Page 1 of 1388

State of New Mexico
Oil Conservation Division

Incident ID	nPAC0619930448
District RP	1RP-956
Facility ID	fPAC0619930362
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: ***Each of the following items must be included in the closure report.***

☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Kim Lambert Title: Enviromental Advisor

Signature: Kim Lambert Date: 3-25-2021

email: Kimberly-Lambert@centurionpl.com Telephone: 806-543-6175

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Nelson Velez Date: 04/26/2023

Printed Name: Nelson Velez Title: Environmental Specialist - Adv

Received by OCD: 3/25/2021 2:14:32 PM

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March 25, 2021

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

Re: Request for Closure
Maljamar 6" Pipeline Release Site - North SW/4 Sec 20, T17S, R33E
Maljamar, Lea County, New Mexico NMOCD ID. 1RP-956
Apex Project No. CPNM2

Dear Mr. Billings:

The attached report details the comprehensive results of investigation and remediation at the Maljamar Release - North Site (Site). On the behalf of Centurion Pipeline L.P., the report was originally submitted to Mr. Tomas J. Oberding via an ftp server download link on June 17, 2016 by Ms. Adrian Baker of Apex Titan, Inc. Mr. Oberding responded that he had received the information to download the report. Neither Apex or Centurion has documentation that Mr. Oberding was able to download and review the report. Therefore, Apex respectfully re-submits the attached closure request letter, presented as Attachment B, as summarized below:

On behalf of Centurion Pipeline L.P., Apex personnel have prepared this request for closure with information provided by URS Corporation (URS) and Delta Consultants (Delta). The Site is located on State of New Mexico land, approximately five miles southeast of Maljamar, New Mexico. The site is in an area consisting of undeveloped native open range and oil field sites within the Southwest Quarter of Section 20, Township 17 South, Range 33 East and more specifically at latitude N 32.81333˚, longitude W 103.6925˚.

After reviewing the approved work plans (Attachment A) and reports furnished by URS Corporation and Delta Consultants, presented as Attachment 2 in the original closure request the following conclusions can be drawn:

- The source has effectively been removed from the site via excavation (Excavation and Backfilling and Source Area Characterization Report - Submitted June 2007);

- The laboratory analytical data indicates that impact to soils at the north site was delineated vertically and horizontally during the Initial Exploratory Soil Boring Program

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presented as Attachment 2 (Dec. 2006 – Maljamar Technical Memo_Evironmental Sampling);

- No soil impacts above NMOCD RRALs, appear to exist outside of the immediate area of the approximate release point (Excavation and Backfilling and Source Area Characterization Report - Submitted June 2007);

- Based on NMED's Screening-Level Ecological Risk Assessment, residual contamination in the soil in the vicinity of soil boring B-12, collected post-backfill, does not pose an unacceptable risk to receptor at the Site. The soils with COC concentrations above NMOCD RRALs are localized and located at least 34 feet bgs, and at least 80 feet above the groundwater-bearing zone (March 2016 Closure Request – Attachment 2: Maljamar North – Site Assessment Checklist, Ecological Risk Assessment);

- Backfill activities conducted from February through March 2007 were completed in accordance with the NMOCD approved backfill plan (Excavation and Backfilling and Source Area Characterization Report - Submitted June 2007);

- Stockpile soils with COC concentrations that met or were less than the allowable COC criteria were used to backfill the North Site excavation. Stockpile soils exceeding the allowable criteria were transported to an off-site landfarm (Excavation and Backfilling and Source Area Characterization Report - Submitted June 2007);

- The Site was re-seeded utilizing a seed drill and seed mix provided by Anrac Farms in September 2012 to aid in re-vegetation (March 2016 Closure Request – Attachment 2: AEA – Centurion Revegetation Letter).

- Five monitoring wells were installed at the North Site. Groundwater samples collected at the North Site reported concentrations of BTEX and TPH below New Mexico Water Quality Control Commission groundwater standards, indicating that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the Site. A Groundwater Monitoring Report prepared by Delta Consultants dated June 15, 2009 is presented in Attachment 2.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

It is requested that a letter of 'No Further Action' at the north site be added to the project file associated with NMOCD ID. 1RP-956.

Sincerely,

Aaron Sides
Project Manager/Biologist
432-425-8336

Hank W. McConnell, P.G.
Branch Manager
432-631-5750

cc: Ms. Kimberly Lambert – Centurion Pipeline, L.P.

Attachment A: Work Plans

Attachment B: March 21, 2016 Request for Closure Letter

.

Attachment A

CONESTOGA-ROVERS
& ASSOCIATES

2135 S. Loop 250West
Midland, Texas 79705
Telephone: (432) 686-0086 Fax: (432) 686-0186
http://www.craworld.com

January 12, 2006 Reference No. 043918-01

Mr. Paul Sheeley
Environmental Engineer
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Soil Remediation Workplan
BP Pipelines (North America) Inc.
Maljamar 6-inch Line Crude Oil Release Site #1
NW/4 of Section 29, Township 17 South, Range 33 East
Lea County, New Mexico

Dear Mr. Sheeley:

Conestoga-Rovers and Associates (CRA) is pleased to present this Soil Remediation Workplan on behalf of BP Pipelines (North America), Inc. (BP) for the above referenced crude oil release site.

The Maljamar 6-inch Line release site #1 is located 1.5-miles north of Highway 529 on County Road 125 approximately 5-miles southeast of Maljamar, Lea County, New Mexico (FIGURE 1). The legal description of the Site is the NW/4 of Section 29, T-17-S, R-33-E with GPS coordinates 32° 48.674' N and 103° 41.585' W. CRA understands the surface property is owned by the R. Caviness Trust.

A crude oil release of approximately 35-barrels occurred on December 22, 2005. The release was the result of internal corrosion inside the 6-inch gathering line. The line was clamped and a reported 10-barrels of crude oil was recovered using a vacuum truck. Subsequently, the line was repaired by replacing a section of the line with new pipe. CRA understands that the line was installed in 1989 at 6-feet deep and and handles approximately 150-barrels per day at a working pressure of 300-psi. BP reported that the crude oil has an average 39.0 API specific gravity and approximately 20-ppm hydrogen sulfide. A copy of the submitted OCD form C-141, Release Notification and Corrective Action is included as an enclosure to this correspondence.

The OCD has regulatory jurisdiction over oil and gas production operations including pipeline spill/closure in the State of New Mexico. This project will be conducted under the regulatory jurisdiction of the OCD, which requires that soil impacted by a crude oil spill be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The OCD hydrocarbon remediation levels are determined by ranking criteria on a site-by-site basis, which is outlined in the OCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are

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Employment Opportunity
Employer

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CONESTOGA-ROVERS & ASSOCIATES

based on three site characteristics: depth to groundwater, wellhead protection and distance to surface water.

Information obtained by CRA from the New Mexico Office of the State Engineer on January 10, 2006 indicated that the depth-to- groundwater in the vicinity of the Site is greater than 100-feet. A copy of a water well record (attached) for a location in section 20, T-17-S; R-33-E demonstrated a depth to water of 190 feet. Based on these Site characteristics and associated OCD ranking criteria presented in the table below, the following hydrocarbon remediation levels apply at the Site: benzene- 10 ppm, Total BTEX- 50 ppm and TPH- 5,000 ppm.

CHARACTERISTIC	SELECTION	SCORE
Depth to Groundwater	> 100 feet	0
Wellhead Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0

Total Ranking Score = 0

Hydrocarbon-impacted soils associated with the crude oil release will be excavated by BP designated subcontractors and delineated using a trackhoe. The vertical and horizontal extents of the excavation will be assessed by field personnel using OCD procedures for headspace analysis of soil samples. Confirmation soil samples will be collected for determination of the final soil contaminant concentrations pursuant to section VI.A of the OCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993.

Each soil sample collected at the site will placed into a laboratory-supplied soil jar equipped with a Teflon-lined lid and placed on ice in an insulated cooler. These samples will be submitted for analysis of total petroleum hydrocarbons (TPH) diesel-range organics (DRO) and gasoline-range organics (GRO) by EPA Method 8015 modified and analysis of benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method 8021B. The submitted coolers will be sealed for shipment and proper chain-of-custody documentation will accompany the samples to the laboratory.

Soils exhibiting concentrations above hydrocarbon remediation levels will be brought to the ground surface (to the practical extent possible) and staged onsite. Pending authorization from the surface property owner, the soils will be blended with onsite soils and amendments to the soils may be added in efforts to reduce the hydrocarbon concentrations in the soils. Soils will then be analyzed to determine concentrations relative to the hydrocarbon remediation levels. Soils exhibiting concentrations below regulatory levels (TPH – 5,000 ppm; Total BTEX – 50 ppm and benzene 10 ppm) will be placed back into the remedial excavation. Alternative waste management options will be considered as appropriate.

CONESTOGA-ROVERS
& ASSOCIATES

January 12, 2006 3 Reference No. 043918-01

Please note that BP is currently active in the remedial actions associated with this location. If you have any questions or comments with regards to this Soil Remediation Workplan please call do not hesitate to contact our Midland office at (432) 686-0086. Your timely response to this correspondence is appreciated.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Edward D. (Ted) Philley
Project Geologist

Thomas C. Larson
Operations Manager

Enclosures:
Site Location Map
Form C-141
Water Well Record

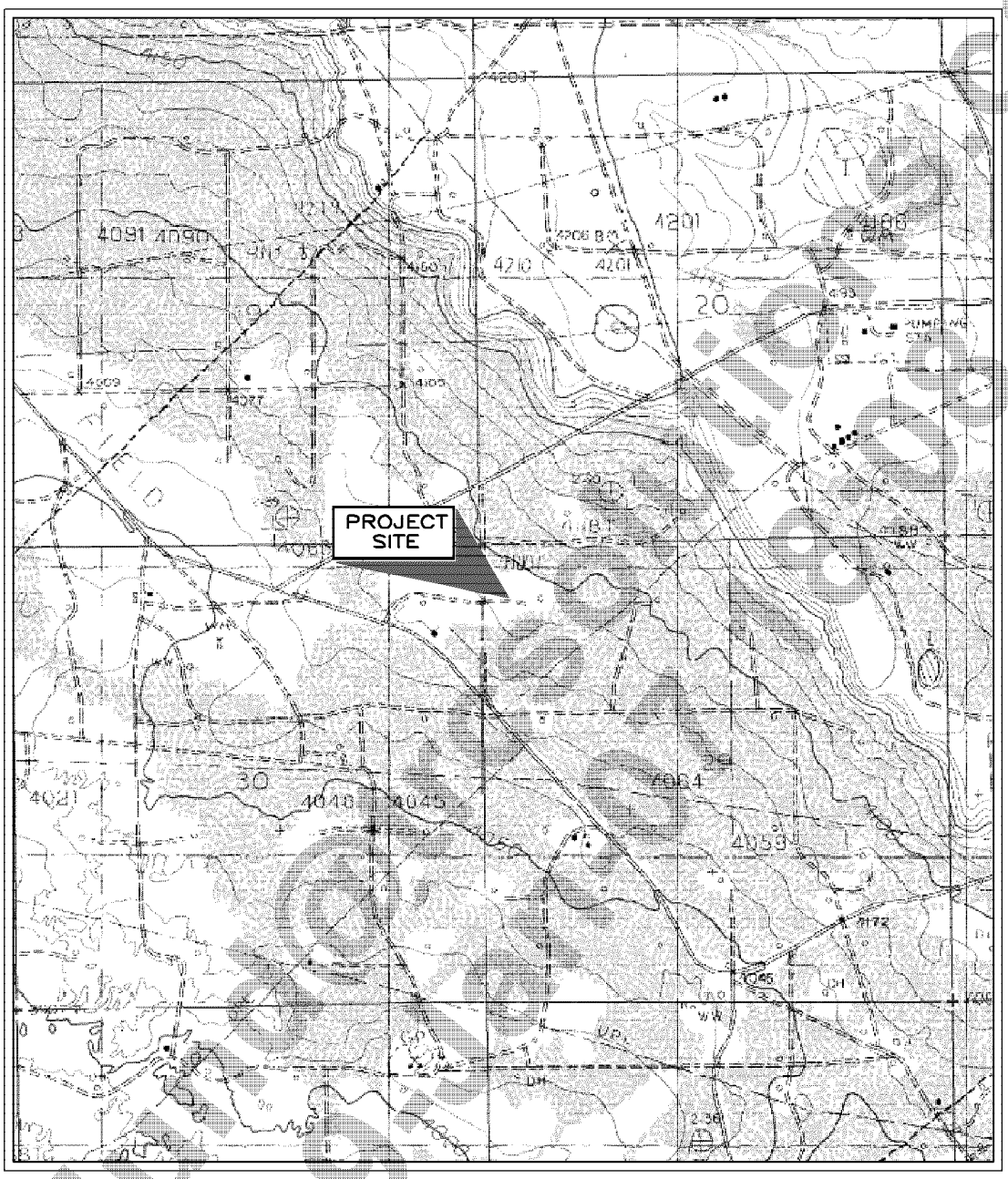
c.c.: Jimmy Humble, BP Pipelines (North America) Inc., Lovington, New Mexico
CRA – Midland File

geklund@trcsolutions.com 29-Jan-07 18:08

DOG LAKE QUADRANGLE
NEW MEXICO

LAT=32° 48.674' N
LONG=103° 41.585' W

PHOTOREVISED 1985



043918 SLR 011206

SITE LOCATION MAP	JOB No. 043918-01
BP PIPELINE (NORTH AMERICA) INC. MALJAMAR 6-INCH CRUDE OIL RELEASE SITE #1 LEA COUNTY, NM	FIGURE 1

CRA

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Report

Name of Company BP PIPELINES N.A., INC	Contact JIMMY HUMBLE
Address 302 EAST AVE. A LOVINGTON, NM 88260	Telephone No. (505) 396-2817
Facility Name MALJAMAR 6" LINE #1	Facility Type GATHERING PIPELINE

Surface Owner STATE OF NEW MEXICO	Mineral Owner UNKNOWN	Lease No. UNKNOWN

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County LEA
	29	17S	33E		500		600	

Latitude N32 ° 48.674
Longitude_103 ° 41.585

NATURE OF RELEASE

Type of Release CRUDE OIL	Volume of Release 35 BARRELS	Volume Recovered 10 BARRELS
Source of Release PIPELINE	Date and Hour of Occurrence UNKNOWN	Date and Hour of Discovery 12/22/05 2:30PM
Was Immediate Notice Given? ☐ Yes ☐ No X Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
THE OCCURRED DUE TO INTERNAL CORROSION IN THE PIPE. ALL CONTAMINATED SOIL WILL BE BROUGHT TO THE SURFACE AND A REMEDATION PLAN WILL BE DEVELOPED

Describe Area Affected and Cleanup Action Taken.*
20 FEET BY 40 FEET PIPE WAS EXCAVATED AND LEAK CLAMPED OFF. THE PIPE IS TO BE REPLACED12/27/05. ALL FREE OIL WAS PICKED UP AND ALL CONTAMINATED SOIL WILL BE BROUGHT TO THE SURFACE FOR REMEDIATION DISPOSAL.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION
Printed Name: JIMMY HUMBLE	Approved by District Supervisor:
Title: TEAM LEADER	Approval Date: / Expiration Date:
E-mail Address: humbleja@bp.com	Conditions of Approval: / Attached ☐
Date: 12/27/05 Phone: (505) 396-2817	

* Attach Additional Sheets If Necessary

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New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 02875	17S	33E	20	2	2				

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name: MURRELL ABBOTT
Source: Shallow
Drill Start Date: 05/18/1955
Drill Finish Date: 05/20/1955
Log File Date: 05/26/1955
PCW Received Date:
Pump Type:
Pipe Discharge Size:
Casing Size: 7
Estimated Yield:
Depth Well: 250
Depth Water: 190

Water Bearing Stratifications:	Top	Bottom	Description
	190	235	Shallow Alluvium/Basin Fil

Casing Perforations:	Top	Bottom
	190	250

geklund@trcsolutions.com
29-Jan-07 18:08

New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 02875 APPRO	17S	33E	20	2	2				

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name:
Source: Shallow
Drill Start Date: 05/18/1955
Drill Finish Date: 05/20/1955
Log File Date: 05/26/1955
PCW Received Date:
Pump Type:
Pipe Discharge Size:
Casing Size:
Estimated Yield:
Depth Well: 250
Depth Water: 190

geklumo@trcsolutions.com
29-Jan-07 18:08

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New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 03713	17S	33E	28	1	4	3			

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name: ABBOTT, MURRELL
Drill Start Date: 10/21/1957
Log File Date: 12/30/1957
Pump Type: TURBIN
Casing Size:
Depth Well: 210

Source: Shallow
Drill Finish Date: 10/23/1957
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water:

geklumo@trcsolutions.com
29-Jan-07 18:08

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Received by OCD: 3/25/2021 2:14:32 PM

Project Name:Sahara
Index No: 8.4.12.2
Title: 043918 Phase 02 BP Maljamar workplan FINAL 011206
User: Eklund, Gwen
Date: Mon Jan 29 18:08:48 CST 2007
Document Total Page Count: 8

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

February 3, 2006

Jimmy Humble
BP Pipelines N. A., Inc. (BP)
302 East Ave. A
Lovington, NM 88260

Re: Remediation Work Plan Approval w/conditions
Maljamar 6-inch Line Crude Oil Release Sites #1, and #2
location: UL- Sec. 20 and 29 – T17E-R33E

Dear Mr. Humble,

The New Mexico Oil Conservation Division (OCD) reviewed the plan submitted by Conestoga-Rovers & Associates (Conestoga), for BP, and referenced above. The plan is **herby approved** according to the information provided with the following conditions:

1. BP shall provide notification by email to paul.sheeley@state.nm.us and Larry.Johnson@state.nm.us a minimum 48-hours in advance of any sampling, backfilling and/or construction activities. Notification(s) shall be documented in the closure plan with the event, time, date and OCD representatives name.

2. BP shall vertically and horizontally delineate the vadose zone at each location according to OCD guidelines, ("Guidelines for Remediation of Leaks, Spills and Releases"):

3. BP shall submit a plan, by April 28, 2006, for repair and/or replacement of this line to prevent future releases.

Please be advised that OCD approval of this plan does not relieve BP of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve BP of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Sincerely,

Paul Sheeley-Environmental Engineer District 1, paul.sheeley@state.nm.us

Cc: Larry Johnson - Environmental Engineer, Dist. 1
Chris Williams - District 1 Supervisor.
Thomas Larson - Conestoga

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Shannon Hoover/Austin/URSCorp
09/05/2006 03:02 PM

To "Johnson, Larry, EMNRD" <larry.johnson@state.nm.us>
cc jimmy.humble@bp.com, Whelamr@BP.com
bcc
Subject RE: BP Maljamar Project Info

Thanks so much for the reply. We will be in the field for drilling next week, beginning on September 12th. If you would like to visit the site during our field operations, and would like directions to the site, please feel free to contact me. We are also installing signage this week along the route to/from the site beginning at the major roadways (CR 126, Hwy 82, and Hwy 529), so that might help. You can always reach me on my cell (pending reception, of course) at 512.632.5829. We are also setting up a satellite phone for field work, since cell phone reception at the site is sporadic. Once we have the number, I'll let you know.

Regards,
Shannon A. Hoover, PG, CAPM
Senior Geologist
URS Corporation
9400 Amberglen Boulevard
Austin, Texas 78729
512.419.6552 (phone)
512.454.8807 (fax)
shannon_hoover@urscorp.com

This e-mail and any attachments are confidential. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

"Johnson, Larry, EMNRD" <larry.johnson@state.nm.us>

"Johnson, Larry, EMNRD" <larry.johnson@state.nm.us>
09/05/2006 02:56 PM

To <Shannon_Hoover@urscorp.com>
cc
Subject RE: BP Maljamar Project Info

Proceed as discussed -- LJ

NMOCD Approval of Exploratory Soil Boring Program Work Plan

From: Shannon_Hoover@URSCorp.com [mailto:Shannon_Hoover@URSCorp.com]
Sent: Tue 8/8/2006 5:49 PM
To: Johnson, Larry, EMNRD
Subject: BP Maljamar Project Info

Hi, Larry,

Thanks for speaking with me this afternoon. I will be in Hobbs this coming Tuesday, August 15, 2006, and would like to meet at your office in the afternoon to discuss this project with you on behalf of BP. Would that be okay with you? How does 2:30 or 3 pm sound? I am hoping that we can meet the following objectives by the end of the meeting: 1) bring you up to speed on the history and current status of the project; 2) discuss our planned technical approach in a little more detail; 3) get your input on the technical/regulatory aspects of the approach; and 4) help me to understand how to best finalize our workplans for your review and approval so we stay on our desired schedule (discussed below).

Here is a brief synopsis of the projects:

The two project sites consist of crude oil releases from the BP Maljamar gathering line. The sites are within approximately 1,000 feet of each other, approximately 5 miles southeast of Maljamar (Lea County). One site, identified as the North Site, is located on State land. The second site, identified as the South Site, is located on private property owned by Mr. Ross Caviness.

Initial response activities conducted by others consisted of pipeline repairs and excavation of impacted soils at each site. Excavation activities were conducted at the North Site and eventually reached an approximate depth of 50 feet bgs. Soil samples were collected during North Site excavation between 33' to 50' bgs and submitted for BTEX and TPH analysis. Concentrations were detected in exceedence of remediation action levels listed in the NMOCD's Guidelines for Remediation of Leaks, Spills and Releases. Some exploratory excavation was performed at the South Site, but no soil samples were submitted for laboratory analysis. However, the previous contractor indicated that PID readings were still elevated, and photographs of the excavation show residual staining.

Upon determining that the residual impacts extend beyond the limits investigated at each site, BP ceased excavation activities to develop another plan of action to facilitate delineation of the horizontal and vertical extent of remaining impacts. URS was retained at that time to assist with developing and implementing an appropriate technical approach.

We are concerned that the excavations at both the North and South Sites are not safe. Our initial objective is to evaluate site conditions to ensure that further work performed at the site, which will include heavy equipment, earth-moving, and drilling, can be done safely. Our current planned approach for completing the source area characterization consists of the following:

- Task 1: Performing initial exploratory drilling to 1) obtain geotechnical data necessary to perform slope stability analyses and develop a safe plan to manage the current excavations, and 2) install monitoring wells to assess groundwater conditions and assist in evaluating horizontal conditions at the North Site (South Site delineation to be performed during a second drilling mobilization).
- Task 2: With the information obtained from the exploratory drilling, the current excavations will be modified so that further subsurface investigation can proceed safely. The North Site will be modified so that a drill rig can enter the excavation for installation of borings at the

source area, while the South Site will be backfilled in advance of drilling activities.
- Task 3: Installation of an appropriate number of borings and groundwater monitoring wells to complete horizontal and vertical delineation at both the North and South Sites.
- Task 4: Preparation of a report documenting the completion and results of the investigation, and evaluation of what additional response actions will be warranted to address remaining impacts.

Our goal is to complete the field work before winter. We understand that you will need to review and approve our workplans. I would like to discuss at our meeting what we can do to get you the information you need in a manner that would expedite your review and approval. We are currently working toward setting the exploratory drilling up for the week of September 11th, with excavation modification to begin mid-October, and completing the delineation activities before Thanksgiving.

As you requested, the C-141 forms for each site are embedded in the attachments below.

(See attached file: 043918 Phase 02 BP Maljamar workplan FINAL 011206.pdf)
(See attached file: 043918 Phase 01 BP Maljamar workplan 011206 FINAL.pdf)

Additionally, here is the correspondence received from Paul.

(See attached file: Maljamar 6 in. wp appr.&cond. 020306.doc)

We look forward to working with you on this project. Please do not hesitate to contact me at any time should you have any questions or wish to discuss.

Regards,
Shannon A. Hoover, PG, CAPM
Senior Geologist
URS Corporation
9400 Amberglen Boulevard
Austin, Texas 78729
512.419.6552 (phone)
512.454.8807 (fax)
shannon_hoover@urscorp.com

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

FEBRUARY 14, 2007

Mr. Michael Whelan
Atlantic Richfield Company
Remediation Management
501 Westlake Park Boulevard
Houston, Texas 77079

RE: BACKFILLING PLAN
BP PIPELINES MALJAMAR PIPELINE RELEASE SITE
SECTIONS 20 AND 29, TOWNSHIP 17 SOUTH, RANGE 33 EAST
LEA COUNTY, NEW MEXICO
NMOCD 1R0956

Dear Mr. Whelan:

The New Mexico Oil Conservation Division (OCD) has reviewed the *Backfilling Plan* for the BP Pipelines Maljamar Pipeline Release Site (1R0956) located in Sections 20 and 29, Township 17 South, Range 33 East, Lea County, submitted by URS Corporation on behalf of BP Pipelines (North America), Inc. and Atlantic Richfield Company Remediation Management on January 25, 2007. OCD approves the *Backfilling Plan* with the following conditions.

1. OCD suggests that BP Pipelines thin-spread and disc the segregated soils (see Section 2.3, page 7) rather than stockpile this material. Given the time frames, this segregated soil may bioremediate on-site.

2. OCD will require BP Pipelines to backfill the excavations with soil that has a TPH concentration of 1000 mg/kg or less from 5 feet below ground surface (bgs) to the bottom of the excavation rather that the proposed concentration of 5000 mg/kg or less (see Section 2.4, page 9 and Section 2.5.2, page 11).

3. BP Pipelines shall inform the OCD Santa Fe Office and the OCD Hobbs District Office on the progress of this work in writing at least monthly until the work has been completed. BP Pipelines shall submit a final report on the backfilling program 30 days after it has completed the

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backfill activities to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office.

4. BP Pipelines shall submit a Remediation Plan pursuant to OCD Rule 116D no more than 45 days after it has completed the backfill activities. BP Pipelines must submit two paper copies and an electronic copy of its Remediation Plan to OCD's Santa Fe office with a copy provided to the OCD Hobbs District Office. The Remediation Plan must specify how BP Pipelines will investigate the extent of the hydrocarbon contamination in both soils and ground water. The workplan must also include a complete description of the site, including a site map, the site history including the nature of the release, and a summary of previous investigations and the backfill program. BP Pipelines must install as many soil borings and monitoring wells as necessary to delineate the extent of the hydrocarbon contamination in both soil and ground water using an appropriate number of isoconcentration maps and cross sections. BP's proposal must include the installation of at least one monitor well inside the perimeter of the former excavation centered on the release site to determine whether hydrocarbon contamination has migrated directly down to ground water.

If BP's soil and ground water investigation detects contamination at concentrations that exceed the Water Quality Control Commission (WQCC) abatement standards specified at 20.6.2.3103 NMAC, then it must immediately notify OCD of this fact and submit a Stage 1 Abatement Plan proposal within sixty (60) days if it has not completely delineated the release. If the extent of the release has been determined, then BP Pipelines must submit a Stage 2 Abatement Plan proposal. After it has completely delineated the release, OCD will determine whether to require additional action from BP Pipelines.

In all future submittals, BP Pipelines must include the location of the release site using Township, Section, and Range coordinates. Please note that all remediation work of this type that is not known to have impacted ground water is handled by OCD's District Offices unless OCD informs BP Pipelines otherwise.

OCD understands that the proposed backfilling work is only being proposed at this time because of safety concerns and that BP Pipelines is committed to the complete delineation and remediation of this release. If you have any questions, please call me at 505-476-3488.

Sincerely,

Glenn von Gonten
Senior Hydrologist

xc: Larry Johnson, OCD Hobbs District Office
Shannon Hoover, URS

Attachment B

March 21, 2016

Mr. Tomas J. Oberding, PhD
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

Re: Request for Closure
Maljamar 6" Pipeline Release Site - North SW/4 Sec 20, T17S, R33E
Maljamar, Lea County, New Mexico NMOCD ID. 1RP-956
Apex Project No. CPNM2

Dear Dr. Oberding:

This report details the comprehensive results of historical events at the Maljamar Release - North Site (Site) on behalf of Glenn Springs Holdings, Inc., Apex personnel have prepared this request for closure with information provided by URS Corporation (URS) and Delta Consultants (Delta). The Site is located on State of New Mexico land, approximately five miles southeast of Maljamar, New Mexico. The site is in an area consisting of undeveloped native open range and oil field sites within the Southwest Quarter of Section 20, Township 17 South, Range 33 East and more specifically at latitude N 32.81333˚, longitude W 103.6925˚. Figure 1 is provided in Attachment 1 as the Topographic Map.

Two releases occurred along a six (6) inch crude oil gathering line, currently being operated by Centurion Pipeline L.P. (Centurion). The releases were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The two project sites (identified as the north and south sites) are located approximately 1,000 feet from each other in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.). The following closure request report is for the north side spill.

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line and retained Conestoga-Rovers and Associates (CRA) to perform initial response activities. The activities included the excavation of impacted soils to remove source area material and to investigate the extent of the impacts. Excavation at the north site was conducted between January and March 2006. Confirmation soil samples were collected from the north site in March 2006, between 32 and 50 feet below grade surface (bgs). Figure 2 is provided in Attachment 1 for excavation boundaries.

After receiving the NMOCD's letter dated February 3, 2006, BP retained the services of URS to conduct further response activities at the sites to comply with the stated directive, "BP shall

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vertically and horizontally delineate the vadose zone at each location according to NMOCD guidelines ..." URS's activities included an exploratory boring program, a geophysical study of the area surrounding the site, installation and monitoring of groundwater monitoring wells five (5), and backfilling the excavation.

URS previously submitted two (2) reports to the NMOCD (e.g., *Technical Memorandum – Initial Exploratory Soil Boring Program,* dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum,* dated June 28, 2007), subsequent to the remedial excavation activities. Previous reports are provided in Attachment 2. Only one delineation/confirmation soil sample collected by Delta exhibited concentrations that exceeded the NMOCD Recommended Remediation Action Levels (RRALs). This sample was collected from soil boring B-12, which was installed approximately 40 feet north of the release point, at a depth of 34 feet bgs, and exhibited concentrations of benzene at 0.51 milligrams per kilogram (mg/Kg), total BTEX at 64 mg/Kg and total TPH at 1,100 mg/Kg. Groundwater at the north site is located at least 115 feet bgs. The identified residual contamination in the vicinity of soil boring B-12 does not pose an unacceptable risk to receptor at the Site. After further reviewing work and reports furnished by URS Corporation and Delta Consultants, the following conclusions can be drawn:

The source has effectively been removed from the site via excavation;

- The laboratory analytical data shows that impact to soils at the north site have been delineated vertically and horizontally, and the identified residual contamination in the soil in the vicinity of soil boring B-12 does not pose an unacceptable risk to receptor at the Site;

- No soil impacts above NMOCD RRALs, appear to exist outside of the immediate area of the approximate release point;

- The soils with COC concentrations above NMOCD RRALs are localized and located at least 34 feet bgs, and at least 80 feet above the groundwater-bearing zone;

- Laboratory analytical data indicates that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the site.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

APEX

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It is requested that a letter of 'No Further Action' at the north site be added to the project file associated with NMOCD ID. 1RP-956, and authorization to properly plug and abandon the five (5) on-site monitor wells be provided to Centurion.

Sincerely,

Adrian Baker

Adrian Baker
Project Manager

Cc via email: Dusty Wilson – Glenn Springs Holdings, Inc.

Attachments 1
Figure 1 – Topographic Map
Figure 2 – Site Vicinity Map
Figure 3 – Site Map

Attachments 2
Dec. 2006 – Maljamar Technical Memo_Environmental Sampling
June 2007 URS – Excavation and Backfill Report
July 2007 URS – Geotech and Slope Stability Analysis
June 10 2009 Maljamar North – Appendix A – NMED RBDM Software Printout
June 15 2009 Delta - Maljamar – North&South-GW Mont. Rpt.-signed
June 23 2009 Delta - Maljamar – North – Closure Request
October 9 2012 Antea - AEA_Centurion_Reveg_Letter
April 14 2015 Maljamar-North – Site Assess. Checklist-Eco.Risk Assess.

APEX

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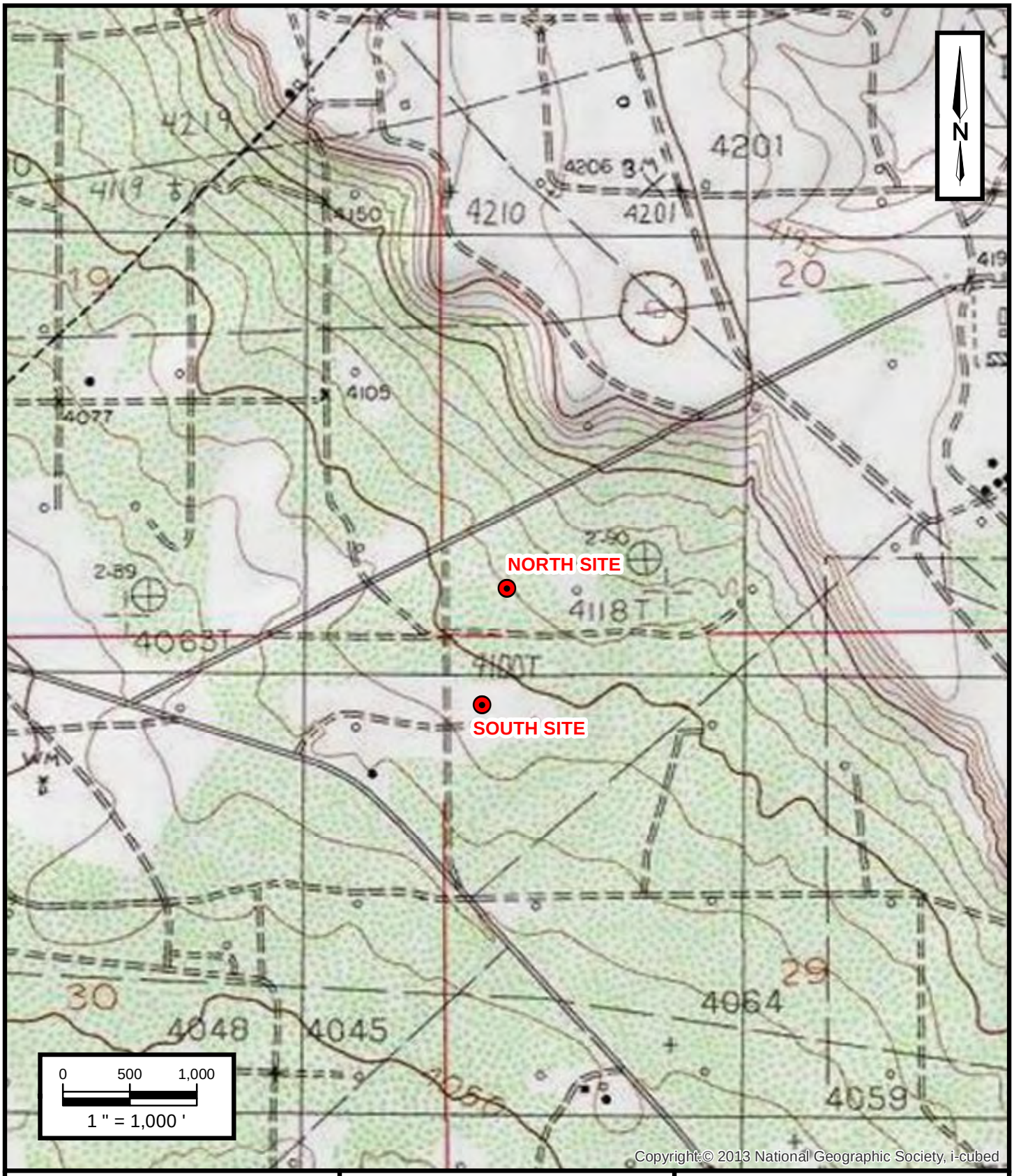
Attachments 1



Centurion Pipeline
Maljamar 6" Pipeline Site - North
Maljamar 6" Pipeline Site - South
Maljamar, Lea County, New Mexico
North Site - 32.813702 N, 103.692408 W
South Site - 32.811315 N, 103.693032 W

Project No. 7250715066

Apex TITAN, Inc.
505 N Big Spring St., Suite 301A
Midland, Texas 79701
Phone: (432) 695-6016
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Dog Lake, New Mexico Quadrangle
1985

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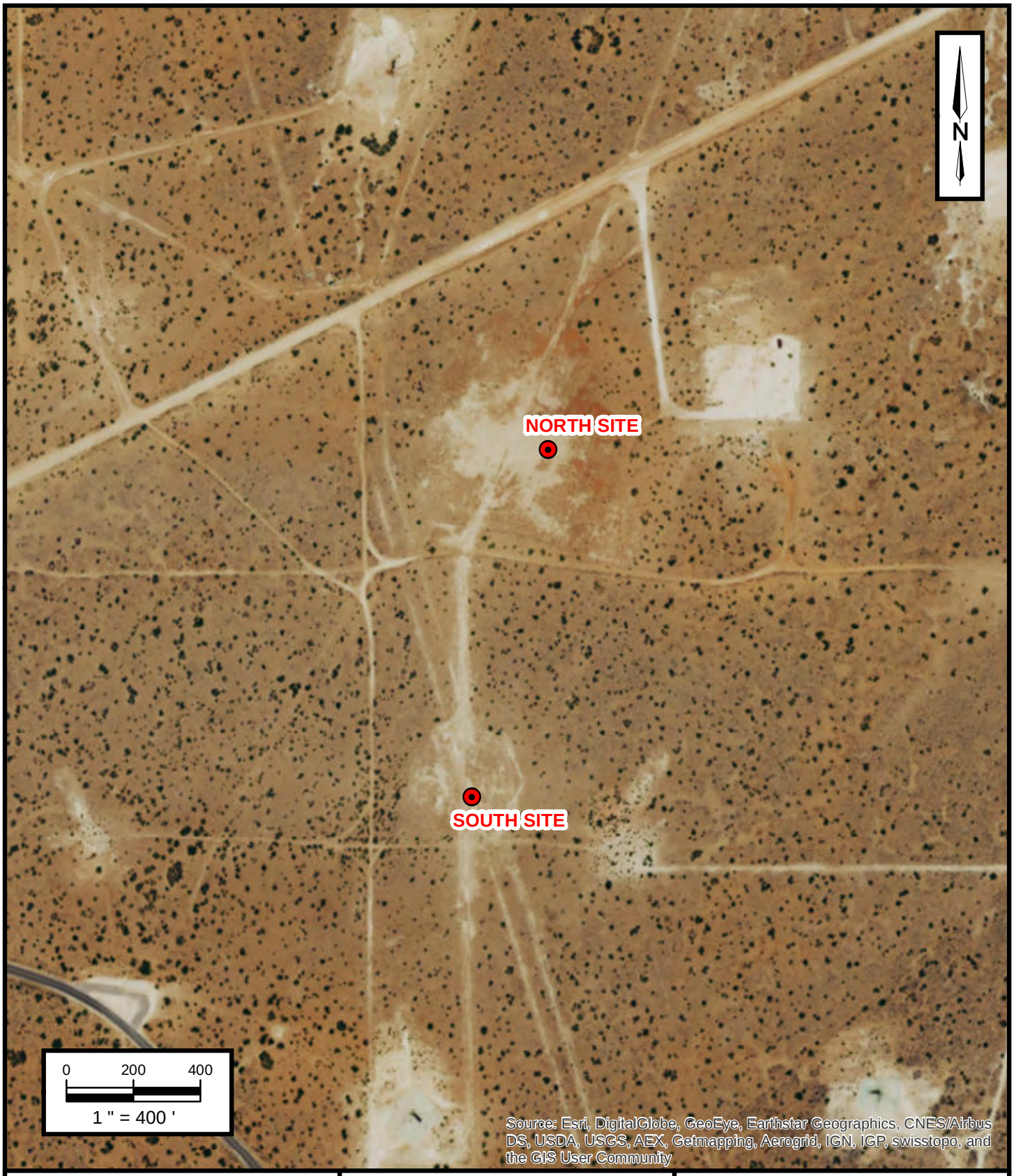

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Maljamar 6" Pipeline Site - North
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FIGURE 2

Site Vicinity Map

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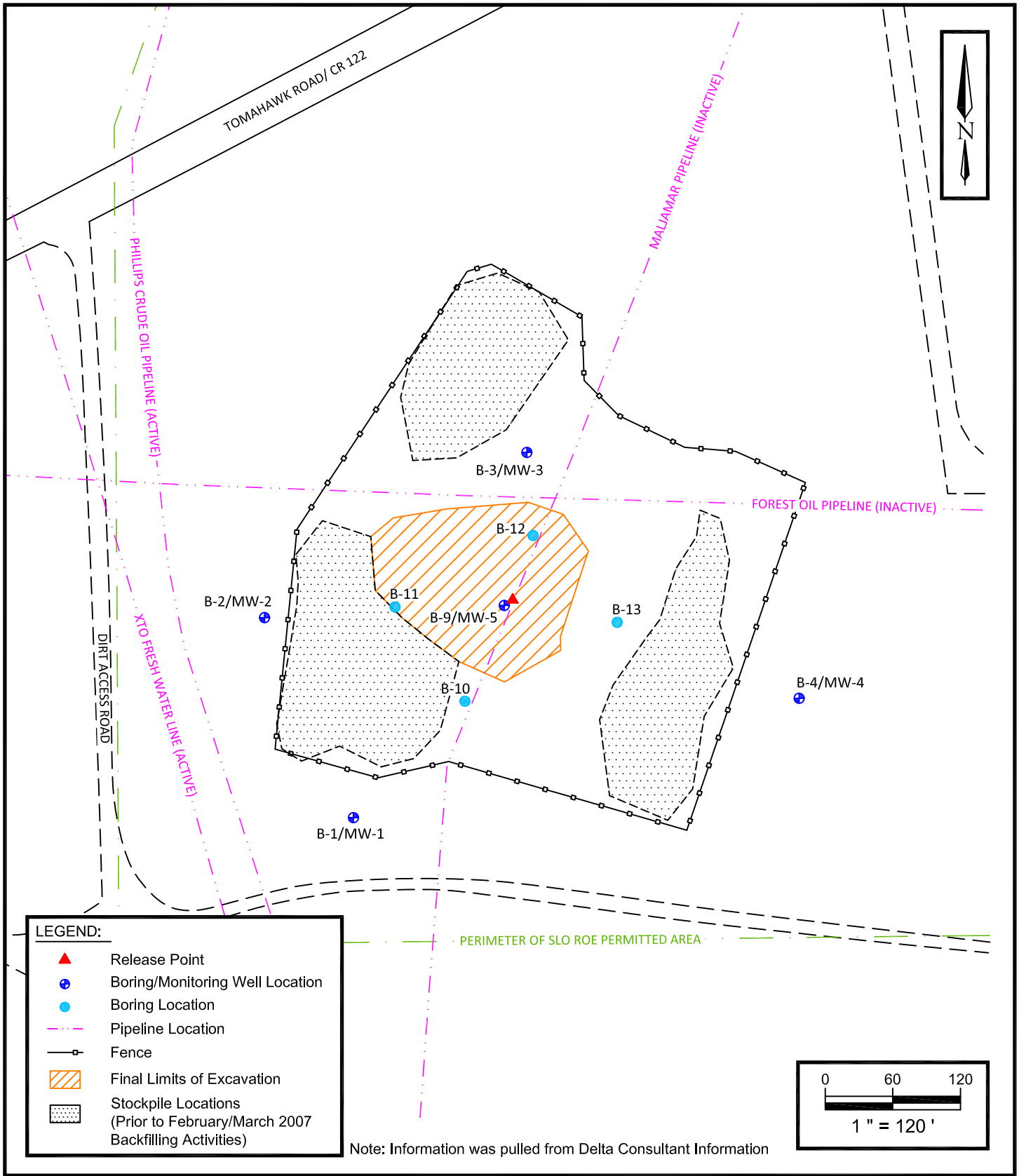

Note: Information was pulled from Delta Consultant Information

Centurion Pipeline
Maljamar 6" Pipeline Site - North
Maljamar 6" Pipeline Site - South
Maljamar, Lea County, New Mexico
North Site - 32.813702 N, 103.692408 W
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FIGURE 3

Site Map
North Site

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Attachments 2

TECHNICAL MEMORANDUM

INITIAL EXPLORATORY SOIL BORING PROGRAM

MALJAMAR PIPELINE RELEASE SITE

MALJAMAR (LEA COUNTY), NEW MEXICO

NMOCD 1-RP NO. 956

Prepared for
BP Pipelines (North America), Inc.
302 East Avenue A
Lovington, New Mexico 88260

And

Atlantic Richfield Company
(a BP Affiliate) Remediation Management
501 Westlake Park Boulevard
Houston, Texas 77079

December 2006

Prepared by

9400 Amberglen Boulevard
Austin, Texas 78729

Project No. 41008243

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1.2 Objective....3

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Figure 2: TPH Results from Initial Response Activities – North Site
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Figure 6: Cross-Section A-A'
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Table 2: Groundwater Measurements Table
Table 3: Summary of Soil Analytical Results – BTEX and TPH
Table 4: Summary of Groundwater Analytical Results – BTEX and TPH
Table 5: Summary of Groundwater Analytical Results – Inorganics
Table 6: Summary of Groundwater Analytical Results – Other Parameters

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Appendix A: Soil Boring Logs
Appendix B: Photographs
Appendix C: Data Validation Report and Laboratory Analytical Reports

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Technical Memorandum INITIAL EXPLORATORY SOIL BORING PROGRAM

1.0 INTRODUCTION

BP Pipelines (North America), Inc. (BP Pipeline NA) operates a 6-inch crude oil gathering line in Lea County, New Mexico. Releases occurred at two locations along the line in December 2005, and are believed to have been the result of internal corrosion. The releases were discovered during aerial reconnaissance of the line. The two project sites (identified as the North and South Sites) are located within approximately 1,000 feet of each other, approximately 5 miles southeast of the town of Maljamar in Lea County (Figure 1). The North Site is located on State of New Mexico land, and the South Site is located on private property owned by Mr. Ross Caviness.

1.1 Background

BP Pipelines NA immediately repaired the lines at the two release locations and retained Conestoga-Rovers & Associates (CRA) to perform initial response activities. CRA submitted Soil Remediation Work Plans dated January 12, 2006 for each of the sites. These documents included the Release Notification and Corrective Action form (Form C-141) submitted to the New Mexico Oil Conservation Division (NMOCD) by BP Pipelines NA on December 27, 2005. The initial response activities included the excavation of impacted soils at each site to remove source area material and investigate the extent of the impacts. Soil samples were collected from the initial response test trenches at the North Site in January 2006 prior to excavation activities and submitted for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) (Table 1). Excavation activities began in February 2006 at the North Site upon approval of the Soil Remediation Work Plans in NMOCD letters dated February 3, 2006. The North Site excavation eventually reached an approximate depth of 50 feet below ground surface (bgs) when excavation was halted in March 2003. CRA collected soil confirmation samples from the North Site excavation in March 2006 between approximately 32 to 50 feet bgs and submitted for BTEX and TPH analysis. Concentrations of these chemicals of concern (COC) were detected in exceedence of remediation action levels listed in the NMOCDs *Guidelines for Remediation of Leaks, Spills and Releases*. Results from the confirmation samples collected during initial response activities are included in Table 1. Samples 1 through 5 represent areas that were subsequently removed during further excavation activities. TPH results from the March 2006 confirmation soil samples are depicted on Figure 2. Laboratory reports for samples collected by CRA during initial response activities are included in Appedix C. Limited exploratory excavation that did not progress past 10 to 15 feet bgs was performed at the

South Site, but no soil samples were submitted for laboratory analysis. However, CRA indicated that limited field screening was performed and PID readings were still elevated. Photographs of the South Site excavation show residual staining.

Further response at the sites is being conducted to comply with NMOCD requirements. Appropriate actions are being taken to ensure that there is no remaining threat from the release to injure or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property.

Following the initial response activities, and pursuant to the NMOCD's letter dated February 3, 2006, which directs that "BP shall vertically and horizontally delineate the vadose zone at each location according to OCD guidelines…," the primary objective of the project at this time is to determine the horizontal and vertical extent of residual impacts. Once the extent of residual impacts is known, a determination for the next appropriate phase of response action will be made.

Observations of the current conditions at the sites indicate that the excavations do not meet minimum required conditions for excavation safety. Due to the nature of the loose fine sand and the presence of weak to no cementation, OSHA categorizes the soils as Class C (the worst class), and appropriate sloping of sidewalls for excavation safety would need to be or exceed 2 horizontal (H):1 vertical (V). Current slope conditions of the excavation sidewalls are 2H:1V or less.

Empirical observations (staining and sampling during initial response actions and soil type) indicate that the crude oil migration pathway in the subsurface was predominantly vertical, with limited horizontal spread. Therefore, determination of the vertical extent of residual impacts necessitates that any investigative activities be conducted at and in the immediate vicinity of the release (e.g., bottom of the excavation). However, since the excavation does not currently meet minimum standards for safety, URS does not recommend that workers or equipment enter the area for further delineation investigation.

The initial exploratory boring program conducted in September 2006 was performed to collect data to support the development of a plan to appropriately modify the current excavations to meet or exceed the requirements for excavation safety so that workers and equipment can enter the excavations for further delineation investigation. Additionally, environmental data was acquired during the initial exploratory soil boring program to provide an indication of potential extent of impacts in soil and groundwater.

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1.2 Objective

The objective of this technical memorandum is to document the results of the September 2006 environmental sampling activities (performed in accordance with the August 2006 ***Initial Exploratory Borings Maljamar Pipeline Release Site Work Plan*** [Work Plan]). A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.

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2.0 INVESTIGATION ACTIVITIES

To ensure a safe work zone for further investigation of residual impacts from the release, URS proposed the initial exploratory soil boring program. This soil boring program was primarily intended to acquire geotechnical data to facilitate further slope stability analysis and excavation plan development for the management of the existing excavations. However, during the mobilization to acquire the geotechnical data, URS also utilized the soil borings for the purpose of investigating the horizontal extent of residual impacts and assessing groundwater conditions (e.g., presence and possible impacts), primarily at the North Site during the initial mobilization.

In order to achieve the objective of obtaining initial indications of the potential horizontal and vertical extent of residual impacts, while managing the current conditions at the sites, the following steps were conducted in September 2006 in accordance with the August 2006 Work Plan:

- Installation of four exploratory soil borings at the North Site, which were subsequently converted to groundwater monitoring wells.
- Installation of four exploratory soil borings at the South Site to 50 feet bgs.
- Collection of soil samples for geotechnical and environmental analysis.
- Collection of groundwater samples from the four monitoring wells installed at the North Site for groundwater assessment.

This technical memorandum describes only the activities associated with the initial exploratory soil boring task and only presents the results from environmental samples collected to provide an initial indication of horizontal extent of impacts.

The initial exploratory soil boring program is discussed in the following subsections for the North and South Sites.

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2.1 North Site

- Four borings (B-1 through B-4) were installed to approximately 10 feet within the first saturated zone (Figure 3). Total depths of exploration ranged from 128.5-132.5 feet bgs. Bedrock was not encountered in any of the borings installed at the site.
- Standard penetration testing (SPT) was performed every 5 feet.
- Split spoon samples were collected every 5 feet for lithologic description and field screening (i.e., headspace analysis) with a properly calibrated photoionization detector (PID) for the presence of volatile organic compound (VOC) vapors. One sample collected per 10-foot interval was submitted to AMEC in Albuquerque, New Mexico for analysis of grain size. Atterberg Limits were also proposed in the August 2006 Work Plan; however, the samples did not contain sufficient amounts of clay. Therefore, Atterberg Limits testing was not performed.
- For additional geotechnical analysis, two undisturbed samples were collected from each soil boring for direct shear tests, with one sample representing the upper 50 feet bgs and the second sample representing the interval between 50 and 75 feet bgs (in the event that future remedial action includes excavation beyond a depth of 50 feet bgs). The samples were also submitted to AMEC in Albuquerque, New Mexico. A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.
- To support the delineation investigation, six soil samples were collected from borings B-1 and B-2 and five soil samples were collected from borings B-3 and B-4. Samples were submitted to Severn Trent Laboratories (STL) in Austin, Texas for laboratory analysis of BTEX and TPH. In the absence of intervals that exhibited crude oil impacts, (e.g., staining, odor, and PID readings), samples were selected spatially with depth to provide vertical profile information (e.g., approximately one sample per 20 foot interval). The deepest sample represented the interval immediately above the saturated zone.
- Groundwater was encountered in all soil borings; therefore, the soil borings were converted to monitoring wells (MW-1 through MW-4). The monitoring wells were developed, and samples were collected no sooner than 24 hours after well development. Development consisted of surging and bailing with the drilling rig. Prior to sampling, the wells were purged using a low-flow pumping technique in accordance with EPA standards. Upon stabilization of field parameters and the removal of at least three well volumes, the well water was sampled from dedicated discharge tubing.

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- The wells were surveyed for top-of-casing elevation, and water levels were measured to the nearest 0.01 inch with an electronic water level indicator to facilitate determination of groundwater flow direction.

2.2 South Site

- Four soil borings (B-5 through B-8) were installed to total depths of 51.5 feet bgs (Figure 4). Neither bedrock nor groundwater were encountered in any of the borings installed at the South Site.
- SPT was performed every 5 feet.
- Split spoon samples were collected every 5 feet for lithologic description and field screening (i.e., headspace analysis) with a properly calibrated PID for the presence of VOC vapors. One sample collected per 10-foot interval was submitted to AMEC in Albuquerque, New Mexico for analysis of grain size. Atterberg Limits were also proposed in the August 2006 Work Plan; however, the samples did not contain sufficient amounts of clay. Therefore, Atterberg Limits testing was not performed.
- For geotechnical purposes, two undisturbed samples were collected per soil boring for direct shear tests, with one sample representing the upper 25 feet bgs and the second sample representing the interval between 25 and 50 feet bgs. The samples were also submitted to AMEC in Albuquerque, New Mexico. A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.
- To support the delineation investigation, three soil samples per boring were submitted for laboratory analysis of BTEX and TPH. In the absence of intervals that exhibited crude oil impacts, (e.g., staining, odor, and PID readings), samples were selected spatially with depth to provide vertical profile information (e.g., approximately one sample per 20 foot interval).

