Water)

Project Number/Name MT0000839.0001

Project Location Navajo-Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation **ARCADIS/RL**

[illegible]

ARCADIS		Seal Intact?	
Relinquished by:	Organization:	Date	Time
Received by: <i>Fed Ex</i>		<i>6/13/04</i>	<i>4:00</i>
		Date	Time
Relinquished by: <i>Fed Ex</i>		Date	Time
Received by: <i>Melrose Arch</i>		<i>7/11/04</i>	<i>10:15</i>
		Date	Time
		<i>7/11/04</i>	<i>10:15</i>

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY

AG 05 0597



ARCADIS GERAGHTY & MILLER

Laboratory Task Order No./P.O. No..

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839-0001

Project Location Navajo-Artesia

Laboratory Pace Analytical

Project Manager
Mike Norman

Sampler(s)/Affiliation **ARCADIS/RL**

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature] Organization: ARCADIS

Received by: Eddy Organization:

Relinquished by: Fed EN
Organization: _____

Received by: Melissa Mack

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other

Asides

SPECIES

AG 05-0507



Laboratory Task Order No./P.O. No. _____

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT000839.0001

Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/RL
ARCADIS/RL	ARCADIS/RL

Project Number/Name MT000839.0001						ANALYSIS / METHOD / SIZE						
Project Location Navajo - Artesia												
Laboratory Pace Analytical												
Project Manager Mike Norman												
Sampler(s)/Affiliation ARCADIS/RL												
Sample ID/Location	Matrix	Date/Sampled	Time									
EPB-1	L	6/30/04	9:00	(3) 40mL VOA VTALS HCl	(3) 40mL VOA VTALS VOC/8260 HCl						Remarks	Total
EPB-3	L	6/30/04	10:00								037	3
EPB-4	L	6/30/04	10:30								038	3
EPB-5	L	6/30/04	11:00								039	3
EPB-6	L	6/30/04	11:30								040	3
TRIP BLANK	L										045	2
FB-SBW	L	6/30/04	1:45								041	3
D.P. SBW	L	6/30/04									042	3
EB-SBW	L	6/30/04	3:00								043	3
EPB-2	L	6/30/04	3:30								044	3
Total No. of Bottles/ Containers												19

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by:	Organization:		Date	Time	Yes No N/A
Relinquished by: <i>R. Robinson</i>	Organization:		Date <i>6/30/04</i>	Time <i>4:00</i>	Seal Intact?
Received by: <i>Ed GY</i>	Organization:		Date <i>1/1</i>	Time	Yes No N/A
Relinquished by: <i>Ed GY</i>	Organization:		Date <i>7/1/04</i>	Time <i>10:15</i>	Seal Intact?
Received by: <i>Melissa Trich</i>	Organization:		Date <i>7/1/04</i>	Time <i>10:15</i>	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with questions.

Delivery Method: ☐ In Person

Common Carrier

Fed-Ex

☐ Lab Courier☐ Other

SPECIES

Appendix

AG 05-1381

Monitor Well Groundwater
(Monitor Wells)

Project Number/Name Navajo / NT00339 0001

Project Location Artista NM

Laboratory Pice

Project Manager Sharon Hall

Sampler(s)/Affiliation
ARCADIS

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature]
Organization: _____

Received by: ELK Organization: ELK

Relinquished by: See Ex Organization: See Ex

Received by: K. J. Brown Organization: _____

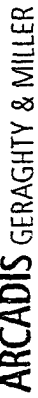
Special Instructions/Remarks:

Delivery Method: ☐ In Person

☒ Common Carrier fedex☐ Lab Courier☐ Other:

SPECIFY

AG 05 0507



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name MT00839 Owl/Nanaj

Project Location Art-Desia NM

Laboratory Place

Project Manager Sharon Hall

ARCADIS
Sampler(s)/Affiliation

[illegible]

Sample Matrix: ~~L~~ = Liquid; ~~S~~ = Solid; ~~A~~ = Air

Relinquished by: Zhen JF Organization: _____

Received by: Ed Ex Organization: _____

Relinquished by: Ed Ex Organization: U

Received by: Urbano Organization: Urbano

Special Instructions/Remarks:

Temp 40

Delivery Method: ☐ In Person

☒ Common Carrier

☐ Lab Courier☐ Other:

8-117345

Specimens

Project Number/Name MT000839.0001 / Navajo

Project Location Artesia, NM

Laboratory Page

Project Manager Sharon Hall

Sampler(s)/Affiliation

[illegible]

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: Cheryl K Organization: _____