URS retained the services of WDC Exploration, a State of New Mexico-licensed driller, for boring installation and monitoring well completion. Borings were installed at the locations shown on Figures 3 (North Site) and 4 (South Site) utilizing hollow stem auger (HSA) drilling. Locations were selected to be close enough to the existing excavation edge to acquire geotechnical information from the adjacent area where heavy equipment operation and earth-moving are anticipated, but far enough away that monitoring wells completed in the borings will likely not need to be properly plugged prior to future earth-moving activities. Boring logs, including well completion details, are included in Appendix A.

Monitoring wells were constructed of 2-inch diameter, flush-threaded polyvinyl chloride (PVC) casing and machine-slot 0.010-inch screen, and the annular space was completed with an appropriate sandpack, bentonite seal, and cement grout. The wells were constructed so that the screened interval intersects the top of the saturated zone. The saturated zone is unconfined; therefore, a 15-foot screen was used with approximately 10 feet of screen below the water table and approximately 5 feet of screen above the water table. Surface completion for monitoring wells MW-1, MW-2, and MW-4 consisted of concrete pads with metal upright well covers. However, MW-3 was not installed with a concrete pad because it will likely be within the excavation zone during future earth-moving activities. If feasible, well MW-3 will be protected during excavation modification for future use. If the integrity of well MW-3 cannot be protected, it will be properly plugged and abandoned prior to earth-moving activities.

Soil borings at the South Site were properly plugged and abandoned with cement grout in accordance with New Mexico regulations.

All non-dedicated drilling, sampling, and down-hole equipment were decontaminated prior to the initiation of investigation activities. Drilling equipment was decontaminated using a steam cleaner, and all sampling equipment was scrubbed with a non-phosphate detergent (Liquinox) and distilled water wash, rinsed with distilled water, and allowed to air dry before being reused. All samples were handled with fresh nitrile gloves.

Soil and groundwater samples were collected in laboratory-supplied containers using standard industry protocols. Samples were continuously kept in the ice-filled cooler from collection until delivery to the laboratory to be maintained at a temperature of approximately four degrees Celsius (4ºC). Soil and groundwater samples selected for laboratory analysis were transported to the laboratory under appropriate chain-of-custody protocol.

Soil and groundwater samples were analyzed in accordance with NMOCD guidance. Both soil and groundwater samples collected for the purposes of determining residual crude oil impacts were analyzed for TPH by EPA Method 8015 for gasoline- and diesel-range organics (GRO and DRO). Soil and groundwater samples were also analyzed for BTEX by EPA Method 8260. Although the August 2006 Work Plan proposed analyzing groundwater samples for polynuclear aromatic hydrocarbons (PAHs), due to laboratory

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error, the samples were not analyzed for PAHs. However, due to the lack of COC detections, further groundwater analysis of PAHs does not appear warranted at this time. Groundwater samples will be analyzed for PAHs in future sampling events conducted at the site. In accordance with NMOCD guidance, groundwater samples were also analyzed for total dissolved solids (TDS) by EPA Method 160.1, major cations and anions by appropriate EPA methods, and dissolved heavy metals by various EPA 7000 series methods.

URS proposed the use of EPA Methods 8260B and 8270C, in lieu of EPA Methods 8020 and 8100 mentioned in the 1993 NMOCD guidance document, respectively, during a meeting with the NMOCD District 1 Office in Hobbs on August 15, 2006. At that time, Mr. Larry Johnson of the NMOCD District 1 Office in Hobbs verbally approved the use of these methods for BTEX and PAH analyses. Mr. Johnson approved the Work Plan, which included the alternate methods, in an email dated September 5, 2006. Note: the samples collected during the September 2006 field effort were not analyzed for PAHs.

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3.0 SITE CHARACTERISTICS

3.1 Geology

Regional Geology

According to the Hobbs Sheet of the Geologic Atlas of Texas (includes the southeast portion of New Mexico), the area is underlain by Quaternary-aged colluvial slopewash and talus deposits of sands, silts, and gravels from the Ogallala Formation of the caprock to the north. These colluvial deposits are reportedly up to 20 feet thick. The Gatuña Formation, which consists primarily of fine friable sand, is believed to underlie the area, with these surficial deposits ultimately overlying Triassic- or Permian-aged bedrock of claystone, siltstone, and sandstone. The applicable section of the geologic map showing the site location is included on Figure 5. A representative cross-section of the North Site is depicted on Figure 6.

Site Geology

The North and South Sites are underlain by moderately well sorted very fine to fine sand with weak to poor calcareous cementation and lenses of caliche and caliche gravel. The moderately well sorted sand extends to depths of approximately 50-60 feet bgs, where alternating areas of poorly sorted and moderately well sorted sand are present. At depths of approximately 40-60 feet bgs, the sand includes pockets of well-cemented lithified sandstone. At approximately 120 feet bgs silty sand may be present above gravelly sand or sand with trace amounts of gravel. While removing the augers from MW-2/B-2, the bottom of the lead auger was observed to have dark red silty clay.

Observations of lithology through the initial investigated depth of 132.5 feet bgs at the North Site and 51.5 feet bgs at the South Site are consistent with the colluvial deposits and Gatuña Formation. No bedrock was observed in the soil borings installed at the North and South Sites. The boring logs are provided in Appendix A.

3.2 Hydrogeology

State well records indicate that depth to water in registered water wells in the area are on the order of 170 to 190 feet bgs; however, the coordinates of these wells indicate they are located to the north of the site at positions atop the caprock, which appears to be approximately 75-100 feet higher in elevation than the site. State well records were also identified for the property to the south, owned by Mr. Caviness, but the well records did

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not include depth to water information. Mr. Caviness recalled that depth to groundwater in one of his water wells located approximately one mile south of the sites was approximately 125 feet bgs.

Based on the fluid levels measured on September 29, 2006, depth of groundwater beneath the North Site ranges from approximately 115-122 feet bgs (approximately 118-125 feet below the top of casing), with groundwater flow to the south-southwest. The hydraulic gradient is approximately 0.005 feet/feet. The fluid level measurements are shown on Table 1, and the groundwater potentiometric surface map is included as Figure 7.

Groundwater was not encountered in any of the borings installed at the South Site. No non-aqueous phase liquid (NAPL) was observed in any of the monitoring wells installed at the North Site. Additionally, no petroleum sheen or odor was observed in groundwater samples collected from the North Site monitoring wells.

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4.0 RESULTS

This section provides results for the environmental samples collected during the initial exploratory soil borings installed in September 2006. Results from the grain size analyses indicate that the site is predominantly underlain by silty sand. A separate technical memorandum will be submitted that will include the results of the geotechnical and slope stability analyses. A work plan for excavation modification and further source area characterization will also be prepared for review and approval.

4.1 Soil

Soil sample analytical results are summarized in Table 2. The data validation report (DVR) and laboratory analytical reports are included in Appendix C. The results indicate that all of the data are useful for their intended purpose.

The BTEX compounds and TPH-GRO were not detected in the soil samples collected from the North and South Sites. TPH-DRO was detected in all samples collected from the North and South Sites; however, TPH-DRO was also reported in the method blank at similar concentrations resulting in these data being qualified with a B flag. Based on this, the presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

The lack of detections of analytes in soil, along with the lack of field evidence of impacts (e.g, visual, PID readings), indicates that the release has not migrated laterally to the locations of the monitoring wells and that the maximum lateral extent of impacts to soil has been delineated at the North Site. The lack of detections and field evidence of impacts in the soil samples collected immediately above the saturated zone support the indication of little to no significant impacts to groundwater (see below). The maximum lateral extent of impacts to soil has been delineated at the South Site from the surface to a depth of 51.5 feet bgs.

4.2 Groundwater

Groundwater sample analytical results are summarized in Table 3 (BTEX and TPH), Table 4 (inorganics), and Table 5 (other parameters). The DVR and laboratory

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analytical reports are included in Appendix C. The results indicate that all of the data are useful for their intended purpose.

Benzene, ethylbenzene, xylenes, and TPH-GRO were not detected in the groundwater samples collected from the North Site. Toluene was detected at a concentration of 1.2 micrograms per liter (µg/L) from MW-3. This concentration is below the New Mexico Water Quality Control Commission Groundwater Standard of 750 µg/L. MW-3 is upgradient from the release point and the sample collected from downgradient well MW-1 was reported as non-detect for all BTEX compounds. TPH-DRO was detected in all groundwater samples collected from the North Site; however, TPH-DRO was also reported in the method blank at similar concentrations resulting in these data being qualified with a "B" flag. Based on this, the presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment, this issue is further discussed in the DVR (Appendix C).

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5.0 CONCLUSIONS

No evidence of impacts was observed at the soil borings installed at the North and South Sites. The lack of detections of analytes in soil, along with the lack of field evidence of impacts, indicates that the release has not migrated laterally to the location of the monitoring wells at the North Site and the soil borings at the South Site. The maximum lateral extent of impacts to soil has been delineated at the North Site. The maximum lateral extent of impacts to soil has been delineated at the South Site from the surface to a depth of 51.5 feet bgs.

Toluene was detected at a concentration of 1.2 µg/L from MW-3. This concentration is below the New Mexico Water Quality Control Commission Groundwater Standard of 750 µg/L. MW-3 is upgradient from the release point and the sample collected from downgradient well MW-1 was reported as non-detect for all BTEX compounds. No other detections of analytes were reported in groundwater samples.

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Table 1
Summary of Soil Analytical Results From Initial Response Action Activities
Initial Exploratory Soil Boring Program Maljamar Pipeline Release Site (NMOCD 1-RP No. 956)
Maljamar, New Mexico

Sample Location	Sample ID	Date	Direction from Release Point[1]	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-DRO	TPH-GRO	Total TPH
North Site											
1	Release Point 27’	1/10/2006	@ Release Point	27	--	--	--	--	17,600	19,700	37,300
2	S. Bottom 30’	1/24/2006	40’ S	30	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
3	S. Wall 17’	1/24/2006	55’ S	17	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
4	N. Bottom 30’	1/24/2006	5’ N	30	7.09	43.4	26.7	53.1	4,150	2,390	6,540
5	N. Wall 15’	1/24/2006	30’ N	15	0.124	7.83	8.72	572	17.54	1,490	2,062
6	B1 (19-19.5)	2/1/2006	75’ N	19-19.5	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
7	B1 (29-31)	2/1/2006	75’ N	29-31	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
8	B1 (39-40)	2/1/2006	75’ N	39-40	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
9	10’ S @ 32’	3/17/2006	10’ S	32	--	--	--	--	4,980	2,770	7,750
10	15’ N @ 33’	3/17/2006	15’ N	33	--	--	--	--	7,910	5,350	13,260
11	02 Bottom 44’ 30’ S	3/21/2006	30’ S	44	22.7	159	95.7	154	1,780	1,710	3,490
12	02 Bottom 44’ 15’ S	3/21/2006	15’ S	44	81.2	267	158	194	4,780	3,020	11,920
13	02 Bottom 44’ 10’ N	3/21/2006	10’ N	44	0.068	3.10	3.92	6.45	652	161	813
14	02 Wall 39’, 25’ S & 10’ W	3/21/2006	25’ S, 10’W	39	17.1	129	91.8	120	2780	1,260	4,040
15	02 Wall 39’ 38’ S	3/21/2006	38’ S	39	<0.005	0.006	<0.005	<0.015	72.0	<10.0	72.0
16	02 Wall 39’, 25’ S & 9’ E	3/21/2006	25’ S & 9’E	39	<0.005	<0.005	<0.005	<0.015	22.7	<10.0	22.7
17	Release 50’ Bottom	3/24/2006	@ Release	50	106	416	195	239.3	8,320	11,540	19,900

Notes:
[1] Pipeline oriented approximately N-S.
All concentrations shown in milligrams per kilogram.
-- Not analyzed for BTEX.
ND - Not detected.
Sample locations 1-5 were removed during subsequent excavation activities.
BTEX analysis by EPA Method 8021B.
TPH analysis by EPA Method 8015 Modified.
Results taken from CRA investigation.

Table 2
Groundwater Measurements Table
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Top of PVC Elevation (ft amsl)	Top of Screen Elevation (ft amsl)	Bottom of Screen Elevation (ft amsl)	DTW (ft btoc)	Groundwater Elevation (ft amsl)
MW-1	4027.26	3912.76	3897.76	119.73	3907.53
MW-2	4026.71	3913.21	3898.21	118.45	3908.26
MW-3	4031.86	3914.36	3899.36	122.71	3909.15
MW-4	4032.80	3915.30	3900.30	124.76	3908.04

Notes:
Groundwater survey performed on 9/29/2006.
DTW = Depth to top of water below top of PVC casing.
ft amsl = feet above mean sea level.
ft btoc = feet below top of casing.

Table 3
Summary of Soil Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Boring	Depth (feet bgs)	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
North Site									
B-1	20-21.5	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 J	<0.10
B-1	45-46.5	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4	<0.10
B-1	80-81.5	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B-1	95-96.5	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-1	115-116.5	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1	<0.11
B-1	120-121.5	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7	<0.12
B-2	15-16.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	40-41.5	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10
B-2	70-71.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	80-81.5	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3	<0.10
B-2	105-106.5	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99	<0.10
B-2	115-116.5	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2	<0.12
B-3	20-20.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99	<0.10
B-3	45-46.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9	<0.10
B-3	70-71.5	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9	<0.10
B-3	95-96.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5	<0.10
B-3	120-121.5	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5	<0.10
B-4	25-26.5	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96	<0.10
B-4	50-51.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-4	75-76.5	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91	<0.10
B-4	95-96.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89	<0.10
B-4	120-121.5	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91	<0.11
South Site									
B-5	25-26.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0	<0.10
B-5	35-36.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.11
B-5	50-51.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92	<0.10
B-6	20-21.5	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0	<0.10
B-6	35-36.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98	<0.10
B-6	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9	<0.10
B-7	25-26.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97	<0.10
B-7	35-36.5	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1	<0.10
B-7	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5	<0.10
B-8	25-26.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98	<0.10
B-8	35-36.5	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4	<0.11
B-8	50-51.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10

Notes:
All depths shown in feet below ground surface.
All concentrations shown in milligrams per kilogram.
Results and reporting limits have been adjusted by the laboratory for dry weight.
-- = Sample not analyzed for indicated parameter.
bgs - below ground surface.
TPH-DRO results are flagged “B” for method blank contamination. With the exception of samples B-1 (45-46.5), B-6 (50-51.5), and B-7 (50-51.5), the TPH-DRO results are flagged “J” because the result is less than the reporting limit.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

Table 4
Summary of Groundwater Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
North Site							
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062	<0.10

Notes:
All concentrations shown in milligrams per liter.
TPH-DRO results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit, respectively.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

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Table 5
Summary of Groundwater Analytical Results - Inorganics
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
North Site											
MW-1	09/28/06	0.025	0.0061	0.086	0.069	<0.0020	57.7	0.0021	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021	0.0035	0.10	0.065	<0.0020	66.3	0.0025	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026	0.0033	0.12	0.064	<0.0020	59.3	0.0033	<0.050	<0.025	<0.10

Well Number	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
North Site												
MW-1	09/28/06	<0.0030	13.7	0.014	<0.00020	0.0041	0.0050	4.1	<0.0050	<0.0050	30.5	0.0093
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025	0.016	19.2	<0.0050	<0.0050	145	0.014
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057	0.0081	5.0	<0.0050	<0.0050	31.8	0.0077
MW-4	09/29/09	<0.0030	11.7	0.014	<0.00020	0.0074	0.0071	5.3	<0.0050	<0.0050	28.7	0.0054

Notes:

All concentrations shown in milligrams per liter.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
Aluminum, molybdenum, and zinc results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit.
Arsenic and chromium results from MW-1, MW-3, and MW-4, manganese results from MW-1 and MW-4, all nickel results, and the potassium result from MW-1 are flagged with “J” because the result is below the detection limit.

Table 6
Summary of Groundwater Analytical Results - Other Parameters
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD RP-1 No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
North Site						
MW-1	9/28/2006	49.6	0.60	2.8	37.9	357
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66	2.9	32.7	303

Notes:
All concentrations shown in milligrams per liter.
TDS - Total dissolved solids.
Fluoride results from MW-1, MW-3, and MW-4 and chloride results from MW-1 are flagged with “J” because the result is less than the reporting limit.

FIGURES

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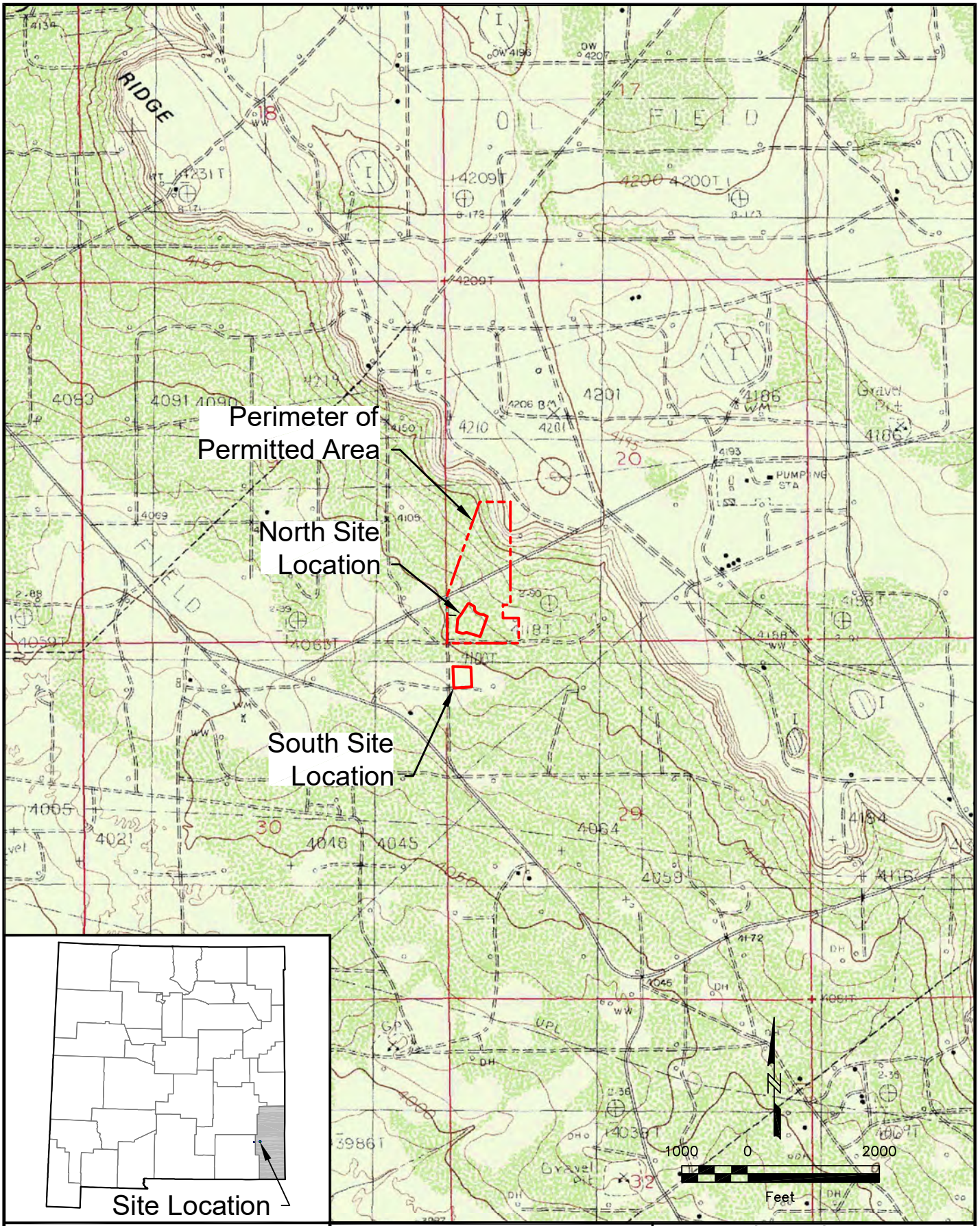

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BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

DATE: DRWN:

Site Location Map
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 1

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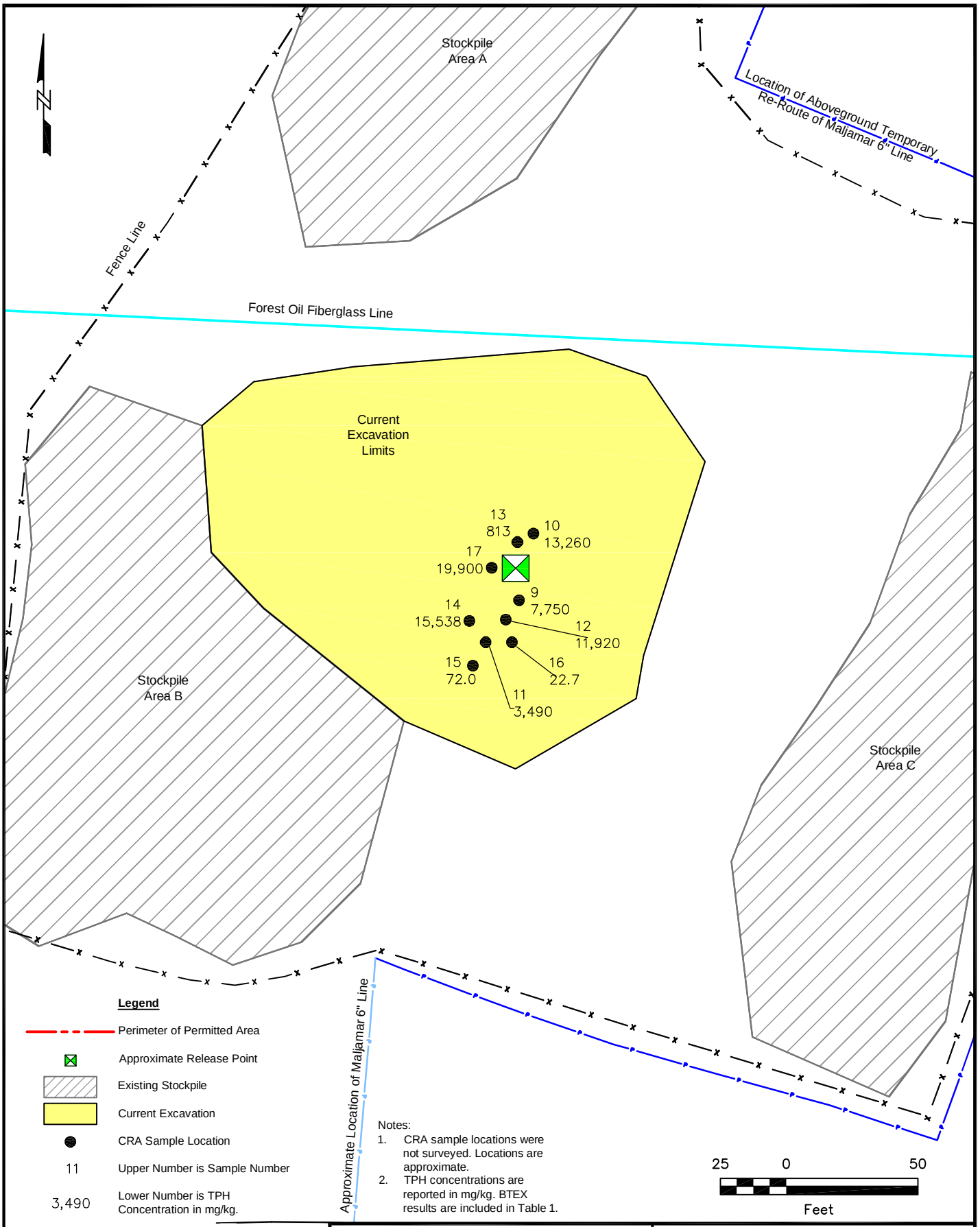

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NMOCD 1-RP No. 956
Maljamar, New Mexico

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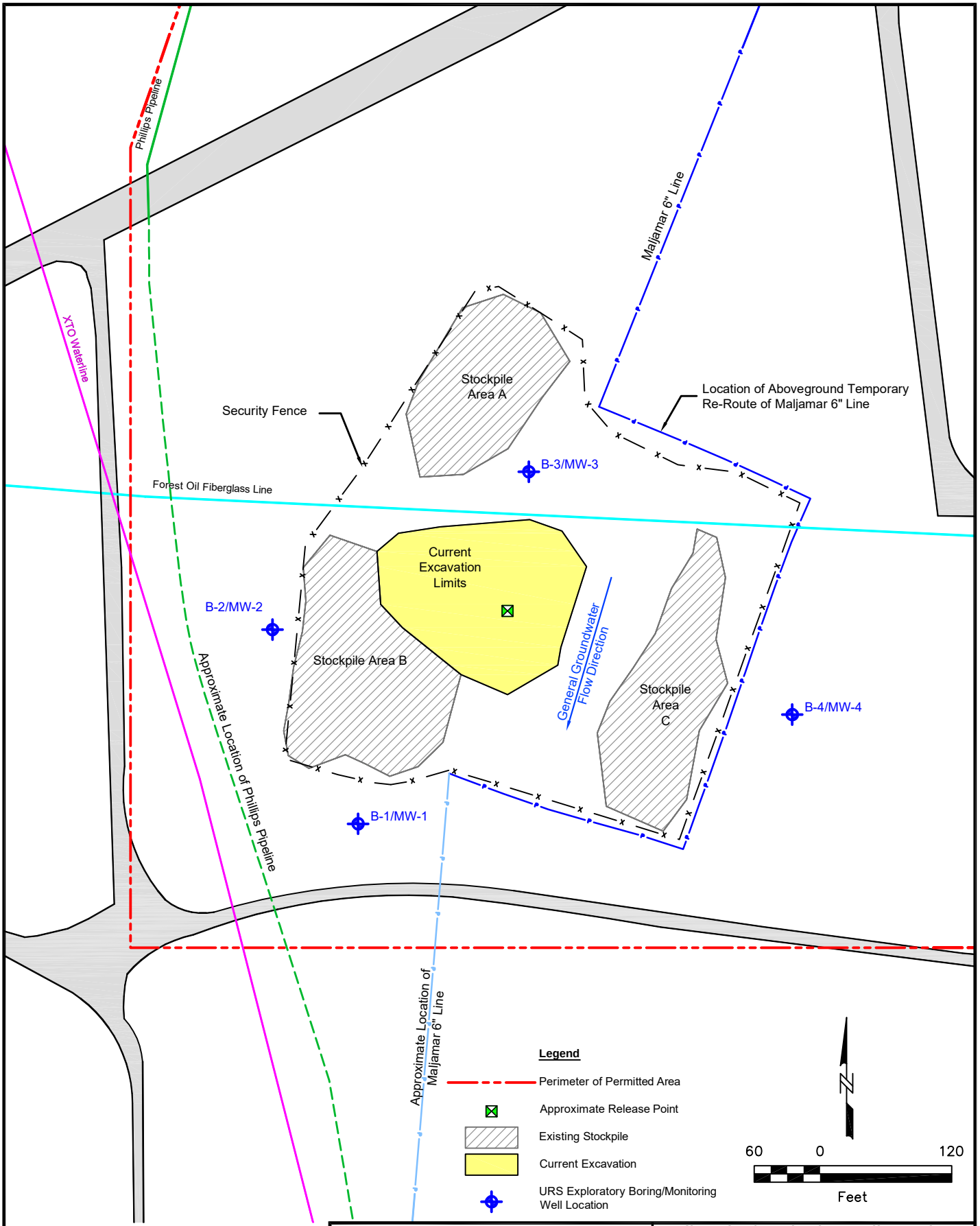
TPH Results From Initial Response Activities - North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 2



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Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

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Soil Boring/Monitoring Well Locations
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 3

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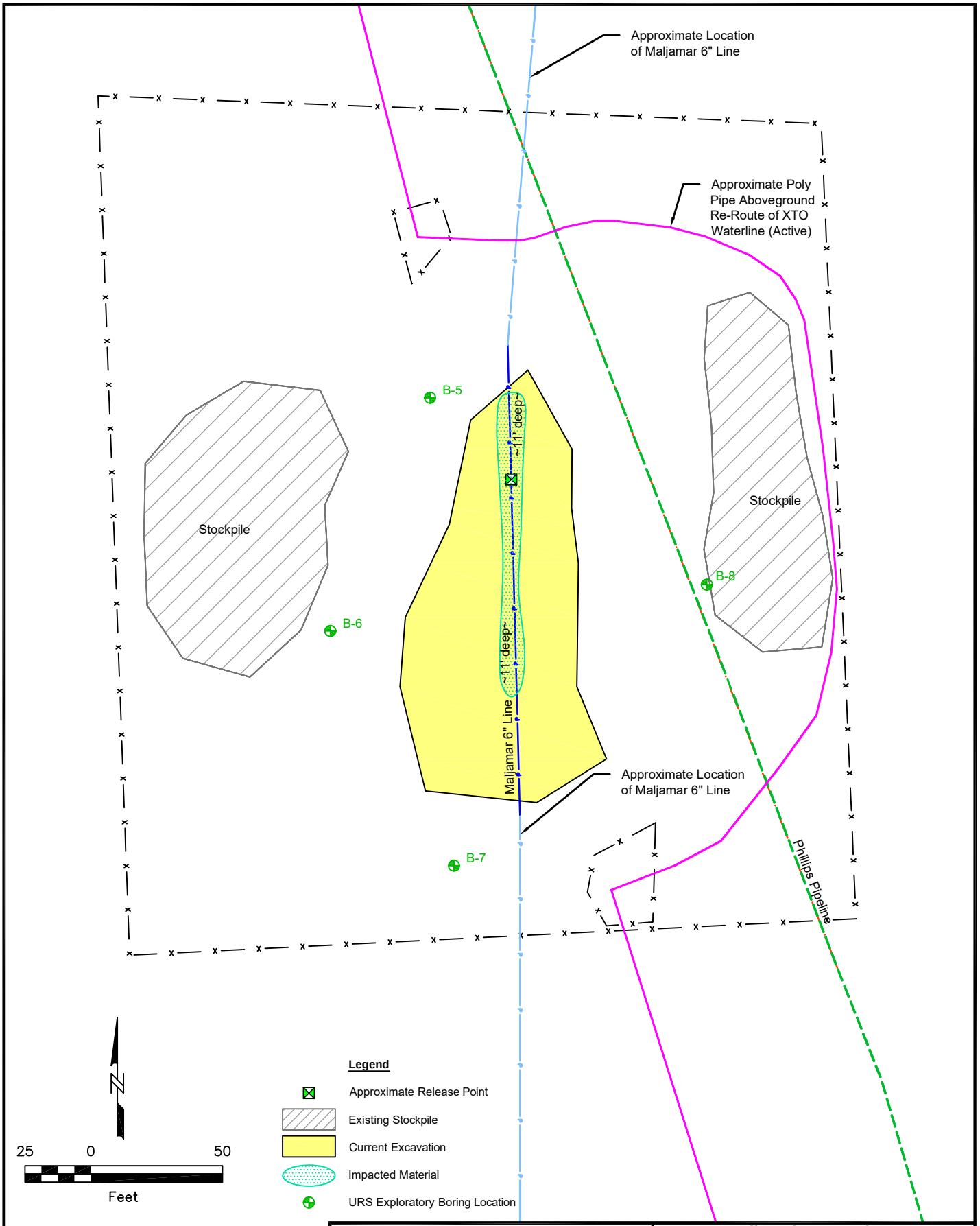

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BP Pipeline (North America), Inc. Maljamar Pipeline Release Site NMOCD 1-RP No. 956 Maljamar, New Mexico	**Soil Boring Locations** **South Site** **Initial Exploratory Soil Boring Program** **Technical Memorandum**
DATE: DRWN:	**Figure 4**

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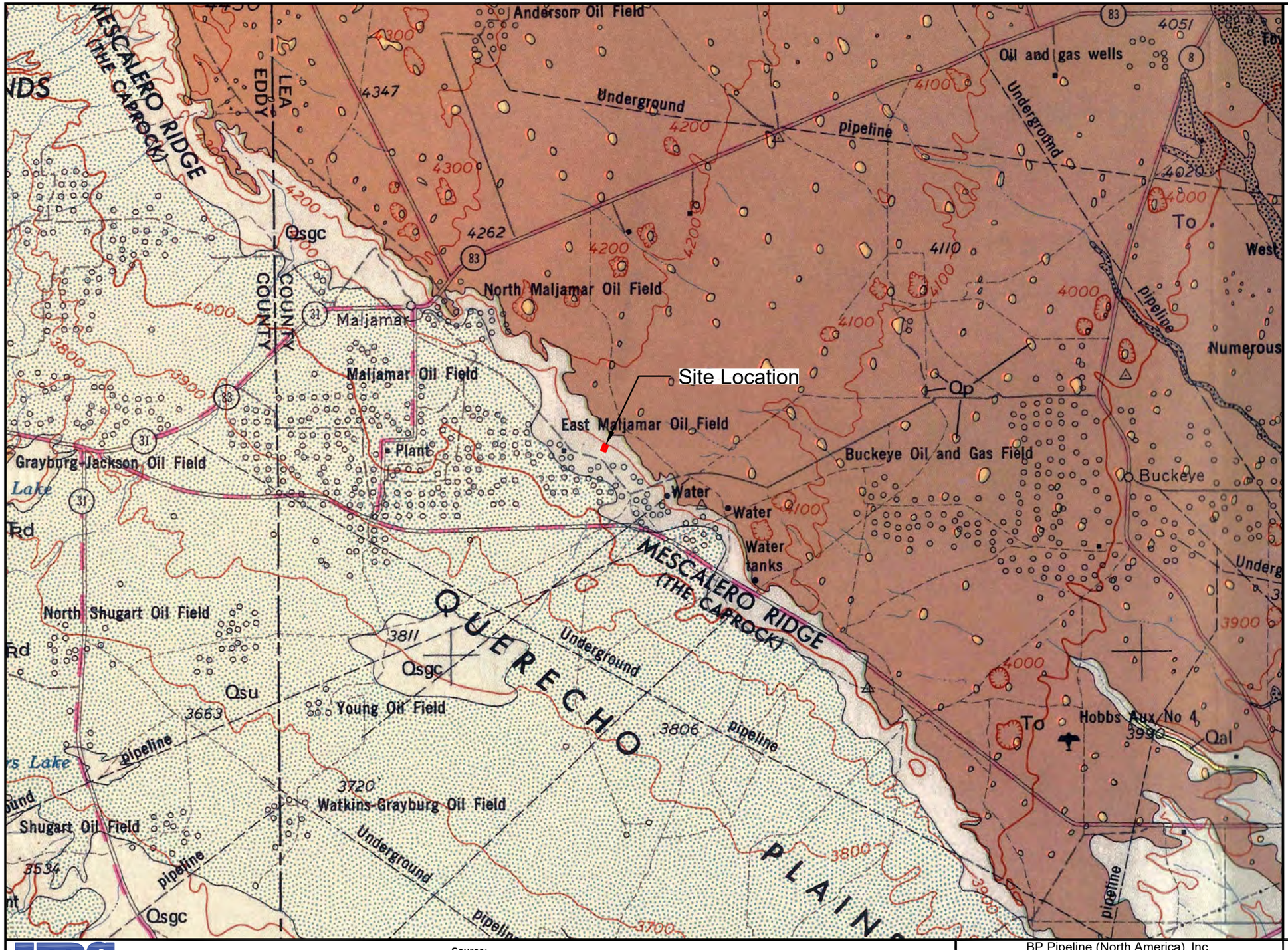

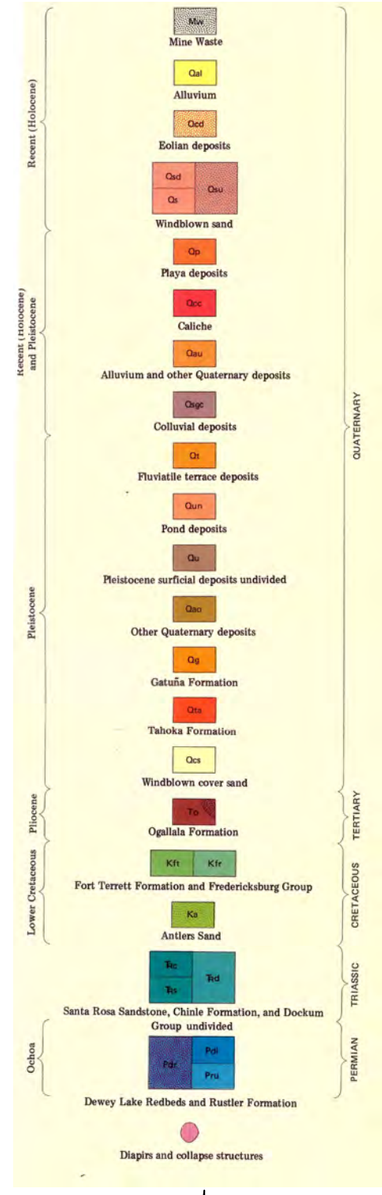

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Source:
Geologic Atlas of Texas, Hobbs Sheet, 1976.

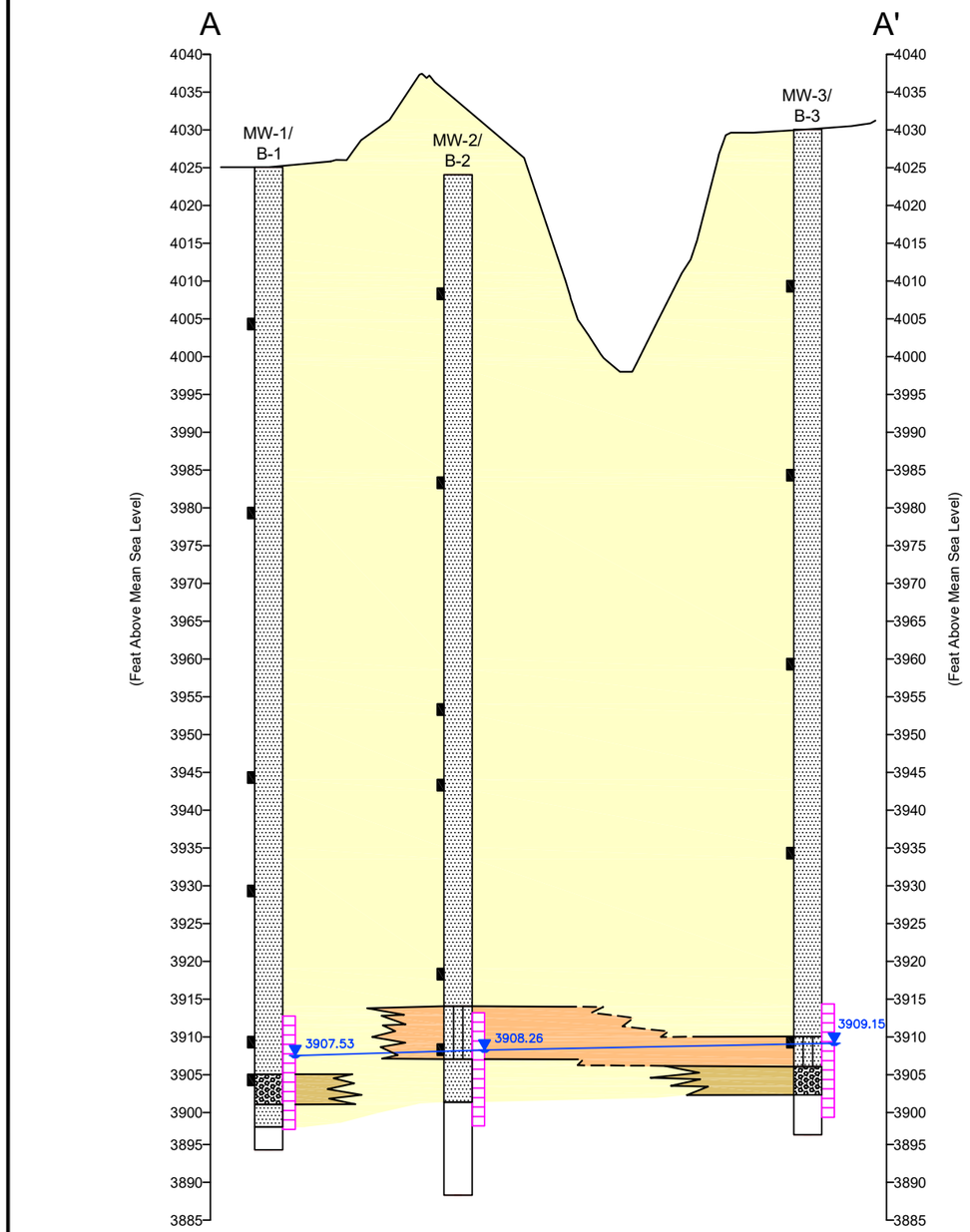
BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMODC 1-RP No. 956
Maljamar, New Mexico

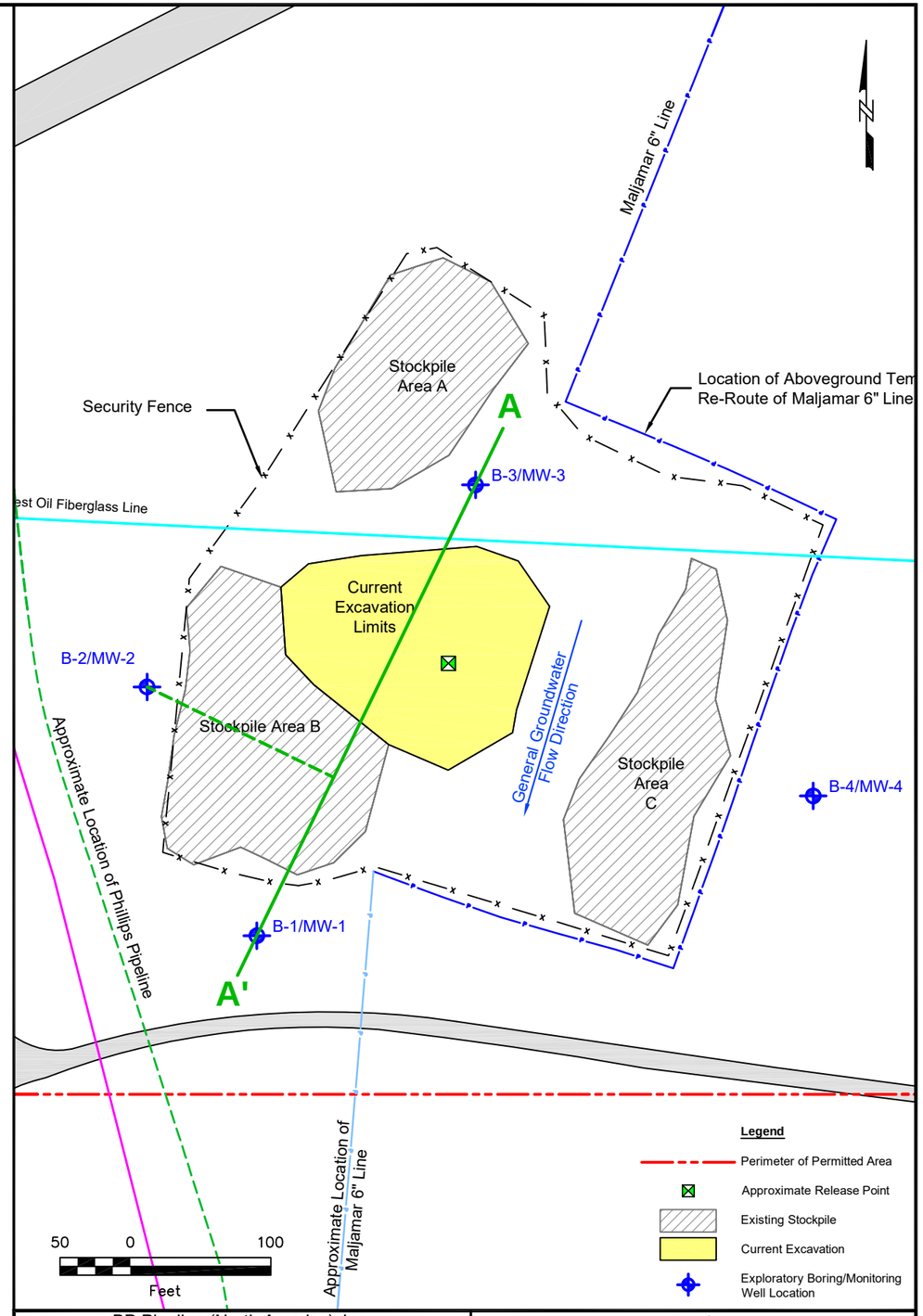
DATE: | DRWN:

Geologic Map
Initial Exploratory Soil Boring Program
Technical Memorandum

Fig 4 GAT Map.dwg 11/13/06 - AUS

Figure 5





50 0 100

Horizontal Scale in Feet
Vertical Exaggeration 5X

Legend

Lithostratigraphic Units

- Sand
- Silty Sand
- Gravelly Sand

Soil Types

- Sand
- Silty Sand
- Gravelly Sand
- Not Sampled
- Water Level
- Groundwater Elevation
- Well Screen
- Soil Sample Location Submitted for Laboratory Analysis
- Contact; Dashed Where Inferred

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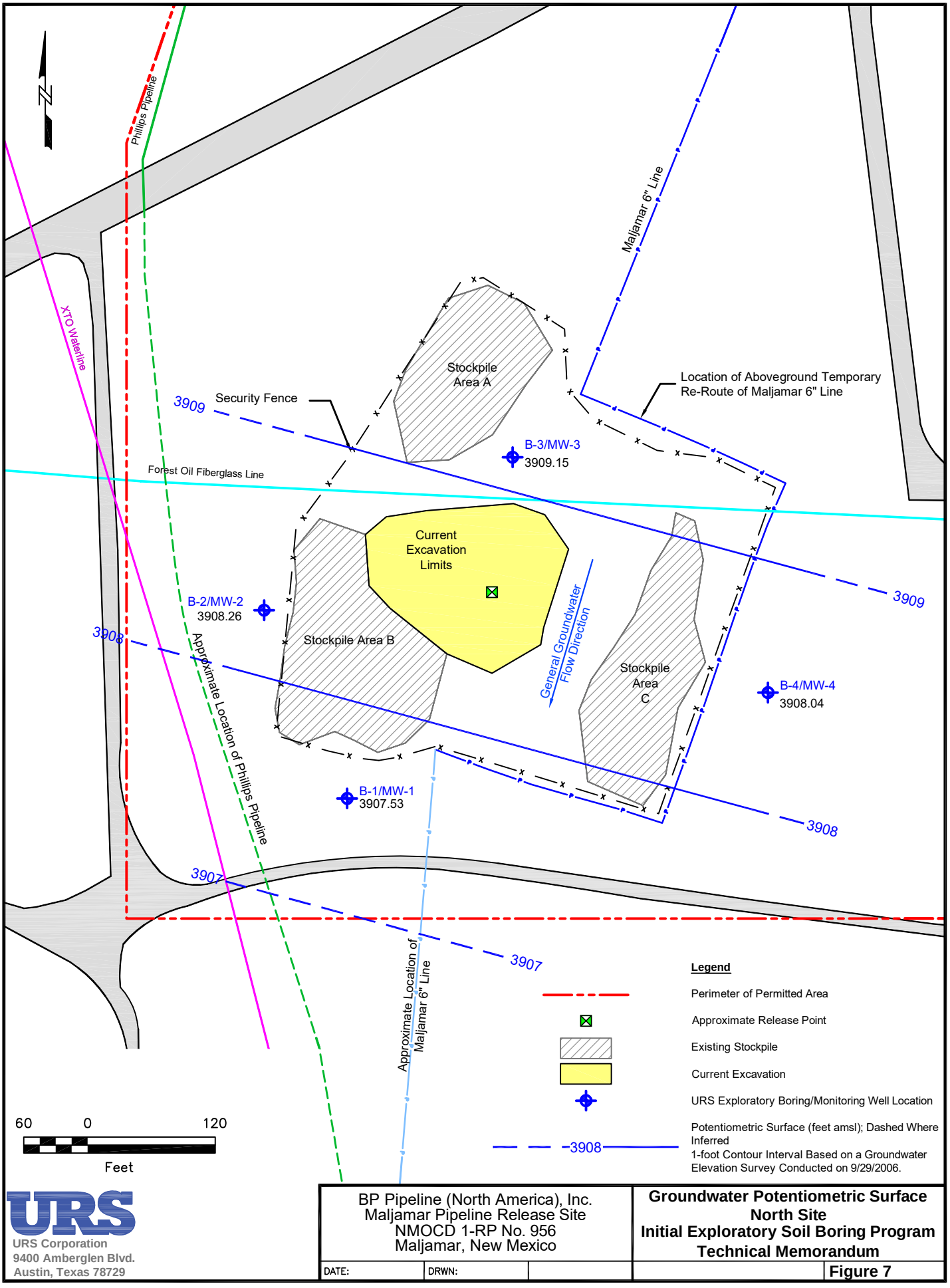
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

Cross-Section A-A'
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

DATE:	DRWN:		Tech_Memo_Figures.dwg 11/29/06 - AUS	**Figure 6**



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URS Corporation
9400 Amberglen Blvd.
Austin, Texas 78729

BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

DATE: DRWN:

Groundwater Potentiometric Surface
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 7

TABLES

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Table 1
Summary of Soil Analytical Results From Initial Response Action Activities
Initial Exploratory Soil Boring Program Maljamar Pipeline Release Site (NMOCD 1-RP No. 956)
Maljamar, New Mexico

Sample Location	Sample ID	Date	Direction from Release Point[1]	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-DRO	TPH-GRO	Total TPH
North Site											
1	Release Point 27’	1/10/2006	@ Release Point	27	--	--	--	--	17,600	19,700	37,300
2	S. Bottom 30’	1/24/2006	40’ S	30	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
3	S. Wall 17’	1/24/2006	55’ S	17	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
4	N. Bottom 30’	1/24/2006	5’ N	30	7.09	43.4	26.7	53.1	4,150	2,390	6,540
5	N. Wall 15’	1/24/2006	30’ N	15	0.124	7.83	8.72	572	17.54	1,490	2,062
6	B1 (19-19.5)	2/1/2006	75’ N	19-19.5	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
7	B1 (29-31)	2/1/2006	75’ N	29-31	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
8	B1 (39-40)	2/1/2006	75’ N	39-40	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
9	10’ S @ 32’	3/17/2006	10’ S	32	--	--	--	--	4,980	2,770	7,750
10	15’ N @ 33’	3/17/2006	15’ N	33	--	--	--	--	7,910	5,350	13,260
11	02 Bottom 44’ 30’ S	3/21/2006	30’ S	44	22.7	159	95.7	154	1,780	1,710	3,490
12	02 Bottom 44’ 15’ S	3/21/2006	15’ S	44	81.2	267	158	194	4,780	3,020	11,920
13	02 Bottom 44’ 10’ N	3/21/2006	10’ N	44	0.068	3.10	3.92	6.45	652	161	813
14	02 Wall 39’, 25’ S & 10’ W	3/21/2006	25’ S, 10’W	39	17.1	129	91.8	120	2780	1,260	4,040
15	02 Wall 39’ 38’ S	3/21/2006	38’ S	39	<0.005	0.006	<0.005	<0.015	72.0	<10.0	72.0
16	02 Wall 39’, 25’ S & 9’ E	3/21/2006	25’ S & 9’E	39	<0.005	<0.005	<0.005	<0.015	22.7	<10.0	22.7
17	Release 50’ Bottom	3/24/2006	@ Release	50	106	416	195	239.3	8,320	11,540	19,900

Notes:
[1] Pipeline oriented approximately N-S.
All concentrations shown in milligrams per kilogram.
-- Not analyzed for BTEX.
ND - Not detected.
Sample locations 1-5 were removed during subsequent excavation activities.
BTEX analysis by EPA Method 8021B.
TPH analysis by EPA Method 8015 Modified.
Results taken from CRA investigation.

Table 2
Groundwater Measurements Table
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Top of PVC Elevation (ft amsl)	Top of Screen Elevation (ft amsl)	Bottom of Screen Elevation (ft amsl)	DTW (ft btoc)	Groundwater Elevation (ft amsl)
MW-1	4027.26	3912.76	3897.76	119.73	3907.53
MW-2	4026.71	3913.21	3898.21	118.45	3908.26
MW-3	4031.86	3914.36	3899.36	122.71	3909.15
MW-4	4032.80	3915.30	3900.30	124.76	3908.04

Notes:
Groundwater survey performed on 9/29/2006.
DTW = Depth to top of water below top of PVC casing.
ft amsl = feet above mean sea level.
ft btoc = feet below top of casing.