Received by: FeedEx Organization: FeedEx

Relinquished by: FeedEx Organization: FeedEx

Received by: _____
Special Instructions/Remarks: _____

Delivery Method: ☐ In Person

☒ Common Carrier ~~Fixed Gas~~

☐ Lab Courier☐ Other

人: 113305



AG 05 12/01



CHAIN-OF-CUSTODY RECORD

of

AT000839.0001

Navajo -- Artesia

Pace Analytical

Mike Norman

ARCADIS/ŞG,RL

Sample ID/Location	Matrix	Date/Time	Sampled	Time
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				

ANALYSIS / METHOD / SIZE	Rem
(1) 500 ml plastic	Rem
Ketals+Cations	
HNO ₃	
(1) 250 ml plastic	
Total Cyanide	
NaOH	
(1) 250 ml plastic	
Amions	
Neat	
(1) 125 ml plastic	
Nitrate+Nitrite	
H ₂ SO ₄	
(1) 250 ml plastic	
pH, Spec. Cond, TDS	
Neat	
(3) 1 T amber	
8270/8310	
Neat	

[illegible]

Sample Matrix: ~~S~~ = Solid; A = Air
L = Liquid;

Relinquished by: Wendy Organization: ARCADIS

Received by: FEDER Organization:

Refrinallished by: FED Organization:

Received by: Amie W. D. Organization:

Special Instructions/Remarks:

Plesse contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

Common Carrier.

xx-pa

☐ Lab Courier☐ Other

SPECIFY

SPECIFY

AG 05-12/M1



Project Number/Name MT000839.0001

Project Location	Navajo - Artesia

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation

[illegible]

Sample Matrix: $\cancel{L} = \text{Liquid}; S = \text{Solid}; A = \text{Air}$

Relinquished by:  Organization: **ARCADIS**

Received by: 1-EDX

Relinquished by: FEDER Organization: FEDER

Received by: Ami W. W. Organization: Precedence

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex☐ Lab Courier☐ Other



CHAIN-OF-CUSTODY RECORD

Page 7 of 7

MT000839.0001

Pace Analytical
Laboratory

sample(s)/Affiliation

Sample Matrix: L = Liquid; S = Solid; A = Air

Organization: ARCADIS

Organization:—

Organization:

Organization:

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier.

Fed-Ex

☐ Lab Courier☐ Other _____

SPECIFY

AG 05-17401



Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

[illegible]

Relinquished by: <u>SCOTT A. BULL</u>	Organization: <u>ARCADIS</u>	Date: <u>6/18/04</u>	Time: <u>1:00</u>	Seal Intact? Yes ☒ No ☐ N/A
Received by: <u>FEDER</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	
Relinquished by: <u>FEDER</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Seal Intact? Yes ☒ No ☐ N/A
Received by: <u>ANNE W. BULL</u>	Organization: <u>FACE</u>	Date: <u>6/16/04</u>	Time: <u>10:30</u>	

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIES SPECIES



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

[illegible]

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method:	☐ In Person	☒ Common Carrier	Fed-Ex
------------------	------------------------------------	--	--------

☐ Lab Courier ☐ Other☐ Other

SPECIFY

Species

AG 05-12/M1



Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

[illegible]

Sample Matrix: ~~L~~ = Liquid; S = Solid; ~~A~~ = Air

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date: <u>6/13/09</u>	Time: <u>1100</u>	Seal Intact? <u>Yes</u>
Received by: <u>FEDER</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	Seal Intact? <u>No</u>
Relinquished by: <u>[Signature]</u>	Organization: <u>PACB</u>	Date: <u>1/1</u>	Time: _____	Seal Intact? <u>Yes</u>
Received by: <u>Amie Walsh</u>	Organization: _____	Date: <u>6/16/04</u>	Time: <u>10:30</u>	Seal Intact? <u>No</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier Fed-Ex _____ Lab Courier ☐ Other _____

CARRIER



CHAIN-OF-CUSTODY RECORD

Project Number/Name	MT000839.0001
---------------------	---------------

Project Location	Navajo - Artesia

Pace Analytical Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation	AKCADIS/SG, RL
...	...

[illegible]

Sample Matrix:	☒ = Liquid; ☒ = Solid; ☒ = Air		Total No. of Bottles/ Containers
			14

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>6/15/04</u>	Time <u>1700</u>	Seal/Intact? <u>Yes</u>
Received by: <u>FEDER</u>	Organization: _____	Date _____	Time _____	Seal/Intact? <u>N/A</u>

Relinquished by: <u>FEBBY</u>	Organization: <u>PACE</u>	Date: <u>6/16/04</u>	Time: <u>10:30</u>	Seal Intact? <u>(X)</u>
Received by: <u>Annex. W. L. L.</u>	Organization: <u></u>	Date: <u></u>	Time: <u></u>	Yes No N/A

Special Instructions/Remarks:	
Plesse contact Mike Norman at 231-509-6489 with any questions.	cc

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page _____ of _____

Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

[illegible]

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date: <u>6/15/04</u>	Time: <u>17:00</u>	Seal Intact? Yes ☒ No ☐ N/A
Received by: <u>FEDER</u>	Organization: _____	Date: <u>1/1</u>	Time: _____	
Relinquished by: <u>[Signature]</u>	Organization: <u>PAGE</u>	Date: <u>1/1</u>	Time: _____	Seal Intact? Yes ☒ No ☐ N/A
Received by: <u>[Signature]</u>	Organization: _____	Date: <u>6/16/04</u>	Time: <u>10:30</u>	

Special Instructions/Remarks: Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Lab Courier ☐ Other

SPECIFY

SPECIFY



Laboratory Task Order No./P.O. No.

CHAIN-OF-CUSTODY RECORD

Page

of

Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

[illegible]

Sample Matrix: ~~L~~ = Liquid; S = Solid; A = Air

Relinquished by: [Signature] Organization: ARCADIS
Received by: [Signature] Organization: ARCADIS

Relinquished by: Fed Ex Organization: _____
Received by: Melissa Finch Organization: _____

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier	Fed-Ex
--	--------

☐ Lab Courier☐ Other

SPECIFY

CONCLUSION

AC 05-13/M



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No.:

Project Number/Name	MT000839.0001
---------------------	---------------

Navajo - Artesia
Project Location

Pace Analytical
Laboratory

Project Manager
Mike Norman

Sampler(s)/Affiliation	ARCADIS/SG, RL
...	...

Project Number/Name MT000839.0001					
Project Location Navajo - Artesia					
Laboratory Pace Analytical					
Project Manager Mike Norman					
Sampler(s)/Affiliation ARCADIS/SG, RL					
Sample ID/Location	Date/Time Sampled	Matrix	Analysis Method	Size	Total
MW-3	6-16-04 1155	L	(1) 500 ml plastic Metals+Cations HM03		
CCD-6	6-16-04 1315	L	(1) 250 ml plastic Total Cyanide NaOH		
			(1) 250 ml plastic Anions (Cl, F, SO ₄) Neat		
			(1) 125 ml plastic Nitrate+Nitrite H2SO4		
			(1) 250 ml plastic Ph, Spec. Cond, TDS Neat		
			(3) 1 L amber Neat 8270/8310		
					7
					7

Sample Matrix: L = Liquid; S = Solid; A = Air

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: <u>ARCADIS</u>	Organization: <u>ARCADIS</u>	Date: <u>6/17/04</u>	Time: <u>1700</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fed ex</u>	Organization: <u>Fed ex</u>	Date: <u>6/18/04</u>	Time: <u>1030</u>	Seal Intact? <u>Yes</u>
Relinquished by: <u>ARCADIS</u>	Organization: <u>ARCADIS</u>	Date: <u>6/18/04</u>	Time: <u>1030</u>	Seal Intact? <u>Yes</u>
Received by: <u>Fed ex</u>	Organization: <u>Fed ex</u>	Date: <u>6/18/04</u>	Time: <u>1030</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier	☐ Fed-Ex
--	---------------------------------

☐ Lab Courier☐ Other: _____



Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

CHAIN-OF-CUSTODY RECORD

[illegible]

Sample Matrix:	L = Liquid; S = Solid; A = Air	Organization:	ARCADIS	Date	Time	Seal Intact?	Total No. of Bottles/ Containers
Relinquished by:	<i>[Signature]</i>	Organization:	ARCADIS	Date	6/17/04	Yes No N/A	17
Received by:	<i>Fed Ex</i>	Organization:		Date			
Relinquished by:	<i>Fed Ex</i>	Organization:	Pace	Date	6/18/04	Yes No N/A	1030
Received by:	<i>Melissa Finch</i>	Organization:		Date	6/18/04	Yes No N/A	1030

Special Instructions/Remarks:
Please contact Mike Norman at 281-509-6489 with any questions. Temp 30

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other

SPECIFY



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

ANALYSIS / METHOD / SIZE				Remarks	Total
(1) 500 ml plastic Metal+Cattons	1				
(1) 250 ml plastic HNO3	1				
(1) 250 ml plastic Total Cyanide	1				
(1) 250 ml plastic NeOH	1				
(1) 250 ml plastic Antons (Cl, Fl, SO4)	1				
(1) 125 ml plastic Nitrate+Nitrite	1				
(1) 250 ml plastic H2SO4	1				
(1) 250 ml plastic PH, Spec. Cond, TDS	1				
(3) 1 L amber Neat 8270/8310	3				
				20267513	8
				514	8