Table 3
Summary of Soil Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Boring	Depth (feet bgs)	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
North Site									
B-1	20-21.5	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 J	<0.10
B-1	45-46.5	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4	<0.10
B-1	80-81.5	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B-1	95-96.5	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-1	115-116.5	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1	<0.11
B-1	120-121.5	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7	<0.12
B-2	15-16.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	40-41.5	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10
B-2	70-71.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	80-81.5	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3	<0.10
B-2	105-106.5	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99	<0.10
B-2	115-116.5	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2	<0.12
B-3	20-20.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99	<0.10
B-3	45-46.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9	<0.10
B-3	70-71.5	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9	<0.10
B-3	95-96.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5	<0.10
B-3	120-121.5	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5	<0.10
B-4	25-26.5	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96	<0.10
B-4	50-51.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-4	75-76.5	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91	<0.10
B-4	95-96.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89	<0.10
B-4	120-121.5	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91	<0.11
South Site									
B-5	25-26.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0	<0.10
B-5	35-36.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.11
B-5	50-51.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92	<0.10
B-6	20-21.5	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0	<0.10
B-6	35-36.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98	<0.10
B-6	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9	<0.10
B-7	25-26.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97	<0.10
B-7	35-36.5	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1	<0.10
B-7	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5	<0.10
B-8	25-26.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98	<0.10
B-8	35-36.5	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4	<0.11
B-8	50-51.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10

Notes:
All depths shown in feet below ground surface.
All concentrations shown in milligrams per kilogram.
Results and reporting limits have been adjusted by the laboratory for dry weight.
-- = Sample not analyzed for indicated parameter.
bgs - below ground surface.
TPH-DRO results are flagged "B" for method blank contamination. With the exception of samples B-1 (45-46.5), B-6 (50-51.5), and B-7 (50-51.5), the TPH-DRO results are flagged "J" because the result is less than the reporting limit.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

Table 4
Summary of Groundwater Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
North Site							
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062	<0.10

Notes:
All concentrations shown in milligrams per liter.
TPH-DRO results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit, respectively.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

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Table 5
Summary of Groundwater Analytical Results - Inorganics
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
North Site											
MW-1	09/28/06	0.025	0.0061	0.086	0.069	<0.0020	57.7	0.0021	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021	0.0035	0.10	0.065	<0.0020	66.3	0.0025	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026	0.0033	0.12	0.064	<0.0020	59.3	0.0033	<0.050	<0.025	<0.10

Well Number	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
North Site												
MW-1	09/28/06	<0.0030	13.7	0.014	<0.00020	0.0041	0.0050	4.1	<0.0050	<0.0050	30.5	0.0093
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025	0.016	19.2	<0.0050	<0.0050	145	0.014
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057	0.0081	5.0	<0.0050	<0.0050	31.8	0.0077
MW-4	09/29/09	<0.0030	11.7	0.014	<0.00020	0.0074	0.0071	5.3	<0.0050	<0.0050	28.7	0.0054

Notes:

All concentrations shown in milligrams per liter.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
Aluminum, molybdenum, and zinc results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit.
Arsenic and chromium results from MW-1, MW-3, and MW-4, manganese results from MW-1 and MW-4, all nickel results, and the potassium result from MW-1 are flagged with “J” because the result is below the detection limit.

Table 6
Summary of Groundwater Analytical Results - Other Parameters
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD RP-1 No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
North Site						
MW-1	9/28/2006	49.6	0.60	2.8	37.9	357
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66	2.9	32.7	303

Notes:
All concentrations shown in milligrams per liter.
TDS - Total dissolved solids.
Fluoride results from MW-1, MW-3, and MW-4 and chloride results from MW-1 are flagged with "J" because the result is less than the reporting limit.

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APPENDIX A
SOIL BORING LOGS

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SOIL BORING AND WELL LOG

Boring/Well ID: B-1 / MW-1 | **Total Depth:** 130 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 13-14, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Airknife for utility clearance, logged from surface, pale brown (10 YR 6/3), tan fine loose sand, soft, friable, nonplastic, some silt, trace caliche nodules, moderately well sorted, dry, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing) Grout to 110.5'
10	18/18	5 7 10	0	SP	SAND	Very pale brown (10 YR 7/3), loose, dry, moderately well sorted, very fine to fine sand with some silt, no odor, no staining	
16	17/18	6 9 15	0	SP	SAND	Same as above, no odor, no staining	
20	18/18	4 20 28	0	SP	SAND	As above, trace silt, slightly moist, no odor, no staining	
26	12/12	19 50	0	SP	SAND	As above with caliche nodules, slightly moist, no odor, no staining	
30	17/18	17 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
36	18/18	15 29 50	0	SP	SAND	35.5', 1" Caliche gravel 36.0', 2" White caliche 38', Hard caliche layer (driller note)	
40	12/18	50	0	SP	SAND	Same as above, no odor, no staining	
46	9/18	42 50	0	SP	SAND	As above, trace 1" gravel, no odor, no staining	
50	16/18	40 50	0	SW	SAND	Light yellowish brown (10 YR 5/4), dense, some silt, trace (2%) fine to medium gravel, subangular sand is fine to medium with trace coarse sand, poorly sorted, slightly moist 50.5', Color change to brown (7.5 YR 5/4), no odor, no staining	
56	0/18	34 50	0			No recovery 56-57', Caliche layer (driller note) 58-59', Caliche layer (driller note)	
60	9/18	50	0	SW	SAND	Brown (7.5 YR 5/4), some silt, some friable sandstone; fine to medium sand, dense, trace fine subangular gravel, poorly sorted	
64							

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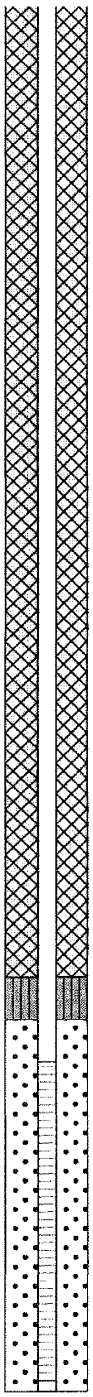
SOIL BORING AND WELL LOG

Boring/Well ID: B-1 / MW-1 | **Total Depth:** 130 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes
66	4/18	50	0	SW	SAND	As above, no odor, no staining, slightly moist
68						
70	12/12	31 50	0	SW	SAND	Yellow (10 YR 7/6), very dense, slightly moist, 15% fine to medium angular to subrounded gravel, 10% silt, no odor, no staining, sand is very fine to very coarse, very poorly sorted. 70.25', Color change to brownish yellow (10 YR 6/6,) no staining, no odor. 71', <1" Green sandstone, friable, slightly moist
72						
74						
76	6/18	50	0	SW	SAND	Brownish yellow (10 YR 6/6), dense, slightly moist, no staining, no odor, fine to medium sand, trace silt, trace fine subrounded gravel 76-77.5', Caliche layer (driller note)
78						
80	6/18	50	0	SW	SAND	As above 81', Hard drilling with augers
82						
84						
86	15/18	27 50	0	SP	SAND	Pinkish gray (7.5 YR 7/2), slightly moist, weakly cemented, very dense, moderately well sorted very fine to fine sand, trace silt
88						
90	2/18	50		SP	SAND	As above
92						
94						
96	13/18	30 50	0	SP	SAND	As above except sand is fine to medium, trace fine rounded gravel, no odor, no staining, slightly moist
98						
100	9/18	30 50	0	SP SW	SAND	As above, slightly moist, no odor, no staining 100.5', Light brown (7.5 YR 6/4) very dense, slightly moist, very fine to very coarse sand, trace fine subangular gravel, very poorly sorted
102						
104						
106	14/18	39 50	0	SP	SAND	Light brown (7.5 YR 6/4), slightly moist, dense very fine to fine sand with some silt, moderately well sorted, no odor, no staining
108						
110	9/18	48 50	0	SP	SAND	As above, except color is light reddish brown (5 YR 6/4), moist
112						
114						
116	13/18	46 50	0	SP	SAND	As above except nodules of hard friable lithified sandstone (2%)
118						
120	9/18	100	0	SW	GRAVELLY SAND	Brown (7.5 YR 5/4), dense, wet, some clay and silt, fine subangular to subrounded gravel (up to 0.5 inch), no odor, no staining 120.5', Clay layer, reddish brown (5 YR 5/4), moist, stiff, trace subrounded fine gravel, no odor, no staining
122						
124						
126	6/18	NA		SW	SAND	As above, except saturated
128						
130						
132						
134						
136						
138						



Well Construction

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SOIL BORING AND WELL LOG

Boring/Well ID: B-2 / MW-2 | **Total Depth:** 135 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 16-25, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, light brown (7.5 YR 6/3), loose, moderately well sorted, very fine to medium sand, trace silt and clay, dry, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	8 12 17	0	SP	SAND	Pink (7.5 YR 7/3), loose, moderately well sorted, very fine to medium sand (mostly fine sized). Caliche nodules, trace manganese nodules (1 cm) and FeOx staining, trace silt, no odor, no staining	Grout to 109.5'
16	18/18	13 24 31	0	SP	SAND	As above, except increased caliche and manganese nodules. Manganese nodules are 2 cm, weak cement, dense, slightly moist, no odor, no staining	
20	12/12	22 43	0	SP	SAND	As above, no odor, no staining	
26	18/18	24 50	0	SP	SAND	As above, very fine to medium sand (mostly medium sized)	
30	18/18	22 50	0	SP	SAND	As above, no odor, no staining	
36	18/18	13 15 31	0	SP	SAND	As above, except very dense, increased caliche cement, no odor, no staining	
40	18/18	18 30 50	0	SP	SAND	As above with trace fine caliche gravel, no odor, no staining	
46	18/18	32 50	0	SW	SAND	Pink (7.5 YR 7/4), very dense, slightly moist, poorly sorted, very fine to very coarse subangular sand, trace (2%) fine subangular gravel, 1 cm pockets of strongly cemented lithified sandstone	
50	18/18	36 42 50	0	SW	SAND	As above, except no gravel, yellow FeOx staining, sand is mostly fine sized, ranging from very fine to coarse with little silt, no odor, no staining 51.5', 0.5" hard white caliche,	
56	18/18	37 47 50	0	SW	SAND	As above with two 0.5" white hard caliche layers at 55' 55.75', 2" gravelly sand, fine to medium angular gravel (up to 1.5 cm) 56.0', sand is very fine to very coarse, subangular, mostly medium sized trace fine subangular gravel, no odor, no staining	
60	12/12	43 50	0	SP	SAND	Pinkish gray (7.5 YR 7/2), moderately well sorted, dense, slightly moist, weakly cemented, very fine to medium sand (mostly fine), trace silt, thinly bedded (1cm bedding layers)	

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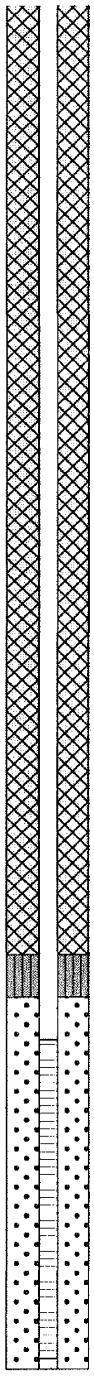
SOIL BORING AND WELL LOG

Boring/Well ID: B-2 / MW-2 | **Total Depth:** 135 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes
66	18/18	43 50	0	SP	SAND	As above with trace yellow FeOx staining, trace fine subrounded gravel (green rhyolite porphyry)
68						
70	18/18	15 24 47		SP	SAND	As above, coarsening with depth, sand is mostly medium sized
72						
74						
76	18/18	34 41 50	0	SP	SAND	As above, except sand is very fine to fine (mostly fine), three 1 cm white hard caliche layers between 75-75.5', very dense, no odor, no staining
78						
80	18/18	20 25 44	0	SP CL SP	SAND CLAY SAND	80-81 as above, coarsening to very fine to medium 81-81.3 clay, reddish brown, very stiff, medium plasticity, moist, no odor, no staining 81.3' sand, pink (7.5 YR 8/3) dense, slightly moist, moderately well sorted, very fine to fine sand, little silt, no odor, no staining
82						
84						
86	18/18	37 35 50	0	SP	SAND	As above, no odor, no staining
88						
90	12/18	50	0	SP	SAND	As above, with 1 cm pockets of lithified sandstone, moist
92						
94						
96						No split spoon sample
98						
100	12/18	27 50	0	SP	SAND	Light reddish brown (5 YR 6/4), slightly moist, fine to medium sand, trace silt, trace white rounded caliche gravel, no odor, no staining
102						
104						
106	15/18	41 50	0	SP	SAND	Coarsening with depth, fine to medium sand, moist, no caliche nodules, pockets of strongly cemented sandstone
108						
110	18/18	23 50	0	SM	SILTY SAND	Reddish yellow (5 YR 6/6), moist, dense poorly sorted very fine to medium sand, trace white caliche, no odor, no staining
112						
114						
116	11/18	27 50	0	SM	SILTY SAND	As above except wet 116', Saturated gravel (driller note) 117', Gravel (driller note)
118						
120	8/18	60	0	SW	SAND	Light brown (7.5 YR 6/3), dense, saturated, poorly sorted, very fine to very coarse sand, little subangular to subrounded fine gravel, little silt and clay
122						
124						
126						
128						
130						
132						
134						
136						Dark red silty clay on lead auger, dry, very hard, little to no plasticity, no odor, no staining
138						

Well Construction



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SOIL BORING AND WELL LOG

Boring/Well ID: B-3 / MW-3 | **Total Depth:** 133 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 26-27, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, light brown (7.5 YR 6/3), dry, loose, moderately well sorted very fine to medium sand, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	12 13 24	5.5	SP	SAND	Pink (7.5 YR 7/3), dry, loose moderately well sorted very fine to fine sand, trace silt, white caliche nodules, no odor, no staining 11', black 1 cm manganese nodules	Grout to 113'
16	18/18	20 43 50	4.0	SP	SAND	As above, with increased caliche, weak cement, dense	
20	12/12	12 50	0	SP	SAND	As above	
26	18/18	18 50	0	SP	SAND	As above, except less cement, less caliche, increase manganese nodules, slightly moist, no odor, no staining	
30	18/18	24 41 50	0.7	SP	SAND	As above, except sand is fine to medium, dense, no odor, no staining	
36	18/18	24 50	0.7	SP	SAND	As above, no odor, no staining	
40	18/18	24 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
46	18/18	21 40 50	0	SP	SAND	As above with increased caliche, fine white caliche gravel	
50	12/12	15 50	0	SP	SAND	As above, with 1 cm pockets of well cemented lithified sandstone	
56	10/18	50	0	SP	SAND	As above, except sand is very fine to fine, no odor, no staining	
60	6/18	50	0	SW	SAND	60.25', Pink (7.5 YR 7/3), dense, poorly sorted, very fine to very coarse subangular to subrounded sand, trace silt, slightly moist, no odor, no staining	

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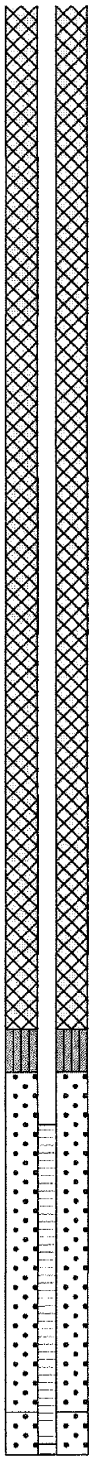
SOIL BORING AND WELL LOG

Boring/Well ID: B-3 / MW-3 | **Total Depth:** 133 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol		Lithology Description and Notes
66	18/18	27 43 50	0	SW		SAND	As above with FeOx staining, sand is mostly medium sized
68							
70	8/18	50	0	SW		SAND	As above, with increased caliche
72							
74							
76	7/18	45 50	0	SP		SAND	Light brown (7.5 YR 6/3), slightly moist, dense, moderately well sorted, very fine to fine sand, no odor, no staining
78							
80	18/18	13 43 50	0	SP		SAND	As above, except sand is fine to medium (mostly medium), red and yellow FeOx staining, no odor, no staining
82							
84							
86	18/18	44 50	0	SP		SAND	Same as above
88							
90	18/18	34 50	0	SW		SAND	Pink (7.5 YR 7/4), moist, very fine to very coarse sand, (mostly medium), trace silt, trace fine subangular gravel, no odor, no staining, poorly sorted
92							
94							
96	18/18	21 30 50	0	SW		SAND	As above
98							
100	18/18	28 37 50	0	SW		SAND	As above, no odor, no staining
102							
104							
106	18/18	30 50	0	SW		SAND	As above, no odor, no staining
108							
110	6/18	50	0	SP		SAND	Strong brown (7.5 YR 5/6), moist, dense, moderately well sorted, very fine to fine sand, trace silt, no odor, no staining
112							
114							
116	9/18	50	0	SP		SAND	As above, except color is reddish yellow (7.5 YR 6/6), sand is fine to medium (mostly medium sized), no odor, no staining
118							
120	18/18	50		SM		SILTY SAND	Yellowish red (5 YR 5/6), very moist, dense, poorly sorted, very fine to very course, subangular to subrounded sand (mostly very fine sized), no odor, no staining
122							
124							
126	5/18	75	0	SW		GRAVELLY SAND	Reddish brown (5 YR 4/4), saturated, dense, very fine to very coarse sand, fine subangular to subrounded gravel (up to 1 inch), no odor, no staining, estimated depth to water is 124' (driller note)
128							
130							
132							
134							
136							
138							

Well Construction



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SOIL BORING AND WELL LOG

Boring/Well ID: B-4 / MW-4 | **Total Depth:** 135 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 27-28, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand with little silt, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	4 4 7	0	SP	SAND	Pink (7.5 YR 7/3), dry, loose, moderately well sorted, very fine to fine sand, trace fines, white caliche, 1 cm black manganese nodules, no odor, no staining	Grout to 112.5'
16	18/18	15 30 40	0	SP	SAND	As above, except slightly moist, medium dense, increased white caliche gravel	
20	12/12	17 38	0	SP	SAND	As above, except sand is very fine to medium	
26	18/18	11 23 40	0	SP	SAND	As above, with weak cement, no odor, no staining, dense	
30	18/18	17 34 50	0	SP	SAND	As above, decrease in fines, no odor, no staining	
36	18/18	31 50	0	SP	SAND	As above 36', sand is very fine to fine with little fines, no odor, no staining	
40	18/18	27 50	0	SP	SAND	As above, except sand is very fine to medium (mostly medium), 1" pockets of strongly cemented lithified sandstone	
46	18/18	37 50	0	SP	SAND	As above, no odor, no staining	
50	12/12	20 50	0	SP	SAND	As above	
56	9/18	43 50	0	SP	SAND	As above, gradual color change to light brown (7.5 YR 6/4), slightly moist, no odor, no staining	
60	18/18	18 38 50	0	SP	SAND	As above, no odor, no staining	

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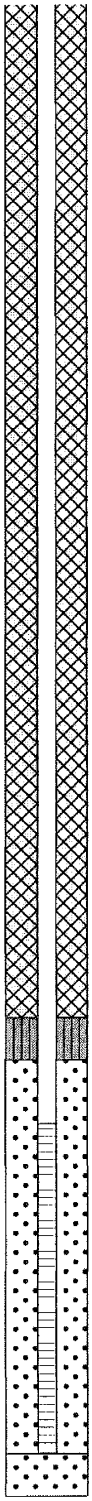
SOIL BORING AND WELL LOG

Boring/Well ID: B-4 / MW-4 | **Total Depth:** 135 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes
66	18/18	19 41 50	0	SW	SAND	Very pale brown (10 YR 7/3), slightly moist, very dense, very fine to very coarse, subangular to subrounded sand (mostly fine sized), 1.5" caliche layer at 65', poorly sorted, coarsening with depth 66.5', sand is hard and strongly cemented, little fine subrounded gravel (18%), gravel includes strong brown (7.5 YR 4/6) silty clay, poorly sorted
70	11/18	50	0	SP	SAND	Pink (7.5 YR 7/3), dense, moderately well sorted, very fine to medium sand (mostly fine sized), trace silt, slightly moist, no odor, no staining 70.5', 1.5" hard, strongly cemented lithified sandstone
74	18/18	40 50	0	SP	SAND	As above, with trace very course subangular sand (4%) 76', strong brown (7.5 YR 4/6) silty clay nodule (1"), no odor, no staining
78	18/18	26 50	0	SP	SAND	Light brown (7.5 YR 6/3), slightly moist, moderately well sorted, very fine to medium sand (mostly fine), no odor, no staining
82	18/18	25/50	inoper-able	SW	SAND	Pale brown (10 YR 6/3), slightly moist, dense very find to very coarse subrounded sand, trace fines, subrounded gravel, trace silt, no odor, no staining
86	18/18	31 50		SW	SAND	As above, sand is mostly medium sized, gravel up to 1 cm, includes quartzite and red clay
90	13/18	50		SW	SAND	As above, decrease in gravel
94	18/18	31 50		SW SP	SAND	As above, 100.6-100.8', sandstone, light gray (10 YR 7/2), moist, friable, no odor, no staining, 100.8-100.9', silty sand, brown (7.5 YR 5/3), loose, poorly sorted, very fine to fine sand, moist, no odor, no staining, 100.9', sand, light brown (7.5 YR 6/3), dense, moderately well sorted, very fine to fine sand, trace silt, moist, no odor, no staining, weak cement
98	10/18	36 50		SW	SAND	105-105.3', sandstone, light brown (7.5 YR 6/3), hard, dry very fine to very coarse subrounded sand, yellow FeOx staining, some fine subrounded gravel (25%), gravel is quartz, red clay, 105.3', sand, light brown, dense, moist, poorly sorted, very fine to very coarse, subrounded sand, (mostly fine sized), trace silt, no odor, no staining, yellow and red FeOx staining
102	7/18	50		SP	SAND	Brown (7.5 YR 5/4), dense, moderately well sorted, very fine to fine sand, trace silt, no odor, no staining
106	8/18	50		SP	SAND	As above, with increasing moisture
110	11/18	40 50		SP	SAND	As above, color change to strong brown (7.5 YR 4/6), increasing moisture, no odor, no staining
114	7/18	60		SP	SAND	As above, except saturated. Trace fine subrounded gravel
118						
122						
126						
130						
134						
138						



Well Construction

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SOIL BORING AND WELL LOG

Boring/Well ID: B-5 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 14, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	Air knife 0-6' for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), loose, moderately well sorted very fine to fine sand, white caliche nodules, dry	
10	18/18	3 8 12	0	SP	SAND	Pink (7.5 YR 7/4), loose, moderately well sorted, very fine to fine sand, trace silt, dry, no odor, no staining, caliche nodules	
16	18/18	8 19 35	0	SP	SAND	As above, very weakly cemented, increased caliche nodules	
20	12/12	24 38	0	SP	SAND	As above, gradational color change to light brown (7.5 YR 6/4), trace black (2 mm) nodules, possibly manganese nodules	
26	18/18	19 40 50	0	SP	SAND	As above, except dense	
30	18/18	37 50	0	SP	SAND	As above 30.5', 1" hard caliche layer, slightly moist	
36	18/18	30 50	0	SP	SAND	As above, except color is reddish yellow (7.5 YR 6/6) 30.5', 1" white hard caliche layer 31.0', color is pink (7.5 YR 7/3), fine caliche gravel	
40	12/12	50	0	SW	SAND	Pink (7.5 YR 7/3), dense, slightly moist, poorly sorted, very fine to very coarse sand (mostly medium), trace silt, trace fine subrounded gravel, some nodules of sand are hard and strongly cemented, no odor, no staining	
46	18/18	27 50	0	SW	SAND	As above 45.5', 1-cm white hard caliche layer	
50	18/18	20 30 50	0	SW	SAND	As above 50.2', reddish brown (5 YR 4/4) clay nodule Total depth, 51.5'	

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SOIL BORING AND WELL LOG

Boring/Well ID: B-6 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' air knife for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), loose, moderately well sorted, very fine to fine sand, trace silt, caliche nodules, dry	
10	18/18	4 4 7	0	SP	SAND	Pink (7.5 YR 7/3), loose, moderately well sorted, very fine to fine sand, with some silt, fine caliche gravel, dry, no odor, no staining	
16	18/18	3 4 7	0	SP	SAND	As above, except reddish yellow (7.5YR 6/6), very slightly cemented, dense, increased caliche nodules, no odor, no staining	
20	12/12	25 50	0	SP	SAND	As above, with black manganese nodules, slightly moist, no odor, no staining	
26	12/12	21 37	0	SP	SAND	As above, with 1" nodules of hard, strongly cemented sandstone	
30	18/18	25 37 50	0	SP	SAND	As above 30.5, caliche layer (1"), hard, no odor, no staining	
36	14/18	29 50	0	SW	SAND	As above, poorly sorted, very fine to medium, with trace coarse to very coarse sand, trace silt, slightly moist, no odor, no staining	
40	10/12	45 50	0	SW	SAND	Coarsening with depth, color gradually changed to light brown (7.5 YR 6/3), slightly moist, no odor, no staining, sand is very fine to very coarse, trace fine subangular gravel, sand is subangular to subrounded, dense	
46	18/18	20 39 50	0	SW	SAND	As above, except sand is mostly medium sized 46', very dense, slightly lithified	
50	18/18	30 50		SW	SAND	As above, except no gravel Total depth, 51.5'	

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SOIL BORING AND WELL LOG

Boring/Well ID: B-7 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	Air knife 0-6' for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand, trace silt, hard white caliche gravel	
10	18/18	5 4 5	0	SP	SAND	Pink (7.5 YR 7/3), loose, dry, moderately well sorted, very fine to fine sand, some silt, white hard 1-cm caliche gravel nodules	
16	18/18	5 10 13	0	SP	SAND	As above, except decrease to trace silt, black 2-cm manganese nodules, sand is very fine to fine, no odor, no staining, very weakly cemented	
20	12/12	15 44		SP	SAND	As above, except color is reddish yellow (7.5 YR 6/6), slightly moist, no odor, no staining	
26	18/18	17 30 50	0	SP	SAND	As above	
30	12/18	29 50	0	SP	SAND	As above, 30.5', color abruptly changes to light brown (1.5 YR 6/3), 1- to 2-cm nodules of hard, strongly cemented sandstone, no odor, no staining	
36	14/18	25 50	0	SP	SAND	As above 36.0', 2-cm white hard caliche layer, no odor, no staining	
40	12/12	37 50	0	SW	SAND	Light brown (7.5 YR 6/4), dense, poorly sorted, very fine to very coarse sand (mostly medium sized), trace fine subrounded to angular gravel, trace silt, no odor, no staining, slightly moist	
46	18/18	17 40 50	0	SW	SAND	As above, except no gravel 46.25', 1" hard lithified, cemented sandstone	
50	11/18	50	0	SW	SAND	As above, with trace FeOx staining, slightly moist, no odor, no staining Total depth 51.5'	

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SOIL BORING AND WELL LOG

Boring/Well ID: B-8 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand, trace silt, hard, white caliche gravel	
10	18/18	6 10 15	0	SP	SAND	Pink (7.5 YR 7/3), dry, loose, moderately well sorted, very fine to medium, mostly fine sized, no odor, no staining, hard, white caliche nodules 11.25', slightly moist	
16	18/18	9 16 26	0	SP	SAND	15', color is light brown (7.5 YR 6/3), 2-cm manganese nodules	
20	12/12	29 50	0	SP	SAND	As above, except weakly cemented, sand is mostly medium sized	
26	16/18	28 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
30	18/18	22 31 50	0	SP	SAND	Pale brown (10 YR 7/3), moderately well sorted, very fine to fine sand, little silt, fine caliche gravel, no odor, no staining	
36	18/18	30 38 49	0	SW	SAND	Pink (7.5 YR 7/3), slightly moist, dense, poorly sorted, very fine to very coarse subangular to subrounded sand, weakly cemented, mostly medium sized sand, no odor, no staining, trace subangular gravel	
40	12/12	50	0	SW	GRAVELLY SAND	Light brown (7.5 YR 6/4), very fine to very coarse subangular sand, fine to medium subangular to rounded gravel, trace silt, gravel up to 3-cm, little cementation, no odor, no staining	
46	18/18	30 44 48	0	SP	SAND	Light brown (7.5 YR 6/3), slightly moist, dense, moderately well sorted, very fine to coarse sand, (mostly medium sized), no odor, no staining, weakly cemented trace pockets of strongly cemented sandstone	
50	2/18	25 50		SP	SAND	As above, very fine to coarse sand, (mostly medium sized), no odor, no staining Total depth, 51.5'	

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APPENDIX B
PHOTOGRAPHS

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Photograph 1. The south and east walls of the North Site excavation.

Photograph 2. Installation of MW-2/B-2 at the North Site, view looking south.

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Photograph 3. The South Site prior to drilling activities.

Photograph 4. Installation of B-6 at the South Site, view looking north.

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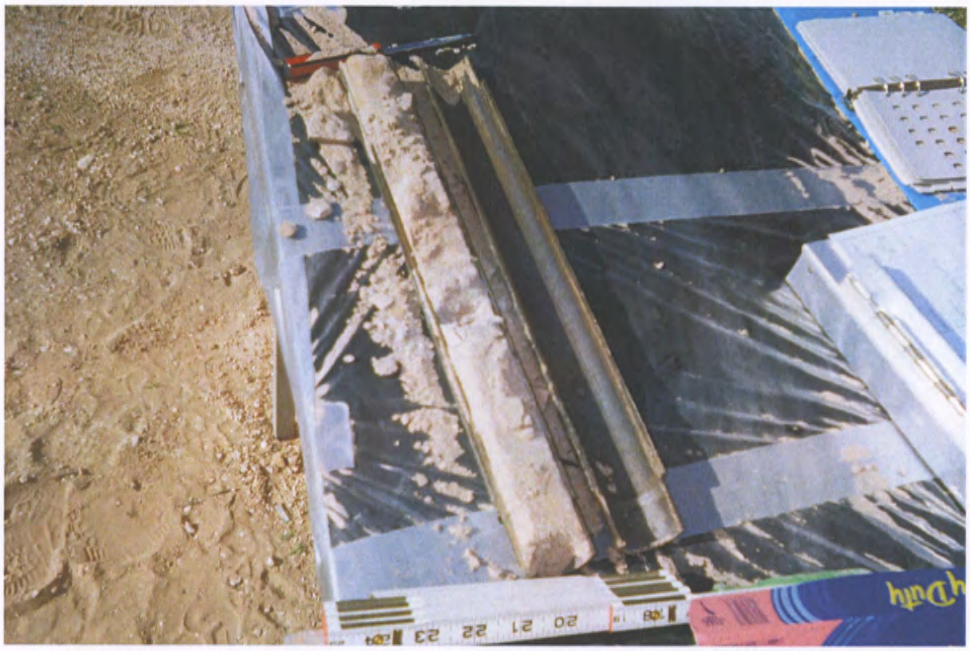

Photograph 5. Typical split spoon sample of moderately wells sorted fine sand.

Photograph 6. Caliche sample from ring-sampler.

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APPENDIX C
DATA VALIDATION REPORT AND LABORATORY ANALYTICAL REPORTS

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INITIAL EXPLORATORY SOIL BORING PROGRAM – SEPTEMBER 2006

This laboratory Data Validation Report (DVR) describes the data quality for the September 2006 soil and groundwater sampling event conducted at the North and South Site excavations along the BP Pipelines (North America), Inc. (BP Pipeline NA) 6-inch crude oil gathering line, approximately five miles southeast of the town of Maljamar in Lea County, New Mexico. This event includes 34 soil samples, 3 soil field duplicate samples, 4 groundwater samples, and 1 groundwater field duplicate sample collected by URS Corporation (URS) in September 2006 and analyzed by Severn Trent Laboratories, Austin, Texas (STL Austin).

The purpose of the initial exploratory boring program was to collect data to support the development of a plan to appropriately modify the current excavations to create a safe work environment as well as to provide an indication of potential extent of impacts in soil and groundwater.

Sample identifications, dates sampled, matrices, and methods used for analyses are provided in Table C-1. Analytical results are presented in Attachment A and the laboratory analytical reports are included in Attachment B. A list of potential data flags used in describing data is included in Attachment A. The purpose of this laboratory data validation was to confirm that the analyses were performed according to method protocols and to assess the quality of the reported laboratory data.

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Table C-1

Sample Identification	Laboratory Identification	Date Sampled	TDS SM160.1	Total Metals SW6010B	Dissolved Metals SW6010B	Dissolved Mercury SW7470A	TPH SW8015B	BTEX SW8260B	Anions SW9056
Soils									
B1 (20-21.5)	16I180155001	09/13/06	NA	NA	NA	NA	1	1	NA
B1 (45-46.5)	16I180155002	09/13/06	NA	NA	NA	NA	1	1	NA
B1 (80-81.5)	16I180155003	09/13/06	NA	NA	NA	NA	NA	1	NA
B1 (95-96.5)	16I180155004	09/14/06	NA	NA	NA	NA	1	1	NA
DUP-1 (FD of B1 [95-96.5])	16I180155005	09/14/06	NA	NA	NA	NA	1	1	NA
B1 (115-116.5)	16I180155006	09/14/06	NA	NA	NA	NA	1	1	NA
B1 (120-121.5)	16I180155007	09/14/06	NA	NA	NA	NA	1	1	NA
B2 (15-16.5)	16I190109011	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (40-41.5)	16I190109012	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (70-71.5)	16I190109013	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (80-81.5)	16I190109014	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (105-106.5)	16I280173001	09/25/06	NA	NA	NA	NA	1	1	NA
B2 (115-116.5)	16I280173002	09/25/06	NA	NA	NA	NA	1	1	NA
B3 (20-20.5)	16I280173003	09/26/06	NA	NA	NA	NA	1	1	NA
DUP-3 (FD of B3 [20-20.5])	16I280173008	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (45-46.5)	16I280173004	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (70-71.5)	16I280173005	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (95-96.5)	16I280173006	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (120-121.5)	16I280173007	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (25-26.5)	16I300123001	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (50-51.5)	16I300123002	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (75-76.5)	16I300123003	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (95-96.5)	16I300123004	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (120-121.5)	16I300123005	09/28/06	NA	NA	NA	NA	1	1	NA
B5 (25-26.5)	16I180155008	09/14/06	NA	NA	NA	NA	1	1	NA
B5 (35-36.5)	16I180155009	09/14/06	NA	NA	NA	NA	1	1	NA
B5 (50-51.5)	16I180155010	09/14/06	NA	NA	NA	NA	1	1	NA
B6 (20-21.5)	16I190109001	09/15/06	NA	NA	NA	NA	1	1	NA
B6 (35-36.5)	16I190109002	09/15/06	NA	NA	NA	NA	1	1	NA
B6 (50-51.5)	16I190109003	09/15/06	NA	NA	NA	NA	1	1	NA
B7 (25-26.5)	16I190109004	09/15/06	NA	NA	NA	NA	1	1	NA

Table C-1
(Continued)

Sample Identification	Laboratory Identification	Date Sampled	TDS SM160.1	Total Metals SW6010B	Dissolved Metals SW6010B	Dissolved Mercury SW7470A	TPH SW8015B	BTEX SW8260B	Anions SW9056
Soils (Continued)									
B7 (35-36.5)	I6I190109005	09/15/06	NA	NA	NA	NA	1	1	NA
DUP-2 (FD of B7 [35-36.5])	I6I190109010	09/15/06	NA	NA	NA	NA	1	1	NA
B7 (50-51.5)	I6I190109006	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (25-26.5)	I6I190109007	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (35-36.5)	I6I190109008	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (50-51.5)	I6I190109009	09/15/06	NA	NA	NA	NA	1	1	NA
Groundwater									
MW-1	I6I300123006	09/28/06	1	1	1	1	1	1	1
DUP-1 (FD of MW-1)	I6I300123008	09/28/06	1	1	1	1	1	1	1
MW-2	I6I300123009	09/29/06	1	1	1	1	1	1	1
MW-3	I6I300123007	09/29/06	1	1	1	1	1	1	1
MW-4	I6I3001230010	09/29/06	1	1	1	1	1	1	1

1 - Analyzed by STL Austin.
BTEX – Benzene, toluene, ethylbenzene, xylenes.
FD – Field Duplicate.
NA - Not analyzed.
SM - Standard Methods.
SW - EPA SW-846 method.
TDS - Total Dissolved Solids.
TPH – Total Petroleum Hydrocarbons.
VOCs - Volatile Organic Compounds.

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Analytical results were evaluated against their respective method protocols. The results indicate that all of the data are useful for their intended purpose. Sample results that were detected between the method detection limits (MDLs) and the reporting limits (RLs) were qualified with "J" as estimated. Only samples that required qualification or that are considered anomalies are discussed in this DVR. All soil results are reported as dry weight. No trip blanks were submitted with the samples that were analyzed by Environmental Protection Agency (EPA) Method SW8260B. The field team was counseled upon the importance of submitting trip blanks for all samples to be analyzed by this method.

Total Dissolved Solids by Standard Method SM160.1

Samples were analyzed for total dissolved solids (TDS) by Standard Method SM160.1. The quality control (QC) requirements that were evaluated include holding times, blanks, laboratory control samples (LCSs), field duplicate samples, and analytical duplicate samples. Overall, the QC results indicate that all of the data are useful for their intended purpose. No results were qualified.

Metals by EPA Method SW6010B

Samples were analyzed for client-specified metals by EPA Method SW6010B. Samples were analyzed for calcium, potassium, magnesium, and sodium for total metals concentrations. Samples were analyzed for the remainder of the metals for dissolved metals concentrations. The QC requirements that were evaluated include holding times, blanks, LCS/laboratory control sample duplicates (LCSDs) results, matrix spike/matrix spike duplicate (MS/MSD) results, and field duplicate samples. Overall, the QC results indicate that the data are useful for the intended purposes.

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Blanks

Samples were evaluated against their associated method blanks. All associated sample results that were detected above the MDLs and ≤ five times the concentrations in the blanks were qualified with "B" as similar to the blank concentrations. Aluminum, molybdenum, and zinc were detected in one method blank at levels above the MDLs but below the RLs. All of the water samples were associated with this method blank. Qualified results are presented in Table C-2.

Table C-2
Metal Results Qualified Due to Blanks

Sample ID	Analyte	Result (mg/L)	Qualifier	Reason
MW-1	Aluminum	0.025	B	Result within 5x of method blank
	Molybdenum	0.0041		
	Zinc	0.0093		
DUP-1	Aluminum	0.021		
	Molybdenum	0.0034		
	Zinc	0.0052		
MW-2	Aluminum	0.020		
	Molybdenum	0.0025		
	Zinc	0.014		
MW-3	Aluminum	0.021		
	Molybdenum	0.0057		
	Zinc	0.0077		
MW-4	Aluminum	0.026		
	Molybdenum	0.0074		
	Zinc	0.0054		

B – Similar to blank concentration.

Field Duplicates

Results were evaluated if at least one result of the field duplicate sample pair was above the RL. The results for selenium in one field duplicate pair, MW-1 and its field duplicate DUP-1, were not reproducible. The relative percent difference (RPD) for selenium was 200%, which was above the acceptance criterion of 30%. The not detected result for selenium in MW-1 was qualified with "UJ" as not detected/estimated and the detected result of 0.0060 mg/L for selenium in DUP-1 was qualified with "J" as estimated.

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Mercury by EPA Method SW7470A

Samples were analyzed for mercury by EPA Method SW7470A. The QC requirements that were evaluated include holding times, blanks, LCS/LCSD results, MS/MSD results, and field duplicate samples. Overall, the QC results indicate that the data are useful for the intended purposes. No results were qualified.

Total Petroleum Hydrocarbons by EPA Method SW8015B

Samples were analyzed for total petroleum hydrocarbons (TPH) by EPA Method SW8015B. The results were reported as gasoline range organics (GRO) and diesel range organics (DRO). The QC requirements that were evaluated included holding times, blanks, LCS/LCSD results, MS/MSD results, field duplicate samples, and surrogate spike results. Overall, the QC results indicate that all of the data are useful for the intended purposes.

Laboratory Control Samples

LCSs were prepared and analyzed with each batch of samples. All of the recoveries were within acceptance criteria. The RPD for DRO for the LCS/LCSD pair associated with the groundwater samples was 61%, which was above the acceptance criterion of 30%. The DRO result of 0.062 mg/L in sample MW-4 was qualified with "J" as estimated. All of the other groundwater results had already been qualified with "J" due to concentrations between the MDLs and RLs; therefore, no further qualifications were made.

Blanks

Samples were evaluated against their associated method blanks. Detected results in associated samples ≤ five times the concentrations in the method blanks were qualified with "B" as similar to the blank concentrations. All of the DRO soil and water method blanks had detections of hydrocarbons at levels above the MDLs but below the RLs. All of the soil and groundwater samples had DRO concentrations that were within five times of the concentrations in the method blanks; therefore, all DRO results were qualified with "B" as similar to the method blanks. The laboratory was questioned about this contamination. The response was that the MDLs for DRO are very low; therefore, the laboratory always detects DRO in their method blanks when requested to report to the MDLs. The MDLs are considered valid since the lab analyzes a low-

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level check standard quarterly to confirm the MDLs. All of the sample results were less than 5 mg/kg for soils and 0.1 mg/L for groundwater.

BTEX by EPA Method SW8260B

Samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method SW8260B. The QC requirements that were evaluated included holding times, blanks, LCS/LCSD results, MS/MSD results, field duplicate samples, and surrogate spike results. Overall, the QC results indicate that all of the data are useful for the intended purposes. No results were qualified.

Anions by EPA Method SW9056

Samples were analyzed for chloride, fluoride, nitrate, and sulfate by EPA Method SW9056. The QC requirements that were evaluated include holding times, blanks, LCS/LCSD results, MS/MSD results, and field duplicate samples. Overall, the QC results indicate that all of the data are useful for the intended purposes.

Holding Times

Most of the analyses were performed within holding times. However, the analysis for nitrate in sample DUP-1 was performed four hours past the 48-hour holding time. The holding time had already expired by the time that the laboratory had received the sample. The result of 2.8 mg/L was qualified with "JL" as estimated/biased low due to this.

Field Duplicates

Results were evaluated if at least one result of the field duplicate sample pair was above the RL. The results for chloride in one field duplicate pair, MW-1 and its field duplicate DUP-1, were not reproducible. The RPD for chloride was 55%, which was above the acceptance criterion of 30%. The detected results for chloride in MW-1 and DUP-1, 49.6 mg/L and 87.3 mg/L respectively, were qualified with "J" as estimated.

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Table A-1
Summary of Soil Analytical Results - BTEX and TPH

Sample Identification	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
B1 (20-21.5)	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B1 (45-46.5)	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4 B	<0.10
B1 (80-81.5)	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B1 (95-96.5)	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2 JB	<0.10
DUP-1 (FD of B1 (95-96.5))	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.11
B1 (115-116.5)	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1 JB	<0.12
B1 (120-121.5)	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7 JB	<0.10
B2 (15-16.5)	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B2 (40-41.5)	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1 JB	<0.10
B2 (70-71.5)	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B2 (80-81.5)	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3 JB	<0.10
B2 (105-106.5)	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99 JB	<0.10
B2 (115-116.5)	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2 JB	<0.12
B3 (20-20.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99 JB	<0.10
DUP-3 (FD of B3 (20-20.5))	09/26/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.4 JB	<0.10
B3 (45-46.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9 JB	<0.10
B3 (70-71.5)	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9 JB	<0.10
B3 (95-96.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5 JB	<0.10
B3 (120-121.5)	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5 JB	<0.10
B4 (25-26.5)	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96 JB	<0.10
B4 (50-51.5)	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2 JB	<0.10
B4 (75-76.5)	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91 JB	<0.10
B4 (95-96.5)	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89 JB	<0.10
B4 (120-121.5)	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91 JB	<0.11
B5 (25-26.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0 JB	<0.10
B5 (35-36.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.11
B5 (50-51.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92 JB	<0.10
B6 (20-21.5)	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0 JB	<0.10
B6 (35-36.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98 JB	<0.10
B6 (50-51.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9 B	<0.10
B7 (25-26.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97 JB	<0.10
B7 (35-36.5)	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1 JB	<0.10
DUP-2 (FD of B7 (35-36.5))	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.2 B	<0.10
B7 (50-51.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5 B	<0.10
B8 (25-26.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98 JB	<0.10
B8 (35-36.5)	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4 JB	<0.11
B8 (50-51.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1 JB	<0.10

Notes:
All concentrations shown in mg/kg.
< = Value is reporting limit.
-- = Sample not analyzed for indicated parameter.
BTEX = Benzene, toluene, ethylbenzene, xylenes.
FD = Field duplicate.
TPH-DRO = Total Petroleum Hydrocarbons – Diesel Range Organics.
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics.

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Table A-2
Summary of Groundwater Analytical Results - BTEX and TPH

Sample Identification	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025 JB	<0.10
DUP-1 (FD of MW-1)	09/28/06	<0.001	<0.001	<0.001	<0.003	0.026 JB	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036 JB	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045 JB	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062 JB	<0.10

Notes:
All concentrations shown in mg/L.
< = Value is reporting limit.
BTEX = Benzene, toluene, ethylbenzene, xylenes.
FD = Field duplicate.
TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics.
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics.

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Table A-3
Summary of Groundwater Analytical Results – Metals

Sample Identification	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
MW-1	09/28/06	0.025 JB	0.0061 J	0.086 J	0.069	<0.0020	57.7	0.0021 J	<0.050	<0.025	<0.10
DUP-1 (FD of MW-1)	09/28/06	0.021 JB	0.0060 J	0.083 J	0.066	<0.0020	57.1	0.0024 J	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020 JB	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021 JB	0.0035 J	0.10 J	0.065	<0.0020	66.3	0.0025 J	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026 JB	0.0033 J	0.12 J	0.064	<0.0020	59.3	0.0033 J	<0.050	<0.025	<0.10

Sample Identification	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
MW-1	09/28/06	<0.0030	13.7	0.014 J	<0.00020	0.0041 JB	0.0050 J	4.1 J	<0.0050 UJ	<0.0050	30.5	0.0093 JB
DUP-1 (FD of MW-1)	09/28/06	<0.0030	13.6	0.011 J	<0.00020	0.0034 JB	0.0045 J	4.1 J	0.0060 J	<0.0050	30.4	0.0052 JB
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025 JB	0.016 J	19.2	<0.0050	<0.0050	145	0.014 JB
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057 JB	0.0081 J	5.0	<0.0050	<0.0050	31.8	0.0077 JB
MW-4	09/29/09	<0.0030	11.7	0.014 J	<0.00020	0.0074 JB	0.0071 J	5.3	<0.0050	<0.0050	28.7	0.0054 JB

Note:
All concentrations shown in mg/L.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
< = Value is reporting limit.
FD = Field duplicate.

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Table A-4
Summary of Groundwater Analytical Results - Other Parameters

Sample Identification	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
MW-1	9/28/2006	49.6 J	0.60 J	2.8	37.9	357
DUP-1 (FD of MW-1)	9/28/2006	87.3 J	0.74 J	2.8 JL	40.5	348
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59 J	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66 J	2.9	32.7	303

Notes:
All concentrations shown in mg/L.
FD = Field duplicate.
TDS - Total dissolved solids.

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Attachment A
Analytical Results

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Flag Definitions

B	Analyte detected in a blank at a concentration within five times this sample result (ten times for common laboratory contaminants).
H	Result may be biased high. See data validation report for details.
J	Estimated: The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
L	Result may be biased low. See data validation report for details.
ND	Not detected, no instrument response was recorded for the analyte.
R	Result is rejected. The data are unusable.
U	Not detected: Analysis for the analyte was performed, but the analyte was not detected above the level of the associated value.