Project Number/Name

Navajo - Artesia

Project Location

Pace Analytical

Laboratory

Project Manager

Mike Norman

Sampler(s)/Affiliation

ARCADIS/SG, RL

Date/Time

6/16/04 1800

Date/Time

6/17/04 900

Sample ID/Location

MW-22A

MW-10

Matrix

L

L

MT000839.0001

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by:	Organization:		Date	Time	Yes No N/A
Relinquished by: <i>[Signature]</i>	Organization: <i>Feed EV</i>		Date <i>6/1/05</i>	Time <i>1830</i>	Seal Intact? <i>(Yes)</i> No N/A
Received by: <i>Feed EV</i>	Organization: <i>Feed EV</i>		Date <i>6/1/05</i>	Time <i>1830</i>	Seal Intact? <i>(Yes)</i> No N/A
Relinquished by: <i>[Signature]</i>	Organization: <i>Feed EV</i>		Date <i>6/1/05</i>	Time <i>1830</i>	Seal Intact? <i>(Yes)</i> No N/A
Received by: <i>Melina Truck</i>	Organization: <i>Feed EV</i>		Date <i>6/1/05</i>	Time <i>1830</i>	Seal Intact? <i>(Yes)</i> No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Temp 2:

Delivery Method: ☐ In Person

Common Carrier	Fed-Ex	SPECIES
☒		

☐ Lab Courier☐ Other _____

SPECIFY

SPECIES

Ar: 05.13.01



CHAIN-OF-CUSTODY RECORD

Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

[illegible]

Relinquished by: <u>[Signature]</u>	Organization: <u>ARCADIS</u>	Date <u>6/17/04</u>	Time <u>1700</u>	Seal Intact? <u>(Yes)</u>
Received by: <u>Red Ex</u>	Organization: _____	Date <u>1/1</u>	Time _____	No N/A
Relinquished by: <u>Red Ex</u>	Organization: <u>Pave</u>	Date <u>6/18/04</u>	Time <u>1030</u>	Seal Intact? <u>(Yes)</u>
Received by: <u>[Signature]</u>	Organization: _____	Date _____	Time _____	No N/A

Special Instructions/Remarks:	Please contact Mike Norman at 281-509-6489 with any questions.
-------------------------------	--

Delivery Method: ☐ In Person ☒ Common Carrier ☐ Fed-Ex ☐ Lab Courier ☐ Other Temp



Project Number/Name	MT000839.0001
Project Location	Navajo - Artesia
Laboratory	Pace Analytical
Project Manager	Mike Norman
Sampler(s)/Affiliation	ARCADIS/SG, RL

[illegible]

Sample Matrix: L = Liquid; S = Solid; ~~A = Air~~

Relinquished by:	<u>Carol J. [Signature]</u>	Organization:	<u>ARCADIS</u>
Received by:	<u>Carol J. [Signature]</u>	Organization:	<u>ARCADIS</u>
Relinquished by:	<u>Carol J. [Signature]</u>	Organization:	<u>ARCADIS</u>
Received by:	<u>Carol J. [Signature]</u>	Organization:	<u>ARCADIS</u>

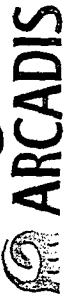
Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

Common Carrier	Fed-Ex
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

☐ Lab Courier☐ Other



CHAIN-OF-CUSTODY RECORD

Laboratory Task Order No./P.O. No.:

Page ____ of ____

Project Number/Name MT000839.G001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG,RL

[illegible]

Sample Matrix: t = Liquid; s = Solid; A = Air

Relinquished by:	Organization:	ARCADIS
Received by: <i>Feed Ex</i>	Organization:	
Relinquished by: <i>Feed Ex</i>	Organization:	
Received by: <i>Feed Ex</i>	Organization:	

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier Fed-Ex

☐ Lab Courier ☐ Other

Appendix

AG 05-12701



Project Number/Name MT000839.0001

Project Location Navajo - Artesia

Laboratory Pace Analytical

Project Manager Mike Norman

Sampler(s)/Affiliation ARCADIS/SG, RL

[illegible]

Sample Matrix: ζ = Liquid; ζ = Solid; ζ = Air

Relinquished by:	Organization:	ARCADIS	Date	Time	Seal Intact?
Received by:	Organization:		Date	Time	Yes No N/A
Relinquished by: <i>[Signature]</i>	Organization: <i>[Signature]</i>		Date <i>6/17/01</i>	Time	Seal Intact? <i>6370</i>
Received by: <i>[Signature]</i>	Organization: <i>[Signature]</i>		Date <i>1/1</i>	Time	Yes No N/A
Relinquished by: <i>[Signature]</i>	Organization: <i>[Signature]</i>		Date <i>6/18/04</i>	Time	Seal Intact? <i>6030</i>
Received by: <i>[Signature]</i>	Organization: <i>[Signature]</i>		Date <i>6/18/04</i>	Time	Yes No N/A

Special Instructions/Remarks:

Please contact Mike Norman at 281-509-6489 with any questions.

Delivery Method: ☐ In Person

☒ Common Carrier ☐ Fed-Ex☐ Lab Courier☐ Other

SPECIFY

Species

AG 05-1301