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Attachment B
Laboratory Analytical Reports

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I180155

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

September 22, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I180155**

This report contains the analytical results for the 10 samples received under chain of custody by Severn Trent Laboratories (STL) on September 16, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6262380, diesel range organics was detected in the associated method blank at 0.98 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I180155

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-1(20-21.5) 09/13/06 14:40 001				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.6	0.50	%	ASTM D 2216-90
B-1(45-46.5) 09/13/06 15:40 002				
Diesel Range Organics	4.4 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.4	0.50	%	ASTM D 2216-90
B-1(80-81.5) 09/13/06 17:50 003				
Percent Moisture	6.5	0.50	%	ASTM D 2216-90
B-1(95-96.5) 09/14/06 09:45 004				
Diesel Range Organics	1.2 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.4	0.50	%	ASTM D 2216-90
DUP-1 09/14/06 08:00 005				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90
B-1(115-116.5) 09/14/06 11:20 006				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	6.5	0.50	%	ASTM D 2216-90
B-1(120-121.5) 09/14/06 11:50 007				
Diesel Range Organics	1.7 J,B	2.0	mg/kg	SW846 8015B
Percent Moisture	16.4	0.50	%	ASTM D 2216-90
B-5(25-26.5) 09/14/06 16:00 008				
Diesel Range Organics	1.0 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.8	0.50	%	ASTM D 2216-90
B-5(35-36.5) 09/14/06 16:20 009				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	5.0	0.50	%	ASTM D 2216-90

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EXECUTIVE SUMMARY - Detection Highlights

I6I180155

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-5(50-51.5) 09/14/06 16:45 010				
Diesel Range Organics	0.92 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.3	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I180155

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I180155

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEHLQ	001	B-1(20-21.5)	09/13/06	14:40
JEHLX	002	B-1(45-46.5)	09/13/06	15:40
JEHL0	003	B-1(80-81.5)	09/13/06	17:50
JEHL1	004	B-1(95-96.5)	09/14/06	09:45
JEHL3	005	DUP-1	09/14/06	08:00
JEHL4	006	B-1(115-116.5)	09/14/06	11:20
JEHL8	007	B-1(120-121.5)	09/14/06	11:50
JEHMA	008	B-5(25-26.5)	09/14/06	16:00
JEHMD	009	B-5(35-36.5)	09/14/06	16:20
JEHMF	010	B-5(50-51.5)	09/14/06	16:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I180155

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
002	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
003	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
004	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
005	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
006	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
007	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
008	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
009	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235

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QC DATA ASSOCIATION SUMMARY

I6I180155

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
010	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-001	Work Order #...: JEHLQ1AC	Matrix.....: SOLID
Date Sampled...: 09/13/06 14:40	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 16:09	
Dilution Factor: 1.02		
% Moisture.....: 1.6	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC Volatiles

Lot-Sample #...:	I6I180155-001	Work Order #...: JEHLQ1AD	Matrix.....: SOLID
Date Sampled...:	09/13/06 14:40	Date Received..: 09/16/06	MS Run #.....: 6263247
Prep Date.....:	09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...:	6263387	Analysis Time..: 16:46	
Dilution Factor:	1		
% Moisture.....:	1.6	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-001	Work Order #...:	JEHLQ1AE	Matrix.....:	SOLID
Date Sampled...:	09/13/06 14:40	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	18:07		
Dilution Factor:	1				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	91	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-1(20-21.5)

General Chemistry

Lot-Sample #...: I6I180155-001 Work Order #...: JEHLQ Matrix.....: SOLID
Date Sampled...: 09/13/06 14:40 Date Received..: 09/16/06
% Moisture.....: 1.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.6	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:00 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: B-1(45-46.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-002	Work Order #...:	JEHLX1AC
Date Sampled...:	09/13/06 15:40	Date Received..:	09/16/06
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06
Prep Batch #...:	6263374	Analysis Time..:	16:31
Dilution Factor:	0.98		
% Moisture.....:	2.4	Method.....:	SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-1(45-46.5)

GC Volatiles

Lot-Sample #...:	I6I180155-002	Work Order #...:	JEHLX1AD	Matrix.....:	SOLID
Date Sampled...:	09/13/06 15:40	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	17:14		
Dilution Factor:	1				
% Moisture.....:	2.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	75	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(45-46.5)

GC Semivolatiles

Lot-Sample #...: I6I180155-002	Work Order #...: JEHLX1AE	Matrix.....: SOLID
Date Sampled...: 09/13/06 15:40	Date Received..: 09/16/06	MS Run #.....: 6262373
Prep Date.....: 09/19/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6262380	Analysis Time..: 18:48	
Dilution Factor: 1		
% Moisture.....: 2.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	4.4 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	87	(37 - 131)
Dotriacontane	104	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-1(45-46.5)

General Chemistry

Lot-Sample #...: I6I180155-002 Work Order #...: JEHLX Matrix.....: SOLID
Date Sampled...: 09/13/06 15:40 Date Received..: 09/16/06
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:04 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: B-1(80-81.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-003	Work Order #...: JEHL01AC	Matrix.....: SOLID
Date Sampled...: 09/13/06 17:50	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 16:53	
Dilution Factor: 1.01		
% Moisture.....: 6.5	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(80-81.5)

General Chemistry

Lot-Sample #...: I6I180155-003 Work Order #...: JEHL0 Matrix.....: SOLID
Date Sampled...: 09/13/06 17:50 Date Received..: 09/16/06
% Moisture.....: 6.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	6.5	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:06 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: B-1(95-96.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-004	Work Order #...:	JEHL11AC	Matrix.....:	SOLID
Date Sampled...:	09/14/06 09:45	Date Received..:	09/16/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	17:16		
Dilution Factor:	1				
% Moisture.....:	2.4	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(95-96.5)

GC Volatiles

Lot-Sample #...: I6I180155-004	Work Order #...: JEHL11AD	Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45	Date Received..: 09/16/06	MS Run #.....: 6263247
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263387	Analysis Time..: 17:41	
Dilution Factor: 0.99		
% Moisture.....: 2.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-1(95-96.5)

GC Semivolatiles

Lot-Sample #...: I6I180155-004	Work Order #...: JEHL11AE	Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45	Date Received..: 09/16/06	MS Run #.....: 6262373
Prep Date.....: 09/19/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6262380	Analysis Time..: 19:28	
Dilution Factor: 1		
% Moisture.....: 2.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-1(95-96.5)

General Chemistry

Lot-Sample #...: I6I180155-004 Work Order #...: JEHL1 Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45 Date Received..: 09/16/06
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:08 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: DUP-1

GC/MS Volatiles

Lot-Sample #...:	I6I180155-005	Work Order #...: JEHL31AC	Matrix.....: SOLID
Date Sampled...:	09/14/06 08:00	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....:	09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...:	6263374	Analysis Time..: 17:38	
Dilution Factor:	0.99		
% Moisture.....:	4.4	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-1

GC Volatiles

Lot-Sample #...:	I6I180155-005	Work Order #...:	JEHL31AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 08:00	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	18:09		
Dilution Factor:	0.99				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: DUP-1

GC Semivolatiles

Lot-Sample #...: I6I180155-005	Work Order #...: JEHL31AE	Matrix.....: SOLID
Date Sampled...: 09/14/06 08:00	Date Received..: 09/16/06	MS Run #.....: 6262373
Prep Date.....: 09/19/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6262380	Analysis Time..: 20:08	
Dilution Factor: 1		
% Moisture.....: 4.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: DUP-1

General Chemistry

Lot-Sample #...: I6I180155-005 Work Order #...: JEHL3 Matrix.....: SOLID
Date Sampled...: 09/14/06 08:00 Date Received..: 09/16/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:10 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(115-116.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-006	**Work Order #...:**	JEHL41AC	**Matrix.....:**	SOLID
Date Sampled...:	09/14/06 11:20	**Date Received..:**	09/16/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	18:00		
Dilution Factor:	1.01				
% Moisture.....:	6.5	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-1(115-116.5)

GC Volatiles

Lot-Sample #...:	I6I180155-006	Work Order #...:	JEHL41AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:20	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	18:37		
Dilution Factor:	1				
% Moisture.....:	6.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(115-116.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-006	Work Order #...:	JEHL41AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:20	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	20:48		
Dilution Factor:	1				
% Moisture.....:	6.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	84	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-1(115-116.5)

General Chemistry

Lot-Sample #...: I6I180155-006 Work Order #...: JEHL4 Matrix.....: SOLID
Date Sampled...: 09/14/06 11:20 Date Received..: 09/16/06
% Moisture.....: 6.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	6.5	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:12 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-007	Work Order #...:	JEHL81AC
Date Sampled...:	09/14/06 11:50	Date Received..:	09/16/06
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06
Prep Batch #...:	6263374	Analysis Time..:	18:23
Dilution Factor:	1.02		
% Moisture.....:	16	Method.....:	SW846 8260B

Matrix.....:	SOLID
MS Run #.....:	6263235

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	6.1	ug/kg
Ethylbenzene	ND	6.1	ug/kg
Toluene	ND	6.1	ug/kg
m-Xylene & p-Xylene	ND	12	ug/kg
o-Xylene	ND	6.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	6.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC Volatiles

Lot-Sample #...:	I6I180155-007	Work Order #...:	JEHL81AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:50	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	19:05		
Dilution Factor:	1.01				
% Moisture.....:	16	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	120	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-007	Work Order #...:	JEHL81AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:50	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	21:29		
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.7 J,B	2.0	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	101	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-1(120-121.5)

General Chemistry

Lot-Sample #...: I6I180155-007 Work Order #...: JEHL8 Matrix.....: SOLID
Date Sampled...: 09/14/06 11:50 Date Received..: 09/16/06
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	16.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:14 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-5(25-26.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-008	**Work Order #...:** JEHMA1AC	**Matrix.....:** SOLID
Date Sampled...: 09/14/06 16:00	**Date Received..:** 09/16/06	**MS Run #.....:** 6263235
Prep Date.....: 09/19/06	**Analysis Date..:** 09/19/06	
Prep Batch #...: 6263374	**Analysis Time..:** 18:44	
Dilution Factor: 1.02		
% Moisture.....: 1.8	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-5(25-26.5)

GC Volatiles

Lot-Sample #...:	I6I180155-008	Work Order #...:	JEHMA1AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:00	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	19:32		
Dilution Factor:	0.99				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-5(25-26.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-008	Work Order #...:	JEHMA1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:00	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	22:09		
Dilution Factor:	1				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.0 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-5(25-26.5)

General Chemistry

Lot-Sample #...: I6I180155-008 Work Order #...: JEHMA Matrix.....: SOLID
Date Sampled...: 09/14/06 16:00 Date Received..: 09/16/06
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.8	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:16 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-5(35-36.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-009	Work Order #...: JEHMD1AC	Matrix.....: SOLID
Date Sampled...:	09/14/06 16:20	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....:	09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...:	6263374	Analysis Time..: 19:07	
Dilution Factor:	0.98		
% Moisture.....:	5.0	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-5(35-36.5)

GC Volatiles

Lot-Sample #...: I6I180155-009	Work Order #...: JEHMD1AD	Matrix.....: SOLID
Date Sampled...: 09/14/06 16:20	Date Received..: 09/16/06	MS Run #.....: 6263247
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263387	Analysis Time..: 20:00	
Dilution Factor: 1		
% Moisture.....: 5.0	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(35-36.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-009	Work Order #...:	JEHMD1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:20	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	22:49		
Dilution Factor:	1				
% Moisture.....:	5.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-5(35-36.5)

General Chemistry

Lot-Sample #...: I6I180155-009 Work Order #...: JEHMD Matrix.....: SOLID
Date Sampled...: 09/14/06 16:20 Date Received..: 09/16/06
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	5.0	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:18 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-5(50-51.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-010	Work Order #...: JEHMF1AC	Matrix.....: SOLID
Date Sampled...: 09/14/06 16:45	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 19:29	
Dilution Factor: 1.01		
% Moisture.....: 2.3	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	97	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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Client Sample ID: B-5(50-51.5)

GC Volatiles

Lot-Sample #...:	I6I180155-010	Work Order #...:	JEHMF1AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:45	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	20:28		
Dilution Factor:	1				
% Moisture.....:	2.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(50-51.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-010	Work Order #...:	JEHMF1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:45	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	23:29		
Dilution Factor:	1				
% Moisture.....:	2.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.92 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	74	(37 - 131)
Dotriacontane	88	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-5(50-51.5)

General Chemistry

Lot-Sample #...: I6I180155-010 Work Order #...: JEHMF Matrix.....: SOLID
Date Sampled...: 09/14/06 16:45 Date Received..: 09/16/06
% Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.3	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:20 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 Work Order #...: JENK81AA Matrix.....: SOLID
MB Lot-Sample #: I6I200000-374

Prep Date.....: 09/19/06 Analysis Time..: 15:45
Analysis Date..: 09/19/06 Prep Batch #...: 6263374
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I180155
Work Order #...: JENM21AA
Matrix.....: SOLID
MB Lot-Sample #: I6I200000-387
Prep Date.....: 09/19/06
Analysis Time..: 16:18
Analysis Date..: 09/19/06
Prep Batch #...: 6263387
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AA Matrix.....: SOLID
MB Lot-Sample #: I6I190000-380

Prep Date.....: 09/19/06 Analysis Time..: 16:47
Analysis Date..: 09/20/06 Prep Batch #...: 6262380
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.98 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	94	(68 - 128)	1.6	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	89	(65 - 125)	3.4	(0-30)	SW846 8260B
Toluene	87	(64 - 124)			SW846 8260B
	88	(64 - 124)	2.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	87	(64 - 124)	3.0	(0-30)	SW846 8260B
o-Xylene	93	(65 - 125)			SW846 8260B
	90	(65 - 125)	3.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	105	(58 - 118)			SW846 8260B
	114	(58 - 118)	8.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 Work Order #...: JENK81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263374 Analysis Time..: 14:38
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	46.9	ug/kg	94	1.6	SW846 8260B
Ethylbenzene	50.0	45.9	ug/kg	92		SW846 8260B
	50.0	44.3	ug/kg	89	3.4	SW846 8260B
Toluene	50.0	43.3	ug/kg	87		SW846 8260B
	50.0	44.2	ug/kg	88	2.1	SW846 8260B
m-Xylene & p-Xylene	100	90.0	ug/kg	90		SW846 8260B
	100	87.3	ug/kg	87	3.0	SW846 8260B
o-Xylene	50.0	46.4	ug/kg	93		SW846 8260B
	50.0	45.0	ug/kg	90	3.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	52.4	ug/kg	105		SW846 8260B
	50.0	56.8	ug/kg	114	8.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I180155 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Gasoline Range Organics	**97**	**(66 - 129)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I180155 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Gasoline Range Organics	**2000**	**1940**	**ug/kg**	**97**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**79**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	33.3	26.2	mg/kg	79	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:33		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(68 - 128)			SW846 8260B
	92	(68 - 128)	0.30	(0-30)	SW846 8260B
Ethylbenzene	83	(65 - 125)			SW846 8260B
	85	(65 - 125)	0.91	(0-30)	SW846 8260B
Toluene	80	(64 - 124)			SW846 8260B
	81	(64 - 124)	0.52	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(64 - 124)			SW846 8260B
	82	(64 - 124)	0.30	(0-30)	SW846 8260B
o-Xylene	85	(65 - 125)			SW846 8260B
	87	(65 - 125)	1.5	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	8.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:33		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.7	46.6	ug/kg	92		SW846 8260B
	ND	50.3	46.4	ug/kg	92	0.30	SW846 8260B
Ethylbenzene	ND	50.7	42.1	ug/kg	83		SW846 8260B
	ND	50.3	42.5	ug/kg	85	0.91	SW846 8260B
Toluene	ND	50.7	40.4	ug/kg	80		SW846 8260B
	ND	50.3	40.6	ug/kg	81	0.52	SW846 8260B
m-Xylene & p-Xylene	ND	101	81.9	ug/kg	81		SW846 8260B
	ND	101	82.2	ug/kg	82	0.30	SW846 8260B
o-Xylene	ND	50.7	43.0	ug/kg	85		SW846 8260B
	ND	50.3	43.6	ug/kg	87	1.5	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.7	48.3	ug/kg	95		SW846 8260B
	ND	50.3	52.4	ug/kg	104	8.3	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AH-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	10:27		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	93	(66 - 129)			SW846 8015B
	91	(66 - 129)	1.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AH-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	10:27		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	ND	2020	1880	ug/kg	93		SW846 8015B
	ND	2040	1860	ug/kg	91	1.0	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AN-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:49		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	91	(32 - 132)			SW846 8015B
	84	(32 - 132)	8.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AN-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:49		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	1.0	33.8	31.9	mg/kg	91		SW846 8015B
	1.0	33.8	29.4	mg/kg	84	8.0	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I180155 **Work Order #...:** JEHLQ-SMP JEHLQ-DUP **Matrix.....:** SOLID

Date Sampled...: 09/13/06 14:40 **Date Received..:** 09/16/06

% Moisture.....: 1.6

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: I6I180155-001		
	1.6	1.6	%	0.63	(0-20)	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:00 MS Run Number..: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2, Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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SEVERN TRENT STL

CHAIN-OF-CUSTODY ADDENDUM

Lot No: IGI180155

RECEIVED BY: UA

DATE/TIME RECEIVED: 9/16/16 0830

UNPACKED DATE/TIME: 9/16/16 1000

CLIENT/PROJECT: URS Austin

Number of Shipping Containers Received with Chain of Custody 1

COC NUMBER:

QUOTE/PROFILE: 72371

SAMPLES LOGGED IN: CC

LOG-IN REVIEWED: M

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: UA

Container Sealed: ☑ YES ☐ NO

Custody Seal Present: ☑ YES ☐ NO

Custody Seal Signed/Dated: ☑ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s):

2.0 VOC CANISTERS EXAMINED UPON RECEIPT:

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)
None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: UA **IR THERMOMETER #:** 7

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB 2.0 SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____ OK to analyze samples: ☑ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☑ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** UA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

Revised 08/04/06

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4.0 CONDITION OF BOTTLES/CONTAINERS

VERIFIED BY: [signature]

Samples received match COC:	☑ YES ☐ NO	Bottles received intact:	☑ YES ☐ NO
See additional discrepancies/comments section:	☐ YES ☑ NO	Samples received from USDA restricted area:	☐ YES ☑ NO
Chain-of-Custody form properly maintained:	☑ YES ☐ NO	VOA trip blanks included:	☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments
Dup-1	9-14-06 0900	Dup-1	9-14-06 0845	Log per COC

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: [signature] Date: 9/26/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Received by OCD: 3/25/2021 2:14:32 PM

Chain of Custody Record

IBI180155

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50851

STL4149 (1202)

Client	Project Manager	Date	Page / of
URS Corporation	Shannon Hoover	9-14-06	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	
9400 Amberglen Blvd.	512-419-6552	STL-Austin	
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78729	Shannon Hoover		
Project Number/Name	**Carrier/Waybill Number**		
41008243 / BP Maljamar	Fed Ex /		
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Type	No.	Preservative	Condition on Receipt/Comments	Analysis: BTEX 8260	TPH DRO 1662 8015
B-1 (20-21.5)	9-13-06	1440	SOIL	4 oz	jar	2	None	2.0 Cool 9/16/06	X	X
B-1 (45-46.5)	9-13-06	1540	SOIL	4 oz	jar	2	None	Good	X	X
B-1 (80-81.5)	9-13-06	1750	SOIL	4 oz	jar	1	None		X	
B-1 (95-96.5)	9-14-06	945	SOIL	4 oz	jar	2	None		X	X
DUP-1	9-14-06	800	SOIL	4 oz	jar	2	None		X	X
B-1 (115-116.5)	9-14-06	1120	SOIL	4 oz	jar	2	None		X	X
B-1 (120-121.5)	9-14-06	1150	SOIL	4 oz	jar	2	None		X	X
B-5 (25-26.5)	9-14-06	1600	SOIL	4 oz	jar	2	None		X	X
B-5 (35-36.5)	9-14-06	1620	SOIL	4 oz	jar	2	None		X	X
B-5 (50-51.5)	9-14-06	1645	SOIL	4 oz	jar	2	None		X	X

RK 9-14-06

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Robert Krobs	9-14-06	700	1. Received By:	9/16/06	0830
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: HOLD ~~TH~~ RIC for PAH analysis — Need prelim TPH within 14 days

WHITE - Returned to Client with Report: YELLOW - Laboratory Copy: PINK - Field Copy

99/99

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[redacted]

Chain of Custody Record

I6I180155

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50851

STL4149 (1202)

Client	Project Manager	Date	Page 1 of 1
URS Corporation	Shannon Hoover	9-14-06	

Address	Telephone Number (Area Code)/Fax Number	Lab Location
9400 Amberglen Blvd.	512-419-6552	STL-Austin

City	State	Zip Code	Site Contact
Austin	TX	78729	Shannon Hoover

Project Number/Name	Carrier/Waybill Number
41008243 / BP Maljamar	Fed Ex / [illegible]

Contract/Purchase Order/Quote Number

Analysis

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260	TPH DRO/GRO 8015
B-1 (20-21.5)	9-13-06	1440	SOIL	4 oz	Jar	2	None	2.0 [illegible] 9/16/06	X	X
B-1 (45-46.5)	9-13-06	1540	SOIL	4 oz	Jar	2	None	GOOD	X	X
B-1 (80-81.5)	9-13-06	1750	SOIL	4 oz	Jar	1	None		X	
B-1 (95-96.5)	9-14-06	945	SOIL	4 oz	Jar	2	None		X	X
DUP-1	9-14-06	800	SOIL	4 oz	Jar	2	None		X	X
B-1 (115-116.5)	9-14-06	1120	SOIL	4 oz	Jar	2	None		X	X
B-1 (120-121.5)	9-14-06	1150	SOIL	4 oz	Jar	2	None		X	X
B-5 (25-26.5)	9-14-06	1600	SOIL	4 oz	Jar	2	None		X	X
B-5 (35-36.5)	9-14-06	1620	SOIL	4 oz	Jar	2	None		X	X
B-5 (50-51.5)	9-14-06	1645	SOIL	4 oz	Jar	2	None		X	X

RK 9-14-06

Special Instructions

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible]	9-14-06	700	1. Received By: [illegible]	9/16/06	0830
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: HOLD ~~TPH~~ for PAH analysis — Need prelim. TPH within 14 days

DISTRIBUTION: WHITE - Accompanying Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I190109

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

September 28, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I190109**

This report contains the analytical results for the 14 samples received under chain of custody by Severn Trent Laboratories (STL) on September 19, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6262380, diesel range organics was detected in the associated method blank at 0.98 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

For SW8015B analytical batch # 6265097, diesel range organics was detected in the associated method blank at 0.76 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I190109

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-6(20'-21.5') 09/15/06 09:40 001				
Diesel Range Organics	1.0 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.4	0.50	%	ASTM D 2216-90
B-6(35'-36.5') 09/15/06 10:15 002				
Diesel Range Organics	0.98 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90
B-6(50'-51.5') 09/15/06 10:40 003				
Diesel Range Organics	1.9 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.1	0.50	%	ASTM D 2216-90
B-7(25'-26.5') 09/15/06 12:00 004				
Diesel Range Organics	0.97 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.6	0.50	%	ASTM D 2216-90
B-7(35'-36.5') 09/15/06 12:15 005				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.6	0.50	%	ASTM D 2216-90
B-7(50'-51.5') 09/15/06 12:45 006				
Diesel Range Organics	2.5 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-8(25'-26.5') 09/15/06 15:05 007				
Diesel Range Organics	0.98 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-8(35'-36.5') 09/15/06 15:20 008				
Diesel Range Organics	1.4 J,B	1.9	mg/kg	SW846 8015B
Percent Moisture	8.2	0.50	%	ASTM D 2216-90
B-8(50'-51.5') 09/15/06 15:50 009				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90

(Continued on next page)

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EXECUTIVE SUMMARY - Detection Highlights

I6I190109

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP-2 09/15/06 08:00 010				
Diesel Range Organics	2.2 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.8	0.50	%	ASTM D 2216-90
B-2(15'-16.5') 09/16/06 15:20 011				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.4	0.50	%	ASTM D 2216-90
B-2(40'-41.5') 09/16/06 16:00 012				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-2(70'-71.5') 09/16/06 17:00 013				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.5	0.50	%	ASTM D 2216-90
B-2(80'-81.5') 09/16/06 17:30 014				
Diesel Range Organics	1.3 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I190109

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I190109

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEJQV	001	B-6(20'-21.5')	09/15/06	09:40
JEJQ9	002	B-6(35'-36.5')	09/15/06	10:15
JEJRC	003	B-6(50'-51.5')	09/15/06	10:40
JEJRD	004	B-7(25'-26.5')	09/15/06	12:00
JEJRF	005	B-7(35'-36.5')	09/15/06	12:15
JEJRJ	006	B-7(50'-51.5')	09/15/06	12:45
JEJRK	007	B-8(25'-26.5')	09/15/06	15:05
JEJRM	008	B-8(35'-36.5')	09/15/06	15:20
JEJRR	009	B-8(50'-51.5')	09/15/06	15:50
JEJRW	010	DUP-2	09/15/06	08:00
JEJRX	011	B-2(15'-16.5')	09/16/06	15:20
JEJR2	012	B-2(40'-41.5')	09/16/06	16:00
JEJR4	013	B-2(70'-71.5')	09/16/06	17:00
JEJR6	014	B-2(80'-81.5')	09/16/06	17:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I190109

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
002	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
003	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
004	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
005	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
006	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
007	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
008	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
009	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153

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QC DATA ASSOCIATION SUMMARY

I6I190109

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
009	SOLID	SW846 8260B		6264511	6264346
010	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
011	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
012	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
013	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
014	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346

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URS Corporation

Client Sample ID: B-6(20'-21.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-001	**Work Order #...:**	JEJQV1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	22:26		
Dilution Factor:	0.99				
% Moisture.....:	1.4	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	98	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(20'-21.5')

GC Volatiles

Lot-Sample #...:	I6I190109-001	Work Order #...:	JEJQV1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	20:56		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	50	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(20'-21.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-001	Work Order #...:	JEJQV1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:09		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.0 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	90	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-6(20'-21.5')

General Chemistry

Lot-Sample #...: I6I190109-001 Work Order #...: JEJQV Matrix.....: SOLID
Date Sampled...: 09/15/06 09:40 Date Received..: 09/19/06
% Moisture.....: 1.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:00 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-6(35'-36.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AC	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	22:49		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	11:23		
Dilution Factor:	0.99				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	02:08		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.98 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-6(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-002 Work Order #...: JEJQ9 Matrix.....: SOLID
Date Sampled...: 09/15/06 10:15 Date Received..: 09/19/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:04 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AC	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:10		
Dilution Factor:	1.02				
% Moisture.....:	2.1	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	97	(69 - 129)
1,2-Dichloroethane-d4	101	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC Volatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	11:51		
Dilution Factor:	1				
% Moisture.....:	2.1	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	02:48		
Dilution Factor:	1				
% Moisture.....:	2.1	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.9 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-6(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-003 Work Order #...: JEJRC Matrix.....: SOLID
Date Sampled...: 09/15/06 10:40 Date Received..: 09/19/06
% Moisture.....: 2.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.1	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:06 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-7(25'-26.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-004	**Work Order #...:** JEJRD1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:00	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 17:48	
Dilution Factor: 1		
% Moisture.....: 1.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-7(25'-26.5')

GC Volatiles

Lot-Sample #...:	I6I190109-004	Work Order #...:	JEJRD1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:00	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	12:18		
Dilution Factor:	0.99				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(25'-26.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-004	Work Order #...:	JEJRD1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:00	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	04:08		
Dilution Factor:	1				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.97 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	91	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-7(25'-26.5')

General Chemistry

Lot-Sample #...: I6I190109-004 Work Order #...: JEJRD Matrix.....: SOLID
Date Sampled...: 09/15/06 12:00 Date Received..: 09/19/06
% Moisture.....: 1.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:08 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-7(35'-36.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-005	**Work Order #...:** JEJRF1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:15	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 18:10	
Dilution Factor: 1.02		
% Moisture.....: 3.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-005	**Work Order #...:**	JEJRF1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 12:15	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	12:46		
Dilution Factor:	1.01				
% Moisture.....:	3.6	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-005	Work Order #...:	JEJRF1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:15	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	04:48		
Dilution Factor:	1				
% Moisture.....:	3.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	86	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-7(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-005 Work Order #...: JEJRF Matrix.....: SOLID
Date Sampled...: 09/15/06 12:15 Date Received..: 09/19/06
% Moisture.....: 3.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:10 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-7(50'-51.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-006	**Work Order #...:** JEJRJ1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:45	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 18:32	
Dilution Factor: 1.01		
% Moisture.....: 2.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(50'-51.5')

GC Volatiles

Lot-Sample #...: I6I190109-006	**Work Order #...:** JEJRJ1AD	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:45	**Date Received..:** 09/19/06	**MS Run #.....:** 6263247
Prep Date.....: 09/19/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6263387	**Analysis Time..:** 13:14	
Dilution Factor: 1		
% Moisture.....: 2.2	**Method.....:** SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-006	Work Order #...:	JEJRJ1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:45	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	05:28		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	2.5 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	107	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-7(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-006 Work Order #...: JEJRJ Matrix.....: SOLID
Date Sampled...: 09/15/06 12:45 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:12 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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Client Sample ID: B-8(25'-26.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-007	**Work Order #...:**	JEJRK1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 15:05	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	18:54		
Dilution Factor:	1.02				
% Moisture.....:	2.2	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-8(25'-26.5')

GC Volatiles

Lot-Sample #...: I6I190109-007	Work Order #...: JEJRK1AD	Matrix.....: SOLID
Date Sampled...: 09/15/06 15:05	Date Received..: 09/19/06	MS Run #.....: 6265100
Prep Date.....: 09/20/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6265141	Analysis Time..: 18:28	
Dilution Factor: 0.99		
% Moisture.....: 2.2	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-8(25'-26.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-007	Work Order #...:	JEJRK1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:05	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	06:08		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.98 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	89	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-8(25'-26.5')

General Chemistry

Lot-Sample #...: I6I190109-007 Work Order #...: JEJRK Matrix.....: SOLID
Date Sampled...: 09/15/06 15:05 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:14 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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Client Sample ID: B-8(35'-36.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-008	**Work Order #...:** JEJRM1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 15:20	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 19:16	
Dilution Factor: 0.99		
% Moisture.....: 8.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-8(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-008	Work Order #...:	JEJRM1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	18:55		
Dilution Factor:	1				
% Moisture.....:	8.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-8(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-008	Work Order #...:	JEJRM1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	06:48		
Dilution Factor:	1				
% Moisture.....:	8.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.4 J,B	1.9	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	87	(37 - 131)
Dotriacontane	97	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-8(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-008 Work Order #...: JEJRM Matrix.....: SOLID
Date Sampled...: 09/15/06 15:20 Date Received..: 09/19/06
% Moisture.....: 8.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	8.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:16 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-009	**Work Order #...:** JEJRR1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 15:50	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 19:38	
Dilution Factor: 0.99		
% Moisture.....: 2.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC Volatiles

Lot-Sample #...:	I6I190109-009	Work Order #...:	JEJRR1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:50	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	19:23		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	81	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-009	Work Order #...:	JEJRR1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:50	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	07:28		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-8(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-009 Work Order #...: JEJRR Matrix.....: SOLID
Date Sampled...: 09/15/06 15:50 Date Received..: 09/19/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:18 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: DUP-2

GC/MS Volatiles

Lot-Sample #...:	I6I190109-010	**Work Order #...:**	JEJRW1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 08:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	20:01		
Dilution Factor:	1.02				
% Moisture.....:	2.8	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: DUP-2

GC Volatiles

Lot-Sample #...:	I6I190109-010	Work Order #...:	JEJRW1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 08:00	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	19:51		
Dilution Factor:	0.99				
% Moisture.....:	2.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	85	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-2

GC Semivolatiles

Lot-Sample #...:	I6I190109-010	Work Order #...:	JEJRW1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 08:00	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	08:07		
Dilution Factor:	1				
% Moisture.....:	2.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	2.2 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	73	(37 - 131)
Dotriacontane	83	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: DUP-2

General Chemistry

Lot-Sample #...: I6I190109-010 Work Order #...: JEJRW Matrix.....: SOLID
Date Sampled...: 09/15/06 08:00 Date Received..: 09/19/06
% Moisture.....: 2.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.8	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:20 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-2(15'-16.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-011	**Work Order #...:** JEJRX1AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 15:20	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 20:23	
Dilution Factor: 1.02		
% Moisture.....: 1.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(15'-16.5')

GC Volatiles

Lot-Sample #...: I6I190109-011	Work Order #...: JEJRX1AD	Matrix.....: SOLID
Date Sampled...: 09/16/06 15:20	Date Received..: 09/19/06	MS Run #.....: 6265100
Prep Date.....: 09/20/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6265141	Analysis Time..: 20:18	
Dilution Factor: 0.99		
% Moisture.....: 1.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	92	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(15'-16.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-011	Work Order #...:	JEJRX1AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	08:47		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2(15'-16.5')

General Chemistry

Lot-Sample #...: I6I190109-011 Work Order #...: JEJRX Matrix.....: SOLID
Date Sampled...: 09/16/06 15:20 Date Received..: 09/19/06
% Moisture.....: 1.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:22 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-2(40'-41.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-012	**Work Order #...:** JEJR21AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 16:00	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 20:45	
Dilution Factor: 0.99		
% Moisture.....: 2.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(40'-41.5')

GC Volatiles

Lot-Sample #...:	I6I190109-012	Work Order #...:	JEJR21AD	Matrix.....:	SOLID
Date Sampled...:	09/16/06 16:00	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	20:46		
Dilution Factor:	0.99				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(40'-41.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-012	Work Order #...:	JEJR21AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 16:00	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/27/06		
Prep Batch #...:	6265097	Analysis Time..:	23:43		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	76	(37 - 131)
Dotriacontane	92	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2(40'-41.5')

General Chemistry

Lot-Sample #...: I6I190109-012 Work Order #...: JEJR2 Matrix.....: SOLID
Date Sampled...: 09/16/06 16:00 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:24 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-2(70'-71.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-013	**Work Order #...:** JEJR41AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 17:00	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 21:07	
Dilution Factor: 1.01		
% Moisture.....: 3.5	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(70'-71.5')

GC Volatiles

Lot-Sample #...:	I6I190109-013	**Work Order #...:**	JEJR41AD	**Matrix.....:**	SOLID
Date Sampled...:	09/16/06 17:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	21:14		
Dilution Factor:	0.99				
% Moisture.....:	3.5	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(70'-71.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-013	Work Order #...:	JEJR41AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:00	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/28/06		
Prep Batch #...:	6265097	Analysis Time..:	01:43		
Dilution Factor:	1				
% Moisture.....:	3.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	96	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2(70'-71.5')

General Chemistry

Lot-Sample #...: I6I190109-013 Work Order #...: JEJR4 Matrix.....: SOLID
Date Sampled...: 09/16/06 17:00 Date Received..: 09/19/06
% Moisture.....: 3.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.5	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:26 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-2(80'-81.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-014	**Work Order #...:** JEJR61AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 17:30	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 21:29	
Dilution Factor: 1.02		
% Moisture.....: 4.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(80'-81.5')

GC Volatiles

Lot-Sample #...:	I6I190109-014	Work Order #...:	JEJR61AD	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:30	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	21:42		
Dilution Factor:	1				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	81	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2(80'-81.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-014	Work Order #...:	JEJR61AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:30	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/28/06		
Prep Batch #...:	6265097	Analysis Time..:	02:23		
Dilution Factor:	1				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.3 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2(80'-81.5')

General Chemistry

Lot-Sample #...: I6I190109-014 Work Order #...: JEJR6 Matrix.....: SOLID
Date Sampled...: 09/16/06 17:30 Date Received..: 09/19/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:28 MS Run #.....: 6262153

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AA **Matrix.....:** SOLID
MB Lot-Sample #: I6I200000-374

Prep Date.....: 09/19/06 **Analysis Time..:** 15:45
Analysis Date..: 09/19/06 **Prep Batch #...:** 6263374
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AA **Matrix.....:** SOLID
MB Lot-Sample #: I6I210000-511

Prep Date.....: 09/20/06 **Analysis Time..:** 17:03
Analysis Date..: 09/20/06 **Prep Batch #...:** 6264511
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	93	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AA Matrix.....: SOLID
MB Lot-Sample #: I6I200000-387

Prep Date.....: 09/19/06 Analysis Time..: 16:18
Analysis Date..: 09/19/06 Prep Batch #...: 6263387
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AA Matrix.....: SOLID
MB Lot-Sample #: I6I220000-141

Prep Date.....: 09/20/06 Analysis Time..: 17:04
Analysis Date..: 09/20/06 Prep Batch #...: 6265141
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	89	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I190109
Work Order #...: JELG01AA
Matrix.....: SOLID
MB Lot-Sample #: I6I190000-380

Prep Date.....: 09/19/06
Analysis Time..: 16:47
Analysis Date..: 09/20/06
Prep Batch #...: 6262380
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.98 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JETLX1AA Matrix.....: SOLID
MB Lot-Sample #: I6I220000-097

Prep Date.....: 09/26/06 Analysis Time..: 22:22
Analysis Date..: 09/27/06 Prep Batch #...: 6265097
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.76 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	94	(68 - 128)	1.6	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	89	(65 - 125)	3.4	(0-30)	SW846 8260B
Toluene	87	(64 - 124)			SW846 8260B
	88	(64 - 124)	2.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	87	(64 - 124)	3.0	(0-30)	SW846 8260B
o-Xylene	93	(65 - 125)			SW846 8260B
	90	(65 - 125)	3.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	105	(58 - 118)			SW846 8260B
	114	(58 - 118)	8.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	46.9	ug/kg	94	1.6	SW846 8260B
Ethylbenzene	50.0	45.9	ug/kg	92		SW846 8260B
	50.0	44.3	ug/kg	89	3.4	SW846 8260B
Toluene	50.0	43.3	ug/kg	87		SW846 8260B
	50.0	44.2	ug/kg	88	2.1	SW846 8260B
m-Xylene & p-Xylene	100	90.0	ug/kg	90		SW846 8260B
	100	87.3	ug/kg	87	3.0	SW846 8260B
o-Xylene	50.0	46.4	ug/kg	93		SW846 8260B
	50.0	45.0	ug/kg	90	3.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	52.4	ug/kg	105		SW846 8260B
	50.0	56.8	ug/kg	114	8.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I210000-511 JER121AD-LCSD
Prep Date.....: 09/20/06 **Analysis Date..:** 09/20/06
Prep Batch #...: 6264511 **Analysis Time..:** 15:53
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	93	(68 - 128)			SW846 8260B
	93	(68 - 128)	0.84	(0-30)	SW846 8260B
Ethylbenzene	90	(65 - 125)			SW846 8260B
	90	(65 - 125)	0.70	(0-30)	SW846 8260B
Toluene	86	(64 - 124)			SW846 8260B
	84	(64 - 124)	1.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	88	(64 - 124)	1.3	(0-30)	SW846 8260B
o-Xylene	91	(65 - 125)			SW846 8260B
	90	(65 - 125)	1.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	102	(58 - 118)			SW846 8260B
	110	(58 - 118)	7.2	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	100	(67 - 127)
Toluene-d8	114	(76 - 136)
	115	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	99	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	99	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I210000-511 JER121AD-LCSD
Prep Date.....: 09/20/06 **Analysis Date..:** 09/20/06
Prep Batch #...: 6264511 **Analysis Time..:** 15:53
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	46.3	ug/kg	93		SW846 8260B
	50.0	46.7	ug/kg	93	0.84	SW846 8260B
Ethylbenzene	50.0	45.1	ug/kg	90		SW846 8260B
	50.0	44.8	ug/kg	90	0.70	SW846 8260B
Toluene	50.0	42.8	ug/kg	86		SW846 8260B
	50.0	42.2	ug/kg	84	1.4	SW846 8260B
m-Xylene & p-Xylene	100	89.6	ug/kg	90		SW846 8260B
	100	88.4	ug/kg	88	1.3	SW846 8260B
o-Xylene	50.0	45.7	ug/kg	91		SW846 8260B
	50.0	45.2	ug/kg	90	1.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	51.1	ug/kg	102		SW846 8260B
	50.0	55.0	ug/kg	110	7.2	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	100	(67 - 127)
Toluene-d8	114	(76 - 136)
	115	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	99	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	99	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Gasoline Range Organics	**97**	**(66 - 129)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Gasoline Range Organics	**2000**	**1940**	**ug/kg**	**97**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-141 JETP81AD-LCSD
Prep Date.....: 09/20/06 Analysis Date..: 09/20/06
Prep Batch #...: 6265141 Analysis Time..: 16:09
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**90**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**11**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	96	(49 - 147)
	102	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-141 JETP81AD-LCSD
Prep Date.....: 09/20/06 Analysis Date..: 09/20/06
Prep Batch #...: 6265141 Analysis Time..: 16:09
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**1800**	**ug/kg**	**90**		**SW846 8015B**
	2000	**1620**	**ug/kg**	**81**	**11**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	96	(49 - 147)
	102	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**79**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**26.2**	**mg/kg**	**79**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I190109 **Work Order #...:** JETLX1AC **Matrix.....:** SOLID
LCS Lot-Sample#: I6I220000-097
Prep Date.....: 09/26/06 **Analysis Date..:** 09/27/06
Prep Batch #...: 6265097 **Analysis Time..:** 23:03
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	55	(32 - 132)	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	80	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JETLX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-097
Prep Date.....: 09/26/06 Analysis Date..: 09/27/06
Prep Batch #...: 6265097 Analysis Time..: 23:03
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	33.3	18.3	mg/kg	55	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	80	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	23:33		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(68 - 128)			SW846 8260B
	92	(68 - 128)	0.30	(0-30)	SW846 8260B
Ethylbenzene	83	(65 - 125)			SW846 8260B
	85	(65 - 125)	0.91	(0-30)	SW846 8260B
Toluene	80	(64 - 124)			SW846 8260B
	81	(64 - 124)	0.52	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(64 - 124)			SW846 8260B
	82	(64 - 124)	0.30	(0-30)	SW846 8260B
o-Xylene	85	(65 - 125)			SW846 8260B
	87	(65 - 125)	1.5	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	8.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	23:33		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.7	46.6	ug/kg	92		SW846 8260B
	ND	50.3	46.4	ug/kg	92	0.30	SW846 8260B
Ethylbenzene	ND	50.7	42.1	ug/kg	83		SW846 8260B
	ND	50.3	42.5	ug/kg	85	0.91	SW846 8260B
Toluene	ND	50.7	40.4	ug/kg	80		SW846 8260B
	ND	50.3	40.6	ug/kg	81	0.52	SW846 8260B
m-Xylene & p-Xylene	ND	101	81.9	ug/kg	81		SW846 8260B
	ND	101	82.2	ug/kg	82	0.30	SW846 8260B
o-Xylene	ND	50.7	43.0	ug/kg	85		SW846 8260B
	ND	50.3	43.6	ug/kg	87	1.5	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.7	48.3	ug/kg	95		SW846 8260B
	ND	50.3	52.4	ug/kg	104	8.3	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJRD1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-004		JEJRD1AG-MSD		
Date Sampled...:	09/15/06 12:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	21:51		
Dilution Factor:	1.02	**% Moisture.....:**	1.6		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	97	(68 - 128)			SW846 8260B
	93	(68 - 128)	5.5	(0-30)	SW846 8260B
Ethylbenzene	89	(65 - 125)			SW846 8260B
	88	(65 - 125)	2.4	(0-30)	SW846 8260B
Toluene	84	(64 - 124)			SW846 8260B
	83	(64 - 124)	2.3	(0-30)	SW846 8260B
m-Xylene & p-Xylene	87	(64 - 124)			SW846 8260B
	86	(64 - 124)	2.0	(0-30)	SW846 8260B
o-Xylene	91	(65 - 125)			SW846 8260B
	90	(65 - 125)	1.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	101	(58 - 118)	5.6	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(59 - 119)
	103	(59 - 119)
Toluene-d8	109	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	99	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJRD1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-004		JEJRD1AG-MSD		
Date Sampled...:	09/15/06 12:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	21:51		
Dilution Factor:	1.02	**% Moisture.....:**	1.6		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	51.6	50.1	ug/kg	97		SW846 8260B
	ND	51.2	47.5	ug/kg	93	5.5	SW846 8260B
Ethylbenzene	ND	51.6	46.0	ug/kg	89		SW846 8260B
	ND	51.2	44.9	ug/kg	88	2.4	SW846 8260B
Toluene	ND	51.6	43.5	ug/kg	84		SW846 8260B
	ND	51.2	42.5	ug/kg	83	2.3	SW846 8260B
m-Xylene & p-Xylene	ND	103	89.5	ug/kg	87		SW846 8260B
	ND	102	87.7	ug/kg	86	2.0	SW846 8260B
o-Xylene	ND	51.6	46.8	ug/kg	91		SW846 8260B
	ND	51.2	46.3	ug/kg	90	1.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	51.6	49.0	ug/kg	95		SW846 8260B
	ND	51.2	51.9	ug/kg	101	5.6	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(59 - 119)
	103	(59 - 119)
Toluene-d8	109	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	99	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	95	(67 - 127)

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	10:27		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**93**	**(66 - 129)**			**SW846 8015B**
	91	**(66 - 129)**	**1.0**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	10:27		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2020**	**1880**	**ug/kg**	**93**		**SW846 8015B**
	ND	**2040**	**1860**	**ug/kg**	**91**	**1.0**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR61AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-014		JEJR61AG-MSD		
Date Sampled...:	09/16/06 17:30	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	17:32		
Dilution Factor:	1	**% Moisture.....:**	4.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	75	(66 - 129)			SW846 8015B
	85	(66 - 129)	11	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR61AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-014		JEJR61AG-MSD		
Date Sampled...:	09/16/06 17:30	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	17:32		
Dilution Factor:	1	**% Moisture.....:**	4.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2100**	**1580**	**ug/kg**	**75**		**SW846 8015B**
	ND	**2090**	**1770**	**ug/kg**	**85**	**11**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)
	98	(37 - 153)

NOTE(S):

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Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AN-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6262373
Prep Date.....:	09/19/06	**Analysis Date..:**	09/21/06		
Prep Batch #...:	6262380	**Analysis Time..:**	00:49		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**91**	**(32 - 132)**			**SW846 8015B**
	84	**(32 - 132)**	**8.0**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AN-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6262373
Prep Date.....:	09/19/06	**Analysis Date..:**	09/21/06		
Prep Batch #...:	6262380	**Analysis Time..:**	00:49		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**1.0**	**33.8**	**31.9**	**mg/kg**	**91**		**SW846 8015B**
	1.0	**33.8**	**29.4**	**mg/kg**	**84**	**8.0**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR21AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-012		JEJR21AG-MSD		
Date Sampled...:	09/16/06 16:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265071
Prep Date.....:	09/26/06	**Analysis Date..:**	09/28/06		
Prep Batch #...:	6265097	**Analysis Time..:**	00:23		
Dilution Factor:	1	**% Moisture.....:**	2.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**77**	**(32 - 132)**			**SW846 8015B**
	65	**(32 - 132)**	**16**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	96	(37 - 131)
	87	(37 - 131)
Dotriacontane	98	(10 - 151)
	90	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR21AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-012		JEJR21AG-MSD		
Date Sampled...:	09/16/06 16:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265071
Prep Date.....:	09/26/06	**Analysis Date..:**	09/28/06		
Prep Batch #...:	6265097	**Analysis Time..:**	00:23		
Dilution Factor:	1	**% Moisture.....:**	2.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	1.1	34.1	27.4	mg/kg	77		SW846 8015B
	1.1	34.0	23.3	mg/kg	65	16	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	96	(37 - 131)
	87	(37 - 131)
Dotriacontane	98	(10 - 151)
	90	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I190109 **Work Order #...:** JEJQV-SMP JEJQV-DUP **Matrix.....:** SOLID

Date Sampled...: 09/15/06 09:40 **Date Received..:** 09/19/06

% Moisture.....: 1.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #:	I6I190109-001	
	1.4	1.8	%	27	(0-20)	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:00 MS Run Number..: 6262153

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SEVERN TRENT STL

CHAIN-OF-CUSTODY ADDENDUM

Lot No: 160190109

RECEIVED BY: KA

DATE/TIME RECEIVED: 9/19/06 0815

UNPACKED DATE/TIME: 9/19/06 0840

CLIENT/PROJECT: URS

Number of Shipping Containers Received with Chain of Custody 1

COC NUMBER:

QUOTE/PROFILE: 72371

SAMPLES LOGGED IN: KA

LOG-IN REVIEWED: JM

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: KA

Container Sealed: ☒ YES ☐ NO

Custody Seal Present: ☒ YES ☐ NO

Custody Seal Signed/Dated: ☒ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☒ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s):

2.0 VOC CANISTERS EXAMINED UPON RECEIPT:

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)
None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: KA **IR THERMOMETER #:** R-1

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB / SC 4.2	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☒ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☒ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** KA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: _____

Samples received match COC:	☑ YES ☐ NO	Bottles received intact:	☑ YES ☐ NO
See additional discrepancies/comments section:	☐ YES ☑ NO	Samples received from USDA restricted area:	☐ YES ☑ NO
Chain-of-Custody form properly maintained:	☑ YES ☐ NO	VOA trip blanks included:	☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

Wrote Dup-2 twice only 2x120ml Rec'd

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: 9/29/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50852

I6I190109

STL4149 (1202)

Client	Project Manager	Date	Page / of
ARS	Shannon Hoover	15 Sep 2006	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512 419 6552 512 454 8807	Austin	
City / State / Zip Code	**Site Contact**		
Austin / TX / 78729	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
41008243 BP Maljamar			
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	BTEX S2601B	TPH 8015 GRO + DRO
B-6 (20-21.5')	15 Sep 06	0940	Soil	40z	glass	4	ice	MS/MSD	X	X
B-6 (35-36.5')	15 Sep 06	1015	Soil	40z	glass	2	ice		X	X
B-6 (50-51.5')	15 Sep 06	1040	Soil	40z	glass	2	ice	M. Olcott 9/19/06	X	X
B-7 (25-26.5')	15 Sep 06	1200	Soil	40z	glass	2	ice	VOA	X	X
B-7 (35-36.5')	15 Sep 06	1215	Soil	40z	glass	2	ice		X	X
B-7 (50-51.5')	15 Sep 06	1245	Soil	40z	glass	2	ice		X	X
B-8 (25-26.5)	15 Sep 06	1505	Soil	40z	glass	2	ice		X	X
B-8 (35-36.5)	15 Sep 06	1520	Soil	40z	glass	2	ice		X	X
B-8 (50-51.5)	15 Sep 06	1550	Soil	40z	glass	2	ice		X	X
Dup-2	15 Sep 06	0800	Soil	40z	glass	2	ice		X	X
Dup-2	15 Sep 06	0800	Soil	40z	glass	2	ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify): Hold TPH for PAHs

	Date	Time		Date	Time
1. Relinquished By	9.18.06	0930	1. Received By	9/19/06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with COC SAMPLE; YELLOW - Returned to Client with Report: PINK - Field Copy

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Chain of Custody Record

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

51004

STL4149 (1202)

Client: URS	Project Manager: Shannon Hoover	Date: 16 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512.419.6552	Lab Location:	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO+DRO
B-2 (15'-16.5')	16Sep06	1520	Soil	4oz	glass		ice	4.0 [illegible] 9/19/06	X	X
B-2 (40'-41.5')	16Sep06	1600	Soil	4oz	glass		ice	wood	X	X
B-2 (70-71.5')	16Sep06	1700	Soil	4oz	glass		ice		X	X
B-2 (80-81.5)	16Sep06	1730	Soil	4oz	glass		ice		X	X
~~B-2~~			Soil	4oz	glass		ice			

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	18Sep06	0930	1. Received By: [signature]	9/19/06	0817
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50352

I6I 190109

STL4149 (1202)

Client: URS	Project Manager: Shannon Hoover	Date: 15 Sep 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6552 512 454 8807	Lab Location: Austin	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Kreb		
Project Number/Name: 41008243 BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH GRO + DRO
B-6 (20-21.5')	15 Sep 06	0940	soil	4oz	glass	4	ice	MS/MSD	X	X
B-6 (35-36.5')	15 Sep 06	1015	soil	4oz	glass	2	ice		X	X
B-6 (50-51.5')	15 Sep 06	1040	soil	4oz	glass	2	ice	4 OCGT 9/19/06	X	X
B-7 (25-26.5')	15 Sep 06	1200	soil	4oz	glass	2	ice	WOOD	X	X
B-7 (35-36.5')	15 Sep 06	1215	soil	4oz	glass	2	ice		X	X
B-7 (50-51.5')	15 Sep 06	1245	soil	4oz	glass	2	ice		X	X
B-8 (25-26.5')	15 Sep 06	1505	soil	4oz	glass	2	ice		X	X
B-8 (35-36.5')	15 Sep 06	1520	soil	4oz	glass	2	ice		X	X
B-8 (50-51.5')	15 Sep 06	1550	soil	4oz	glass	2	ice		X	X
DUP-2	15 Sep 06	0800	soil	4oz	glass	2	ice		X	X
DUP-2	15 Sep 06	0800	soil	4oz	glass	2	ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify): Hold TPH for PAHs

	Date	Time		Date	Time
1. Relinquished By: [signature]	9.18.06	0930	1. Received By: [signature]	9/19/06	0815
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

51004

STL4149 (1202)

Client	Project Manager	Date	Page / of
URS	Shannon Hoover	16 Sept 2006	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512.419.6552		
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78729	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
H008243 BP Mallard			
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments
B-2 (15-16.5')	16 Sept 06	1520	Soil	4oz	glass		Ice	4 glass containers received
B-2 (40-41.5')	16 Sept 06	1620	Soil	4oz	glass		Ice	
B-2 (70-71.5')	16 Sept 06	1700	Soil	4oz	glass		Ice	
B-2 (80-81.5')	16 Sept 06	1730	Soil	4oz	glass		Ice	
~~B-2~~	~~16 Sept 06~~	~~1800~~	~~Soil~~	~~4oz~~	~~glass~~		~~Ice~~	

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	18 Sept 06	0930	1. Received By	9/19/06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I280173

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

October 4, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I280173**

This report contains the analytical results for the eight samples received under chain of custody by Severn Trent Laboratories (STL) on September 28, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6275179, diesel range organics was detected in the associated method blank at 0.94 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I280173

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-2 (105-106.5) 09/25/06 16:40 001				
Diesel Range Organics	0.99 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.3	0.50	%	ASTM D 2216-90
B-2 (115-116.5) 09/25/06 17:15 002				
Diesel Range Organics	1.2 J,B	2.1	mg/kg	SW846 8015B
Percent Moisture	17.8	0.50	%	ASTM D 2216-90
B-3 (20-20.5) 09/26/06 14:45 003				
Diesel Range Organics	0.99 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.0	0.50	%	ASTM D 2216-90
B-3 (45-46.5) 09/26/06 15:25 004				
Diesel Range Organics	0.90 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90
B-3 (70-71.5) 09/26/06 16:15 005				
Diesel Range Organics	0.90 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.5	0.50	%	ASTM D 2216-90
B-3 (95-96.5) 09/26/06 17:30 006				
Diesel Range Organics	1.5 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.9	0.50	%	ASTM D 2216-90
B-3 (120-121.5) 09/27/06 09:35 007				
Diesel Range Organics	1.5 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90
DUP-3 09/26/06 08:00 008				
Diesel Range Organics	1.4 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I280173

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I280173

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JE78A	001	B-2 (105-106.5)	09/25/06	16:40
JE78L	002	B-2 (115-116.5)	09/25/06	17:15
JE78P	003	B-3 (20-20.5)	09/26/06	14:45
JE78T	004	B-3 (45-46.5)	09/26/06	15:25
JE78V	005	B-3 (70-71.5)	09/26/06	16:15
JE78W	006	B-3 (95-96.5)	09/26/06	17:30
JE782	007	B-3 (120-121.5)	09/27/06	09:35
JE784	008	DUP-3	09/26/06	08:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I280173

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
002	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
003	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
004	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
005	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
006	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
007	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
008	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051

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URS Corporation

Client Sample ID: B-2 (105-106.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-001	**Work Order #...:** JE78A1AC	**Matrix.....:** SOLID
Date Sampled...: 09/25/06 16:40	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 15:06	
Dilution Factor: 1.01		
% Moisture.....: 3.3	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2 (105-106.5)

GC Volatiles

Lot-Sample #...:	I6I280173-001	Work Order #...:	JE78A1AD	Matrix.....:	SOLID
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	11:49		
Dilution Factor:	0.99				
% Moisture.....:	3.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	90	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2 (105-106.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-001	Work Order #...:	JE78A1AE	Matrix.....:	SOLID
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	19:45		
Dilution Factor:	1				
% Moisture.....:	3.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.99 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2 (105-106.5)

General Chemistry

Lot-Sample #...: I6I280173-001 Work Order #...: JE78A Matrix.....: SOLID
Date Sampled...: 09/25/06 16:40 Date Received..: 09/28/06
% Moisture.....: 3.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.3	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:56 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: B-2 (115-116.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-002	**Work Order #...:**	JE78L1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	15:28		
Dilution Factor:	1.02				
% Moisture.....:	18	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	6.2	ug/kg
Ethylbenzene	ND	6.2	ug/kg
Toluene	ND	6.2	ug/kg
m-Xylene & p-Xylene	ND	12	ug/kg
o-Xylene	ND	6.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	6.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2 (115-116.5)

GC Volatiles

Lot-Sample #...:	I6I280173-002	Work Order #...:	JE78L1AD	Matrix.....:	SOLID
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	12:17		
Dilution Factor:	1				
% Moisture.....:	18	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	120	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2 (115-116.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-002	Work Order #...:	JE78L1AE	Matrix.....:	SOLID
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	21:45		
Dilution Factor:	1				
% Moisture.....:	18	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	2.1	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	100	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2 (115-116.5)

General Chemistry

Lot-Sample #...: I6I280173-002 Work Order #...: JE78L Matrix.....: SOLID
Date Sampled...: 09/25/06 17:15 Date Received..: 09/28/06
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	17.8	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:58 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: B-3 (20-20.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-003	**Work Order #...:**	JE78P1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 14:45	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	15:50		
Dilution Factor:	0.99				
% Moisture.....:	2.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (20-20.5)

GC Volatiles

Lot-Sample #...:	I6I280173-003	Work Order #...:	JE78P1AD	Matrix.....:	SOLID
Date Sampled...:	09/26/06 14:45	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	12:45		
Dilution Factor:	1				
% Moisture.....:	2.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (20-20.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-003	Work Order #...:	JE78P1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 14:45	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	22:25		
Dilution Factor:	1				
% Moisture.....:	2.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.99 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	94	(37 - 131)
Dotriacontane	105	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-3 (20-20.5)

General Chemistry

Lot-Sample #...: I6I280173-003 Work Order #...: JE78P Matrix.....: SOLID
Date Sampled...: 09/26/06 14:45 Date Received..: 09/28/06
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.0	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:00 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: B-3 (45-46.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-004	**Work Order #...:** JE78T1AC	**Matrix.....:** SOLID
Date Sampled...: 09/26/06 15:25	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 16:12	
Dilution Factor: 1		
% Moisture.....: 2.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	103	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (45-46.5)

GC Volatiles

Lot-Sample #...: I6I280173-004	Work Order #...: JE78T1AD	Matrix.....: SOLID
Date Sampled...: 09/26/06 15:25	Date Received..: 09/28/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 13:13	
Dilution Factor: 1		
% Moisture.....: 2.6	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	83	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (45-46.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-004	Work Order #...:	JE78T1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 15:25	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	23:05		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.90 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	90	(37 - 131)
Dotriacontane	100	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (45-46.5)

General Chemistry

Lot-Sample #...: I6I280173-004 Work Order #...: JE78T Matrix.....: SOLID
Date Sampled...: 09/26/06 15:25 Date Received..: 09/28/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:02 MS Run #.....: 6272246

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-3 (70-71.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-005	**Work Order #...:** JE78V1AC	**Matrix.....:** SOLID
Date Sampled...: 09/26/06 16:15	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 16:35	
Dilution Factor: 0.98		
% Moisture.....: 1.5	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	9.9	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (70-71.5)

GC Volatiles

Lot-Sample #...: I6I280173-005	Work Order #...: JE78V1AD	Matrix.....: SOLID
Date Sampled...: 09/26/06 16:15	Date Received..: 09/28/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 13:41	
Dilution Factor: 0.99		
% Moisture.....: 1.5	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (70-71.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-005	Work Order #...:	JE78V1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 16:15	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	23:45		
Dilution Factor:	1				
% Moisture.....:	1.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.90 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	74	(37 - 131)
Dotriacontane	102	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (70-71.5)

General Chemistry

Lot-Sample #...: I6I280173-005 Work Order #...: JE78V Matrix.....: SOLID
Date Sampled...: 09/26/06 16:15 Date Received..: 09/28/06
% Moisture.....: 1.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.5	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:04 MS Run #.....: 6272246

Received by OCD: 3/25/2021 2:14:32 PM

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Client Sample ID: B-3 (95-96.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-006	**Work Order #...:**	JE78W1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 17:30	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	16:57		
Dilution Factor:	0.99				
% Moisture.....:	3.9	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (95-96.5)

GC Volatiles

Lot-Sample #...:	I6I280173-006	**Work Order #...:**	JE78W1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 17:30	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	15:04		
Dilution Factor:	1				
% Moisture.....:	3.9	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	97	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (95-96.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-006	Work Order #...:	JE78W1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 17:30	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/03/06		
Prep Batch #...:	6275179	Analysis Time..:	00:25		
Dilution Factor:	1				
% Moisture.....:	3.9	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.5 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	103	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (95-96.5)

General Chemistry

Lot-Sample #...: I6I280173-006 Work Order #...: JE78W Matrix.....: SOLID
Date Sampled...: 09/26/06 17:30 Date Received..: 09/28/06
% Moisture.....: 3.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.9	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:06 MS Run #.....: 6272246

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-3 (120-121.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-007	**Work Order #...:**	JE7821AC	**Matrix.....:**	SOLID
Date Sampled...:	09/27/06 09:35	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	17:19		
Dilution Factor:	1.02				
% Moisture.....:	4.4	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (120-121.5)

GC Volatiles

Lot-Sample #...:	I6I280173-007	Work Order #...:	JE7821AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 09:35	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	15:32		
Dilution Factor:	0.99				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	83	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (120-121.5)

GC Semivolatiles

Lot-Sample #...: I6I280173-007	Work Order #...: JE7821AE	Matrix.....: SOLID
Date Sampled...: 09/27/06 09:35	Date Received..: 09/28/06	MS Run #.....: 6275114
Prep Date.....: 09/29/06	Analysis Date..: 10/03/06	
Prep Batch #...: 6275179	Analysis Time..: 01:04	
Dilution Factor: 1		
% Moisture.....: 4.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.5 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	104	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (120-121.5)

General Chemistry

Lot-Sample #...: I6I280173-007 Work Order #...: JE782 Matrix.....: SOLID
Date Sampled...: 09/27/06 09:35 Date Received..: 09/28/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:08 MS Run #.....: 6272246

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: DUP-3

GC/MS Volatiles

Lot-Sample #...:	I6I280173-008	**Work Order #...:**	JE7841AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 08:00	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	17:41		
Dilution Factor:	1.02				
% Moisture.....:	2.6	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-3

GC Volatiles

Lot-Sample #...: I6I280173-008	Work Order #...: JE7841AD	Matrix.....: SOLID
Date Sampled...: 09/26/06 08:00	Date Received..: 09/28/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 15:59	
Dilution Factor: 1		
% Moisture.....: 2.6	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-3

GC Semivolatiles

Lot-Sample #...:	I6I280173-008	Work Order #...:	JE7841AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 08:00	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/03/06		
Prep Batch #...:	6275179	Analysis Time..:	01:44		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.4 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: DUP-3

General Chemistry

Lot-Sample #...: I6I280173-008 Work Order #...: JE784 Matrix.....: SOLID
Date Sampled...: 09/26/06 08:00 Date Received..: 09/28/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:10 MS Run #.....: 6272246

Received by OCD: 3/25/2021 2:14:32 PM

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AA **Matrix.....:** SOLID
MB Lot-Sample #: I6J020000-067

Prep Date.....: 09/29/06 **Analysis Time..:** 10:16
Analysis Date..: 09/29/06 **Prep Batch #...:** 6275067
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I280173 Work Order #...: JFJT01AA Matrix.....: SOLID
MB Lot-Sample #: I6J030000-318

Prep Date.....: 10/02/06 Analysis Time..: 11:22
Analysis Date..: 10/02/06 Prep Batch #...: 6276318
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	73	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I280173
MB Lot-Sample #: I6J020000-179

Work Order #...: JFGNX1AA
Prep Date.....: 09/29/06
Prep Batch #...: 6275179

Matrix.....: SOLID
Analysis Time..: 18:25

Analysis Date..: 10/02/06
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.94 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	90	(37 - 131)
Dotriacontane	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J020000-067 JFGGL1AD-LCSD
Prep Date.....: 09/29/06 **Analysis Date..:** 09/29/06
Prep Batch #...: 6275067 **Analysis Time..:** 09:05
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	90	(68 - 128)			SW846 8260B
	88	(68 - 128)	2.3	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	93	(65 - 125)	1.4	(0-30)	SW846 8260B
Toluene	88	(64 - 124)			SW846 8260B
	88	(64 - 124)	0.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	91	(64 - 124)			SW846 8260B
	91	(64 - 124)	0.090	(0-30)	SW846 8260B
o-Xylene	92	(65 - 125)			SW846 8260B
	93	(65 - 125)	0.86	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	9.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	102	(67 - 127)
Toluene-d8	115	(76 - 136)
	110	(76 - 136)
Dibromofluoromethane	97	(67 - 127)
	93	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	93	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J020000-067 JFGGL1AD-LCSD
Prep Date.....: 09/29/06 **Analysis Date..:** 09/29/06
Prep Batch #...: 6275067 **Analysis Time..:** 09:05
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	45.2	ug/kg	90		SW846 8260B
	50.0	44.2	ug/kg	88	2.3	SW846 8260B
Ethylbenzene	50.0	45.8	ug/kg	92		SW846 8260B
	50.0	46.5	ug/kg	93	1.4	SW846 8260B
Toluene	50.0	44.0	ug/kg	88		SW846 8260B
	50.0	44.0	ug/kg	88	0.0	SW846 8260B
m-Xylene & p-Xylene	100	91.1	ug/kg	91		SW846 8260B
	100	91.2	ug/kg	91	0.090	SW846 8260B
o-Xylene	50.0	46.0	ug/kg	92		SW846 8260B
	50.0	46.4	ug/kg	93	0.86	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	52.0	ug/kg	104	9.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	102	(67 - 127)
Toluene-d8	115	(76 - 136)
	110	(76 - 136)
Dibromofluoromethane	97	(67 - 127)
	93	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	93	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I280173 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	107	(66 - 129)			SW846 8015B
	107	(66 - 129)	0.67	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFJT01AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 **Analysis Date..:** 10/02/06
Prep Batch #...: 6276318 **Analysis Time..:** 09:59
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**2150**	**ug/kg**	**107**		**SW846 8015B**
	2000	**2130**	**ug/kg**	**107**	**0.67**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I280173 Work Order #...: JFGNX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-179
Prep Date.....: 09/29/06 Analysis Date..: 10/02/06
Prep Batch #...: 6275179 Analysis Time..: 19:05
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**85**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	100	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I280173 Work Order #...: JFGNX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-179
Prep Date.....: 09/29/06 Analysis Date..: 10/02/06
Prep Batch #...: 6275179 Analysis Time..: 19:05
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**28.4**	**mg/kg**	**85**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	100	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JFA871AE-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I290104-003		JFA871AF-MSD		
Date Sampled...:	09/28/06 15:30	**Date Received..:**	09/29/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	14:00		
Dilution Factor:	0.99	**% Moisture.....:**	12		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	100	(68 - 128)			SW846 8260B
	101	(68 - 128)	0.08	(0-30)	SW846 8260B
Ethylbenzene	94	(65 - 125)			SW846 8260B
	95	(65 - 125)	0.36	(0-30)	SW846 8260B
Toluene	102	(64 - 124)			SW846 8260B
	107	(64 - 124)	3.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	94	(64 - 124)			SW846 8260B
	94	(64 - 124)	1.2	(0-30)	SW846 8260B
o-Xylene	96	(65 - 125)			SW846 8260B
	95	(65 - 125)	1.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	98	(58 - 118)			SW846 8260B
	94	(58 - 118)	5.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(59 - 119)
	102	(59 - 119)
Toluene-d8	113	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	94	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JFA871AE-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I290104-003		JFA871AF-MSD		
Date Sampled...:	09/28/06 15:30	**Date Received..:**	09/29/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	14:00		
Dilution Factor:	0.99	**% Moisture.....:**	12		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	56.3	56.3	ug/kg	100		SW846 8260B
	ND	55.6	56.3	ug/kg	101	0.08	SW846 8260B
Ethylbenzene	ND	56.3	52.9	ug/kg	94		SW846 8260B
	ND	55.6	52.7	ug/kg	95	0.36	SW846 8260B
Toluene	ND	56.3	57.4	ug/kg	102		SW846 8260B
	ND	55.6	59.6	ug/kg	107	3.7	SW846 8260B
m-Xylene & p-Xylene	ND	113	105	ug/kg	94		SW846 8260B
	ND	111	104	ug/kg	94	1.2	SW846 8260B
o-Xylene	ND	56.3	53.8	ug/kg	96		SW846 8260B
	ND	55.6	52.9	ug/kg	95	1.7	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	56.3	55.0	ug/kg	98		SW846 8260B
	ND	55.6	52.2	ug/kg	94	5.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(59 - 119)
	102	(59 - 119)
Toluene-d8	113	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	94	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JE78L1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	14:08		
Dilution Factor:	0.99	**% Moisture.....:**	18		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**85**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**3.3**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78L1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	14:08		
Dilution Factor:	0.99	% Moisture.....:	18		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	ND	2410	2050	ug/kg	85		SW846 8015B
	ND	2440	1990	ug/kg	81	3.3	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78A1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-001		JE78A1AG-MSD		
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	20:25		
Dilution Factor:	1	% Moisture.....:	3.3		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	74	(32 - 132)			SW846 8015B
	89	(32 - 132)	**17**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	97	(37 - 131)
	106	(37 - 131)
Dotriacontane	102	(10 - 151)
	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78A1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-001		JE78A1AG-MSD		
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	20:25		
Dilution Factor:	1	% Moisture.....:	3.3		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	0.99	34.4	26.6	mg/kg	74		SW846 8015B
	0.99	34.4	31.5	mg/kg	89	17	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	97	(37 - 131)
	106	(37 - 131)
Dotriacontane	102	(10 - 151)
	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I280173 **Work Order #...:** JFA83-SMP JFA83-DUP **Matrix.....:** SOLID

Date Sampled...: 09/28/06 14:00 **Date Received..:** 09/29/06

% Moisture.....: 18

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #:	I6I290104-001	
	17.9	19.0	%	6.0	(0-20)	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:30 MS Run Number..: 6272246

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SEVERN TRENT **STL**

CHAIN–OF–CUSTODY ADDENDUM

Lot No: I6I280173

RECEIVED BY: [signature]

COC NUMBER: _____

DATE/TIME RECEIVED: 9-28-04 0815

QUOTE/PROFILE: 72371

UNPACKED DATE/TIME: 9-23-06 0925

CLIENT/PROJECT: ORS

SAMPLES LOGGED IN: [signature]

LOG-IN REVIEWED: CC

Number of Shipping Containers Received with Chain of Custody 1

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: CC

Container Sealed: ☑ YES ☐ NO

Custody Seal Signed/Dated: ☐ ~~YES~~ ☐ NO

Custody Seal Present: ☑ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)

None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other _____

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: CC **IR THERMOMETER #:** P5

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
SC 3.3°C	SC	SC	SC	SC	SC	SC	SC	SC	SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☑ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☑ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** _____

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: CC

Samples received match COC: ☑ YES ☐ NO Bottles received intact: ☑ YES ☐ NO

See additional discrepancies/comments section: ☐ YES ☑ NO Samples received from USDA restricted area: ☐ YES ☑ NO

Chain-of-Custody form properly maintained: ☑ YES ☐ NO VOA trip blanks included: ☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: 10/10/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2; Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

51006

STL4149 (1202)

IOI280173

Client	Project Manager	Date	Page / of
URS Corporation	Shannon Hoover	25 Sept 2006	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512.419.6552	Austin	
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78642	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
BP Maljamar / 41008243			
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO + DRO
B-2 (105-106.5)	25 Sep 06	1640	Soil	4 oz	glass	2	Ice	3.2° @ 28-06 CC	X	X
B-2 (115-116.5)	25 Sep 06	1715	Soil	4 oz	glass	2	Ice		X	X
B-3 (20-20.5)	26 Sep 06	1445	Soil	4 oz	glass	2	Ice		X	X
B-3 (45-46.5)	26 Sep 06	1525	Soil	4 oz	glass	2	Ice		X	X
B-3 (70-71.5)	26 Sep 06	1615	Soil	4 oz	glass	2	Ice		X	X
B-3 (95-96.5)	26 Sep 06	1730	Soil	4 oz	glass	2	Ice		X	X
B-3 (120-121.5)	27 Sep 06	0935	Soil	4 oz	glass	2	Ice		X	X
DUP-3	26 Sep 06	0000	Soil	4 oz	glass	4	Ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-27-06	1100	1. Received By:	9-28-06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

58/58

DISTRIBUTION: WHITE - Stays with SAMPLE; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

STL4149 (1202)

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

51006

I6I280173

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 25 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512.419.6552	Lab Location: Austin	Analysis
City: Austin; State: TX; Zip Code: 78642	Site Contact: Rita Krebs		
Project Number/Name: BP Maljamar / 41008243	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO DRO
B-2 (105-106.5)	25Sep06	1640	Soil	4oz	Glass	2	Ice	9.2° 9-28-06	X	X
B-2 (115-116.5)	25Sep06	1715	Soil	4oz	Glass	2	Ice		X	X
B-3 (20-20.5)	26Sep06	1445	Soil	4oz	Glass	2	Ice		X	X
B-3 (45-46.5)	26Sep06	1525	Soil	4oz	Glass	2	Ice		X	X
B-3 (70-71.5)	26Sep06	1615	Soil	4oz	Glass	2	Ice		X	X
B-3 (95-96.5)	26Sep06	1730	Soil	4oz	Glass	2	Ice		X	X
B-3 (120-121.5)	27Sep06	0935	Soil	4oz	Glass	2	Ice		X	X
DUP-3	26Sep06	0800	Soil	4oz	Glass	4	Ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-27-06	1100	1. Received By: [signature]	9-28-06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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SEVERN TRENT STL Leaders in Environmental Testing

Certificate of Analysis

STL Austin • 14050 Summit Drive, Suite A100, Austin, TX 78728 • Tel 512 244 0855 • Fax 512 244 0160 • www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I300123

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

October 13, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I300123**

This report contains the analytical results for the 10 samples received under chain of custody by Severn Trent Laboratories (STL) on September 30, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements, with the exception of DUP-1 for the analysis of nitrate, where the sample had expired prior to receipt by the laboratory.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6275398, there was insufficient sample volume provided to prepare a project specific MS/MSD. A duplicate LCS was analyzed to provide accuracy and precision data for this batch. Diesel range organics was detected in the associated method blank at 0.022 J mg/L. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is. The LCS RPD criterion was exceeded for diesel range organics, however the individual recoveries were within criteria, therefore the data was flagged and are reported as is.

For SW8015B analytical batch # 6275401, diesel range organics was detected in the associated method blank at 0.84 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

For SW6010B analytical batch # 6276373, aluminum was detected in the associated method blank at 0.063 B mg/L, molybdenum was detected in the associated method blank at 0.0036 B mg/L, and zinc was detected in the associated method blank at 0.0022 B mg/L. The contamination levels were less than the reporting limit; therefore the data was flagged and are reported as is.

For SW6010B analytical batch # 6276369, where the recoveries and RPD could not be calculated for calcium and sodium because the native concentration was greater than (4) four times that of the spike amount; therefore the data was flagged and are reported as is.

For E300.0A analytical batch # 6278068, sample DUP-1 was analyzed less than (4) four hours outside of holding time due to lack of holding time remaining upon receipt. The data is flagged and is reported as is per client instruction.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-4(25-26.5) 09/27/06 16:15 001				
Diesel Range Organics	0.96 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.2	0.50	%	ASTM D 2216-90
B-4(50-51.5) 09/27/06 16:50 002				
Diesel Range Organics	1.2 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.8	0.50	%	ASTM D 2216-90
B-4(75-76.5) 09/27/06 17:35 003				
Diesel Range Organics	0.91 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	2.9	0.50	%	ASTM D 2216-90
B-4(95-96.5) 09/28/06 09:05 004				
Diesel Range Organics	0.89 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.8	0.50	%	ASTM D 2216-90
B-4(120-121.5) 09/28/06 10:45 005				
Diesel Range Organics	0.91 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	7.5	0.50	%	ASTM D 2216-90
MW-1 09/28/06 15:50 006				
Diesel Range Organics	0.025 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.025 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0061 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.086 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.069	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0021 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.014 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0041	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0050 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0093	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	57.7	5.0	mg/L	SW846 6010B
Potassium	4.1 B	5.0	mg/L	SW846 6010B
Magnesium	13.7	5.0	mg/L	SW846 6010B
Sodium	30.5	5.0	mg/L	SW846 6010B
Total Dissolved Solids	357	40.0	mg/L	MCAWW 160.1

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EXECUTIVE SUMMARY - Detection Highlights

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PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-1 09/28/06 15:50 006				
Chloride	49.6	10.0	mg/L	SW846 9056
Fluoride	0.60 B	1.0	mg/L	SW846 9056
Sulfate	37.9	10.0	mg/L	SW846 9056
Nitrate as N	2.8	0.50	mg/L	SW846 9056
MW-3 09/29/06 08:05 007				
Diesel Range Organics	0.045 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.021 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0035 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.10 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.065	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0025 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.024	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0057	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0081 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0077	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	66.3	5.0	mg/L	SW846 6010B
Potassium	5.0	5.0	mg/L	SW846 6010B
Magnesium	15.5	5.0	mg/L	SW846 6010B
Sodium	31.8	5.0	mg/L	SW846 6010B
Toluene	1.2	1.0	ug/L	SW846 8260B
Total Dissolved Solids	369	40.0	mg/L	MCAWW 160.1
Chloride	77.2	20.0	mg/L	SW846 9056
Fluoride	0.59 B	1.0	mg/L	SW846 9056
Sulfate	35.3	20.0	mg/L	SW846 9056
Nitrate as N	2.9	0.50	mg/L	SW846 9056
DUP-1 09/28/06 08:00 008				
Diesel Range Organics	0.026 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.021 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0060 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.083 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.066	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0024 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.011 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0034	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0045 B	0.040	mg/L	SW846 6010B

(Continued on next page)

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP-1 09/28/06 08:00 008				
Selenium - DISSOLVED	0.0060	0.0050	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0052	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	57.1	5.0	mg/L	SW846 6010B
Potassium	4.1 B	5.0	mg/L	SW846 6010B
Magnesium	13.6	5.0	mg/L	SW846 6010B
Sodium	30.4	5.0	mg/L	SW846 6010B
Total Dissolved Solids	348	40.0	mg/L	MCAWW 160.1
Chloride	87.3	10.0	mg/L	SW846 9056
Fluoride	0.74 B	1.0	mg/L	SW846 9056
Sulfate	40.5	10.0	mg/L	SW846 9056
Nitrate as N	2.8 H	0.50	mg/L	SW846 9056
MW-2 09/29/06 10:20 009				
Diesel Range Organics	0.036 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.020 B,J	0.20	mg/L	SW846 6010B
Barium - DISSOLVED	0.39	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.083	0.060	mg/L	SW846 6010B
Manganese - DISSOLVED	0.21	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0025	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.016 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.014 B,J	0.020	mg/L	SW846 6010B
Calcium	899	5.0	mg/L	SW846 6010B
Potassium	19.2	5.0	mg/L	SW846 6010B
Magnesium	257	5.0	mg/L	SW846 6010B
Sodium	145	5.0	mg/L	SW846 6010B
Total Dissolved Solids	6010	40.0	mg/L	MCAWW 160.1
Chloride	2600	500	mg/L	SW846 9056
Sulfate	81.8	50.0	mg/L	SW846 9056
Nitrate as N	2.8	0.50	mg/L	SW846 9056
MW-4 09/29/06 12:10 010				
Diesel Range Organics	0.062 B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.026 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0033 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.12 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.064	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0033 B	0.0050	mg/L	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-4 09/29/06 12:10 010				
Manganese - DISSOLVED	0.014 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0074	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0071 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0054	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	59.3	5.0	mg/L	SW846 6010B
Potassium	5.3	5.0	mg/L	SW846 6010B
Magnesium	11.7	5.0	mg/L	SW846 6010B
Sodium	28.7	5.0	mg/L	SW846 6010B
Total Dissolved Solids	303	40.0	mg/L	MCAWW 160.1
Chloride	25.8	10.0	mg/L	SW846 9056
Fluoride	0.66 B	1.0	mg/L	SW846 9056
Sulfate	32.7	10.0	mg/L	SW846 9056
Nitrate as N	2.9	0.50	mg/L	SW846 9056

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ANALYTICAL METHODS SUMMARY

I6I300123

PARAMETER	ANALYTICAL METHOD
Chloride	SW846 9056
Extractable Petroleum Hydrocarbons	SW846 8015B
Filterable Residue (TDS)	MCAWW 160.1
Fluoride	SW846 9056
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Method for Determination of Water Content of Soil	ASTM D 2216-90
Nitrate as N	SW846 9056
Sulfate	SW846 9056
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I300123

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JFFA1	001	B-4(25-26.5)	09/27/06	16:15
JFFD0	002	B-4(50-51.5)	09/27/06	16:50
JFFD2	003	B-4(75-76.5)	09/27/06	17:35
JFFD4	004	B-4(95-96.5)	09/28/06	09:05
JFFD9	005	B-4(120-121.5)	09/28/06	10:45
JFFED	006	MW-1	09/28/06	15:50
JFFFC	007	MW-3	09/29/06	08:05
JFFFK	008	DUP-1	09/28/06	08:00
JFFFM	009	MW-2	09/29/06	10:20
JFFFN	010	MW-4	09/29/06	12:10

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I300123

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
002	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
003	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
004	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
005	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
006	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
007	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	

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QC DATA ASSOCIATION SUMMARY

I6I300123

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
007	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
008	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
009	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
010	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	

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Client Sample ID: B-4(25-26.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-001	**Work Order #...:** JFFA11AA	**Matrix.....:** SOLID
Date Sampled...: 09/27/06 16:15	**Date Received..:** 09/30/06	**MS Run #.....:** 6279233
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6279367	**Analysis Time..:** 17:47	
Dilution Factor: 1.02		
% Moisture.....: 1.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(25-26.5)

GC Volatiles

Lot-Sample #...:	I6I300123-001	Work Order #...:	JFFA11AC	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:15	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	17:03		
Dilution Factor:	1				
% Moisture.....:	1.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(25-26.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-001	Work Order #...:	JFFA11AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:15	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	13:59		
Dilution Factor:	1				
% Moisture.....:	1.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.96 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	89	(37 - 131)
Dotriacontane	111	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-4(25-26.5)

General Chemistry

Lot-Sample #...: I6I300123-001 Work Order #...: JFFA1 Matrix.....: SOLID
Date Sampled...: 09/27/06 16:15 Date Received..: 09/30/06
% Moisture.....: 1.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.2	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:22 MS Run #.....: 6276282

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Client Sample ID: B-4(50-51.5)

GC/MS Volatiles

Lot-Sample #...:	I6I300123-002	Work Order #...:	JFFD01AA	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:50	Date Received..:	09/30/06	MS Run #.....:	6279233
Prep Date.....:	10/04/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6279367	Analysis Time..:	18:09		
Dilution Factor:	1				
% Moisture.....:	1.8	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(50-51.5)

GC Volatiles

Lot-Sample #...:	I6I300123-002	Work Order #...:	JFFD01AC	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:50	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	17:30		
Dilution Factor:	0.99				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	84	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(50-51.5)

GC Semivolatiles

Lot-Sample #...: I6I300123-002	Work Order #...: JFFD01AD	Matrix.....: SOLID
Date Sampled...: 09/27/06 16:50	Date Received..: 09/30/06	MS Run #.....: 6275271
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275401	Analysis Time..: 16:00	
Dilution Factor: 1		
% Moisture.....: 1.8	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	94	(37 - 131)
Dotriacontane	111	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-4(50-51.5)

General Chemistry

Lot-Sample #...: I6I300123-002 Work Order #...: JFFD0 Matrix.....: SOLID
Date Sampled...: 09/27/06 16:50 Date Received..: 09/30/06
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.8	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:24 MS Run #.....: 6276282

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URS Corporation

Client Sample ID: B-4(75-76.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-003	**Work Order #...:** JFFD21AA	**Matrix.....:** SOLID
Date Sampled...: 09/27/06 17:35	**Date Received..:** 09/30/06	**MS Run #.....:** 6279233
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6279367	**Analysis Time..:** 18:32	
Dilution Factor: 0.98		
% Moisture.....: 2.9	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(75-76.5)

GC Volatiles

Lot-Sample #...: I6I300123-003	Work Order #...: JFFD21AC	Matrix.....: SOLID	
Date Sampled...: 09/27/06 17:35	Date Received..: 09/30/06	MS Run #.....: 6276185	
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06		
Prep Batch #...: 6276318	Analysis Time..: 17:58		
Dilution Factor: 0.99			
% Moisture.....: 2.9	Method.....: SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	94	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(75-76.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-003	Work Order #...:	JFFD21AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 17:35	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	16:40		
Dilution Factor:	1				
% Moisture.....:	2.9	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.91 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-4(75-76.5)

General Chemistry

Lot-Sample #...: I6I300123-003 Work Order #...: JFFD2 Matrix.....: SOLID
Date Sampled...: 09/27/06 17:35 Date Received..: 09/30/06
% Moisture.....: 2.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.9	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:26 MS Run #.....: 6276282

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Client Sample ID: B-4(95-96.5)

GC/MS Volatiles

Lot-Sample #...:	I6I300123-004	Work Order #...:	JFFD41AA	Matrix.....:	SOLID
Date Sampled...:	09/28/06 09:05	Date Received..:	09/30/06	MS Run #.....:	6279233
Prep Date.....:	10/04/06	Analysis Date..:	10/05/06		
Prep Batch #...:	6279367	Analysis Time..:	10:14		
Dilution Factor:	0.99				
% Moisture.....:	3.8	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(95-96.5)

GC Volatiles

Lot-Sample #...:	I6I300123-004	Work Order #...:	JFFD41AC	Matrix.....:	SOLID
Date Sampled...:	09/28/06 09:05	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	18:26		
Dilution Factor:	1				
% Moisture.....:	3.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(95-96.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-004	Work Order #...:	JFFD41AD	Matrix.....:	SOLID
Date Sampled...:	09/28/06 09:05	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	17:21		
Dilution Factor:	1				
% Moisture.....:	3.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.89 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-4(95-96.5)

General Chemistry

Lot-Sample #...: I6I300123-004 Work Order #...: JFFD4 Matrix.....: SOLID
Date Sampled...: 09/28/06 09:05 Date Received..: 09/30/06
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.8	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:28 MS Run #.....: 6276282

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Client Sample ID: B-4(120-121.5)

GC/MS Volatiles

Lot-Sample #...:	I6I300123-005	**Work Order #...:**	JFFD91AA	**Matrix.....:**	SOLID
Date Sampled...:	09/28/06 10:45	**Date Received..:**	09/30/06	**MS Run #.....:**	6279233
Prep Date.....:	10/04/06	**Analysis Date..:**	10/05/06		
Prep Batch #...:	6279367	**Analysis Time..:**	10:37		
Dilution Factor:	1.02				
% Moisture.....:	7.5	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.5	ug/kg
Ethylbenzene	ND	5.5	ug/kg
Toluene	ND	5.5	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.5	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.5	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(120-121.5)

GC Volatiles

Lot-Sample #...: I6I300123-005	**Work Order #...:** JFFD91AC	**Matrix.....:** SOLID
Date Sampled...: 09/28/06 10:45	**Date Received..:** 09/30/06	**MS Run #.....:** 6276185
Prep Date.....: 10/02/06	**Analysis Date..:** 10/02/06	
Prep Batch #...: 6276318	**Analysis Time..:** 18:54	
Dilution Factor: 1		
% Moisture.....: 7.5	**Method.....:** SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-4(120-121.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-005	Work Order #...:	JFFD91AD	Matrix.....:	SOLID
Date Sampled...:	09/28/06 10:45	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	18:01		
Dilution Factor:	1				
% Moisture.....:	7.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.91 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	108	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-4(120-121.5)

General Chemistry

Lot-Sample #...: I6I300123-005 Work Order #...: JFFD9 Matrix.....: SOLID
Date Sampled...: 09/28/06 10:45 Date Received..: 09/30/06
% Moisture.....: 7.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	7.5	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:30 MS Run #.....: 6276282

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Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A2	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 13:36	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	98	(88 - 119)

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Client Sample ID: MW-1

GC Volatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A4	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 13:27	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(75 - 122)

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Client Sample ID: MW-1

GC Semivolatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A3	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....:
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275398	Analysis Time..: 20:42	
Dilution Factor: 0.96		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.025 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(48 - 153)
Dotriacontane	100	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-1

TOTAL Metals

Lot-Sample #...: I6I300123-006 Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	57.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A5
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Potassium	4.1 B	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A6
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Magnesium	13.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A7
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Sodium	30.5	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A8
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	

NOTE(S):

B Estimated result. Result is less than RL.

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Client Sample ID: MW-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-006 Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AH
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Aluminum	**0.025 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AJ**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Arsenic	**0.0061 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AK**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Barium	**0.086 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AL**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Boron	**0.069**	**0.060**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AM**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AN
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AP
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Chromium	**0.0021 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AQ**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AR
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AT
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Manganese	**0.014 B**	**0.015**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AU**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Molybdenum	**0.0041 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AV**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	

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Client Sample ID: MW-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-006 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0050 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AW**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AX
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A0
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Zinc	**0.0093 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1A1**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFED1AG
		Dilution Factor: 1		Analysis Time..: 00:00	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-1

General Chemistry

Lot-Sample #...: I6I300123-006 Work Order #...: JFFED Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	49.6	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 10:48	MS Run #.....: 6279200	
Fluoride	0.60 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 09:55	MS Run #.....: 6278048	
Nitrate as N	2.8	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 09:55	MS Run #.....: 6278049	
Sulfate	37.9	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 10:48	MS Run #.....: 6279202	
Total Dissolved Solids	357	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:07	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: I6I300123-007	Work Order #...: JFFFC1A2	Matrix.....: WATER
Date Sampled...: 09/29/06 08:05	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 14:01	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	**1.2**	**1.0**	**ug/L**
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	92	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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Client Sample ID: MW-3

GC Volatiles

Lot-Sample #...: I6I300123-007	**Work Order #...:** JFFFC1A4	**Matrix.....:** WATER
Date Sampled...: 09/29/06 08:05	**Date Received..:** 09/30/06	**MS Run #.....:** 6278106
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6278167	**Analysis Time..:** 13:54	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(75 - 122)

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URS Corporation

Client Sample ID: MW-3

GC Semivolatiles

Lot-Sample #...: I6I300123-007	Work Order #...: JFFFC1A3	Matrix.....: WATER
Date Sampled...: 09/29/06 08:05	Date Received..: 09/30/06	MS Run #.....:
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275398	Analysis Time..: 21:22	
Dilution Factor: 0.97		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.045 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(48 - 153)
Dotriacontane	99	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-3

TOTAL Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	66.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A5
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Potassium	5.0	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A6
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Magnesium	15.5	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A7
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Sodium	31.8	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A8
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	

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Client Sample ID: MW-3

DISSOLVED Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AH
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Aluminum	**0.021 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AJ**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Arsenic	**0.0035 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AK**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Barium	**0.10 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AL**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Boron	**0.065**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AM**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AN
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AP
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Chromium	**0.0025 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AQ**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AR
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AT
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Manganese	**0.024**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AU**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Molybdenum	**0.0057 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AV**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	

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Client Sample ID: MW-3

DISSOLVED Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0081 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AW**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AX
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1A0
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Zinc	**0.0077 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1A1**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFC1AG
		Dilution Factor: 1		Analysis Time..: 09:07	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-3

General Chemistry

Lot-Sample #...: I6I300123-007 Work Order #...: JFFFC Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	77.2	20.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 20		Analysis Time..: 11:03	MS Run #.....: 6279200	
Fluoride	0.59 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 10:55	MS Run #.....: 6278048	
Nitrate as N	2.9	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 10:55	MS Run #.....: 6278049	
Sulfate	35.3	20.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 20		Analysis Time..: 11:03	MS Run #.....: 6279202	
Total Dissolved Solids	369	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:11	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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Client Sample ID: DUP-1

GC/MS Volatiles

Lot-Sample #...: I6I300123-008	Work Order #...: JFFFK1A2	Matrix.....: WATER
Date Sampled...: 09/28/06 08:00	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 14:27	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(67 - 130)
Toluene-d8	97	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	99	(88 - 119)

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Client Sample ID: DUP-1

GC Volatiles

Lot-Sample #...: I6I300123-008	Work Order #...: JFFFK1A4	Matrix.....: WATER
Date Sampled...: 09/28/06 08:00	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 14:22	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(75 - 122)

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URS Corporation

Client Sample ID: DUP-1

GC Semivolatiles

Lot-Sample #...:	I6I300123-008	Work Order #...:	JFFFK1A3	Matrix.....:	WATER
Date Sampled...:	09/28/06 08:00	Date Received..:	09/30/06	MS Run #.....:	
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275398	Analysis Time..:	22:02		
Dilution Factor:	0.95				
		Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.026 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	95	(48 - 153)
Dotriacontane	120	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: DUP-1

TOTAL Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	57.1	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A5
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Potassium	4.1 B	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A6
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Magnesium	13.6	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A7
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Sodium	30.4	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A8
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	

NOTE(S):

B Estimated result. Result is less than RL.

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Client Sample ID: DUP-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AH
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Aluminum	0.021 B,J	0.20	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AJ
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Arsenic	0.0060 B	0.010	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AK
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Barium	0.083 B	0.20	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AL
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Boron	0.066	0.060	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AM
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AN
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AP
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Chromium	0.0024 B	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AQ
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AR
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AT
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Manganese	0.011 B	0.015	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AU
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Molybdenum	0.0034 B,J	0.040	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AV
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	

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Client Sample ID: DUP-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0045 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1AW**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AX
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Selenium	**0.0060**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1A0**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Zinc	**0.0052 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1A1**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFK1AG
		Dilution Factor: 1		Analysis Time..: 09:08	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: DUP-1

General Chemistry

Lot-Sample #...: I6I300123-008 Work Order #...: JFFFK Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	87.3	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 11:19	MS Run #.....: 6279200	
Fluoride	0.74 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 11:25	MS Run #.....: 6278048	
Nitrate as N	2.8 H	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 11:25	MS Run #.....: 6278049	
Sulfate	40.5	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 11:19	MS Run #.....: 6279202	
Total Dissolved Solids	348	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:09	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

H The sample was prepared or analyzed after the EPA recommended holding time had been exceeded.

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Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: I6I300123-009	**Work Order #...:** JFFFM1A2	**Matrix.....:** WATER
Date Sampled...: 09/29/06 10:20	**Date Received..:** 09/30/06	**MS Run #.....:** 6284080
Prep Date.....: 10/06/06	**Analysis Date..:** 10/06/06	
Prep Batch #...: 6284128	**Analysis Time..:** 14:52	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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URS Corporation

Client Sample ID: MW-2

GC Volatiles

Lot-Sample #...: I6I300123-009	Work Order #...: JFFFM1A4	Matrix.....: WATER
Date Sampled...: 09/29/06 10:20	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 14:50	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(75 - 122)

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URS Corporation

Client Sample ID: MW-2

GC Semivolatiles

Lot-Sample #...:	I6I300123-009	Work Order #...:	JFFFM1A3	Matrix.....:	WATER
Date Sampled...:	09/29/06 10:20	Date Received..:	09/30/06	MS Run #.....:	
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275398	Analysis Time..:	22:42		
Dilution Factor:	0.97				
		Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.036 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	89	(48 - 153)
Dotriacontane	100	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-2

TOTAL Metals

Lot-Sample #...: I6I300123-009 Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	899	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A5
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Potassium	19.2	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A6
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Magnesium	257	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A7
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Sodium	145	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A8
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	

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Client Sample ID: MW-2

DISSOLVED Metals

Lot-Sample #...: I6I300123-009 Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AH
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Aluminum	**0.020 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AJ**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Arsenic	ND	0.010	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AK
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Barium	**0.39**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AL**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Boron	**0.083**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AM**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AN
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AP
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Chromium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AQ
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AR
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AT
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Manganese	**0.21**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AU**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Molybdenum	**0.0025 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AV**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	

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Client Sample ID: MW-2

DISSOLVED Metals

Lot-Sample #...: I6I300123-009 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.016 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AW**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AX
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1A0
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Zinc	**0.014 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1A1**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFM1AG
		Dilution Factor: 1		Analysis Time..: 09:09	MS Run #.....:	6284074

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-2

General Chemistry

Lot-Sample #...: I6I300123-009 Work Order #...: JFFFM Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	2600	500	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 500		Analysis Time..: 15:05	MS Run #.....: 6279200	
Fluoride	ND	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 10:40	MS Run #.....: 6278048	
Nitrate as N	2.8	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 10:40	MS Run #.....: 6278049	
Sulfate	81.8	50.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 50		Analysis Time..: 11:34	MS Run #.....: 6279202	
Total Dissolved Solids	6010	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:13	MS Run #.....: 6276146	

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Client Sample ID: MW-4

GC/MS Volatiles

Lot-Sample #...: I6I300123-010	**Work Order #...:** JFFFN1A2	**Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10	**Date Received..:** 09/30/06	**MS Run #.....:** 6284080
Prep Date.....: 10/06/06	**Analysis Date..:** 10/06/06	
Prep Batch #...: 6284128	**Analysis Time..:** 15:18	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(67 - 130)
Toluene-d8	97	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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Client Sample ID: MW-4

GC Volatiles

Lot-Sample #...: I6I300123-010	Work Order #...: JFFFN1A4	Matrix.....: WATER
Date Sampled...: 09/29/06 12:10	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 15:17	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	90	(75 - 122)

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Client Sample ID: MW-4

GC Semivolatiles

Lot-Sample #...:	I6I300123-010	Work Order #...:	JFFFN1A3	Matrix.....:	WATER
Date Sampled...:	09/29/06 12:10	Date Received..:	09/30/06	MS Run #.....:	
Prep Date.....:	10/02/06	Analysis Date..:	10/05/06		
Prep Batch #...:	6275398	Analysis Time..:	00:02		
Dilution Factor:	0.97				
		Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.062 B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	80	(48 - 153)
Dotriacontane	104	(35 - 143)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-4

TOTAL Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	59.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A5
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Potassium	5.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A6
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Magnesium	11.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A7
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Sodium	28.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A8
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	

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Client Sample ID: MW-4

DISSOLVED Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AH
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Aluminum	**0.026 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AJ**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Arsenic	**0.0033 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AK**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Barium	**0.12 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AL**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Boron	**0.064**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AM**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AN
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AP
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Chromium	**0.0033 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AQ**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AR
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AT
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Manganese	**0.014 B**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AU**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Molybdenum	**0.0074 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AV**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	

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Client Sample ID: MW-4

DISSOLVED Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0071 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AW**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AX
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1A0
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Zinc	**0.0054 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1A1**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFN1AG
		Dilution Factor: 1		Analysis Time..: 09:11	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: MW-4

General Chemistry

Lot-Sample #...: I6I300123-010 Work Order #...: JFFFN Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	25.8	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 11:49	MS Run #.....: 6279200	
Fluoride	0.66 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 11:10	MS Run #.....: 6278048	
Nitrate as N	2.9	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 11:10	MS Run #.....: 6278049	
Sulfate	32.7	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 11:49	MS Run #.....: 6279202	
Total Dissolved Solids	303	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:15	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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GC/MS Volatiles

Client Lot #...: I6I300123 Work Order #...: JFWCG1AA Matrix.....: SOLID
MB Lot-Sample #: I6J060000-367

Prep Date.....: 10/04/06 Analysis Time..: 15:55
Analysis Date..: 10/04/06 Prep Batch #...: 6279367
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	93	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AA **Matrix.....:** WATER
MB Lot-Sample #: I6J110000-128

Prep Date.....: 10/06/06 **Analysis Time..:** 12:44
Analysis Date..: 10/06/06 **Prep Batch #...:** 6284128
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	93	(67 - 130)
Toluene-d8	95	(83 - 115)
4-Bromofluorobenzene	95	(79 - 119)
Dibromofluoromethane	99	(88 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFJT01AA Matrix.....: SOLID
MB Lot-Sample #: I6J030000-318

Prep Date.....: 10/02/06 Analysis Time..: 11:22
Analysis Date..: 10/02/06 Prep Batch #...: 6276318
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	73	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFPHC1AA Matrix.....: WATER
MB Lot-Sample #: I6J050000-167

Prep Date.....: 10/04/06 Analysis Time..: 12:59
Analysis Date..: 10/04/06 Prep Batch #...: 6278167
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHJ51AA Matrix.....: WATER
MB Lot-Sample #: I6J020000-398

Prep Date.....: 10/02/06 Analysis Time..: 18:41
Analysis Date..: 10/04/06 Prep Batch #...: 6275398
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.022 J	0.050	mg/L	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	79	(48 - 153)
Dotriacontane	102	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AA Matrix.....: SOLID
MB Lot-Sample #: I6J020000-401

Prep Date.....: 10/02/06 Analysis Time..: 12:39
Analysis Date..: 10/04/06 Prep Batch #...: 6275401
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.84 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	102	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: I6J030000-369 **Prep Batch #...:** 6276369						
Calcium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AM
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Magnesium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AP
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Potassium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AN
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Sodium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AQ
		Dilution Factor: 1				
		Analysis Time..: 11:20				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: I6J030000-373 **Prep Batch #...:** 6276373						
Aluminum	**0.063 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AC**
		Dilution Factor: 1 Analysis Time..: 12:44				
Arsenic	ND	0.010	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AD
		Dilution Factor: 1 Analysis Time..: 12:44				
Barium	ND	0.20	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AE
		Dilution Factor: 1 Analysis Time..: 12:44				
Boron	ND	0.060	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AF
		Dilution Factor: 1 Analysis Time..: 12:44				
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AG
		Dilution Factor: 1 Analysis Time..: 12:44				
Chromium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AJ
		Dilution Factor: 1 Analysis Time..: 12:44				
Cobalt	ND	0.050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AH
		Dilution Factor: 1 Analysis Time..: 12:44				
Copper	ND	0.025	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AK
		Dilution Factor: 1 Analysis Time..: 12:44				
Iron	ND	0.10	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AL
		Dilution Factor: 1 Analysis Time..: 12:44				
Lead	ND	0.0030	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AQ
		Dilution Factor: 1 Analysis Time..: 12:44				
Manganese	ND	0.015	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AM
		Dilution Factor: 1 Analysis Time..: 12:44				

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DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**0.0036 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AN**
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Nickel	ND	0.040	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AP
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Selenium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AR
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Silver	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AA
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Zinc	**0.0022 B**	**0.020**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AT**
		Dilution Factor: 1				
		Analysis Time..: 12:44				

MB Lot-Sample #: I6J110000-112 **Prep Batch #...:** 6284112

Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JF5ME1AA
		Dilution Factor: 1				
		Analysis Time..: 00:00				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

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General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: JFV4G1AA		MB Lot-Sample #:	I6J060000-315	
	ND	1.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 1				
		Analysis Time..: 10:19				
Fluoride		Work Order #: JFPCT1AA		MB Lot-Sample #:	I6J050000-066	
	ND	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1				
		Analysis Time..: 09:25				
Nitrate as N		Work Order #: JFPCV1AA		MB Lot-Sample #:	I6J050000-068	
	ND	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1				
		Analysis Time..: 09:25				
Sulfate		Work Order #: JFV4X1AA		MB Lot-Sample #:	I6J060000-320	
	ND	1.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 1				
		Analysis Time..: 10:19				
Total Dissolved Solids		Work Order #: JFJGW1AA		MB Lot-Sample #:	I6J030000-243	
	ND	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1				
		Analysis Time..: 10:45				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFWCG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J060000-367 JFWCG1AD-LCSD
Prep Date.....: 10/04/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6279367 **Analysis Time..:** 14:15
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	98	(68 - 128)	2.8	(0-30)	SW846 8260B
Ethylbenzene	101	(65 - 125)			SW846 8260B
	95	(65 - 125)	6.2	(0-30)	SW846 8260B
Toluene	94	(64 - 124)			SW846 8260B
	89	(64 - 124)	5.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	99	(64 - 124)			SW846 8260B
	94	(64 - 124)	5.4	(0-30)	SW846 8260B
o-Xylene	101	(65 - 125)			SW846 8260B
	97	(65 - 125)	4.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	108	(58 - 118)			SW846 8260B
	115	(58 - 118)	6.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(67 - 127)
	102	(67 - 127)
Toluene-d8	112	(76 - 136)
	119	(76 - 136)
Dibromofluoromethane	92	(67 - 127)
	100	(67 - 127)
1,2-Dichloroethane-d4	91	(65 - 125)
	100	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFWCG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J060000-367 JFWCG1AD-LCSD
Prep Date.....: 10/04/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6279367 **Analysis Time..:** 14:15
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.7	ug/kg	95		SW846 8260B
	50.0	49.1	ug/kg	98	2.8	SW846 8260B
Ethylbenzene	50.0	50.4	ug/kg	101		SW846 8260B
	50.0	47.4	ug/kg	95	6.2	SW846 8260B
Toluene	50.0	46.9	ug/kg	94		SW846 8260B
	50.0	44.4	ug/kg	89	5.4	SW846 8260B
m-Xylene & p-Xylene	100	99.3	ug/kg	99		SW846 8260B
	100	94.1	ug/kg	94	5.4	SW846 8260B
o-Xylene	50.0	50.5	ug/kg	101		SW846 8260B
	50.0	48.5	ug/kg	97	4.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	53.9	ug/kg	108		SW846 8260B
	50.0	57.7	ug/kg	115	6.9	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(67 - 127)
	102	(67 - 127)
Toluene-d8	112	(76 - 136)
	119	(76 - 136)
Dibromofluoromethane	92	(67 - 127)
	100	(67 - 127)
1,2-Dichloroethane-d4	91	(65 - 125)
	100	(65 - 125)

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J110000-128 JF5NV1AD-LCSD
Prep Date.....: 10/06/06 **Analysis Date..:** 10/06/06
Prep Batch #...: 6284128 **Analysis Time..:** 07:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	109	(70 - 118)			SW846 8260B
	106	(70 - 118)	2.9	(0-20)	SW846 8260B
Toluene	104	(76 - 120)			SW846 8260B
	104	(76 - 120)	0.32	(0-20)	SW846 8260B
Ethylbenzene	106	(72 - 121)			SW846 8260B
	106	(72 - 121)	0.20	(0-20)	SW846 8260B
Xylenes (total)	106	(72 - 121)			SW846 8260B
	106	(72 - 121)	0.19	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(75 - 115)
	91	(75 - 115)
Toluene-d8	98	(90 - 114)
	96	(90 - 114)
4-Bromofluorobenzene	95	(86 - 117)
	92	(86 - 117)
Dibromofluoromethane	102	(81 - 110)
	98	(81 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J110000-128 JF5NV1AD-LCSD
Prep Date.....: 10/06/06 **Analysis Date..:** 10/06/06
Prep Batch #...: 6284128 **Analysis Time..:** 07:14
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	20.0	21.8	ug/L	109		SW846 8260B
	20.0	21.1	ug/L	106	2.9	SW846 8260B
Toluene	20.0	20.7	ug/L	104		SW846 8260B
	20.0	20.8	ug/L	104	0.32	SW846 8260B
Ethylbenzene	20.0	21.1	ug/L	106		SW846 8260B
	20.0	21.2	ug/L	106	0.20	SW846 8260B
Xylenes (total)	60.0	63.4	ug/L	106		SW846 8260B
	60.0	63.5	ug/L	106	0.19	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(75 - 115)
	91	(75 - 115)
Toluene-d8	98	(90 - 114)
	96	(90 - 114)
4-Bromofluorobenzene	95	(86 - 117)
	92	(86 - 117)
Dibromofluoromethane	102	(81 - 110)
	98	(81 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**107**	**(66 - 129)**			**SW846 8015B**
	107	**(66 - 129)**	**0.67**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**2150**	**ug/kg**	**107**		**SW846 8015B**
	2000	**2130**	**ug/kg**	**107**	**0.67**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFPHC1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: I6J050000-167 JFPHC1AD-LCSD
Prep Date.....: 10/04/06 Analysis Date..: 10/04/06
Prep Batch #...: 6278167 Analysis Time..: 11:36
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**99**	**(85 - 115)**			**SW846 8015B**
	92	**(85 - 115)**	**7.3**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	99	(81 - 123)
	98	(81 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFPHC1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J050000-167 JFPHC1AD-LCSD
Prep Date.....: 10/04/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6278167 **Analysis Time..:** 11:36
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**1980**	**ug/L**	**99**		**SW846 8015B**
	2000	**1840**	**ug/L**	**92**	**7.3**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	99	(81 - 123)
	98	(81 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHJ51AC-LCS Matrix.....: WATER
LCS Lot-Sample#: I6J020000-398 JFHJ51AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275398 Analysis Time..: 19:21
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**103**	**(28 - 121)**			**SW846 8015B**
	55 p	**(28 - 121)**	**61**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	116	(48 - 153)
	79	(48 - 153)
Dotriacontane	115	(35 - 143)
	97	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHJ51AC-LCS Matrix.....: WATER
LCS Lot-Sample#: I6J020000-398 JFHJ51AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275398 Analysis Time..: 19:21
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**1.00**	**1.03**	**mg/L**	**103**		**SW846 8015B**
	1.00	**0.552 p**	**mg/L**	**55**	**61**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	116	(48 - 153)
	79	(48 - 153)
Dotriacontane	115	(35 - 143)
	97	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-401
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275401 Analysis Time..: 13:19
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**78**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	106	(37 - 131)
Dotriacontane	113	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-401
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275401 Analysis Time..: 13:19
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**26.0**	**mg/kg**	**78**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	106	(37 - 131)
Dotriacontane	113	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J030000-369 **Prep Batch #...:** 6276369					
Calcium	103	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A2
		Dilution Factor: 1		Analysis Time..: 11:25	
Potassium	99	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A3
		Dilution Factor: 1		Analysis Time..: 11:25	
Magnesium	101	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A4
		Dilution Factor: 1		Analysis Time..: 11:25	
Sodium	97	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A5
		Dilution Factor: 1		Analysis Time..: 11:25	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J030000-369 **Prep Batch #...:** 6276369							
Calcium	50.0	51.4	mg/L	103	SW846 6010B	10/03-10/04/06	JFJ781A2
			Dilution Factor: 1		Analysis Time..: 11:25		
Potassium	50.0	49.6	mg/L	99	SW846 6010B	10/03-10/04/06	JFJ781A3
			Dilution Factor: 1		Analysis Time..: 11:25		
Magnesium	50.0	50.6	mg/L	101	SW846 6010B	10/03-10/04/06	JFJ781A4
			Dilution Factor: 1		Analysis Time..: 11:25		
Sodium	50.0	48.5	mg/L	97	SW846 6010B	10/03-10/04/06	JFJ781A5
			Dilution Factor: 1		Analysis Time..: 11:25		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.5	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Arsenic	96	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	98	(80 - 120)	1.7	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Barium	98	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	99	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Boron	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	2.9	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Cadmium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.9	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Chromium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Cobalt	97	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	98	(80 - 120)	1.5	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Copper	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Iron	102	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	103	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Lead	101	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.2	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Manganese	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Molybdenum	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.7	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Nickel	102	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	104	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Selenium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Silver	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	101	(80 - 120)	1.8	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Zinc	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	2.0	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	50.0	50.0	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	50.0	50.8	mg/L	102	1.5	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Arsenic	0.500	0.482	mg/L	96		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.490	mg/L	98	1.7	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Barium	0.500	0.489	mg/L	98		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.497	mg/L	99	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Boron	0.500	0.495	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.510	mg/L	102	2.9	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Cadmium	0.500	0.493	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.9	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Chromium	0.500	0.495	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Cobalt	0.500	0.485	mg/L	97		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.492	mg/L	98	1.5	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Copper	0.500	0.500	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.508	mg/L	102	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Iron	50.0	50.8	mg/L	102		SW846 6010B	10/03-10/04/06	6276373
	50.0	51.5	mg/L	103	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Lead	0.500	0.503	mg/L	101		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.509	mg/L	102	1.2	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Manganese	0.500	0.501	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.509	mg/L	102	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Molybdenum	0.500	0.493	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.7	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Nickel	0.500	0.510	mg/L	102		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.518	mg/L	104	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Selenium	0.500	0.494	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.501	mg/L	100	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Silver	0.100	0.0989	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.100	0.101	mg/L	101	1.8	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Zinc	0.500	0.500	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.510	mg/L	102	2.0	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J110000-112 **Prep Batch #...:** 6284112					
Mercury	106	(80 - 120)	SW846 7470A	10/10-10/11/06	JF5ME1AC
		Dilution Factor: 1	Analysis Time..: 00:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J110000-112 **Prep Batch #...:** 6284112							
Mercury	0.00500	0.00529	mg/L	106	SW846 7470A	10/10-10/11/06	JF5ME1AC
		Dilution Factor: 1			Analysis Time..: 00:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: JFV4G1AC	LCS Lot-Sample#: I6J060000-315		
	98	(90 - 110)	SW846 9056	10/05/06	6279315
		Dilution Factor: 1	Analysis Time..: 10:34		
Fluoride		Work Order #: JFPCT1AC	LCS Lot-Sample#: I6J050000-066		
	98	(90 - 110)	SW846 9056	09/30/06	6278066
		Dilution Factor: 1	Analysis Time..: 09:40		
Nitrate as N		Work Order #: JFPCV1AC	LCS Lot-Sample#: I6J050000-068		
	96	(90 - 110)	SW846 9056	09/30/06	6278068
		Dilution Factor: 1	Analysis Time..: 09:40		
Sulfate		Work Order #: JFV4X1AC	LCS Lot-Sample#: I6J060000-320		
	94	(90 - 110)	SW846 9056	10/05/06	6279320
		Dilution Factor: 1	Analysis Time..: 10:34		
Total Dissolved Solids		Work Order #: JFJGW1AC	LCS Lot-Sample#: I6J030000-243		
	99	(87 - 113)	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1	Analysis Time..: 10:47		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #: JFV4G1AC LCS Lot-Sample#: I6J060000-315				
	4.00	3.93	mg/L	98	SW846 9056	10/05/06	6279315
			Dilution Factor: 1		Analysis Time..: 10:34		
Fluoride			Work Order #: JFPCT1AC LCS Lot-Sample#: I6J050000-066				
	4.00	3.90	mg/L	98	SW846 9056	09/30/06	6278066
			Dilution Factor: 1		Analysis Time..: 09:40		
Nitrate as N			Work Order #: JFPCV1AC LCS Lot-Sample#: I6J050000-068				
	4.00	3.85	mg/L	96	SW846 9056	09/30/06	6278068
			Dilution Factor: 1		Analysis Time..: 09:40		
Sulfate			Work Order #: JFV4X1AC LCS Lot-Sample#: I6J060000-320				
	4.00	3.77	mg/L	94	SW846 9056	10/05/06	6279320
			Dilution Factor: 1		Analysis Time..: 10:34		
Total Dissolved Solids			Work Order #: JFJGW1AC LCS Lot-Sample#: I6J030000-243				
	2010	2000	mg/L	99	MCAWW 160.1	10/03/06	6276243
			Dilution Factor: 1		Analysis Time..: 10:47		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AJ-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6279233
Prep Date.....:	10/04/06	**Analysis Date..:**	10/05/06		
Prep Batch #...:	6279367	**Analysis Time..:**	12:27		
Dilution Factor:	1.01	**% Moisture.....:**	1.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	90	(68 - 128)			SW846 8260B
	82	(68 - 128)	9.0	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	83	(65 - 125)	11	(0-30)	SW846 8260B
Toluene	86	(64 - 124)			SW846 8260B
	78	(64 - 124)	10	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	82	(64 - 124)	10	(0-30)	SW846 8260B
o-Xylene	94	(65 - 125)			SW846 8260B
	85	(65 - 125)	11	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	107	(58 - 118)			SW846 8260B
	95	(58 - 118)	12	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	106	(59 - 119)
Toluene-d8	113	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
	95	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)
	99	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AJ-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6279233
Prep Date.....:	10/04/06	**Analysis Date..:**	10/05/06		
Prep Batch #...:	6279367	**Analysis Time..:**	12:27		
Dilution Factor:	1.01	**% Moisture.....:**	1.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.9	45.6	ug/kg	90		SW846 8260B
	ND	50.7	41.6	ug/kg	82	9.0	SW846 8260B
Ethylbenzene	ND	50.9	46.9	ug/kg	92		SW846 8260B
	ND	50.7	42.1	ug/kg	83	11	SW846 8260B
Toluene	ND	50.9	43.6	ug/kg	86		SW846 8260B
	ND	50.7	39.3	ug/kg	78	10	SW846 8260B
m-Xylene & p-Xylene	ND	102	91.9	ug/kg	90		SW846 8260B
	ND	101	83.1	ug/kg	82	10	SW846 8260B
o-Xylene	ND	50.9	48.0	ug/kg	94		SW846 8260B
	ND	50.7	43.2	ug/kg	85	11	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.9	54.3	ug/kg	107		SW846 8260B
	ND	50.7	48.4	ug/kg	95	12	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	106	(59 - 119)
Toluene-d8	113	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
	95	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)
	99	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFPWH1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6J050150-004		JFPWH1AD-MSD		
Date Sampled...:	10/04/06 09:55	**Date Received..:**	10/05/06	**MS Run #.....:**	6284080
Prep Date.....:	10/06/06	**Analysis Date..:**	10/06/06		
Prep Batch #...:	6284128	**Analysis Time..:**	10:22		
Dilution Factor:	200				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	109	(70 - 118)			SW846 8260B
	108	(70 - 118)	0.37	(0-20)	SW846 8260B
Toluene	114	(76 - 120)			SW846 8260B
	108	(76 - 120)	1.9	(0-20)	SW846 8260B
Ethylbenzene	102	(72 - 121)			SW846 8260B
	100	(72 - 121)	1.7	(0-20)	SW846 8260B
Xylenes (total)	101	(72 - 121)			SW846 8260B
	100	(72 - 121)	1.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
	95	(67 - 130)
Toluene-d8	96	(83 - 115)
	97	(83 - 115)
4-Bromofluorobenzene	93	(79 - 119)
	94	(79 - 119)
Dibromofluoromethane	98	(88 - 119)
	98	(88 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFPWH1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6J050150-004		JFPWH1AD-MSD		
Date Sampled...:	10/04/06 09:55	**Date Received..:**	10/05/06	**MS Run #.....:**	6284080
Prep Date.....:	10/06/06	**Analysis Date..:**	10/06/06		
Prep Batch #...:	6284128	**Analysis Time..:**	10:22		
Dilution Factor:	200				

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	7200	4000	11600	ug/L	109		SW846 8260B
	7200	4000	11500	ug/L	108	0.37	SW846 8260B
Toluene	7500	4000	12000	ug/L	114		SW846 8260B
	7500	4000	11800	ug/L	108	1.9	SW846 8260B
Ethylbenzene	540	4000	4600	ug/L	102		SW846 8260B
	540	4000	4530	ug/L	100	1.7	SW846 8260B
Xylenes (total)	3400	12000	15500	ug/L	101		SW846 8260B
	3400	12000	15300	ug/L	100	1.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
	95	(67 - 130)
Toluene-d8	96	(83 - 115)
	97	(83 - 115)
4-Bromofluorobenzene	93	(79 - 119)
	94	(79 - 119)
Dibromofluoromethane	98	(88 - 119)
	98	(88 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JE78L1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	14:08		
Dilution Factor:	0.99	**% Moisture.....:**	18		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**85**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**3.3**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I300123	Work Order #...:	JE78L1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	14:08		
Dilution Factor:	0.99	% Moisture.....:	18		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	ND	2410	2050	ug/kg	85		SW846 8015B
	ND	2440	1990	ug/kg	81	3.3	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFFC1A9-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6I300123-007		JFFFC1CA-MSD		
Date Sampled...:	09/29/06 08:05	**Date Received..:**	09/30/06	**MS Run #.....:**	6278106
Prep Date.....:	10/04/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6278167	**Analysis Time..:**	16:20		
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**102**	**(79 - 124)**			**SW846 8015B**
	93	**(79 - 124)**	**9.3**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(75 - 122)
	99	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFFC1A9-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6I300123-007		JFFFC1CA-MSD		
Date Sampled...:	09/29/06 08:05	**Date Received..:**	09/30/06	**MS Run #.....:**	6278106
Prep Date.....:	10/04/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6278167	**Analysis Time..:**	16:20		
Dilution Factor:	1				

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2500**	**2560**	**ug/L**	**102**		**SW846 8015B**
	ND	**2500**	**2330**	**ug/L**	**93**	**9.3**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(75 - 122)
	99	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AG-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6275271
Prep Date.....:	10/02/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6275401	**Analysis Time..:**	14:40		
Dilution Factor:	1	**% Moisture.....:**	1.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**87**	**(32 - 132)**			**SW846 8015B**
	97	**(32 - 132)**	**10**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	104	(37 - 131)
	121	(37 - 131)
Dotriacontane	107	(10 - 151)
	121	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AG-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6275271
Prep Date.....:	10/02/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6275401	**Analysis Time..:**	14:40		
Dilution Factor:	1	**% Moisture.....:**	1.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**0.96**	**33.7**	**30.2**	**mg/kg**	**87**		**SW846 8015B**
	0.96	**33.6**	**33.4**	**mg/kg**	**97**	**10**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	104	(37 - 131)
	121	(37 - 131)
Dotriacontane	107	(10 - 151)
	121	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/26/06 09:17 **Date Received..:** 09/27/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I270143-001 **Prep Batch #...:** 6276369							
Calcium	NC	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C0
	NC	(75 - 125)		(0-20)	SW846 6010B	10/03-10/04/06	JE4311C1
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Magnesium	98	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C6
	100	(75 - 125)	0.54	(0-20)	SW846 6010B	10/03-10/04/06	JE4311C7
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Potassium	118	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C3
	118	(75 - 125)	0.14	(0-20)	SW846 6010B	10/03-10/04/06	JE4311C4
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Sodium	NC	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C9
	NC	(75 - 125)		(0-20)	SW846 6010B	10/03-10/04/06	JE4311DA
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/26/06 09:17 **Date Received..:** 09/27/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I270143-001 **Prep Batch #...:** 6276369									
Calcium									
	255	50.0	298 NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C0
	255	50.0	302 NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C1
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Magnesium									
	128	50.0	177	mg/L	98		SW846 6010B	10/03-10/04/06	JE4311C6
	128	50.0	178	mg/L	100	0.54	SW846 6010B	10/03-10/04/06	JE4311C7
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Potassium									
	17.2	50.0	76.4	mg/L	118		SW846 6010B	10/03-10/04/06	JE4311C3
	17.2	50.0	76.3	mg/L	118	0.14	SW846 6010B	10/03-10/04/06	JE4311C4
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Sodium									
	374	50.0	NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C9
	374	50.0	NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311DA
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						

NOTE(S):

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NC The recovery and/or RPD were not calculated.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/28/06 15:50 **Date Received..:** 09/30/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I300123-006 **Prep Batch #...:** 6284112							
Mercury	105	(75 - 125)			SW846 7470A	10/10-10/11/06	JFFED1CE
	103	(75 - 125)	2.3	(0-20)	SW846 7470A	10/10-10/11/06	JFFED1CF

Dilution Factor: 1
Analysis Time..: 00:00
MS Run #.....: 6284074

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/28/06 15:50 **Date Received..:** 09/30/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I300123-006 **Prep Batch #...:** 6284112									
Mercury									
	ND	0.00200	0.00210	mg/L	105		SW846 7470A	10/10-10/11/06	JFFED1CE
	ND	0.00200	0.00206	mg/L	103	2.3	SW846 7470A	10/10-10/11/06	JFFED1CF

Dilution Factor: 1
Analysis Time..: 00:00
MS Run #.....: 6284074

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10 **Date Received..:** 09/30/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#: JFFFN1A9-MS/JFFFN1CA-MSD				MS Lot-Sample #:	I6I300123-010
	96	(90 - 110)			SW846 9056	10/05/06	6279315
	96	(90 - 110)	0.25	(0-20)	SW846 9056	10/05/06	6279315
		Dilution Factor: 10					
		Analysis Time..: 12:04					
		MS Run #.....: 6279200					
Fluoride		WO#: JFFED1A9-MS/JFFED1CA-MSD				MS Lot-Sample #:	I6I300123-006
	91	(90 - 110)			SW846 9056	09/30/06	6278066
	90	(90 - 110)	1.4	(0-20)	SW846 9056	09/30/06	6278066
		Dilution Factor: 1					
		Analysis Time..: 12:25					
		MS Run #.....: 6278048					
Nitrate as N		WO#: JFFED1CC-MS/JFFED1CD-MSD				MS Lot-Sample #:	I6I300123-006
	92	(90 - 110)			SW846 9056	09/30/06	6278068
	91	(90 - 110)	0.53	(0-20)	SW846 9056	09/30/06	6278068
		Dilution Factor: 1					
		Analysis Time..: 12:25					
		MS Run #.....: 6278049					
Sulfate		WO#: JFFFN1CC-MS/JFFFN1CD-MSD				MS Lot-Sample #:	I6I300123-010
	95	(90 - 110)			SW846 9056	10/05/06	6279320
	97	(90 - 110)	1.1	(0-20)	SW846 9056	10/05/06	6279320
		Dilution Factor: 10					
		Analysis Time..: 12:04					
		MS Run #.....: 6279202					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10 **Date Received..:** 09/30/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#: JFFFN1A9-MS/JFFFN1CA-MSD		MS Lot-Sample #: I6I300123-010				
	25.8	40.0	64.3	mg/L	96		SW846 9056	10/05/06	6279315
	25.8	40.0	64.1	mg/L	96	0.25	SW846 9056	10/05/06	6279315
			Dilution Factor: 10						
			Analysis Time..: 12:04						
			MS Run #.....: 6279200						
Fluoride			WO#: JFFED1A9-MS/JFFED1CA-MSD		MS Lot-Sample #: I6I300123-006				
	0.60	4.00	4.26	mg/L	91		SW846 9056	09/30/06	6278066
	0.60	4.00	4.20	mg/L	90	1.4	SW846 9056	09/30/06	6278066
			Dilution Factor: 1						
			Analysis Time..: 12:25						
			MS Run #.....: 6278048						
Nitrate as N			WO#: JFFED1CC-MS/JFFED1CD-MSD		MS Lot-Sample #: I6I300123-006				
	2.8	4.00	6.49	mg/L	92		SW846 9056	09/30/06	6278068
	2.8	4.00	6.46	mg/L	91	0.53	SW846 9056	09/30/06	6278068
			Dilution Factor: 1						
			Analysis Time..: 12:25						
			MS Run #.....: 6278049						
Sulfate			WO#: JFFFN1CC-MS/JFFFN1CD-MSD		MS Lot-Sample #: I6I300123-010				
	32.7	40.0	70.5	mg/L	95		SW846 9056	10/05/06	6279320
	32.7	40.0	71.3	mg/L	97	1.1	SW846 9056	10/05/06	6279320
			Dilution Factor: 10						
			Analysis Time..: 12:04						
			MS Run #.....: 6279202						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Work Order #...:** JE6AA-SMP JE6AA-DUP **Matrix.....:** WATER

Date Sampled...: 09/26/06 09:25 **Date Received..:** 09/27/06

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: I6I270267-002		
	708	703	mg/L	0.71	(0-20)	MCAWW 160.1	10/03/06	6276243

Dilution Factor: 1 Analysis Time..: 10:51 MS Run Number..: 6276146

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Work Order #...:** JFCN7-SMP JFCN7-DUP **Matrix.....:** SOLID

Date Sampled...: 09/28/06 10:15 **Date Received..:** 09/29/06

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: I6I290153-004		
	19.9	20.9	%	4.9	(0-20)	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:00 MS Run Number..: 6276282

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2, Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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SEVERN TRENT STL

CHAIN–OF–CUSTODY ADDENDUM

Lot No: _____

RECEIVED BY: WA

COC NUMBER: _____

DATE/TIME RECEIVED: 9/30/04 0845

QUOTE/PROFILE: 72371

UNPACKED DATE/TIME: 9/30/04 0850

CLIENT/PROJECT: URS

SAMPLES LOGGED IN: _____ LOG-IN REVIEWED: _____

Number of Shipping Containers Received with Chain of Custody 2

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: WA

Container Sealed: ☒ YES ☐ NO

Custody Seal Signed/Dated: ☒ YES ☐ NO

Custody Seal Present: ☒ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☒ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed: ☐ YES ☐ NO

Samples Received Match Chain: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Packing Material Used: (circle)

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

None / Absorbent / Paper / Bubble Wrap

Can Size: ☐ 6L ☐ 15L Other _____

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: WA **IR THERMOMETER #:** 9-4

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

~~TB~~ SC 2.7	~~TB~~ SC 2.5	~~TB~~ SC 3.1	~~TB~~ SC 3.6	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☒ ~~YES~~ ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☐ NA ☒ ~~YES~~ ☒ VOA Samples **VERIFIED BY:** WA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☒ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: MA

Samples received match COC:	☐ YES	☑ NO	Bottles received intact:	☑ YES	☐ NO
See additional discrepancies/comments section:	☑ YES	☐ NO	Samples received from USDA restricted area:	☐ YES	☑ NO
Chain-of-Custody form properly maintained:	☑ YES	☐ NO	VOA trip blanks included:	☐ YES ☐ NO	☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments
CW Dup-1	9/28/06 0800	Dup-1	9/28/06 0800	logged out

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

MW-2 / labels on bottles show tests that do not match bottle type.
MW-4

All bottles that have HNO_3 preserved stickers are not preserved - HNO_3 washed out of bottle.

Dup 1 - Received: 1x40mL HCl, 2x50mL UP, 2x50mL UP, 3L-UP.

* Prepare 1x125 ml split ~~for~~ total cations; preserve w/ HNO_3 *DO NOT FILTER*

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: Shannon Hoover Informed verbally on: 9/28/06 By: Steve

Sample(s) processed "as is" comments: Will be shipping for Sat. Delivery. Notified that NO_3 analysis will have limited holding time remaining. Narrate any problems w/ H.T.

@ ~~Dissolved~~ metals containers' preservative was rinsed out. Make a split to preserve for Total cations, and filter and preserve for dissolved metals upon rec't.

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: 10/16/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Chain of Custody Record

F6I300123

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

STL4149 (1202)

Client	Project Manager	Date	Page
URS Corporation	Shannon Hoover	27 Sept 2006	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	
9400 Amberglen Blvd	512.419.6552	Austin	
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78729	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
41008243 / BP Maljamar			
Contract/Purchase Order/Quote Number			

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	Analysis: BTEX 8260	Analysis: TPH 8015 GRO+DRO	Analysis: PAH 8015 GRO
B-4 (25-26.5)	27Sep06	1615	soil	40z	glass	2	Ice	3.1 KH 9/28/06	X		
B-4 (50-51.5)	27Sep06	1650	soil	40z	glass	2	Ice	Sucox KH	X		
B-4 (75-76.5)	27Sep06	1735	soil	40z	glass	2	Ice		X		
B-4 (95-96.5)	28Sep06	0705	soil	40z	glass	2	Ice		X		
B-4 (120-121.5)	28Sep06	1045	soil	40z	glass	2	Ice		X		
MW-1	28Sep06	1550	gw	40 ml	glass	6	HCl, ice		X	X	
MW-3	29Sep06 ~~28Sep06~~	~~1740~~	gw	40 ml	glass	6	HCl, ice		X	X	
CTWDUP-1	28Sep06	0800	gw	40 ml	glass	6	HCl, ice		X	X	
MW-2	29Sep06	1020	gw	40ml	glass	6	HCl ice		X	X	
MW-4	29Sep06	1210	gw	40 ml	glass	6	HCl ice		X	X	

Special Instructions: Hold for PAHs

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☒ Normal ☐ Rush ☐ Other _____

QC Level

☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1	Rita Krebs	9-29-06	700		9/30/06	0850 KH
2						
3						

0845

Comments

119/120

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 28 Sep 2006
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6552 / 512 454 8807	Lab Location: Austin
City: Austin / State: TX / Zip Code: 78729	Site Contact: Rita Krebs	
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number:	
Contract/Purchase Order/Quote Number:		

Page 1 of 1

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	Analysis: TPH-DRO 8015	PAHs 8270	Metals	TDS 160.1 / Cations/Anions
MW-1	28Sep06	1550	GW	1Lamber	glass	3	ice	2.7 9/30/06 See COC Add	X	X		
MW-3 SLH	29Sep06	~~1410~~ SLH	GW	1Lamber	glass	3	ice		X	X		
MW-3	29Sep06	0805	GW	250ml	pl	2	ice	unfiltered SLH		X	X	X
MW-1	28Sep06	1550	GW	250 ml	pl	2	ice	unfiltered		X	X	X
MW-2	29Sep06	1020	GW	1Lamber	glass	3	ice		X			
MW-2	29Sep06	1020	GW	250 ml	pl	2	ice	unfiltered		X	X	X
MW-4	29Sep06	1210	GW	1Lamber	glass	3	ice		X			
MW-4	29Sep06	1210	GW	250ml	pl	2	ice	unfiltered		X	X	X

Special Instructions: samples NOT field filtered for metals, HNO3 rinsed out of containers ⇒ must filter in lab / 3 coolers on this COC

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Relinquished By	Date	Time	Received By	Date	Time
1.	Rita Krebs	9-29-06	700		9/30/06	0845
2.						
3.						

Comments:

120/120

WHITE - Returned to Client with Report: PINK - Field Copy

[redacted]

Chain of Custody Record

I6I300123

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

53073

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 27 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419.6552	Lab Location: Austin	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260	TPH 8015 GRO+DRO	TPH 8015 GRO
B-4 (25-26.5)	27 Sep 06	1615	soil	4oz	glass	2	ice	3.1 [illegible]	X	X	
B-4 (50-51.5)	27 Sep 06	1050	soil	4oz	glass	2	ice	[illegible]	X	X	
B-4 (75-76.5)	27 Sep 06	1735	soil	4oz	glass	2	ice		X	X	
B-4 (95-96.5)	28 Sep 06	0905	soil	4oz	glass	2	ice		X	X	
B-4 (120-121.5)	28 Sep 06	1045	soil	4oz	glass	2	ice		X	X	
MW-1	28 Sep 06	1550	gw	40 ml	glass	6	HCl, ice		X		X
MW-3 * 29 Sep 06	~~28 Sep 06~~	~~1740~~	gw	40 ml	glass	6	HCl, ice		X		X
GWDUP-1	28 Sep 06	0800	gw	40 ml	glass	6	HCl, ice		X		X
MW-2	29 Sep 06	1020	gw	40 ml	glass	6	HCl, ice		X		X
MW-4	29 Sep 06	1210	gw	40 ml	glass	6	HCl, ice		X		X

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-29-06	700	1. Received By: [signature]	9/30/06	0850
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

STL4149 (1202)

Client	Project Manager	Date	Page / of /
URS Corporation	Shannon Hoover	28 Sep 2006	
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512 419 6552 / 512 454 8807	Austin	
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78729	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
41008243 / BP Malgamar			
Contract/Purchase Order/Quote Number			

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments
MW-1	28 Sep 06	1550	GW	1 Liter	glass	3	Ice	
MW-3	29 Sep 06	[illegible]	GW	1 Liter	glass	3	Ice	
MW-3	29 Sep 06	0805	GW	250 ml	pl	2	Ice	unfiltered
MW-1	28 Sep 06	1550	GW	250 ml	pl	2	Ice	unfiltered
MW-2	29 Sep 06	1020	GW	1 Liter	glass	3	Ice	
MW-2	29 Sep 06	1020	GW	250 ml	pl	2	Ice	unfiltered
MW-4	29 Sep 06	1210	GW	1 Liter	glass	3	Ice	
MW-4	29 Sep 06	1210	GW	250 ml	pl	2	Ice	unfiltered

Special Instructions

Sample - NOT field filtered for metals, HNO3 rinsed out of containers - must filter in lab / 3 coolers on this COC

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☒ Normal ☐ Rush ☐ Other _____

QC Level

☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	9-28-06	1700	1. Received By	9/28/06	1700
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

WHITE - Returned to Client with Report. YELLOW - Laboratory Copy. PINK - Field Copy

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ted Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: Mal Jamar #2

Project Number: 043918

Location: Lea County, NM

Lab Order Number: 6A11003

Report Date: 01/12/06

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release Point 27'	6A11003-01	Soil	01/10/06 14:30	01/11/06 10:55

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Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point 27' (6A11003-01) Soil									
Gasoline Range Organics C6-C12	**19700**	20.0	mg/kg dry	2	EA61120	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**17600**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**37300**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*188 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*99.6 %*	*70-130*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point 27' (6A11003-01) Soil									
% Moisture	**4.5**	0.1	%	1	EA61202	01/11/06	01/12/06	% calculation	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA61120 - Solvent Extraction (GC)										
Blank (EA61120-BLK1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*53.3*		*mg/kg*	*50.0*		*107*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.8*		*"*	*50.0*		*91.6*	*70-130*			
LCS (EA61120-BS1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	479	10.0	mg/kg wet	500		95.8	75-125			
Diesel Range Organics >C12-C35	530	10.0	"	500		106	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*59.0*		*mg/kg*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.0*		*"*	*50.0*		*100*	*70-130*			
Calibration Check (EA61120-CCV1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	479		mg/kg	500		95.8	80-120			
Diesel Range Organics >C12-C35	524		"	500		105	80-120			
Total Hydrocarbon C6-C35	1000		"	1000		100	80-120			
Surrogate: 1-Chlorooctane	*59.1*		*"*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
Matrix Spike (EA61120-MS1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	521	10.0	mg/kg dry	553	8.36	92.7	75-125			
Diesel Range Organics >C12-C35	608	10.0	"	553	138	85.0	75-125			
Total Hydrocarbon C6-C35	1130	10.0	"	1110	138	89.4	75-125			
Surrogate: 1-Chlorooctane	*60.0*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.7*		*"*	*50.0*		*103*	*70-130*			
Matrix Spike Dup (EA61120-MSD1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	524	10.0	mg/kg dry	553	8.36	93.2	75-125	0.574	20	
Diesel Range Organics >C12-C35	620	10.0	"	553	138	87.2	75-125	1.95	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1110	138	90.3	75-125	0.881	20	
Surrogate: 1-Chlorooctane	*60.2*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.8*		*"*	*50.0*		*104*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA61202 - General Preparation (Prep)										
Blank (EA61202-BLK1)				Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	100		%							
Duplicate (EA61202-DUP1)		**Source: 6A10012-01**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	88.6		%		90.4			2.01	20	
Duplicate (EA61202-DUP2)		**Source: 6A10016-04**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	93.3		%		93.6			0.321	20	
Duplicate (EA61202-DUP3)		**Source: 6A11007-01**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	96.6		%		97.0			0.413	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1/12/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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Received by OCD: 3/25/2021 2:14:32 PM

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79763
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward Phillips (Ted)
Company Name: CRA Conestoga-Rovers & Assoc.
Company Address: 2135 S Loop 250 W
City/State/Zip: Midland, TX
Telephone No: 432-686-0086 Fax No: 432-686-0186
Sampler Signature:

Project Name: Maddox #2
Project #: 043918
Project Loc: Lea County, NM
PO #:

6A11003

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 / 8015M / 1005 / 1006	Calions (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Total Gamma	RUSH TAT (Pre-Schedule)	Standard TAT
-01	Release Point 27'	1/10/06	14:30	1	✓									✓		✓											✓	

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 4.0
Laboratory Comments: 4oz jar

Relinquished by:	Date	Time	Received by:	Date	Time
	1/11/06	10:55			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Carrie Keep	1/11/06	10:55

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 1/11/06 10:55

Order #: 6A11003

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	ID on it'd
Container labels legible and intact?	Yes	No	n/a
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - Date/Time: Contacted by:

Regarding:

Corrective Action Taken:

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Edward Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: BP Mal Jamar Ph2

Project Number: 043995

Location: Lea County, NM

Lab Order Number: 6A25009

Report Date: 01/26/06

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ph 2 S. Bottom 30'	6A25009-01	Soil	01/24/06 15:00	01/25/06 10:20
Ph 2 S. Wall 17'	6A25009-02	Soil	01/24/06 15:15	01/25/06 10:20
Ph 2 N. Bottom 30'	6A25009-03	Soil	01/24/06 15:19	01/25/06 10:20
Ph 2 N. Wall 15'	6A25009-04	Soil	01/24/06 15:27	01/25/06 10:20

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Released to Imaging: 4/26/2023 2:01:09 PM

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 S. Bottom 30' (6A25009-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*85.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*106 %*	*70-130*		"	"	"	"	
Ph 2 S. Wall 17' (6A25009-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*84.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.5 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*101 %*	*70-130*		"	"	"	"	
Ph 2 N. Bottom 30' (6A25009-03) Soil									
Benzene	**7.09**	0.500	mg/kg dry	500	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	**43.4**	0.500	"	"	"	"	"	"	
Ethylbenzene	**26.7**	0.500	"	"	"	"	"	"	
Xylene (p/m)	**38.9**	0.500	"	"	"	"	"	"	
Xylene (o)	**14.2**	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*129 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*113 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**2390**	20.0	mg/kg dry	2	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	**4150**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**6540**	20.0	"	"	"	"	"	"	

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 N. Bottom 30' (6A25009-03) Soil									
Surrogate: 1-Chlorooctane		*69.8 %*	*70-130*		*EA62412*	*01/25/06*	*01/25/06*	*EPA 8015M*	*S-06*
Surrogate: 1-Chlorooctadecane		*56.2 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*
Ph 2 N. Wall 15' (6A25009-04) Soil									
Benzene	**0.124**	0.100	mg/kg dry	100	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	**7.83**	0.100	"	"	"	"	"	"	
Ethylbenzene	**8.72**	0.100	"	"	"	"	"	"	
Xylene (p/m)	**12.3**	0.100	"	"	"	"	"	"	
Xylene (o)	**5.24**	0.100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*120 %*	*80-120*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*130 %*	*80-120*		*"*	*"*	*"*	*"*	*S-04*
Gasoline Range Organics C6-C12	**572**	20.0	mg/kg dry	2	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1490**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2060**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*57.2 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*
Surrogate: 1-Chlorooctadecane		*58.8 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 S. Bottom 30' (6A25009-01) Soil									
% Moisture	**17.0**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 S. Wall 17' (6A25009-02) Soil									
% Moisture	**1.0**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 N. Bottom 30' (6A25009-03) Soil									
% Moisture	**1.7**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 N. Wall 15' (6A25009-04) Soil									
% Moisture	**1.4**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62412 - Solvent Extraction (GC)										
Blank (EA62412-BLK1)				Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*51.1*		*mg/kg*	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.2*		*"*	*50.0*		*96.4*	*70-130*			
LCS (EA62412-BS1)				Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	454	10.0	mg/kg wet	500		90.8	75-125			
Diesel Range Organics >C12-C35	559	10.0	"	500		112	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*60.4*		*mg/kg*	*50.0*		*121*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.6*		*"*	*50.0*		*107*	*70-130*			
Calibration Check (EA62412-CCV1)				Prepared: 01/24/06 Analyzed: 01/25/06						
Gasoline Range Organics C6-C12	488		mg/kg	500		97.6	80-120			
Diesel Range Organics >C12-C35	590		"	500		118	80-120			
Total Hydrocarbon C6-C35	1080		"	1000		108	80-120			
Surrogate: 1-Chlorooctane	*63.7*		*"*	*50.0*		*127*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.1*		*"*	*50.0*		*104*	*70-130*			
Matrix Spike (EA62412-MS1)	**Source: 6A24002-01**			Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	453	10.0	mg/kg dry	525	ND	86.3	75-125			
Diesel Range Organics >C12-C35	563	10.0	"	525	ND	107	75-125			
Total Hydrocarbon C6-C35	1020	10.0	"	1050	ND	97.1	75-125			
Surrogate: 1-Chlorooctane	*58.6*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.8*		*"*	*50.0*		*97.6*	*70-130*			
Matrix Spike Dup (EA62412-MSD1)	**Source: 6A24002-01**			Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	477	10.0	mg/kg dry	525	ND	90.9	75-125	5.16	20	
Diesel Range Organics >C12-C35	583	10.0	"	525	ND	111	75-125	3.49	20	
Total Hydrocarbon C6-C35	1060	10.0	"	1050	ND	101	75-125	3.85	20	
Surrogate: 1-Chlorooctane	*61.5*		*mg/kg*	*50.0*		*123*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.2*		*"*	*50.0*		*102*	*70-130*			

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62503 - EPA 5030C (GC)										
Blank (EA62503-BLK1)				Prepared & Analyzed: 01/25/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*34.7*		*ug/kg*	*40.0*		*86.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*38.8*		*"*	*40.0*		*97.0*	*80-120*			
LCS (EA62503-BS1)				Prepared & Analyzed: 01/25/06						
Benzene	1.02	0.0250	mg/kg wet	1.25		81.6	80-120			
Toluene	1.05	0.0250	"	1.25		84.0	80-120			
Ethylbenzene	1.02	0.0250	"	1.25		81.6	80-120			
Xylene (p/m)	2.04	0.0250	"	2.50		81.6	80-120			
Xylene (o)	1.08	0.0250	"	1.25		86.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	*33.6*		*ug/kg*	*40.0*		*84.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*43.6*		*"*	*40.0*		*109*	*80-120*			
Calibration Check (EA62503-CCV1)				Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	41.5		ug/kg	50.0		83.0	80-120			
Toluene	42.2		"	50.0		84.4	80-120			
Ethylbenzene	40.0		"	50.0		80.0	80-120			
Xylene (p/m)	80.2		"	100		80.2	80-120			
Xylene (o)	41.9		"	50.0		83.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	*35.7*		*"*	*40.0*		*89.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*34.7*		*"*	*40.0*		*86.8*	*80-120*			
Matrix Spike (EA62503-MS1)	**Source: 6A20010-08**			Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	1.01	0.0250	mg/kg dry	1.26	ND	80.2	80-120			
Toluene	1.06	0.0250	"	1.26	0.0123	83.2	80-120			
Ethylbenzene	1.03	0.0250	"	1.26	ND	81.7	80-120			
Xylene (p/m)	2.06	0.0250	"	2.51	0.0307	80.8	80-120			
Xylene (o)	1.04	0.0250	"	1.26	ND	82.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	*37.5*		*ug/kg*	*40.0*		*93.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.3*		*"*	*40.0*		*116*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62503 - EPA 5030C (GC)										
Matrix Spike Dup (EA62503-MSD1)	**Source: 6A20010-08**			Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	1.02	0.0250	mg/kg dry	1.26	ND	81.0	80-120	0.993	20	
Toluene	1.04	0.0250	"	1.26	0.0123	81.6	80-120	1.94	20	
Ethylbenzene	1.04	0.0250	"	1.26	ND	82.5	80-120	0.974	20	
Xylene (p/m)	2.05	0.0250	"	2.51	0.0307	80.5	80-120	0.372	20	
Xylene (o)	1.06	0.0250	"	1.26	ND	84.1	80-120	1.92	20	
Surrogate: a,a,a-Trifluorotoluene	*33.0*		*ug/kg*	*40.0*		*82.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.3*		*"*	*40.0*		*101*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62507 - General Preparation (Prep)										
Blank (EA62507-BLK1)				Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	100		%							
Duplicate (EA62507-DUP1)		**Source: 6A24001-01**		Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	96.8		%		96.9			0.103	20	
Duplicate (EA62507-DUP2)		**Source: 6A25009-03**		Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	98.4		%		98.3			0.102	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1/26/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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Page 478 of 1388

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward (Ted) Phillips
Company Name: CRA Conestoga Rovers & Assoc
Company Address: 2135 S Loop 250 West
City/State/Zip: Midland, TX 79703
Telephone No: (432)686-0086 Fax No: (432)686-0186
Sampler Signature:
Email: EPhillips@CRAWorld.com

Project Name: BP Maljamar Ph 2
Project #: 043995
Project Loc: Lea County NM
PO #:

Acid as Per Ted 01-25-06 @1455

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TPH: 418.1 8015M 8005 1006	TOTAL: Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.					RUSH TAT (Pre-Schedule) 24 hrs	Standard TAT
601	Ph 2 S. Bottom 30'	1/24/06	15:00	1	✓									✓									✓							✓	
602	Ph 2 S. Wall 17'	1/24/06	15:15	1	✓									✓									✓							✓	
603	Ph 2 N. Bottom 30'	1/24/06	15:19	1	✓									✓									✓							✓	
604	Ph 2 N. Wall 15'	1/24/06	15:27	1	✓									✓									✓							✓	

Special Instructions: Print → wet & dry wt. results needed

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler
Temperature Upon Receipt: 5.0

Laboratory Comments: 402

Relinquished by:	Date	Time	Received by:	Date	Time
E Phillips	1/25/06	10:20			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Cindi Wells	1/25/06	10:20

Received by OCD: 3/25/2021 2:14:32 PM
Released to Imaging: 4/26/2023 2:01:09 PM

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 1/25/00 10:20

Order #: 10A25009

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	5.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Edward Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: Mal Jamar 6 inch

Project Number: 043918-02

Location: Lea County

Lab Order Number: 6C27001

Report Date: 03/28/06

Conestoga-Rovers & Associates
2135 S. Loop 250 West
Midland TX, 79703

Project: Mal Jamar 6 inch
Project Number: 043918-02
Project Manager: Edward Philley

Fax: (432) 686-0186

Reported:
03/28/06 13:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release 50' Bottom	6C27001-01	Soil	03/24/06 14:30	03/27/06 08:12

Released to Imaging: 4/26/2023 2:01:09 PM

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release 50' Bottom (6C27001-01) Soil									
Carbon Ranges C6-C12	**8320**	20.0	mg/kg wet	2	EC62707	03/27/06	03/27/06	EPA 8015M	
Carbon Ranges C12-C28	**10400**	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**1140**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**19900**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*"*	*"*	*"*	*"*	*S-04*
Surrogate: 1-Chlorooctadecane		*55.6 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release 50' Bottom (6C27001-01) Soil									
Benzene	**106000**	5000	ug/kg wet	5000	EC62705	03/27/06	03/28/06	EPA 8260B	
Toluene	**416000**	5000	"	"	"	"	"	"	
Ethylbenzene	**195000**	5000	"	"	"	"	"	"	
Xylene (p/m)	**165000**	5000	"	"	"	"	"	"	
Xylene (o)	**74300**	5000	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*70-139*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85.6 %*	*52-149*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*76-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.2 %*	*66-145*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62707 - Solvent Extraction (GC)										
Blank (EC62707-BLK1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*41.8*		*mg/kg*	*50.0*		*83.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.8*		*"*	*50.0*		*87.6*	*70-130*			
LCS (EC62707-BS1)				Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	585	10.0	mg/kg wet	500		117	75-125			
Carbon Ranges C12-C28	561	10.0	"	500		112	75-125			
Total Hydrocarbon C6-C35	1150	10.0	"	1000		115	75-125			
Surrogate: 1-Chlorooctane	*62.3*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*61.7*		*"*	*50.0*		*123*	*70-130*			
Calibration Check (EC62707-CCV1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Carbon Ranges C6-C12	282		mg/kg	250		113	80-120			
Carbon Ranges C12-C28	291		"	250		116	80-120			
Total Hydrocarbon C6-C35	573		"	500		115	80-120			
Surrogate: 1-Chlorooctane	*64.2*		*"*	*50.0*		*128*	*70-130*			
Surrogate: 1-Chlorooctadecane	*63.2*		*"*	*50.0*		*126*	*70-130*			
Matrix Spike (EC62707-MS1)	**Source: 6C24004-01**			Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	516	10.0	mg/kg dry	535	ND	96.4	75-125			
Carbon Ranges C12-C28	494	10.0	"	535	ND	92.3	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1070	ND	94.4	75-125			
Surrogate: 1-Chlorooctane	*59.5*		*mg/kg*	*50.0*		*119*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.7*		*"*	*50.0*		*111*	*70-130*			

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Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62707 - Solvent Extraction (GC)										
Matrix Spike Dup (EC62707-MSD1)	**Source: 6C24004-01**			Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	508	10.0	mg/kg dry	535	ND	95.0	75-125	1.56	20	
Carbon Ranges C12-C28	484	10.0	"	535	ND	90.5	75-125	2.04	20	
Total Hydrocarbon C6-C35	992	10.0	"	1070	ND	92.7	75-125	1.80	20	
Surrogate: 1-Chlorooctane	*58.6*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.1*		*"*	*50.0*		*110*	*70-130*			

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Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62705 - EPA 5030C (GCMS)										
Blank (EC62705-BLK1)				Prepared & Analyzed: 03/27/06						
Benzene	ND	25.0	ug/kg wet							
Toluene	ND	25.0	"							
Ethylbenzene	ND	25.0	"							
Xylene (p/m)	ND	25.0	"							
Xylene (o)	ND	25.0	"							
Surrogate: Dibromofluoromethane	*56.2*		*ug/kg*	*50.0*		*112*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		*"*	*50.0*		*98.6*	*52-149*			
Surrogate: Toluene-d8	*53.8*		*"*	*50.0*		*108*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*48.6*		*"*	*50.0*		*97.2*	*66-145*			
LCS (EC62705-BS1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Benzene	1140	25.0	ug/kg wet	1250		91.2	70-130			
Toluene	1370	25.0	"	1250		110	70-130			
Ethylbenzene	1120	25.0	"	1250		89.6	70-130			
Xylene (p/m)	2100	25.0	"	2500		84.0	70-130			
Xylene (o)	1090	25.0	"	1250		87.2	70-130			
Surrogate: Dibromofluoromethane	*52.3*		*ug/kg*	*50.0*		*105*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		*"*	*50.0*		*92.8*	*52-149*			
Surrogate: Toluene-d8	*51.1*		*"*	*50.0*		*102*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*46.9*		*"*	*50.0*		*93.8*	*66-145*			
Calibration Check (EC62705-CCV1)				Prepared & Analyzed: 03/27/06						
Toluene	53.2		ug/kg	50.0		106	70-130			
Ethylbenzene	44.0		"	50.0		88.0	70-130			
Surrogate: Dibromofluoromethane	*51.7*		*"*	*50.0*		*103*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*48.2*		*"*	*50.0*		*96.4*	*52-149*			
Surrogate: Toluene-d8	*50.8*		*"*	*50.0*		*102*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*46.6*		*"*	*50.0*		*93.2*	*66-145*			

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Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62705 - EPA 5030C (GCMS)										
Matrix Spike (EC62705-MS1)	**Source: 6C27007-01**			Prepared: 03/27/06 Analyzed: 03/28/06						
Benzene	1270	25.0	ug/kg dry	1360	ND	93.4	70-130			
Toluene	1570	25.0	"	1360	ND	115	70-130			
Ethylbenzene	1330	25.0	"	1360	ND	97.8	70-130			
Xylene (p/m)	2470	25.0	"	2730	ND	90.5	70-130			
Xylene (o)	1270	25.0	"	1360	ND	93.4	70-130			
Surrogate: Dibromofluoromethane	*44.9*		*ug/kg*	*50.0*		*89.8*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*44.7*		*"*	*50.0*		*89.4*	*52-149*			
Surrogate: Toluene-d8	*53.0*		*"*	*50.0*		*106*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*47.7*		*"*	*50.0*		*95.4*	*66-145*			
Matrix Spike Dup (EC62705-MSD1)	**Source: 6C27007-01**			Prepared & Analyzed: 03/27/06						
Benzene	1350	25.0	ug/kg dry	1360	ND	99.3	70-130	6.12	20	
Toluene	1620	25.0	"	1360	ND	119	70-130	3.42	20	
Ethylbenzene	1310	25.0	"	1360	ND	96.3	70-130	1.55	20	
Xylene (p/m)	2520	25.0	"	2730	ND	92.3	70-130	1.97	20	
Xylene (o)	1280	25.0	"	1360	ND	94.1	70-130	0.747	20	
Surrogate: Dibromofluoromethane	*49.2*		*ug/kg*	*50.0*		*98.4*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		*"*	*50.0*		*99.2*	*52-149*			
Surrogate: Toluene-d8	*52.9*		*"*	*50.0*		*106*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*48.0*		*"*	*50.0*		*96.0*	*66-145*			

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Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 3/28/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward Phillips
Company Name: CRA Conestoga Rovers & Assoc
Company Address: 2135 S Loop 250 West
City/State/Zip: Midland, TX 79703
Telephone No: (432)686-0086 Fax No: (432)686-0186
Sampler Signature: Ed Phillips
Email: EPhillips@CRAWorld.com

Project Name: Midland 6"
Project #: 043918-~~04~~ 02
Project Loc: Lea County
PO #: 043918-2

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule)	Standard TAT
627001																TCLP:											
																TOTAL:							X				
-01	Release 50' bottom	3/24/06	14:30	1	✓									✓												✓	

Special Instructions: Results ASAP, Wet Wt.

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / Cooler None
Temperature Upon Receipt: -4.5
Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Ed Phillips	3/27	8:12			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jaime McMurrey	03-27-06	0812

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 03-27-06 @ 0812

Order #: 6C 270001

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-4.5 C
Shipping container/cooler in good condition?	Yes	No	N/A
Custody Seals intact on shipping container/cooler?	Yes	No	Not present N/A
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

hand delivered by sampler

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CONESTOGA-ROVERS & ASSOCIATES
ATTN: EDWARD PHILLEY
2135 S. LOOP 250 WEST
MIDLAND, TX 79703
FAX TO: (432) 686-0186

Receiving Date: 03/17/06
Reporting Date: 03/23/06
Project Number: 043918-04
Project Name: MALJAMAR 6"
Project Location: LEA CO., NM

Sampling Date: 03/17/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)
ANALYSIS DATE:		03/21/06	03/21/06
H10908-1*	10' S @ 30'	-	-
H10908-2	10' S @ 32'	2770	4980
H10908-3*	15' N @ 30'	-	-
H10908-4	15' N @ 33'	5350	7910
Quality Control		761	796
True Value QC		800	800
% Recovery		95.1	99.5
Relative Percent Difference		4.3	3.3

*Sample held at client's request.

METHOD: SW-846 8015 M

Chemist

3/23/06
Date

H10908

PLEASE NOTE: **Liability and Damages.** **Cardinal's** liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by **Cardinal** within thirty (30) days after completion of the applicable service. In no event shall **Cardinal** be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by **Cardinal**, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

Page 492 of 1388

CARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 (325) 673-7001 Fax (325) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

Company Name:	CPA	BILL TO P.O. #:	043918-04
Project Manager:	Edward Phillips	Company:	
Address:	2135 S. Loop 250 west	Attn:	Jamie
City:	Midland State: TX Zip: 79703	Address:	
Phone #:	432-686-0086 Fax #: 432-686-0186	City:	
Project #:	043918-04 Project Owner: BP	State: Zip:	
Project Name:	Maljamar 6"	Phone #:	
Project Location:	Lea County	Fax #:	
Sampler Name:	Ed Phillips		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	ANALYSIS REQUEST: TPH 8015 DRO/GRO	Hold
H10908-1	10'S @ 30'	G	1			✓					✓		3/17/06	9:15	✓	✓
-2	10'S @ 32'	G	1			✓					✓			9:21	✓	
-3	15'N @ 30'	G	1			✓					✓			9:54		✓
-4	15'N @ 33'	G	1			✓					✓			9:57	✓	

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Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Ed Phillips	Date: 3/17/06 Time: 4:25	Received By:
Relinquished By:		Date: 3-17-06 Time: 4:25	Received By: (Lab Staff) Kaye S. Mc Cune

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Sample Condition		Checked By: (Initials)
Temp, °C	Intact?	
Cool	☑ Yes ☐ No	

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No
REMARKS:

2 x 8015 x 90 = 180

W TAX —

† Cardinal cannot accept verbal changes. Please fax written changes to (325) 673-7020.

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CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CONESTOGA-ROVERS & ASSOCIATES
ATTN: EDWARD PHILLEY
2135 S. LOOP 250 WEST
MIDLAND, TX 79703
FAX TO: (432) 686-0186

Receiving Date: 03/21/06
Reporting Date: 03/22/06
Project Number: 04398-02
Project Name: MALJAMAR 6"
Project Location: LEA COUNTY, NM

Sampling Date: 03/21/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		03/21/06	03/21/06	03/21/06	03/21/06	03/21/06	03/21/06
H10912-1	02 BOTTOM 44' 30'S	1710	1780	22.7	159	95.7	154
H10912-2	02 BOTTOM 44' 15'S	3020	4780	81.2	267	158	194
H10912-3	02 BOTTOM 44' 10'N	161	652	0.068	3.10	3.92	6.45
H10912-4	02 WALL 39', 25'S&10"W	1260	2780	17.1	129	91.8	120
H10912-5	02 WALL 39', 38'S	<10.0	72.0	<0.005	0.006	<0.005	<0.015
H10912-6	02 WALL 39', 25'S&9'E	<10.0	22.7	<0.005	<0.005	<0.005	<0.015
Quality Control		810	791	0.091	0.090	0.090	0.282
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		101	98.9	90.6	90.1	90.3	94.0
Relative Percent Difference		3.5	3.1	3.9	3.1	0.7	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; BTEX: SW-846 8260.

Burgess J. A. Cooke, Ph. D.

3/22/06
Date

H10912

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101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name:	CRA	BILL TO	
Project Manager:	Edward "Ted" Phillips	P.O. #:	043918-02
Address:	2135 S Loop 250 West	Company:	
City:	Midland	Attn:	Same
State:	TX	Zip:	79703
Phone #:	432-686-0086	Address:	
Fax #:	432-686-0186	City:	
Project #:	043918-02	State:	Zip:
Project Owner:	BP	Phone #:	
Project Name:	Mal Sauer 6"	Fax #:	
Project Location:	Lea County		
Sampler Name:	Edward Phillips		

ANALYSIS REQUEST: TPH 8015 M DRO/GRO; BTEX 8021B; Chlorides

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H10912-1	02 Bottom 49', 30'S	G	1			✓					✓		3/21/06	9:23
-2	02 Bottom 44', 15'S					✓					✓			9:29
-3	02 Bottom 44', 10'N					✓					✓			9:38
-4	02 Wall 39', 25'S +10'W					✓					✓			9:44
-5	02 Wall 39' 38'S					✓					✓			9:53
-6	02 Wall 39', 25'S +9'E					✓					✓			9:59

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: Edward Phillips	Date: 3/21/06 Time: 12:30	Received By:	
Relinquished By:	Date: Time:	Received By: (Lab Staff) Neil Fullerton	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Temp, °C; Intact? ☒ Yes ☐ No	Checked By: (Initials) MA	

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No
REMARKS: RUSH Cl⁻ cancelled 3/21/06

6 × 8015 × 90 = 540
6 × BTEX × 60 = 360
900

SAMPY please indicate here that a rush charge was not assessed. 1 × RUSH × 0 = 0
900
w TAX 960.19

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GROUNDWATER MONITORING REPORT

MALJAMAR RELEASE SITES – NORTH AND SOUTH
SW/4 SEC 20 AND NW/4 SEC 29, T17S, R33E
MALJAMAR, LEA COUNTY, NEW MEXICO
NMOCD ID. 1RP-956
DELTA PROJECT NO. CPNM2

Prepared for:

Centurion Pipeline L.P.
5 Greenway Plaza
Houston, Texas

June 15, 2009

Prepared by:

Delta Consultants
704 Central Parkway East, #1220
Plano, Texas 75074

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APPENDICES

Appendix A	Laboratory Analytical Report

GROUNDWATER MONITORING REPORT

MALJAMAR RELEASE SITES – NORTH AND SOUTH
SW/4 SEC 20 AND NW/4 SEC 29, T17S, R33E
MALJAMAR, LEA COUNTY, NEW MEXICO
NMOCD ID. 1RP-956
DELTA PROJECT NO. CPNM2

1.0 REPORT SUMMARY

On behalf of Centurion Pipeline L.P. (Centurion), Delta Consultants (Delta) has prepared this summary report to present the results of the groundwater gauging and sampling activities that took place on December 10, 2008 and January 14, 2009, at the North and South Maljamar Release Sites, which are located approximately five miles southeast of Maljamar, New Mexico.

2.0 SITE HISTORY

Releases along a 6-inch crude oil gathering line, currently operated by Centurion, were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The two project sites (identified as the North and South sites) are located within approximately 1,000 feet of each other, in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.). The North site is located on State of New Mexico land (Southwest Quarter of Section 20, Township 17 South, Range 33 East), and the South site is located on private property (Northwest Quarter of Section 29, Township 17 South, Range 33 East) (refer to Figure 1).

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line at the two release locations and retained Conestoga-Rovers and Associates to perform initial response activities. These activities included the excavation of impacted soils at each site to remove source area material and investigate the extent of the impacts (refer to Figures 2 and 3 for excavation boundaries at each site). An approximate total of 3,330 cubic yards of impacted soils were removed and disposed off-site.

BP then retained the services of URS to conduct further response activities at the sites to comply with New Mexico Oil Conservation District (NMOCD) requirements. These activities included an exploratory boring program, a geophysical study of the area surrounding the sites, installation and monitoring of groundwater monitor wells (five (5) at each site), and backfilling the excavations at each site.

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3.0 FIELD ACTIVITIES

On December 10, 2008 and January 14, 2009, Delta conducted groundwater monitoring and sampling activities at the North and South sites. The field data and laboratory analytical results from the monitoring and sampling events were used to produce this report.

3.1 Groundwater Elevations

Groundwater elevation data was collected using a product/water interface probe that was properly decontaminated prior to use and between each measurement. In December 2008, depth to groundwater at the North site ranged from 3,907.35 feet above mean sea level (amsl) at MW-1 to 3,908.95 feet amsl at MW-3; and, at the South site, depth to groundwater ranged from 3,904.94 feet amsl at MW-9 to 3,905.76 feet amsl at MW-6. In January 2009, depth to groundwater at the North site ranged from 3,907.18 feet amsl at MW-1 to 3,908.85 feet amsl at MW-3; and, at the South site, depth to groundwater ranged from 3,904.55 feet amsl at MW-9 to 3,905.39 feet amsl at MW-6. Between December 2008 and January 2009, the largest groundwater elevation fluctuations at the North and South sites were observed in MW-2 (0.94 feet) and MW-9 (0.39 feet), respectively. Groundwater underlying the North and South sites is located at approximately 119 feet bgs and 109 feet bgs, respectively, and generally flows towards the south-southwest. Historical groundwater elevation data is presented in Tables 1A and 1B, and data for the gauging events that took place in 2008 and 2009 are depicted on Figures 4A, 4B, 5A and 5B.

3.2 Groundwater Chemistry

In December 2008, subsequent to gauging each of the on-site monitor wells, samples were collected from MW-1 and MW-5 at the North site, and MW-7 and MW-9 at the South site. The samples were collected utilizing low-flow purging and sampling methods, with a 200 foot stainless steel Proactive SS mega monsoon pump and a YSI 556 multi-meter and flow-thru cell. These sampling points represent the wells located nearest the release points and the most downgradient wells. Each sample was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by Method SW8021B, total petroleum hydrocarbons (TPH) by Texas Method TX1005, total dissolved solids (TDS) by Method E160.1 and total chloride by Method E325.2.

In January 2009, subsequent to gauging, each monitor well at the North and South sites were sampled. Each sample was analyzed for BTEX by Method SW8021B, TPH-GRO and TPH-DRO by Method SW8015B and total chloride by Method E325.2.

Based on the laboratory analytical results from the December 2008 sampling event, no petroleum hydrocarbon constituent concentrations (BTEX and TPH) above the New Mexico Human Health MCLs were identified.

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The sample collected from MW-1 exhibited elevated concentrations of TDS (1,820 mg/L) and total chloride (857 mg/L), which are above the appropriate New Mexico Human Health MCLs (1,000 mg/L and 250 mg/L, respectively). The sample collected from MW-9 also exhibited an elevated concentration of TDS (60,300 mg/L).

The laboratory analytical results from the January 2009 sampling event indicate no BTEX or TPH concentrations above the appropriate laboratory reporting limits were identified in the samples collected from MW-1 through MW-5 at the North site or MW-6 through MW-10 at the South site.

In January 2009, the samples collected from MW-1 and MW-2 exhibited elevated concentrations of TDS (1,360 mg/L and 6,390 mg/L, respectively) and total chloride (446 mg/L and 3,000 mg/L, respectively). It should be noted the sample collected from MW-9 exhibited a TDS concentration of 281 mg/L.

Although, the TDS and total chloride concentrations in the vicinity of MW-1 and MW-2 are above the appropriate New Mexico Human Health MCLs, shallow groundwater in this region of New Mexico consistently exhibits relatively higher concentrations of TDS and total chloride. Additionally, the groundwater in the vicinity of the North and South sites is not known to be utilized for any 'beneficial' uses.

The above-referenced data confirms historical data collected by URS, which indicates no BTEX or TPH concentrations above New Mexico Human Health MCLs were identified in groundwater samples collected from the monitor wells located at the North and South sites.

The analytical results are summarized in Tables 2A and 2B. Copies of the laboratory analytical reports and chain-of-custody documentation are presented in Appendix A.

4.0 FINDINGS

Based on the current groundwater data, as well as historic data (refer to previous reports submitted by URS), no petroleum hydrocarbon impacts above New Mexico Human Health MCLs exist in the groundwater underlying the North and South sites. Based on the data, no further study appears warranted.

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5.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

Groundwater samples were collected utilizing low-flow purging and sampling methods, which are in general accordance with guidance contained in EPA publication EPA/540/S-95/504. The groundwater samples were collected utilizing industry standards and by personnel wearing appropriate personal protective equipment (PPE). The groundwater samples were transferred to laboratory-prepared containers (i.e., 40 ml, clear glass vials preserved with hydrochloric acid), immediately placed in an ice-filled cooler and chilled to less than four degrees Celsius. Each cooler was then transferred to the analytical laboratory (Southern Petroleum Laboratories, Inc. in Houston, TX) under chain-of-custody protocol. Blind duplicate samples (MW-11) and trip blanks were prepared during the December 2008 and January 2009 sampling events, and each was analyzed for various constituents of concern (COCs). No errors or anomalies were identified.

6.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

7.0 SIGNATURES

This report was prepared by **DELTA CONSULTANTS**

Date: 6-15-09

Michael Henn
Senior Project Manager

Reviewed by:

Date: 6-15-09

for Chieu Mai, P.G.
Project Geologist

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TABLES

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TABLE 1A
GROUNDWATER ELEVATION DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (NORTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

LOCATION	DATE	TOP OF CASING (TOC) ELEVATION ft amsl	GRADE ELEVATION based on assumed casing stick up elevation of 3 feet ft amsl	TOP OF SCREEN ELEVATION (from TOC) ft amsl	TOTAL DEPTH ELEVATION (from TOC) ft bgs amsl	DEPTH TO WATER (from TOC) ft amsl	CORRECTED GROUNDWATER ELEVATION ft amsl
MW-1	9/29/2006	4027.26	4024.26	3912.76	3897.26	119.73	3907.53
	2/14/2007					119.75	3907.51
	4/18/2007					119.78	3907.48
	12/10/2008					119.91	3907.35
	1/13/2009					120.08	3907.18
MW-2	9/29/2006	4026.71	4023.71	3913.21	3898.21	118.45	3908.26
	2/14/2007					118.44	3908.27
	4/18/2007					118.47	3908.24
	12/10/2008					118.64	3908.07
	1/13/2009					118.98	3907.73
MW-3	9/29/2006	4031.86	4028.86	3914.36	3899.36	122.71	3909.15
	2/14/2007					122.71	3909.15
	4/18/2007					122.72	3909.14
	12/10/2008					122.91	3908.95
	1/13/2009					123.01	3908.85
MW-4	9/29/2006	4032.8	4029.80	3915.30	3900.30	124.76	3908.04
	2/14/2007					124.74	3908.06
	4/18/2007					124.74	3908.06
	12/10/2008					124.95	3907.85
	1/13/2009					124.91	3907.89
MW-5	9/29/2006	4030.66	4027.66	3912.78	3897.78	-	-
	2/14/2007					-	-
	4/18/2007					122.27	3908.39
	12/10/2008					122.42	3908.24
	1/13/2009					122.56	3908.10

Casing and other elevations based on survey data provided in GW Gradient Table prepared by URS Corp.
Bottom of screen - 0.5 feet above Total Depth Elevation
TOC = Top of Casing
amsl = above mean sea level
Blue type represents data collected by URS Corp.

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TABLE 1B
GROUNDWATER ELEVATION DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (SOUTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

LOCATION	DATE	TOP OF CASING (TOC) ELEVATION ft amsl	GRADE ELEVATION based on assumed casing stick up elevation of 3 feet ft amsl	TOP OF SCREEN ELEVATION (from TOC) ft amsl	TOTAL DEPTH ELEVATION (from TOC) ft bgs amsl	DEPTH TO WATER (from TOC) ft amsl	CORRECTED GROUNDWATER ELEVATION ft amsl
MW-6	9/29/2006	4018.34	4015.34	3910.88	3890.88	-	-
	2/14/2007					-	-
	4/18/2007					112.60	3905.74
	12/10/2008					112.58	3905.76
	1/14/2009					112.95	3905.39
MW-7	9/29/2006	4017.28	4014.28	3909.61	3894.61	-	-
	2/14/2007					-	-
	4/18/2007					111.73	3905.55
	12/10/2008					111.82	3905.46
	1/14/2009					112.04	3905.24
MW-8	9/29/2006	4016.34	4013.34	3908.92	3893.92	-	-
	2/14/2007					-	-
	4/18/2007					110.82	3905.52
	12/10/2008					110.88	3905.46
	1/14/2009					111.09	3905.25
MW-9	9/29/2006	4015.97	4012.97	3908.52	3893.52	-	-
	2/14/2007					-	-
	4/18/2007					110.88	3905.09
	12/10/2008					111.03	3904.94
	1/14/2009					111.42	3904.55
MW-10	9/29/2006	4018.67	4015.67	3911.34	3896.34	-	-
	2/14/2007					-	-
	4/18/2007					113.28	3905.39
	12/10/2008					113.32	3905.35
	1/14/2009					113.59	3905.08

Casing and other elevations based on survey data provided in GW Gradient Table prepared by URS Corp.
Bottom of screen - 0.5 feet above Total Depth Elevation
TOC = Top of Casing
amsl = above mean sea level
Blue type represents data collected by URS Corp.

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TABLE 2A
GROUNDWATER ANALYTICAL DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (NORTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

MONITORING WELL	DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	XYLENES (mg/L)	TPH C_6-C_{12} (mg/L)	TPH C_{12}-C_{28} (mg/L)	TPH C_{28}-C_{35} (mg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TDS (mg/L)	CHLORIDE (mg/L)	LABORATORY	CONSULTANT
New Mexico Human Health MCLs		0.01	0.75	0.75	0.62	Not Listed for crude oil (waste oil)					1,000	250		
MW-1	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.63	<0.64	<0.64	NA	NA	**1,820**	**857**	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	**1,360**	**446**	SPL	Delta
MW-2	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	**6,390**	**3,000**	SPL	Delta
MW-3	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	552	149	SPL	Delta
MW-4	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	297	25.8	SPL	Delta
MW-5	12/10/08	0.0056	0.0015	0.00046-J	<0.001	<0.63	<0.64	<0.64	NA	NA	580	135	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	479	121	SPL	Delta
MW-11	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.65	<0.66	<0.66	NA	NA	NA	NA	SPL	Delta
(Blind Duplicate of MW-1)														
MW-11	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	478	119	SPL	Delta
(Blind Duplicate of MW-5)														
Trip Blank	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	NA	NA	NA	NA	NA	NA	NA	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	NA	NA	NA	SPL	Delta

mg/L = milligrams per liter

BTEX - EPA 8021B

TPH - (C_8 - C_{8}) - TNRCC TX1005

TPH-GRO - EPA 8015B

TPH-DRO - EPA 8015B

MCLs = Maximum Concentration Levels.

< 0.001 mg/L = not detected above the laboratory analytical method reporting limit

NA = Not Analyzed

Bold = Indicates concentrations above New Mexico Human Health MCLs.

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TABLE 2B
GROUNDWATER ANALYTICAL DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (SOUTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

MONITORING WELL	DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	XYLENES (mg/L)	TPH C_6-C_{12} (mg/L)	TPH C_{12}-C_{28} (mg/L)	TPH C_{28}-C_{35} (mg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TDS (mg/L)	CHLORIDE (mg/L)	LABORATORY	CONSULTANT
New Mexico Human Health MCLs		0.01	0.75	0.75	0.62	Not Listed for crude oil (waste oil)					1,000	250		
MW-6	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	611	26.8	SPL	Delta
MW-7	12/10/08	0.0053	0.0062	0.00072-J	<0.001	<0.63	<0.64	<0.64	NA	NA	333	33.4	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	308	27.7	SPL	Delta
MW-8	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	297	25.7	SPL	Delta
MW-9	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.63	<0.63	<0.63	NA	NA	**60,300**	30.3	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	281	25.5	SPL	Delta
MW-10	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	289	26.3	SPL	Delta
Trip Blank	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	NA	NA	NA	NA	NA	NA	NA	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	NA	NA	NA	SPL	Delta

mg/L = milligrams per liter

BTEX - EPA 8021B

TPH - (C_x - C_y) - TNRCC TX1005

TPH-GRO - EPA 8015B

TPH-DRO - EPA 8015B

MCLs = Maximum Concentration Levels.

< 0.001 mg/L = not detected above the laboratory analytical method reporting limit

NA = Not Analyzed

Bold = Indicates concentrations above New Mexico Human Health MCLs.

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

FIGURES

NORTH SITE COORDINATES

LATITUDE: N 32° 48' 48"
LONGITUDE: W 103° 41' 33"

UTM COORDINATES: ZONE 13 622402 E 3631350 N

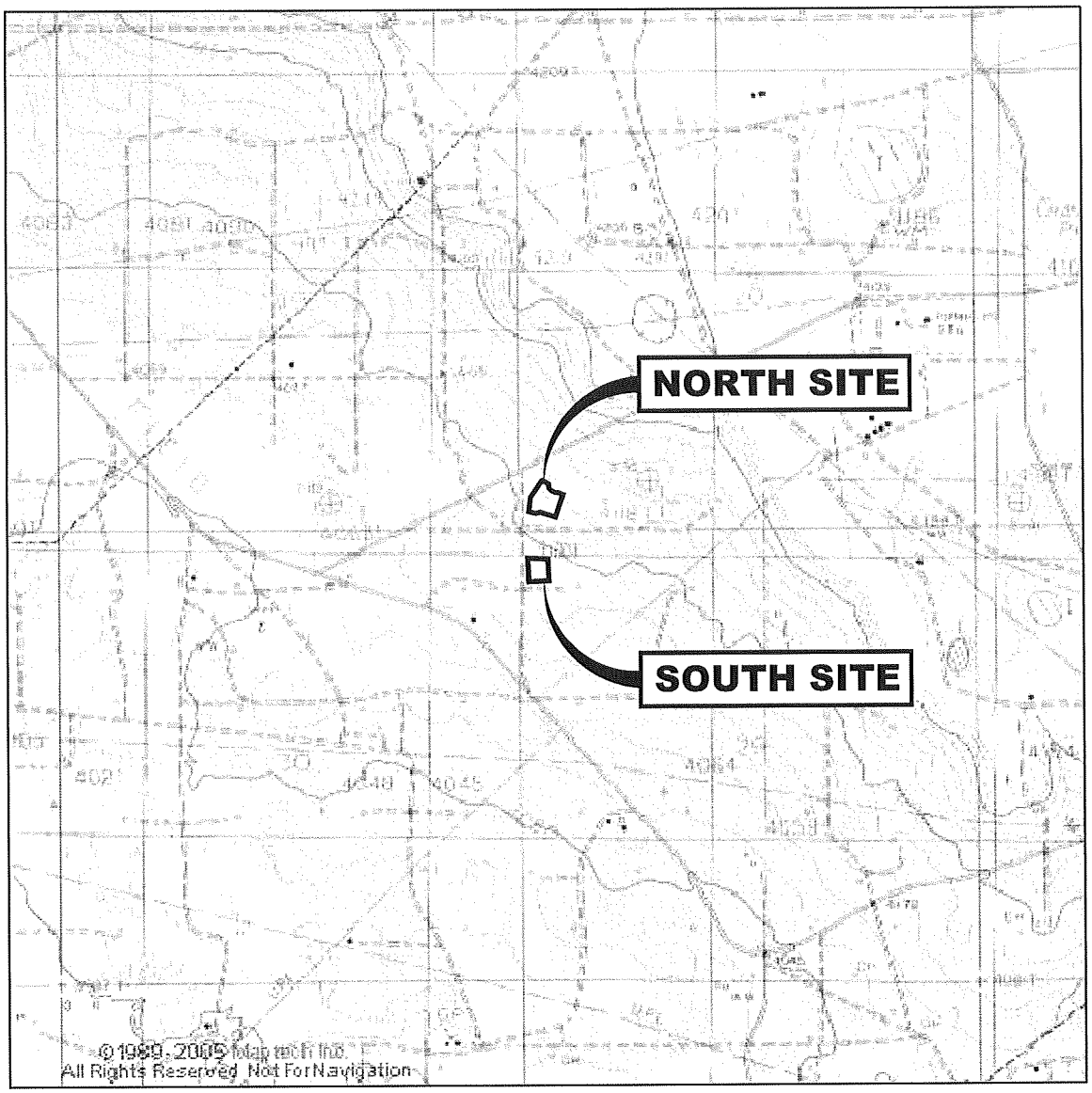
TOWNSHIP 17S
RANGE 33E
SECTION 20

SOUTH SITE COORDINATES

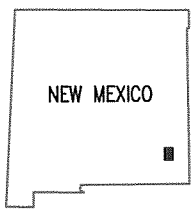
LATITUDE: N 32° 48' 40"
LONGITUDE: W 103° 41' 34"

UTM COORDINATES: ZONE 13 622379 E 3631104 N

TOWNSHIP 17S
RANGE 33E
SECTION 29



DOG LAKE QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE LOCATION

North

0 2000

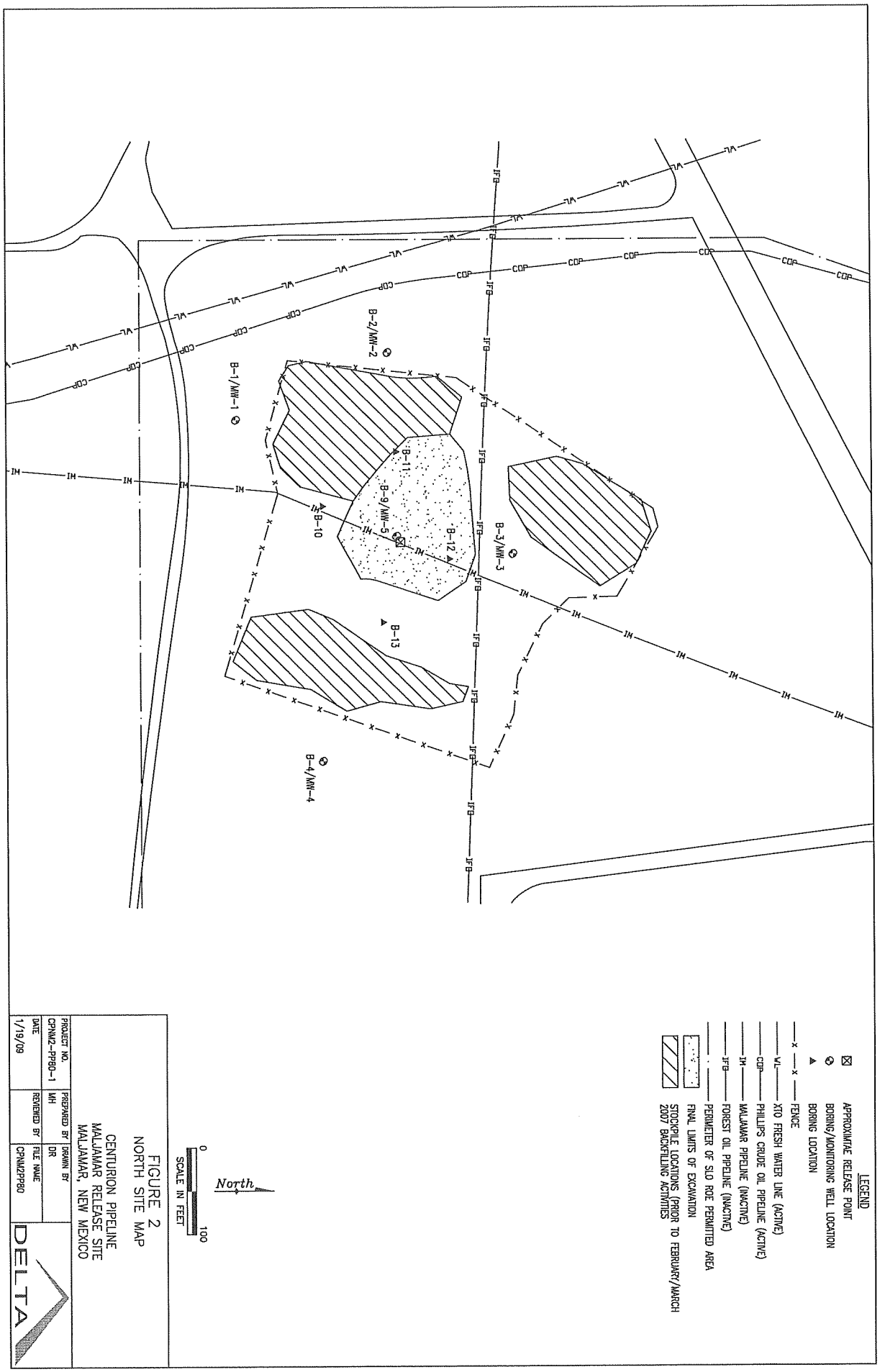
SCALE IN FEET

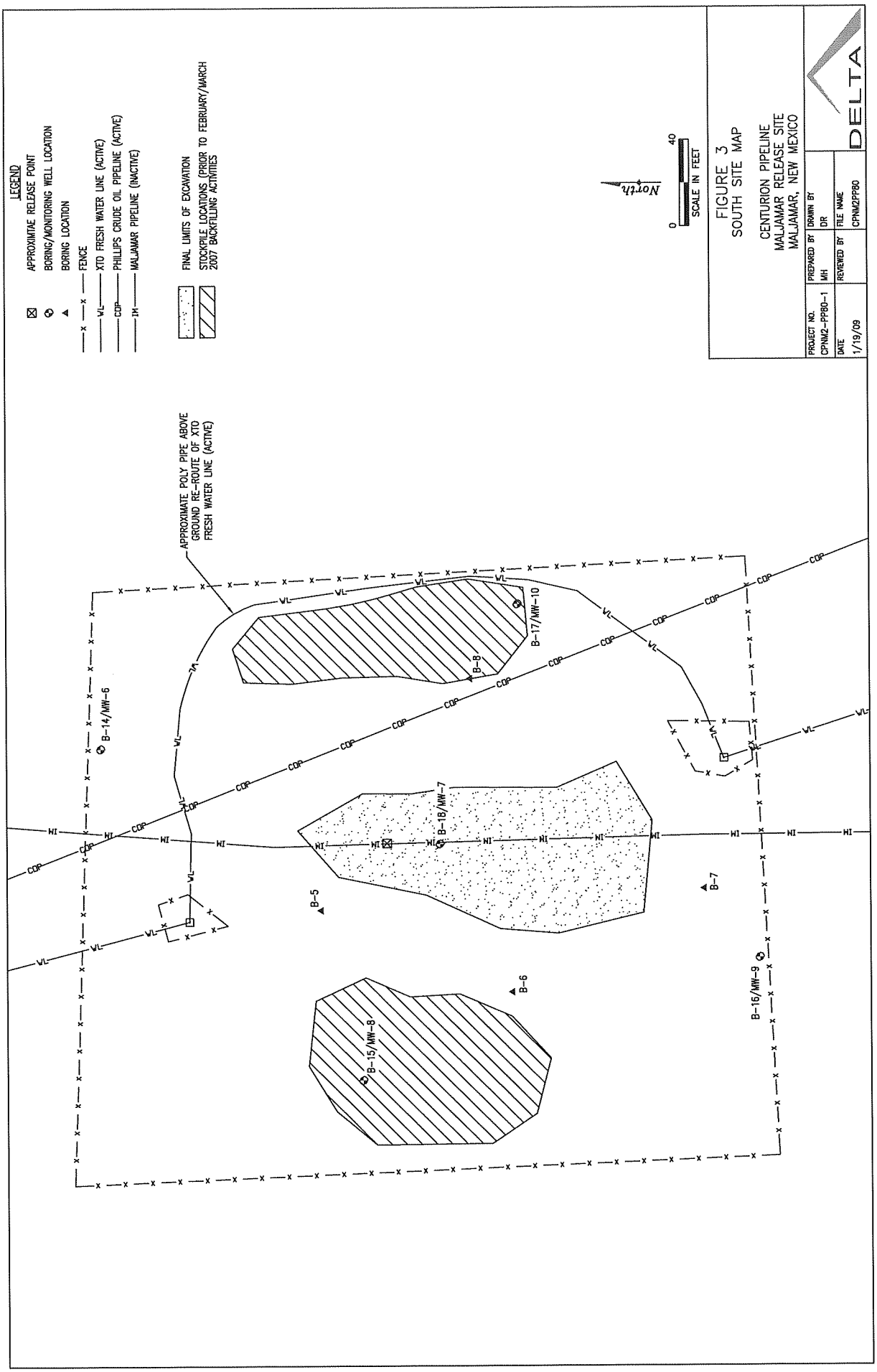
FIGURE 1
SITE LOCATION MAP

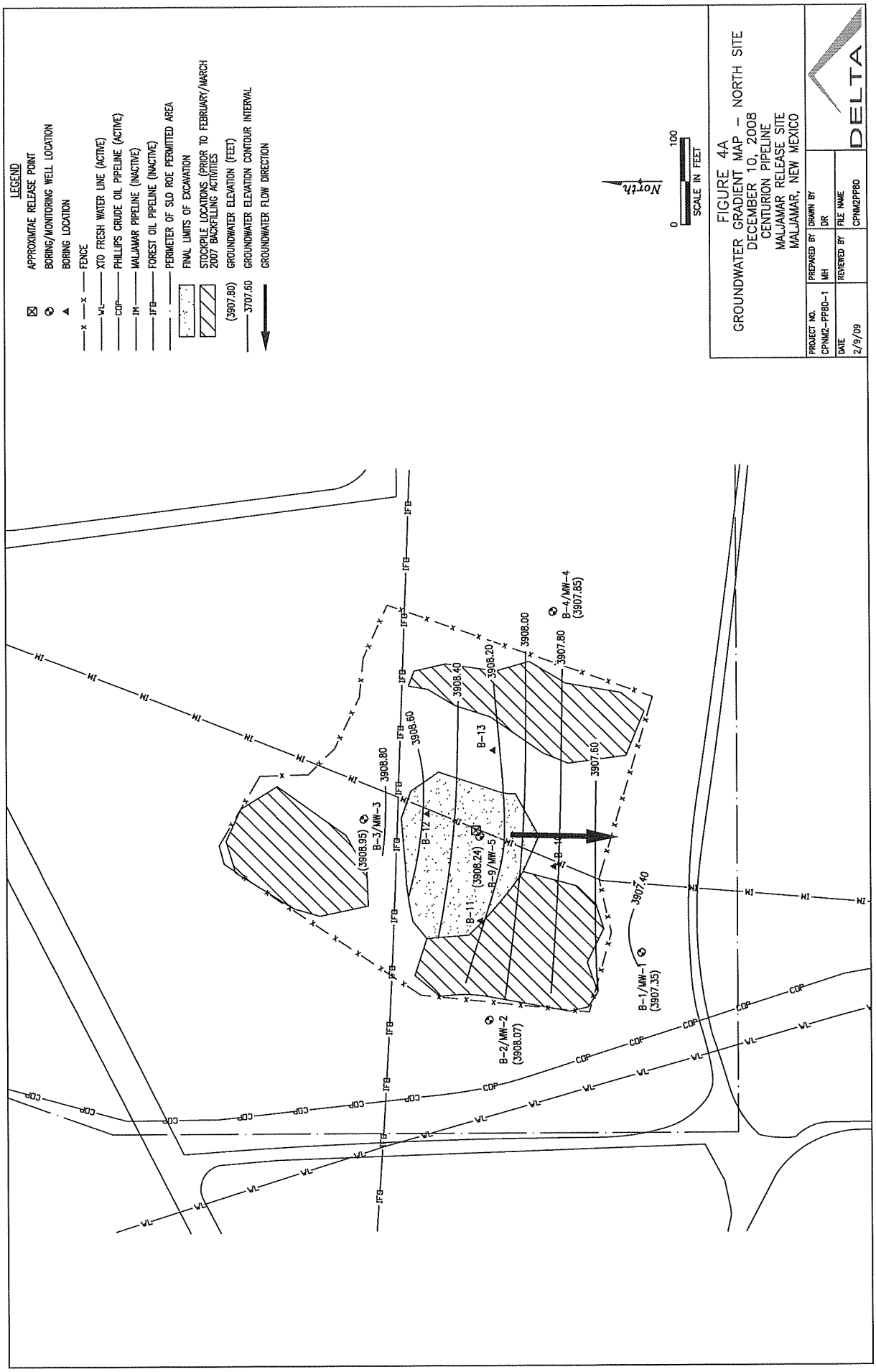
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO

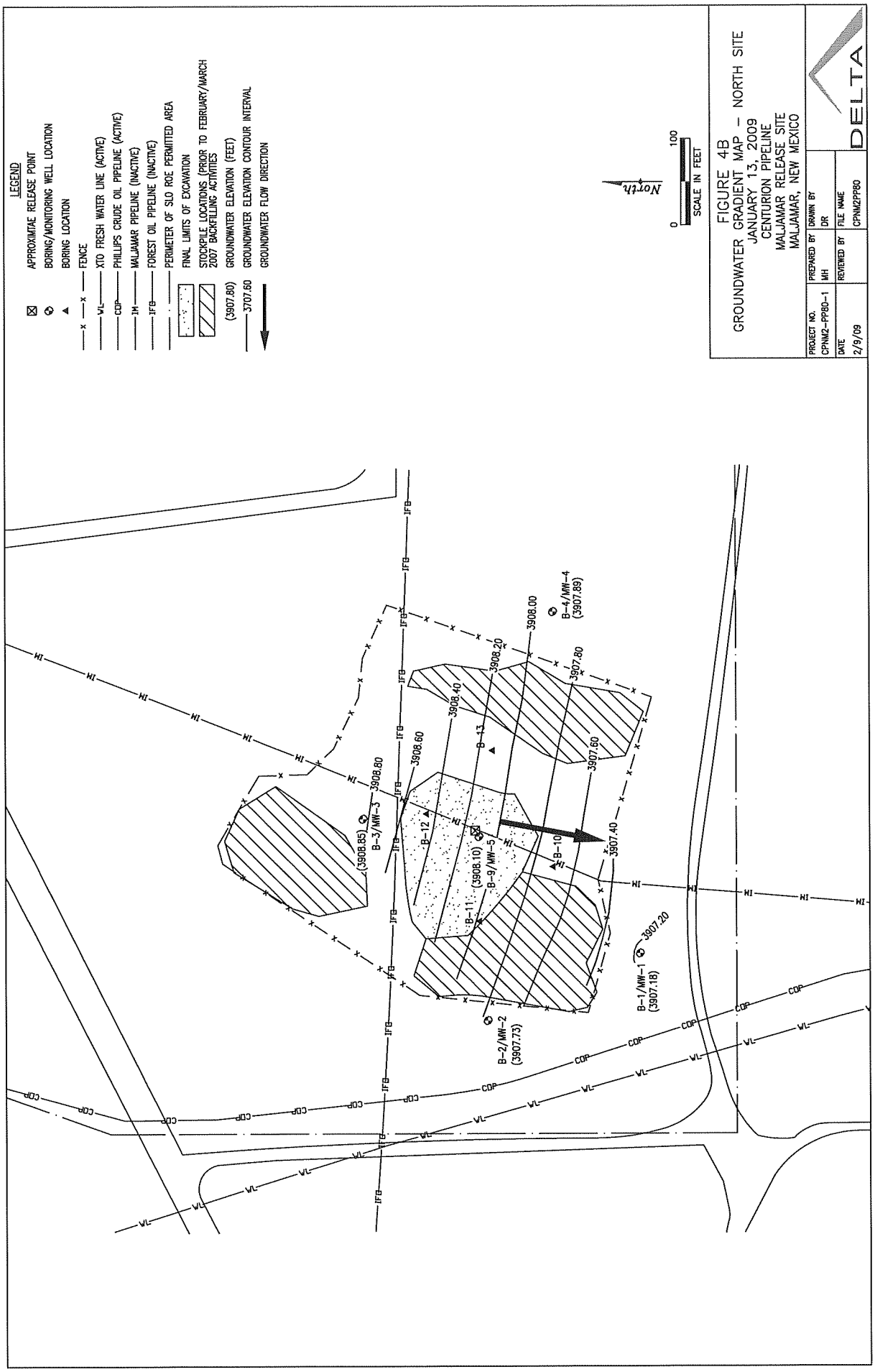
PROJECT NO.	PREPARED BY	DRAWN BY
CPNM2-PP80-1	MH	DR
DATE	REVIEWED BY	FILE NAME
2/20/09		CPNM2PP80

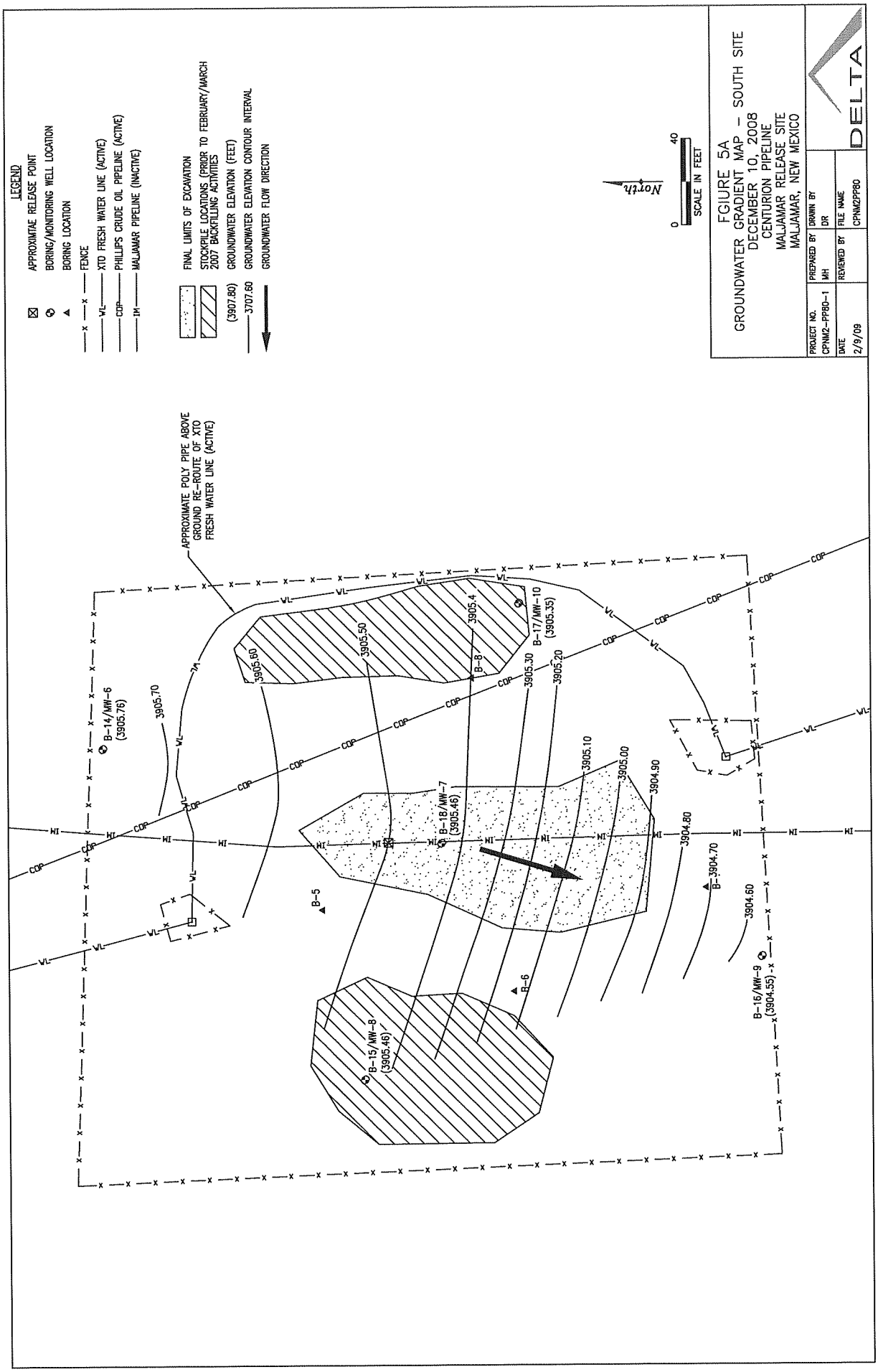
DELTA

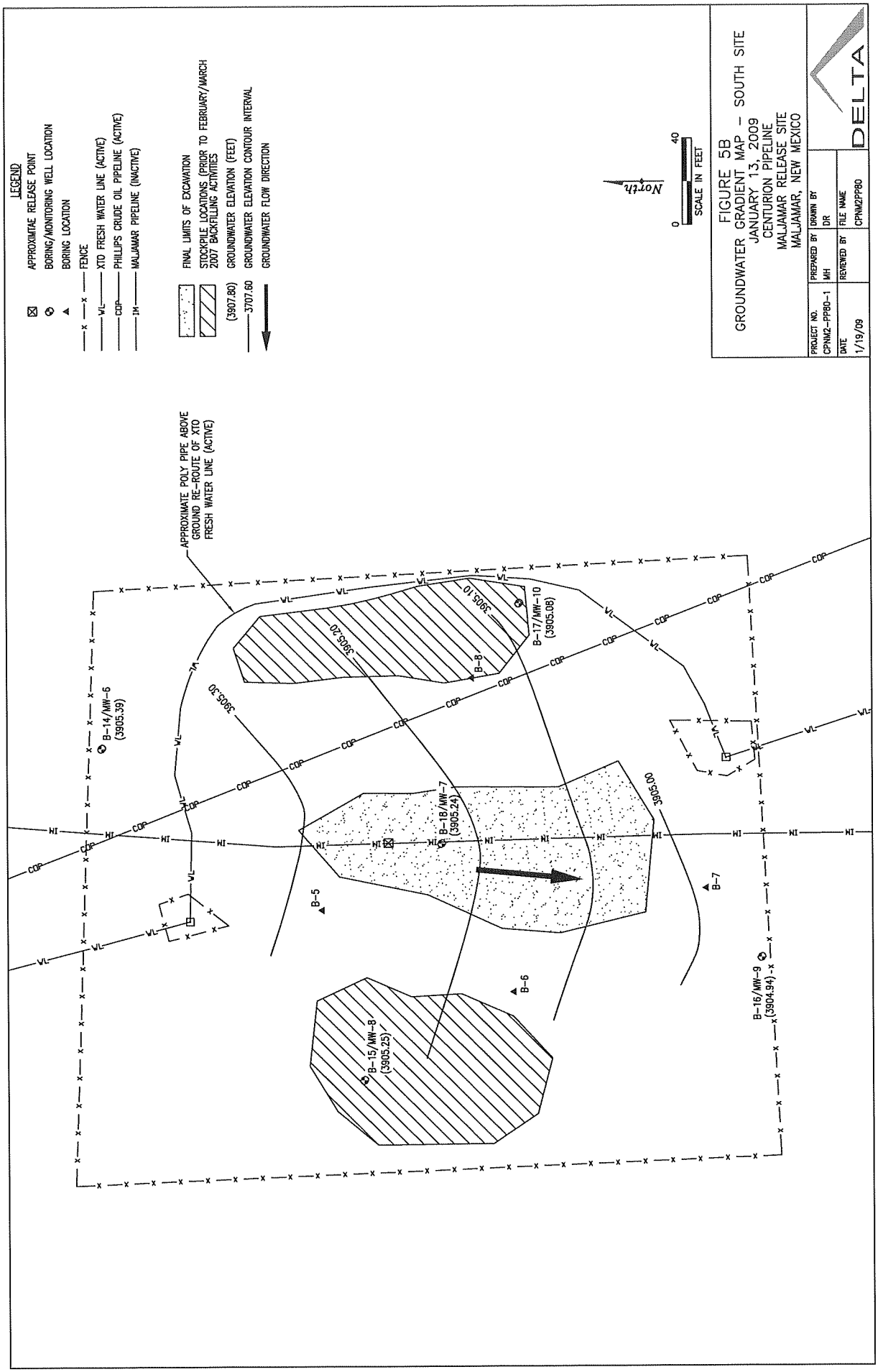

LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
B-1/MW-1
B-2/MW-2
B-3/MW-3
B-4/MW-4
B-9/MW-5
B-10
B-11
B-12
B-13
North
0
100
SCALE IN FEET
FIGURE 2
NORTH SITE MAP
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO.
CPNM2-PPBO-1
DATE
1/19/09
PREPARED BY
MH
DRAWN BY
DR
REVIEWED BY
FILE NAME
CPNM2PPBO
DELTA


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
North
0
40
SCALE IN FEET
FIGURE 3
SOUTH SITE MAP
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2--PPBO--1
DRAWN BY DR
PREPARED BY MH
DATE 1/19/09
REVIEWED BY
FILE NAME CPNM2PPBO
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6
B-8
B-17/MW-10
B-18/MW-7
B-5
B-7
B-6
B-15/MW-8
B-16/MW-9


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
100
SCALE IN FEET
FIGURE 4A
GROUNDWATER GRADIENT MAP - NORTH SITE
DECEMBER 10, 2008
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
B-3/MW-3 (3908.95)
B-12
B-11
B-9/MW-5 (3908.24)
B-2/MW-2 (3908.07)
B-1/MW-1 (3907.35)
B-13
B-4/MW-4 (3907.85)
3908.80
3908.60
3908.40
3908.20
3908.00
3907.80
3907.60
3907.40
IFB
WI
COP
WL


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
100
SCALE IN FEET
FIGURE 4B
GROUNDWATER GRADIENT MAP – NORTH SITE
JANUARY 13, 2009
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
B-1/MW-1 (3907.18)
3907.20
B-2/MW-2 (3907.73)
B-3/MW-3 (3908.85)
B-4/MW-4 (3907.89)
B-9/MW-5 (3908.10)
B-10
B-11
B-12
B-13
3908.80
3908.60
3908.40
3908.20
3908.00
3907.80
3907.60
3907.40
IFB
IM
WL
COP


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
40
SCALE IN FEET
FGIURE 5A
GROUNDWATER GRADIENT MAP - SOUTH SITE
DECEMBER 10, 2008
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPBD-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPBD
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6 (3905.76)
B-17/MW-10 (3905.35)
B-8
B-18/MW-7 (3905.46)
B-5
B-6
B-15/MW-8 (3905.46)
B-16/MW-9 (3904.55)
3905.70
3905.60
3905.50
3905.4
3905.30
3905.20
3905.10
3905.00
3904.90
3904.80
3904.70
3904.60


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
40
SCALE IN FEET
FIGURE 5B
GROUNDWATER GRADIENT MAP - SOUTH SITE
JANUARY 13, 2009
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 1/19/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6 (3905.39)
B-17/MW-10 (3905.08)
B-18/MW-7 (3905.24)
B-15/MW-8 (3905.25)
B-16/MW-9 (3904.94)
B-5
B-6
B-7
B-8
3905.10
3905.20
3905.30
3905.00

APPENDICES

APPENDIX A

LABORATORY ANALYTICAL REPORT

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To:		Project Name:	Maljamar, NM.
Delta Environmental Consultants, Inc. Michael Henn 704 Central Parkway East, Suite 1220 Plano TX 75074- ph (972) 665-0528 fax:		Site:	Maljamar, NM.
		Site Address:	
		PO Number:	
		State:	New Mexico
		State Cert. No.:	
		Date Reported:	12/29/2008

This Report Contains A Total Of 17 Pages

Excluding This Page, Chain Of Custody

And

Attachments

1/5/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To:		Project Name:	Maljamar, NM.
Delta Environmental Consultants, Inc.		Site:	Maljamar, NM.
Michael Henn		Site Address:	
704 Central Parkway East, Suite 1220			
		PO Number:	
Plano		State:	New Mexico
TX		State Cert. No.:	
75074-		Date Reported:	12/29/2008
ph (972) 665-0528	fax:		

This report has been revised per your request to correct sample ID: MW-04 to MW-09.

This report is presented in a format to meet the Texas Risk Reduction Program Rule (TRRP). The reports include a list of the Method Quantitation Limits (MQL's) for each target compound. The MQL represents the lowest non-zero standard concentration in the initial calibration curve. The Practical Quantitation Limit (PQL) represents the MQL adjusted for dilutions and moisture, if applicable. Results that are reported as ND (not detected) indicate that the compound was not identified at a concentration that is at or above the Sample Detection Limit (SDL). The SDL represents the Method Detection Limit (MDL) or the Detectability Check Standard (DCS) concentration with any adjustments for dilutions and moisture, if applicable. The SDL's are rounded based on the number of significant figures in the MDL. This accounts for any slight inconsistencies in the SDL's on the report. Any compound that was detected at a concentration that was above the SDL, but for which the concentration was less than the MQL (after adjustment for dilutions and/ or moisture), is reported as estimated (with a J qualifier). The J flags were applied to meet TRRP requirements.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

SPL Sample ID 08120600-04B (which corresponds to your sample MW-07) was selected as the matrix spik and matrix spike duplicate sample for TPH Texas 1005.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical result pages or the quality control summary pages.

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Georgia Jones

Georgia Jones
Senior Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To: Delta Environmental Consultants, Inc.
Michael Henn
704 Central Parkway East, Suite 1220

Plano
TX
75074-
ph (972) 665-0528 fax: (972) 665-9989

Fax To:

Project Name: Maljamar, NM.
Site: Maljamar, NM.
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 12/29/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-11	08120600-01	Water	12/10/2008 9:01:00 AM	12/12/2008 9:30:00 AM	313090	☐
MW-05	08120600-02	Water	12/10/2008 12:18:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-01	08120600-03	Water	12/10/2008 1:39:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-07	08120600-04	Water	12/10/2008 3:45:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-09	08120600-05	Water	12/10/2008 4:55:00 PM	12/12/2008 9:30:00 AM	313090	☐
TRIP BLANK	08120600-06	Water	12/10/2008	12/12/2008 9:30:00 AM	313090	☐

Georgia Jones 1/5/2009
Georgia Jones Date
Senior Project Manager

Richard R. Reed
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-11 **Collected:** 12/10/2008 9:01 **SPL Sample ID:** 08120600-01

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 20:11	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 20:11	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 20:11	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 20:11	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 20:11	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 20:11	JSP
Surr: 1,4-Difluorobenzene	95.4		%	39-163				1	12/16/08 20:11	JSP
Surr: 4-Bromofluorobenzene	96.1		%	57-157				1	12/16/08 20:11	JSP
TPH TEXAS 1005						**TX1005**		**Units: mg/L**		
C6-C12	ND		0.65	0.64		5	5	1	12/17/08 10:33	E_S1
>C12-C28	ND		0.66	0.65		5	5	1	12/17/08 10:33	E_S1
>C28-C35	ND		0.66	0.65		5	5	1	12/17/08 10:33	E_S1
Total TPH (C6-C35)	ND		0.65	0.64		5	5	1	12/17/08 10:33	E_S1
Surr: 1-Chlorooctane	81.7		%	70-130				1	12/17/08 10:33	E_S1
Surr: o-Terphenyl	87.5		%	70-130				1	12/17/08 10:33	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	1.01

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-05 **Collected:** 12/10/2008 12:18 **SPL Sample ID:** 08120600-02

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						E325.2		Units: mg/L		
Chloride	135		1.24	0.248		1	5	5	12/17/08 16:19	ESK
PURGEABLE AROMATICS						SW8021B		Units: ug/L		
Benzene	5.6		0.35	0.35		1	1	1	12/16/08 20:39	JSP
Toluene	1.5		0.36	0.36		1	1	1	12/16/08 20:39	JSP
Ethylbenzene	0.46	J	0.30	0.30		1	1	1	12/16/08 20:39	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 20:39	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 20:39	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 20:39	JSP
Surr: 1,4-Difluorobenzene	95.5		% 39-163					1	12/16/08 20:39	JSP
Surr: 4-Bromofluorobenzene	95.2		% 57-157					1	12/16/08 20:39	JSP
TOTAL DISSOLVED SOLIDS						E160.1		Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	580		5.66	2.83		10	20	2	12/13/08 7:50	CFS
TPH TEXAS 1005						TX1005		Units: mg/L		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 10:41	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 10:41	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 10:41	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 10:41	E_S1
Surr: 1-Chlorooctane	83.6		% 70-130					1	12/17/08 10:41	E_S1
Surr: o-Terphenyl	88.0		% 70-130					1	12/17/08 10:41	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: MW-01 **Collected:** 12/10/2008 13:39 **SPL Sample ID:** 08120600-03

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						E325.2		Units: mg/L		
Chloride	857		6.20	0.248		1	25	25	12/17/08 16:24	ESK
PURGEABLE AROMATICS						SW8021B		Units: ug/L		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 21:07	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 21:07	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 21:07	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 21:07	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 21:07	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 21:07	JSP
Surr: 1,4-Difluorobenzene	96.0		% 39-163					1	12/16/08 21:07	JSP
Surr: 4-Bromofluorobenzene	95.8		% 57-157					1	12/16/08 21:07	JSP
TOTAL DISSOLVED SOLIDS						E160.1		Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	1820		2.83	2.83		10	10	1	12/13/08 7:50	CFS
TPH TEXAS 1005						TX1005		Units: mg/L		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 10:51	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 10:51	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 10:51	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 10:51	E_S1
Surr: 1-Chlorooctane	83.9		% 70-130					1	12/17/08 10:51	E_S1
Surr: o-Terphenyl	88.5		% 70-130					1	12/17/08 10:51	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.99

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: MW-07 **Collected:** 12/10/2008 15:45 **SPL Sample ID:** 08120600-04

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						E325.2		Units: mg/L		
Chloride	33.4		0.248	0.248		1	1	1	12/17/08 16:09	ESK
PURGEABLE AROMATICS						SW8021B		Units: ug/L		
Benzene	5.3		0.35	0.35		1	1	1	12/16/08 21:35	JSP
Toluene	6.2		0.36	0.36		1	1	1	12/16/08 21:35	JSP
Ethylbenzene	0.72	J	0.30	0.30		1	1	1	12/16/08 21:35	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 21:35	JSP
o-Xylene	0.41	J	0.38	0.38		1	1	1	12/16/08 21:35	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 21:35	JSP
Surr: 1,4-Difluorobenzene	97.3		% 39-163					1	12/16/08 21:35	JSP
Surr: 4-Bromofluorobenzene	97.2		% 57-157					1	12/16/08 21:35	JSP
TOTAL DISSOLVED SOLIDS						E160.1		Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	333		2.83	2.83		10	10	1	12/13/08 7:50	CFS
TPH TEXAS 1005						TX1005		Units: mg/L		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 11:00	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 11:00	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 11:00	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 11:00	E_S1
Surr: 1-Chlorooctane	81.2		% 70-130					1	12/17/08 11:00	E_S1
Surr: o-Terphenyl	87.0		% 70-130					1	12/17/08 11:00	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: MW-09 **Collected:** 12/10/2008 16:55 **SPL Sample ID:** 08120600-05

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						**E325.2**		**Units: mg/L**		
Chloride	30.3		0.248	0.248		1	1	1	12/17/08 16:09	ESK
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 22:03	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 22:03	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 22:03	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 22:03	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 22:03	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 22:03	JSP
Surr: 1,4-Difluorobenzene	96.1		% 39-163					1	12/16/08 22:03	JSP
Surr: 4-Bromofluorobenzene	96.8		% 57-157					1	12/16/08 22:03	JSP
TOTAL DISSOLVED SOLIDS						**E160.1**		**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	60300		142	2.83		10	500	50	12/13/08 7:50	CFS
TPH TEXAS 1005						**TX1005**		**Units: mg/L**		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 11:27	E_S1
>C12-C28	ND		0.63	0.65		5	4.9	1	12/17/08 11:27	E_S1
>C28-C35	ND		0.63	0.65		5	4.9	1	12/17/08 11:27	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 11:27	E_S1
Surr: 1-Chlorooctane	76.9		% 70-130					1	12/17/08 11:27	E_S1
Surr: o-Terphenyl	82.2		% 70-130					1	12/17/08 11:27	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: TRIP BLANK **Collected:** 12/10/2008 0:00 **SPL Sample ID:** 08120600-06

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 18:47	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 18:47	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 18:47	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 18:47	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 18:47	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 18:47	JSP
Surr: 1,4-Difluorobenzene	94.3		% 39-163					1	12/16/08 18:47	JSP
Surr: 4-Bromofluorobenzene	95.5		% 57-157					1	12/16/08 18:47	JSP

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

Quality Control Documentation

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: TPH Texas 1005 **WorkOrder:** 08120600
Method: TX1005 **Lab Batch ID:** 86402

Method Blank

RunID: HP_B_081217C-4826112 Units: mg/L
Analysis Date: 12/17/2008 10:24 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: Method TX1005

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
>C12-C28	ND		5.0	0.65	0.65
>C28-C35	ND		5.0	0.65	0.65
C6-C12	ND		5.0	0.64	0.64
Total TPH (C6-C35)	ND		5.0	0.64	0.64
Surr: 1-Chlorooctane	85.5		70-130	0	0
Surr: o-Terphenyl	90.2		70-130	0	0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-01B	MW-11
08120600-02B	MW-05
08120600-03B	MW-01
08120600-04B	MW-07
08120600-05B	MW-09

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_B_081217C-4826110 Units: mg/L
Analysis Date: 12/17/2008 10:06 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: JDM Method TX1005

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCS Qual	LCSD Spike Added	LCSD Result	LCSD Qual	LCSD Percent Recovery	RPD	RPD Qual	RPD Limit	Lower Limit	Upper Limit
>C12-C28	100	108	108		100	108		108	0.3		20	75	125
C6-C12	100	92.4	92		100	92.4		92	0.0		20	75	125
Total TPH (C6-C35)	200	200.4	100		200	200.4		100	0.1		20	75	125
Surr: 1-Chlorooctane	5	4.84	97		5	4.81		96	0.5		30	70	130
Surr: o-Terphenyl	5	4.66	93		5	4.65		93	0.3		30	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120600-04
RunID: HP_B_081217C-4826117 Units: mg/L
Analysis Date: 12/17/2008 11:08 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: JDM Method TX1005

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
>C12-C28	ND		99.3	107	107		99.2	103	104		3.12		20	75	125
C6-C12	ND		99.3	91.8	92.4		99.2	88.4	89.2		3.76		20	75	125
Total TPH (C6-C35)	ND		198.7	198.8	99.88		198.3	191.4	96.69		3.413		20	75	125
Surr: 1-Chlorooctane	ND		4.97	4.77	96.0		4.96	4.59	92.5		3.90		20	70	130
Surr: o-Terphenyl	ND		4.97	4.57	92.0		4.96	4.43	89.3		3.08		20	70	130

Qualifiers:
ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 08120600
Lab Batch ID: R260025

Method Blank

RunID: HP_N_081216A-4821899 Units: ug/L
Analysis Date: 12/16/2008 13:36 Analyst: JSP
Preparation Date: 12/16/2008 13:36 Prep By: Method SW5030B

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS	
Benzene	ND		1.0	0.35	0.35	
Ethylbenzene	ND		1.0	0.30	0.30	
Toluene	ND		1.0	0.36	0.36	
m,p-Xylene	ND		1.0	1.0	1.0	+
o-Xylene	ND		1.0	0.38	0.38	
Xylenes,Total	ND		1.0	1.0	1.0	+
Surr: 1,4-Difluorobenzene	94.2		39-163	0	0	
Surr: 4-Bromofluorobenzene	95.1		57-157	0	0	

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-01A	MW-11
08120600-02A	MW-05
08120600-03A	MW-01
08120600-04A	MW-07
08120600-05A	MW-09
08120600-06A	TRIP BLANK

Laboratory Control Sample (LCS)

RunID: HP_N_081216A-4821897 Units: ug/L
Analysis Date: 12/16/2008 12:40 Analyst: JSP
Preparation Date: 12/16/2008 12:40 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Benzene	20.0	18.4	91.9		70	130
Ethylbenzene	20.0	18.5	92.5		66	132
Toluene	20.0	18.4	92.2		69	133
m,p-Xylene	40.0	37	92.5		67	136
o-Xylene	20.0	18	90.2		67	133
Xylenes,Total	60.0	55	91.7		67	136
Surr: 1,4-Difluorobenzene	100	95.9	95.9		39	163
Surr: 4-Bromofluorobenzene	100	96.1	96.1		57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120563-04
RunID: HP_N_081216A-4821902 Units: ug/L
Analysis Date: 12/16/2008 15:56 Analyst: JSP

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Benzene	ND		20	18.2	91.0		20	18.4	92.0		1.14		26	40	165
Ethylbenzene	ND		20	18.1	90.4		20	18.3	91.6		1.29		34	51	156
Toluene	ND		20	18.3	91.3		20	18.2	90.9		0.413		25	58	153

Qualifiers:
ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis:	**Purgeable Aromatics**	**WorkOrder:**	**08120600**
Method:	**SW8021B**	**Lab Batch ID:**	**R260025**

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked:	08120563-04		
RunID:	HP_N_081216A-4821902	Units:	ug/L
Analysis Date:	12/16/2008 15:56	Analyst:	JSP

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
m,p-Xylene	ND		40	36.1	90.3		40	36.4	91.1		0.942		27	51	155
o-Xylene	ND		20	17.6	88.2		20	17.8	89.0		0.898		25	58	151
Xylenes,Total	ND		60	53.7	89.6		60	54.2	90.4		0.927		27	51	155
Surr: 1,4-Difluorobenzene	ND		100	95.3	95.3		100	94.7	94.7		0.655		30	39	163
Surr: 4-Bromofluorobenzene	ND		100	95.3	95.3		100	95.8	95.8		0.455		30	57	157

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Total Dissolved Solids **WorkOrder:** 08120600
Method: E160.1 **Lab Batch ID:** R259841

Method Blank

RunID: WET_081213Q-4818872 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Total Dissolved Solids (Residue,Filterable)	ND		10	2.83	2.83

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-02C	MW-05
08120600-03C	MW-01
08120600-04C	MW-07
08120600-05C	MW-09

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_081213Q-4818874 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCS Qual	LCSD Spike Added	LCSD Result	LCSD Qual	LCSD Percent Recovery	RPD	RPD Qual	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200	199	100		200	200		100	0.5		10	95	107

Sample Duplicate

Original Sample: 08120563-04
RunID: WET_081213Q-4818879 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	Sample Result	DUP Result	Qual	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	546	548		0.366	20

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Chloride, Total **WorkOrder:** 08120600
Method: E325.2 **Lab Batch ID:** R260127

Method Blank

RunID: KONELAB_081217A-4823608 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-02C	MW-05
08120600-03C	MW-01

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Chloride	0.783	J	1.0	0.248	0.248

Laboratory Control Sample (LCS)

RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Chloride	50.00	52.25	104.5		80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120708-01
RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 16:58 Analyst: ESK

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Chloride	4389	B	50	4161	N/C		50	4156	N/C		N/C		20	76	131

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Chloride, Total **WorkOrder:** 08120600
Method: E325.2 **Lab Batch ID:** R260127A

Method Blank

RunID: KONELAB_081217A-4823608 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-04C	MW-07
08120600-05C	MW-09

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Chloride	0.783	J	1.0	0.248	0.248

Laboratory Control Sample (LCS)

RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Chloride	50.00	52.25	104.5		80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120512-01
RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Chloride	7.026	B	50	64.12	114.2		50	64.89	115.7		1.188		20	76	131

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist
And
Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	08120600	Received By:	L_C
Date and Time Received:	12/12/2008 9:30:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	1.5°C	Chilled by:	Water Ice

		Yes	No	Not Present	
1.	Shipping container/cooler in good condition?	☑	☐		☐
2.	Custody seals intact on shippping container/cooler?	☑	☐		☐
3.	Custody seals intact on sample bottles?	☐	☐		☑
4.	Chain of custody present?	☑	☐		
5.	Chain of custody signed when relinquished and received?	☑	☐		
6.	Chain of custody agrees with sample labels?	☑	☐		
7.	Samples in proper container/bottle?	☑	☐		
8.	Sample containers intact?	☑	☐		
9.	Sufficient sample volume for indicated test?	☑	☐		
10.	All samples received within holding time?	☑	☐		
11.	Container/Temp Blank temperature in compliance?	☑	☐		
12.	Water - VOA vials have zero headspace?	☑	☐	VOA Vials Not Present	☐
13.	Water - Preservation checked upon receipt (except VOA*)?	☐	☐	Not Applicable	☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 313090

08120600

page 1 of 1

Client Name: Michael Henn - Delta Consultants
Address: Plano, TX
Phone/Fax:
Client Contact: Michael Henn Email: mhenn@deltaenv.com
Project Name/No.:
Site Name:
Site Location: Maljamar, NM
Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=oil X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 8=8oz 40=vial 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: BTEX - 8021B	TPH - TX1005	TDS - 160.1	Chloride - E300
MW-11	12/10/08	901		X	W	G	4	1	6	X	X		
MW-05		1218					4,8	1,X	8	X	X	X	X
MW-01		1339								X	X	X	X
MW-07		1545								X	X	X	X
MW-04		1655								X	X	X	X
Trip Blank		—					4	1	2	X			

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 1.5°C

Requested TAT

Contract ☐ 72hr ☐
24hr ☐ Standard ☒
48hr ☐
Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): DF

	date	time	
1. Relinquished by Sampler:	12/11/08	900	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	12/12/08	9:55	6. Received by Laboratory:

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To:		Project Name:	Maljamar Release Site
Delta Environmental Consultants, Inc. Michael Henn 704 Central Parkway East, Suite 1220 Plano TX 75074- ph: (972) 665-0528 fax:		Site: Site Address: PO Number: State: State Cert. No.: Date Reported:	Maljamar, NM. New Mexico 1/28/2009

This Report Contains A Total Of 28 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

1/28/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To:		Project Name:	Maljamar Release Site
Delta Environmental Consultants, Inc.		Site:	Maljamar, NM.
Michael Henn		Site Address:	
704 Central Parkway East, Suite 1220			
Plano		PO Number:	
TX		State:	New Mexico
75074-		State Cert. No.:	
ph: (972) 665-0528	fax:	Date Reported:	1/28/2009

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:87217 for the Diesel Range Organics analysis by Method 8015B. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Georgia Jones

09010585 Page 1
1/28/2009

Georgia Jones
Senior Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To: Delta Environmental Consultants, Inc.
Michael Henn
704 Central Parkway East, Suite 1220

Plano
TX
75074-
ph: (972) 665-0528 fax: (972) 665-9989

Fax To:

Project Name: Maljamar Release Site
Site: Maljamar, NM.
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 1/28/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	09010585-01	Water	1/13/2009 5:24:00 PM	1/15/2009 10:00:00 AM		☐
MW-2	09010585-02	Water	1/13/2009 4:28:00 PM	1/15/2009 10:00:00 AM		☐
MW-3	09010585-03	Water	1/13/2009 11:47:00 AM	1/15/2009 10:00:00 AM		☐
MW-4	09010585-04	Water	1/13/2009 1:40:00 PM	1/15/2009 10:00:00 AM		☐
MW-5	09010585-05	Water	1/13/2009 3:10:00 PM	1/15/2009 10:00:00 AM		☐
MW-6	09010585-06	Water	1/14/2009 2:25:00 PM	1/15/2009 10:00:00 AM		☐
MW-7	09010585-07	Water	1/14/2009 11:57:00 AM	1/15/2009 10:00:00 AM		☐
MW-8	09010585-08	Water	1/14/2009 1:22:00 PM	1/15/2009 10:00:00 AM		☐
MW-9	09010585-09	Water	1/14/2009 9:38:00 AM	1/15/2009 10:00:00 AM		☐
MW-10	09010585-10	Water	1/14/2009 10:50:00 AM	1/15/2009 10:00:00 AM		☐
MW-11	09010585-11	Water	1/13/2009 10:00:00 AM	1/15/2009 10:00:00 AM		☐
Trip Blank	09010585-12	Water	1/14/2009	1/15/2009 10:00:00 AM		☐

Georgia Jones

1/28/2009
Date

Georgia Jones
Senior Project Manager

Richard R. Reed
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-1 **Collected:** 01/13/2009 17:24 **SPL Sample ID:** 09010585-01

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	446		50	50	01/16/09 18:38	ESK	4863612
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:03	NW	4877705
Surr: n-Pentacosane	42.2	%	20-150	1	01/24/09 0:03	NW	4877705

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 20:47	WLV	4872828
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 20:47	WLV	4872828
Surr: 4-Bromofluorobenzene	108	%	50-158	1	01/22/09 20:47	WLV	4872828
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 20:47	WLV	4872732
Toluene	ND		1	1	01/22/09 20:47	WLV	4872732
Ethylbenzene	ND		1	1	01/22/09 20:47	WLV	4872732
m,p-Xylene	ND		1	1	01/22/09 20:47	WLV	4872732
o-Xylene	ND		1	1	01/22/09 20:47	WLV	4872732
Xylenes,Total	ND		1	1	01/22/09 20:47	WLV	4872732
Surr: 1,4-Difluorobenzene	96.1	%	39-163	1	01/22/09 20:47	WLV	4872732
Surr: 4-Bromofluorobenzene	100	%	57-157	1	01/22/09 20:47	WLV	4872732
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	1360		10	1	01/17/09 10:45	CFS	4865100

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Client Sample ID: MW-2 **Collected:** 01/13/2009 16:28 **SPL Sample ID:** 09010585-02

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	3000		50	50	01/16/09 18:38	ESK	4863615
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:23	NW	4877706
Surr: n-Pentacosane	38.6	%	20-150	1	01/24/09 0:23	NW	4877706

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 21:18	WLV	4872829
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 21:18	WLV	4872829
Surr: 4-Bromofluorobenzene	110	%	50-158	1	01/22/09 21:18	WLV	4872829
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 21:18	WLV	4872733
Toluene	ND		1	1	01/22/09 21:18	WLV	4872733
Ethylbenzene	ND		1	1	01/22/09 21:18	WLV	4872733
m,p-Xylene	ND		1	1	01/22/09 21:18	WLV	4872733
o-Xylene	ND		1	1	01/22/09 21:18	WLV	4872733
Xylenes,Total	ND		1	1	01/22/09 21:18	WLV	4872733
Surr: 1,4-Difluorobenzene	95.8	%	39-163	1	01/22/09 21:18	WLV	4872733
Surr: 4-Bromofluorobenzene	99.7	%	57-157	1	01/22/09 21:18	WLV	4872733
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	6390		40	4	01/17/09 10:45	CFS	4865102

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-3 **Collected:** 01/13/2009 11:47 **SPL Sample ID:** 09010585-03

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	149		5	5	01/16/09 18:24	ESK	4863610
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:43	NW	4877707
Surr: n-Pentacosane	73.2	%	20-150	1	01/24/09 0:43	NW	4877707

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 21:50	WLV	4872830
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 21:50	WLV	4872830
Surr: 4-Bromofluorobenzene	111	%	50-158	1	01/22/09 21:50	WLV	4872830
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 21:50	WLV	4872734
Toluene	ND		1	1	01/22/09 21:50	WLV	4872734
Ethylbenzene	ND		1	1	01/22/09 21:50	WLV	4872734
m,p-Xylene	ND		1	1	01/22/09 21:50	WLV	4872734
o-Xylene	ND		1	1	01/22/09 21:50	WLV	4872734
Xylenes,Total	ND		1	1	01/22/09 21:50	WLV	4872734
Surr: 1,4-Difluorobenzene	96.2	%	39-163	1	01/22/09 21:50	WLV	4872734
Surr: 4-Bromofluorobenzene	100	%	57-157	1	01/22/09 21:50	WLV	4872734
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	552		10	1	01/17/09 10:45	CFS	4865103

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-4 **Collected:** 01/13/2009 13:40 **SPL Sample ID:** 09010585-04

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					**MCL**	**E325.2**	**Units: mg/L**	
Chloride	25.8			1	1	01/16/09 18:13	ESK	4863606
DIESEL RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 1:04	NW	4877708
Surr: n-Pentacosane	34.6		%	20-150	1	01/24/09 1:04	NW	4877708

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND			0.1	1	01/22/09 23:56	WLV	4872833
Surr: 1,4-Difluorobenzene	104		%	60-155	1	01/22/09 23:56	WLV	4872833
Surr: 4-Bromofluorobenzene	111		%	50-158	1	01/22/09 23:56	WLV	4872833
PURGEABLE AROMATICS					**MCL**	**SW8021B**	**Units: ug/L**	
Benzene	ND			1	1	01/22/09 23:56	WLV	4872737
Toluene	ND			1	1	01/22/09 23:56	WLV	4872737
Ethylbenzene	ND			1	1	01/22/09 23:56	WLV	4872737
m,p-Xylene	ND			1	1	01/22/09 23:56	WLV	4872737
o-Xylene	ND			1	1	01/22/09 23:56	WLV	4872737
Xylenes,Total	ND			1	1	01/22/09 23:56	WLV	4872737
Surr: 1,4-Difluorobenzene	95.8		%	39-163	1	01/22/09 23:56	WLV	4872737
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/22/09 23:56	WLV	4872737
TOTAL DISSOLVED SOLIDS					**MCL**	**E160.1**	**Units: mg/L**	
Total Dissolved Solids (Residue,Filterable)	297			10	1	01/17/09 10:45	CFS	4865104

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-5 **Collected:** 01/13/2009 15:10 **SPL Sample ID:** 09010585-05

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	121		5	5	01/16/09 18:24	ESK	4863611
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 1:24	NW	4877709
Surr: n-Pentacosane	71.6	%	20-150	1	01/24/09 1:24	NW	4877709

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/23/09 0:27	WLV	4872834
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/23/09 0:27	WLV	4872834
Surr: 4-Bromofluorobenzene	109	%	50-158	1	01/23/09 0:27	WLV	4872834
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/23/09 0:27	WLV	4872738
Toluene	ND		1	1	01/23/09 0:27	WLV	4872738
Ethylbenzene	ND		1	1	01/23/09 0:27	WLV	4872738
m,p-Xylene	ND		1	1	01/23/09 0:27	WLV	4872738
o-Xylene	ND		1	1	01/23/09 0:27	WLV	4872738
Xylenes,Total	ND		1	1	01/23/09 0:27	WLV	4872738
Surr: 1,4-Difluorobenzene	96.6	%	39-163	1	01/23/09 0:27	WLV	4872738
Surr: 4-Bromofluorobenzene	102	%	57-157	1	01/23/09 0:27	WLV	4872738
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	479		10	1	01/17/09 10:45	CFS	4865105

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-6 **Collected:** 01/14/2009 14:25 **SPL Sample ID:** 09010585-06

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					**MCL**	**E325.2**	**Units: mg/L**	
Chloride	28.6			1	1	01/16/09 18:13	ESK	4863607
DIESEL RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 1:44	NW	4877710
Surr: n-Pentacosane	38.6		%	20-150	1	01/24/09 1:44	NW	4877710

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND			0.1	1	01/23/09 0:58	WLV	4872835
Surr: 1,4-Difluorobenzene	102		%	60-155	1	01/23/09 0:58	WLV	4872835
Surr: 4-Bromofluorobenzene	111		%	50-158	1	01/23/09 0:58	WLV	4872835
PURGEABLE AROMATICS					**MCL**	**SW8021B**	**Units: ug/L**	
Benzene	ND			1	1	01/23/09 0:58	WLV	4872739
Toluene	ND			1	1	01/23/09 0:58	WLV	4872739
Ethylbenzene	ND			1	1	01/23/09 0:58	WLV	4872739
m,p-Xylene	ND			1	1	01/23/09 0:58	WLV	4872739
o-Xylene	ND			1	1	01/23/09 0:58	WLV	4872739
Xylenes,Total	ND			1	1	01/23/09 0:58	WLV	4872739
Surr: 1,4-Difluorobenzene	96.5		%	39-163	1	01/23/09 0:58	WLV	4872739
Surr: 4-Bromofluorobenzene	102		%	57-157	1	01/23/09 0:58	WLV	4872739
TOTAL DISSOLVED SOLIDS					**MCL**	**E160.1**	**Units: mg/L**	
Total Dissolved Solids (Residue,Filterable)	611			10	1	01/17/09 10:45	CFS	4865106

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-7 **Collected:** 01/14/2009 11:57 **SPL Sample ID:** 09010585-07

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	27.7		1	1	01/16/09 18:13	ESK	4863608
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 2:44	NW	4877712
Surr: n-Pentacosane	63.4	%	20-150	1	01/24/09 2:44	NW	4877712

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/23/09 1:30	WLV	4872836
Surr: 1,4-Difluorobenzene	103	%	60-155	1	01/23/09 1:30	WLV	4872836
Surr: 4-Bromofluorobenzene	111	%	50-158	1	01/23/09 1:30	WLV	4872836
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/23/09 1:30	WLV	4872740
Toluene	ND		1	1	01/23/09 1:30	WLV	4872740
Ethylbenzene	ND		1	1	01/23/09 1:30	WLV	4872740
m,p-Xylene	ND		1	1	01/23/09 1:30	WLV	4872740
o-Xylene	ND		1	1	01/23/09 1:30	WLV	4872740
Xylenes,Total	ND		1	1	01/23/09 1:30	WLV	4872740
Surr: 1,4-Difluorobenzene	96.3	%	39-163	1	01/23/09 1:30	WLV	4872740
Surr: 4-Bromofluorobenzene	101	%	57-157	1	01/23/09 1:30	WLV	4872740
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	308		10	1	01/17/09 10:45	CFS	4865107

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-8 **Collected:** 01/14/2009 13:22 **SPL Sample ID:** 09010585-08

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				**MCL**	**E325.2**	**Units: mg/L**		
Chloride	25.7			1	1	01/16/09 18:13	ESK	4863609
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 3:05	NW	4877713
Surr: n-Pentacosane	50.2		%	20-150	1	01/24/09 3:05	NW	4877713

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND			0.1	1	01/23/09 2:01	WLV	4872837
Surr: 1,4-Difluorobenzene	102		%	60-155	1	01/23/09 2:01	WLV	4872837
Surr: 4-Bromofluorobenzene	110		%	50-158	1	01/23/09 2:01	WLV	4872837
PURGEABLE AROMATICS				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND			1	1	01/23/09 2:01	WLV	4872741
Toluene	ND			1	1	01/23/09 2:01	WLV	4872741
Ethylbenzene	ND			1	1	01/23/09 2:01	WLV	4872741
m,p-Xylene	ND			1	1	01/23/09 2:01	WLV	4872741
o-Xylene	ND			1	1	01/23/09 2:01	WLV	4872741
Xylenes,Total	ND			1	1	01/23/09 2:01	WLV	4872741
Surr: 1,4-Difluorobenzene	96.3		%	39-163	1	01/23/09 2:01	WLV	4872741
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/23/09 2:01	WLV	4872741
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	297			10	1	01/17/09 10:45	CFS	4865108

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-9 **Collected:** 01/14/2009 9:38 **SPL Sample ID:** 09010585-09

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					**MCL**	**E325.2**	**Units: mg/L**	
Chloride	25.5			1	1	01/16/09 18:53	ESK	4863618
DIESEL RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 3:25	NW	4877714
Surr: n-Pentacosane	42.8		%	20-150	1	01/24/09 3:25	NW	4877714

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND			0.1	1	01/23/09 2:33	WLV	4872838
Surr: 1,4-Difluorobenzene	103		%	60-155	1	01/23/09 2:33	WLV	4872838
Surr: 4-Bromofluorobenzene	110		%	50-158	1	01/23/09 2:33	WLV	4872838
PURGEABLE AROMATICS					**MCL**	**SW8021B**	**Units: ug/L**	
Benzene	ND			1	1	01/23/09 2:33	WLV	4872742
Toluene	ND			1	1	01/23/09 2:33	WLV	4872742
Ethylbenzene	ND			1	1	01/23/09 2:33	WLV	4872742
m,p-Xylene	ND			1	1	01/23/09 2:33	WLV	4872742
o-Xylene	ND			1	1	01/23/09 2:33	WLV	4872742
Xylenes,Total	ND			1	1	01/23/09 2:33	WLV	4872742
Surr: 1,4-Difluorobenzene	96.3		%	39-163	1	01/23/09 2:33	WLV	4872742
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/23/09 2:33	WLV	4872742
TOTAL DISSOLVED SOLIDS					**MCL**	**E160.1**	**Units: mg/L**	
Total Dissolved Solids (Residue,Filterable)	281			10	1	01/17/09 10:45	CFS	4865109

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-10 **Collected:** 01/14/2009 10:50 **SPL Sample ID:** 09010585-10

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					**MCL**	**E325.2**	**Units: mg/L**	
Chloride	26.3			1	1	01/16/09 18:54	ESK	4863619
DIESEL RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 3:45	NW	4877715
Surr: n-Pentacosane	41.0		%	20-150	1	01/24/09 3:45	NW	4877715

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND			0.1	1	01/21/09 18:34	CLJ	4870362
Surr: 1,4-Difluorobenzene	98.8		%	60-155	1	01/21/09 18:34	CLJ	4870362
Surr: 4-Bromofluorobenzene	93.4		%	50-158	1	01/21/09 18:34	CLJ	4870362
PURGEABLE AROMATICS					**MCL**	**SW8021B**	**Units: ug/L**	
Benzene	ND			1	1	01/21/09 18:34	CLJ	4870461
Toluene	ND			1	1	01/21/09 18:34	CLJ	4870461
Ethylbenzene	ND			1	1	01/21/09 18:34	CLJ	4870461
m,p-Xylene	ND			1	1	01/21/09 18:34	CLJ	4870461
o-Xylene	ND			1	1	01/21/09 18:34	CLJ	4870461
Xylenes,Total	ND			1	1	01/21/09 18:34	CLJ	4870461
Surr: 1,4-Difluorobenzene	99.9		%	39-163	1	01/21/09 18:34	CLJ	4870461
Surr: 4-Bromofluorobenzene	89.8		%	57-157	1	01/21/09 18:34	CLJ	4870461
TOTAL DISSOLVED SOLIDS					**MCL**	**E160.1**	**Units: mg/L**	
Total Dissolved Solids (Residue,Filterable)	289			10	1	01/17/09 10:45	CFS	4865111

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-11 **Collected:** 01/13/2009 10:00 **SPL Sample ID:** 09010585-11

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	119		5	5	01/16/09 19:04	ESK	4863620
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 4:05	NW	4877716
Surr: n-Pentacosane	60.0	%	20-150	1	01/24/09 4:05	NW	4877716

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/21/09 19:05	CLJ	4870363
Surr: 1,4-Difluorobenzene	98.1	%	60-155	1	01/21/09 19:05	CLJ	4870363
Surr: 4-Bromofluorobenzene	94.2	%	50-158	1	01/21/09 19:05	CLJ	4870363
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/21/09 19:05	CLJ	4870462
Toluene	ND		1	1	01/21/09 19:05	CLJ	4870462
Ethylbenzene	ND		1	1	01/21/09 19:05	CLJ	4870462
m,p-Xylene	ND		1	1	01/21/09 19:05	CLJ	4870462
o-Xylene	ND		1	1	01/21/09 19:05	CLJ	4870462
Xylenes,Total	ND		1	1	01/21/09 19:05	CLJ	4870462
Surr: 1,4-Difluorobenzene	99.0	%	39-163	1	01/21/09 19:05	CLJ	4870462
Surr: 4-Bromofluorobenzene	89.6	%	57-157	1	01/21/09 19:05	CLJ	4870462
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	478		10	1	01/17/09 10:45	CFS	4865112

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Trip Blank **Collected:** 01/14/2009 0:00 **SPL Sample ID:** 09010585-12

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/L		
Gasoline Range Organics	ND			0.1	1	01/21/09 17:32	CLJ	4870361
Surr: 1,4-Difluorobenzene	96.8		%	60-155	1	01/21/09 17:32	CLJ	4870361
Surr: 4-Bromofluorobenzene	93.0		%	50-158	1	01/21/09 17:32	CLJ	4870361
PURGEABLE AROMATICS				MCL	SW8021B	Units: ug/L		
Benzene	ND			1	1	01/21/09 17:32	CLJ	4870459
Toluene	ND			1	1	01/21/09 17:32	CLJ	4870459
Ethylbenzene	ND			1	1	01/21/09 17:32	CLJ	4870459
m,p-Xylene	ND			1	1	01/21/09 17:32	CLJ	4870459
o-Xylene	ND			1	1	01/21/09 17:32	CLJ	4870459
Xylenes,Total	ND			1	1	01/21/09 17:32	CLJ	4870459
Surr: 1,4-Difluorobenzene	99.5		%	39-163	1	01/21/09 17:32	CLJ	4870459
Surr: 4-Bromofluorobenzene	88.7		%	57-157	1	01/21/09 17:32	CLJ	4870459

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Diesel Range Organics
Method: SW8015B
WorkOrder: 09010585
Lab Batch ID: 87217

Method Blank

RunID: HP_V_090123D-4877703 Units: mg/L
Analysis Date: 01/23/2009 22:43 Analyst: NW
Preparation Date: 01/20/2009 11:43 Prep By: N_M Method SW3510C

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.10
Surr: n-Pentacosane	48.4	20-150

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01B	MW-1
09010585-02B	MW-2
09010585-03B	MW-3
09010585-04B	MW-4
09010585-05B	MW-5
09010585-06B	MW-6
09010585-07B	MW-7
09010585-08B	MW-8
09010585-09B	MW-9
09010585-10B	MW-10
09010585-11B	MW-11

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_V_090123D-4877719 Units: mg/L
Analysis Date: 01/26/2009 10:28 Analyst: NW
Preparation Date: 01/20/2009 11:43 Prep By: N_M Method SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	2.00	1.96	97.9	2.00	1.86	93.2	5.0	20	21	130
Surr: n-Pentacosane	0.0500	0.0198	39.6	0.0500	0.0181	36.2	9.0	30	20	150

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 09010585
Lab Batch ID: R263135

Method Blank

RunID: VARE_090121A-4870360 Units: mg/L
Analysis Date: 01/21/2009 14:24 Analyst: CLJ

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-10A	MW-10
09010585-11A	MW-11
09010585-12A	Trip Blank

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	97.1	60-155
Surr: 4-Bromofluorobenzene	91.9	50-158

Laboratory Control Sample (LCS)

RunID: VARE_090121A-4870358 Units: mg/L
Analysis Date: 01/21/2009 13:21 Analyst: CLJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	0.956	95.6	42	136
Surr: 1,4-Difluorobenzene	0.100	0.0997	99.7	60	155
Surr: 4-Bromofluorobenzene	0.100	0.0965	96.5	50	158

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-11
RunID: VARE_090121A-4870364 Units: mg/L
Analysis Date: 01/21/2009 20:07 Analyst: CLJ

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1	1.04	104	1	1.06	106	2.05	36	22	174
Surr: 1,4-Difluorobenzene	ND	0.1	0.101	101	0.1	0.100	100	0.695	30	60	155
Surr: 4-Bromofluorobenzene	ND	0.1	0.0993	99.3	0.1	0.0967	96.7	2.65	30	50	158

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 09010585
Lab Batch ID: R263141

Method Blank

RunID: VARE_090121B-4870458 Units: ug/L
Analysis Date: 01/21/2009 14:24 Analyst: CLJ

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-10A	MW-10
09010585-11A	MW-11
09010585-12A	Trip Blank

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	98.9	39-163
Surr: 4-Bromofluorobenzene	89.8	57-157

Laboratory Control Sample (LCS)

RunID: VARE_090121B-4870456 Units: ug/L
Analysis Date: 01/21/2009 12:50 Analyst: CLJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.3	96.7	70	130
Ethylbenzene	20.0	19.0	95.0	66	132
Toluene	20.0	18.6	93.0	69	133
m,p-Xylene	40.0	37.6	94.0	67	136
o-Xylene	20.0	18.8	94.2	67	133
Xylenes,Total	60.0	56.4	94.1	67	136
Surr: 1,4-Difluorobenzene	100	99.2	99.2	39	163
Surr: 4-Bromofluorobenzene	100	92	92.0	57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-10
RunID: VARE_090121B-4870465 Units: ug/L
Analysis Date: 01/21/2009 23:07 Analyst: CLJ

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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1/28/2009 12:44:15 PM

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics **WorkOrder:** 09010585
Method: SW8021B **Lab Batch ID:** R263141

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	22.8	114	20	22.4	112	2.01	26	40	165
Ethylbenzene	ND	20	21.5	108	20	21.1	106	1.90	34	51	156
Toluene	ND	20	21.9	109	20	21.4	107	2.20	25	58	153
m,p-Xylene	ND	40	42.2	106	40	41.4	104	1.87	27	51	155
o-Xylene	ND	20	22.4	112	20	22.0	110	1.39	25	58	151
Xylenes,Total	ND	60	64.6	108	60	63.4	106	1.71	27	51	155
Surr: 1,4-Difluorobenzene	ND	100	99	99.0	100	99.8	99.8	0.730	30	39	163
Surr: 4-Bromofluorobenzene	ND	100	92.2	92.2	100	92.0	92.0	0.249	30	57	157

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 09010585
Lab Batch ID: R263285

Method Blank

RunID: HP_N_090122A-4872723 Units: ug/L
Analysis Date: 01/22/2009 13:26 Analyst: WLV
Preparation Date: 01/22/2009 13:26 Prep By: Method SW5030B

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	96.8	39-163
Surr: 4-Bromofluorobenzene	99.9	57-157

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01A	MW-1
09010585-02A	MW-2
09010585-03A	MW-3
09010585-04A	MW-4
09010585-05A	MW-5
09010585-06A	MW-6
09010585-07A	MW-7
09010585-08A	MW-8
09010585-09A	MW-9

Laboratory Control Sample (LCS)

RunID: HP_N_090122A-4872722 Units: ug/L
Analysis Date: 01/22/2009 11:52 Analyst: WLV
Preparation Date: 01/22/2009 11:52 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.0	95.2	70	130
Ethylbenzene	20.0	18.9	94.5	66	132
Toluene	20.0	19.7	98.7	69	133
m,p-Xylene	40.0	38.3	95.9	67	136
o-Xylene	20.0	18.8	93.9	67	133
Xylenes,Total	60.0	57.1	95.2	67	136
Surr: 1,4-Difluorobenzene	100	96.8	96.8	39	163
Surr: 4-Bromofluorobenzene	100	101	101	57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010588-08
RunID: HP_N_090122A-4872726 Units: ug/L
Analysis Date: 01/22/2009 15:01 Analyst: WLV

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 09010585
Lab Batch ID: R263285

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	20.0	100	20	20.1	100	0.373	26	40	165
Ethylbenzene	ND	20	19.4	97.2	20	19.6	98.0	0.774	34	51	156
Toluene	ND	20	20.2	101	20	20.0	100	0.837	25	58	153
m,p-Xylene	ND	40	39.3	98.3	40	39.6	98.9	0.655	27	51	155
o-Xylene	ND	20	19.3	96.5	20	19.5	97.5	1.03	25	58	151
Xylenes,Total	ND	60	58.6	97.7	60	59.1	98.4	0.777	27	51	155
Surr: 1,4-Difluorobenzene	ND	100	95.3	95.3	100	95.5	95.5	0.272	30	39	163
Surr: 4-Bromofluorobenzene	ND	100	100	100	100	101	101	0.996	30	57	157

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 09010585
Lab Batch ID: R263292

Method Blank

RunID: HP_N_090122B-4872817 Units: mg/L
Analysis Date: 01/22/2009 13:26 Analyst: WLV
Preparation Date: 01/22/2009 13:26 Prep By: Method SW5030B

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	101.0	60-155
Surr: 4-Bromofluorobenzene	107.5	50-158

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01A	MW-1
09010585-02A	MW-2
09010585-03A	MW-3
09010585-04A	MW-4
09010585-05A	MW-5
09010585-06A	MW-6
09010585-07A	MW-7
09010585-08A	MW-8
09010585-09A	MW-9

Laboratory Control Sample (LCS)

RunID: HP_N_090122B-4872816 Units: mg/L
Analysis Date: 01/22/2009 12:23 Analyst: WLV
Preparation Date: 01/22/2009 12:23 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	0.744	74.4	42	136
Surr: 1,4-Difluorobenzene	0.100	0.122	122	60	155
Surr: 4-Bromofluorobenzene	0.100	0.0998	99.8	50	158

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010588-06
RunID: HP_N_090122B-4872820 Units: mg/L
Analysis Date: 01/22/2009 16:04 Analyst: WLV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1	0.771	77.1	1	0.756	75.6	2.03	36	22	174
Surr: 1,4-Difluorobenzene	ND	0.1	0.12	120	0.1	0.120	120	0.0836	30	60	155
Surr: 4-Bromofluorobenzene	ND	0.1	0.0998	99.8	0.1	0.102	102	2.67	30	50	158

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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1/28/2009 12:44:15 PM

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Chloride, Total **WorkOrder:** 09010585
Method: E325.2 **Lab Batch ID:** R262622

Method Blank

RunID: KONELAB_090116C-4863602 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Result	Rep Limit
Chloride	ND	1.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01C	MW-1
09010585-02C	MW-2
09010585-03C	MW-3
09010585-04C	MW-4
09010585-05C	MW-5
09010585-06C	MW-6
09010585-07C	MW-7
09010585-08C	MW-8
09010585-09C	MW-9
09010585-10C	MW-10

Laboratory Control Sample (LCS)

RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	50.00	52.31	104.6	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-01
RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 18:38 Analyst: ESK

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	445.9	50	472.6	N/C	50	473.1	N/C	N/C	20	76	131

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Chloride, Total
Method: E325.2
WorkOrder: 09010585
Lab Batch ID: R262622A

Method Blank

RunID: KONELAB_090116C-4863602 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-11C	MW-11

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	50.00	52.31	104.6	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-11
RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 19:04 Analyst: ESK

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	119.5	50	158.0	77.00	50	160.0	81.01	1.260	20	76	131

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Total Dissolved Solids **WorkOrder:** 09010585
Method: E160.1 **Lab Batch ID:** R262727

Method Blank

RunID: WET_090117L-4865096 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01C	MW-1
09010585-02C	MW-2
09010585-03C	MW-3
09010585-04C	MW-4
09010585-05C	MW-5
09010585-06C	MW-6
09010585-07C	MW-7
09010585-08C	MW-8
09010585-09C	MW-9
09010585-10C	MW-10

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_090117L-4865098 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200.0	201.0	100.5	200.0	200.0	100.0	0.5	10	95	107

Sample Duplicate

Original Sample: 09010585-01
RunID: WET_090117L-4865100 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	1360	1353	0.148	10

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Total Dissolved Solids **WorkOrder:** 09010585
Method: E160.1 **Lab Batch ID:** R262727A

Method Blank

RunID: WET_090117L-4865096 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-11C	MW-11

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_090117L-4865098 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200.0	201.0	100.5	200.0	200.0	100.0	0.5	10	95	107

Sample Duplicate

Original Sample: 09010585-11
RunID: WET_090117L-4865112 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	478	480	0.418	10

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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Released to Imaging: 4/26/2023 2:01:09 PM

Sample Receipt Checklist

And

Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	09010585	Received By:	RE
Date and Time Received:	1/15/2009 10:00:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	3.0°C	Chilled by:	Water Ice

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
2. Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐	
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑	
4. Chain of custody present?	Yes ☑	No ☐		
5. Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
6. Chain of custody agrees with sample labels?	Yes ☑	No ☐		
7. Samples in proper container/bottle?	Yes ☑	No ☐		
8. Sample containers intact?	Yes ☑	No ☐		
9. Sufficient sample volume for indicated test?	Yes ☑	No ☐		
10. All samples received within holding time?	Yes ☑	No ☐		
11. Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
12. Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐	
13. Water - Preservation checked upon receipt (except VOA*)?	Yes ☑	No ☐	Not Applicable ☐	

*VOA Preservation Checked After Sample Analysis

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

Delta Consultants	Sampling Event Description	SPL Workorder Number: 09010585	Page 1 of 1
Contact: Michael Henn	Quarterly ☐		
Address: 704 Central Parkway East, Suite 1220	WC-Waste Char. ☐		
Phone: 972-665-0528 Fax: 972-665-989	☐		
City: Plano State: TX 75074	Other (describe below) ☐		
PO No.:			
Project Name: Maljamar Release Site	QA/QC Level		
Project Location: Maljamar, NM	TRRP ☐ Lvl 3 ☐		
Site Address:	Std ☒ Other ☐		
Sampled By:	Matrix		

SAMPLE ID	DATE	TIME	Water	Soil	Sludge	Wipe	Number Containers	Container Type	Preservative	REQUESTED ANALYSIS: BTEX-8021B	GRO-8015	DRO-8015	TDS/CLD
MW-1	1/13/09	1724	W				6	40 ml/1L	HCL	X	X	X	X
MW-2		1628	W				3	40 ml	HCL				
MW-3		1147	W				3	40 ml	HCL				
MW-4		1340	W				3	40 ml	HCL				
MW-5		1510	W				3	40 ml	HCL				
MW-6	1/14/09	1425	W				3	40 ml	HCL				
MW-7		1157	W				3	40 ml	HCL				
MW-8		1322	W				3	40 ml	HCL				
MW-9		938	W				3	40 ml	HCL				
MW-10		1050	W				3	40 ml	HCL				
MW-11	1/13/09	1000	W				3	40 ml	HCL				
~~MW-12~~			~~W~~				~~3~~	~~40 ml~~	~~HCL~~				
Trip Blank	1/14/09	—	W				2	4mL	HCL	X			

TAT	Special Detection Limits (Specify):	Consultant Remarks:
24hr ☐ 72hr ☐		3,0c
48hr ☐ 10 day ☐	Special Reporting Requirements (Specify):	Laboratory Remarks:
Other ☐		PM review:

Relinquished by Sampler:	Date	Time	Received by:
(Blake Ford)	01/14/09	1600	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by SPL, Inc.:
	1/15/09	1000	

June 23, 2009

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

RE: **Request for Closure**
Maljamar 6" Pipeline Release Site – North
SW/4 Sec 20, T17S, R33E
Maljamar, Lea County, New Mexico
NMOCD ID. 1RP-956
Delta Project No. CPNM2

DELTA

Dear Mr. Von Gonten:

On behalf of Centurion Pipeline L.P. (Centurion), Delta Consultants (Delta) has prepared this request for closure for the Maljamar Release - North Site, which is located on State of New Mexico land (Southwest Quarter of Section 20, Township 17 South, Range 33 East), approximately five miles southeast of Maljamar, New Mexico (refer to Figure 1 in Attachment 1).

Releases along a 6-inch crude oil gathering line, currently operated by Centurion, were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The project sites (identified as the north and south sites) are located approximately 1,000 feet from each other in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.).

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line and retained Conestoga-Rovers and Associates (CRA) to perform initial response activities. These activities included the excavation of impacted soils to remove source area material and investigate the extent of the impacts (refer to Figure 2 in Attachment 1 for excavation boundaries). Excavation at the north site was conducted between January and March 2006. Confirmation soil samples were collected from the north site in March 2006, between 32 and 50 feet below grade surface (bgs).

After receiving the NMOCD's letter dated February 3, 2006, BP retained the services of URS to conduct further response activities at the sites to comply with the stated directive, "BP shall vertically and horizontally delineate the vadose zone at each location according to NMOCD guidelines...". URS's activities included an exploratory boring program, a geophysical study of the area surrounding the sites, installation and monitoring of groundwater monitor wells (five (5) at each site), and backfilling the excavations at each site.

As identified in previously submitted reports to the NMOCD by URS (e.g., *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007), subsequent to the remedial excavation activities, only one delineation/confirmation soil sample exhibited concentrations that exceeded the NMOCD Recommended Remediation Action

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Levels (RRALs). This sample was collected from soil boring B-12, which was installed approximately 40 feet north of the release point, at a depth of 34 feet below grade surface (bgs), and exhibited concentrations of benzene at 0.51J milligrams per kilogram (mg/Kg), total BTEX at 64 mg/Kg and total TPH at 1,100 mg/Kg. Groundwater at the north site is located at least 115 feet bgs. The identified residual contamination in the vicinity of soil boring B-12 represents a de Minimis impact.

Regarding groundwater, no COC concentrations above the New Mexico Human Health Maximum Concentration Levels (MCLs – 20.6.2 NMAC) have been identified in the groundwater samples collected from the five (5) on-site monitor wells subsequent to installation (MW-1, MW-2, MW-3 and MW-4 in September 2006; and, MW-5 in March 2007).

As reported in Delta's Groundwater Monitoring Report dated June 15, 2009, in December 2008, samples were collected from MW-1 and MW-5 at the north site and analyzed for BTEX by Method SW8021B, TPH by Texas Method TX1005, total dissolved solids (TDS) by Method E160.1 and total chloride by Method E325.2. In January 2009, monitor wells MW-1, MW-2, MW-3, MW-4 and MW-5 were sampled and analyzed for BTEX by Method SW8021B, TPH- gasoline range organics (GRO) and TPH- diesel range organics (DRO) by Method SW8015B and total chloride by Method E325.2.

Based on the laboratory analytical results from both of the groundwater sampling events conducted by Delta, no petroleum hydrocarbon constituent concentrations (BTEX and TPH) above the New Mexico Human Health MCLs were identified.

Although elevated concentrations of TDS and total chloride concentrations were identified in the vicinity of MW-1 and MW-2 (TDS concentrations of 1,820 mg/L in MW-1 (December 2008) and 6,390 mg/L in MW-2 (January 2009); and total chloride concentrations of 446 mg/L in MW-1 (January 2009) and 3,000 mg/L in MW-2 (January 2009), shallow groundwater in this region of New Mexico consistently exhibits relatively higher concentrations of TDS and total chloride. Additionally, the groundwater in the vicinity of the north site is not known to be utilized for any 'beneficial' uses.

Delta completed the Screening-Level Ecological Risk Assessment, Scoping Assessment and Site Assessment Checklist (refer to Attachment 2). "This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways." Based on the results of the checklist, and using the associated Ecological Exclusion Criteria Decision Tree, no further ecological assessment is required.

Although designed to drive remediation associated with underground storage tanks (USTs), Delta completed also the New Mexico Environment Department (NMED) Risk-Based Decision Making Computational Software package for the site (refer to Attachment 3) to further evaluate potential risk of exposure via ingestion, inhalation (vapor emissions and particulates) and dermal contact. This tool is used to evaluate risk-based screening levels for various demographics (e.g., resident child/adult, commercial adult and construction worker). The results indicate that surface soil is the only complete exposure pathway, given the site specifics. Given that the site is located within an oil and gas production field, and as the residual soil impact is localized and at a depth of at least 34 feet bgs, it is likely that only construction workers would be potentially exposed to COCs. The results of the screening indicate that the risk-based screening level for benzene in soil within a construction zone is 167 mg/Kg. The maximum benzene concentration identified at this site was 0.51J mg/Kg at a depth of 34 feet bgs. Hence, there does not appear to be a risk to construction workers via the residual de Minimis impact.

Based on the above-referenced findings, the following conclusions can be drawn:

- The source has effectively been removed from the site via excavation;

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- The laboratory analytical data shows that impact to soils at the north site have been delineated vertically and horizontally, and the identified residual contamination in the soil in the vicinity of soil boring B-12 represents a de Minimis impact;
- No soil impacts, above NMOCD RRALs, exist outside of the immediate area of the approximate release point;
- The soils with COC concentrations above NMOCD RRALs are localized and located at least 34 feet bgs, and at least 80 feet above the groundwater-bearing zone; and,
- Laboratory analytical data indicates that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the site.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

It is requested that a letter of 'No Further Action' at the north site be added to the project file associated with NMOCD ID. 1RP-956, and authorization to properly plug and abandon the five (5) on-site monitor wells be provided to Centurion.

The recommendations contained in this correspondence represents Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This document is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This document is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this document.

If you have any questions or comments, or if additional information is required, please contact Mr. Bill Von Drehle at 713-215-7379 or me at 972-665-0528.

Sincerely,

DELTA CONSULTANTS

Michael Henn
Senior Project Manager

Cc via email: Bill Von Drehle - Centurion Pipeline L.P.
Darrel Lester - Centurion Pipeline L.P.
Rebecca Moore - Centurion Pipeline L.P.

CC: Larry Johnson - New Mexico Oil Conservation Division – Hobbs, New Mexico Office

Attachment 1

NORTH SITE COORDINATES

LATITUDE: N 32° 48' 48"
LONGITUDE: W 103° 41' 33"

UTM COORDINATES: ZONE 13 622402 E 3631350 N

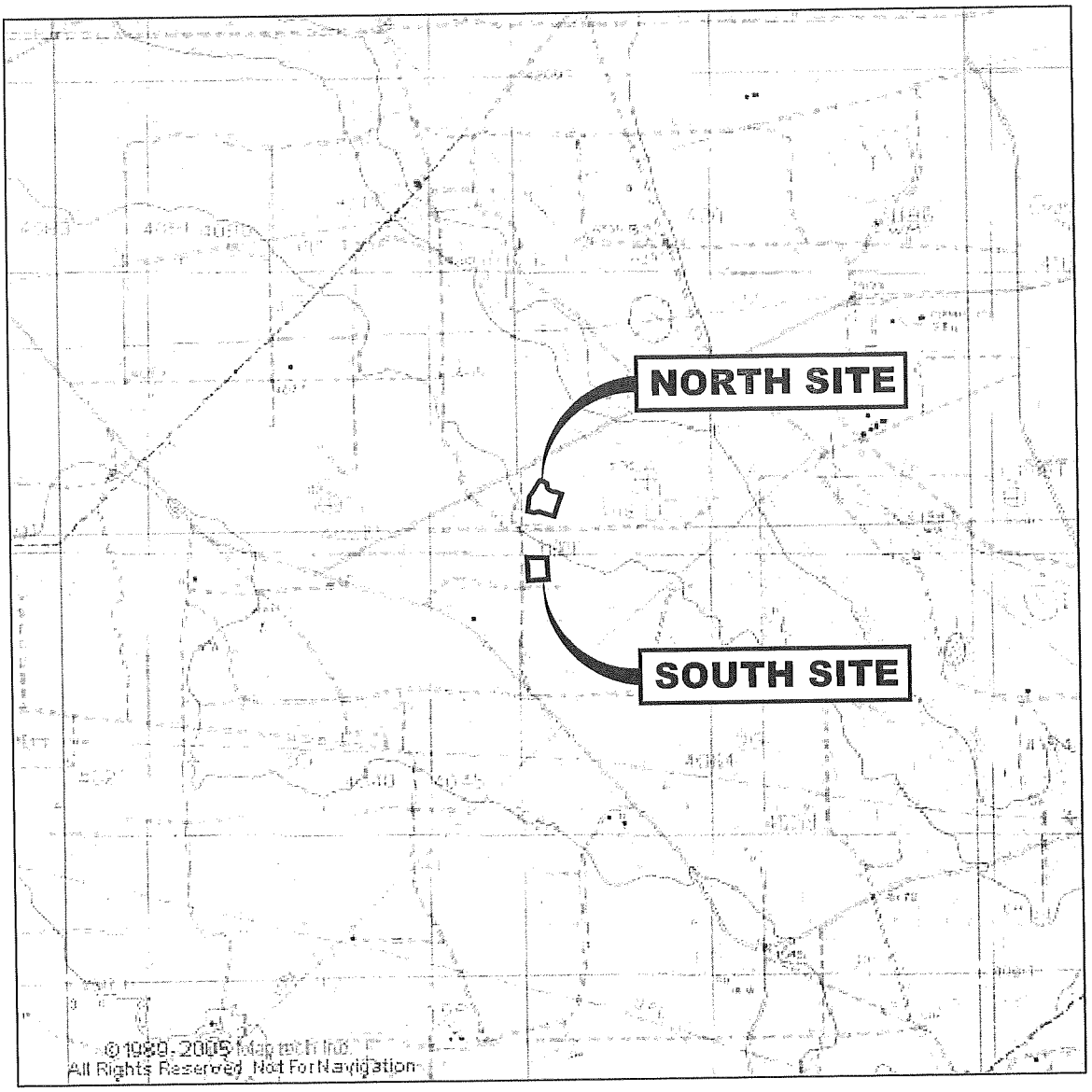
TOWNSHIP 17S
RANGE 33E
SECTION 20

SOUTH SITE COORDINATES

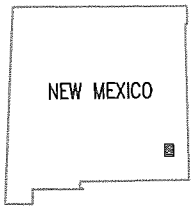
LATITUDE: N 32° 48' 40"
LONGITUDE: W 103° 41' 34"

UTM COORDINATES: ZONE 13 622379 E 3631104 N

TOWNSHIP 17S
RANGE 33E
SECTION 29



DOG LAKE QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE LOCATION

North

0 2000

SCALE IN FEET

FIGURE 1
SITE LOCATION MAP

CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO

PROJECT NO.	PREPARED BY	DRAWN BY
CPNM2-PP80-1	MH	DR
DATE	REVIEWED BY	FILE NAME
2/20/09		CPNM2PP80

DELTA

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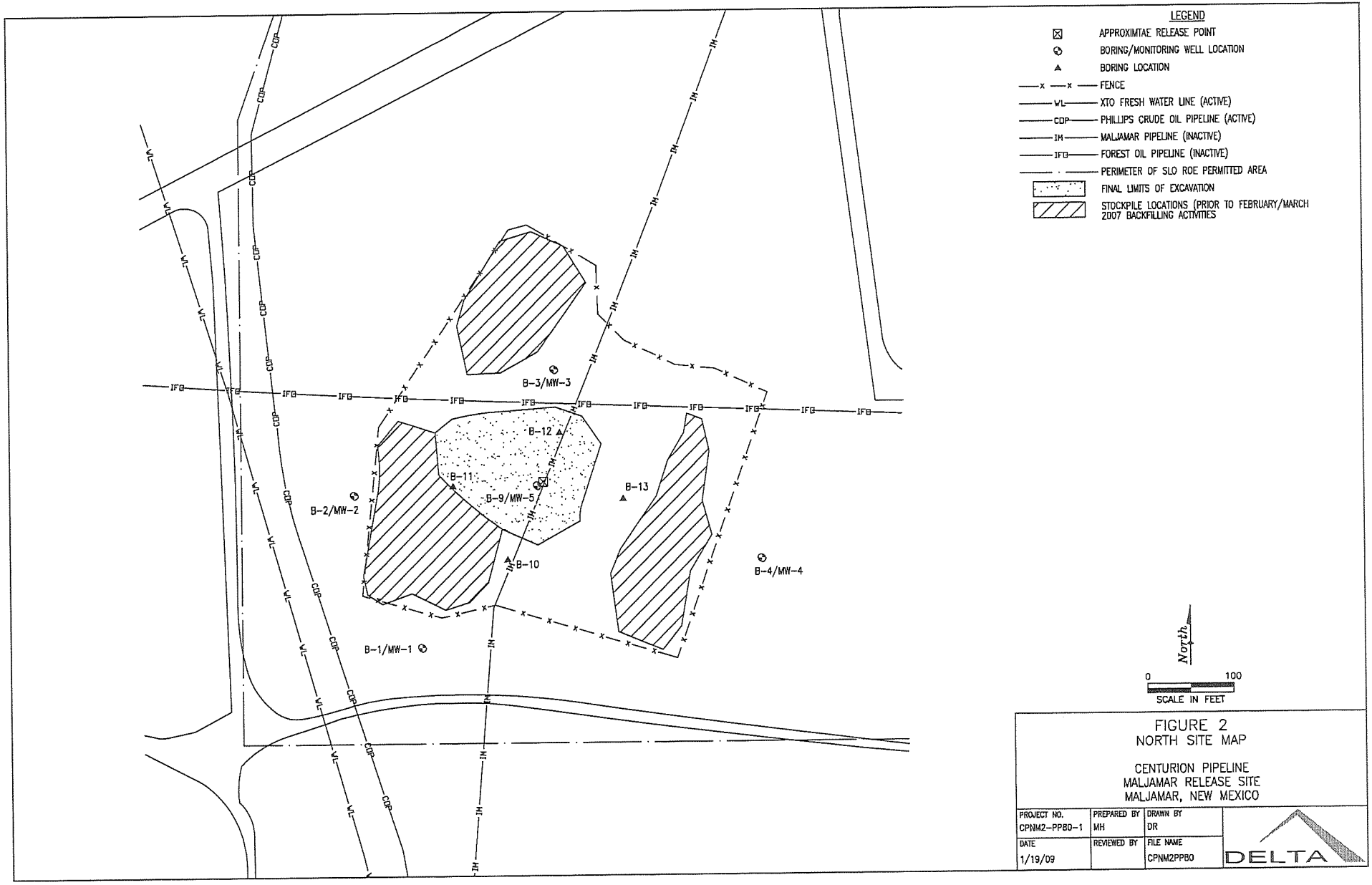

FIGURE 2
NORTH SITE MAP

CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO

PROJECT NO.	PREPARED BY	DRAWN BY
CPNM2-PP80-1	MH	DR
DATE	REVIEWED BY	FILE NAME
1/19/09		CPNM2PP80

DELTA

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Attachment 2

ATTACHMENT A

SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT
SCOPING ASSESSMENT
SITE ASSESSMENT CHECKLIST

INTRODUCTION

This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways. The completed checklist can then be used to construct the preliminary conceptual site exposure model (PCSEM) for the site. In addition, the checklist and PCSEM will serve as the basis for the scoping assessment report. Section III of this document provides further information on using the completed checklist to develop the PCSEM.

In general, the checklist is designed for applicability to all sites, however, there may be unusual circumstances which require professional judgment in order to determine the need for further ecological evaluation (*e.g.,* cave-dwelling receptors). In addition, some of the questions in the checklist may not be relevant to all sites. Some facilities may have large amounts of data available regarding contaminant concentrations and hydrogeologic conditions at the site, while other may have only limited data. In either case, the questions on the checklist should be addressed as completely as possible with the information available.

Habitats and receptors, which may be present at the site, can be identified by direct or indirect[1] observations and by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing land use and land cover maps (LULC), which are available via the Internet at http://www.nationalatlas.gov/mapit.html. With regard to receptors, it should be noted that receptors are often present at a site even when they are not observed. Therefore, for the purposes of this checklist, it should be assumed that receptors are present if viable habitat is present. The presence of receptors should be confirmed by contacting one or several of the organizations listed below.

Sources of general information available for the identification of ecological receptors and habitats include:

- U.S. Fish and Wildlife Service (http://www.fws.gov)
- Biota Information System of New Mexico (BISON-M) maintained by the New Mexico Department of Game and Fish (NMGF) (http://151.199.74.229/states/nm.htm)
- U.S. Forest Service (USFS) (http://www.fs.fed.us/)
- New Mexico Forestry Division (NMFD) of the Energy, Minerals and Natural Resources Department (http://www.emnrd.state.nm.us/forestry/index.htm)

1 Examples of indirect observations that indicate the presence of receptors include: tracks, feathers, burrows, scat

- U.S. Bureau of Land Management (USBLM) (http://www.blm.gov/nhp/index.htm) or (http://www.nm.blm.gov/www/new_home_2.html)
- United States Geological Service (USGS) (http://www.usgs.gov)
- National Wetland Inventory Maps (http://wetlands.fws.gov)
- National Audubon Society (http://www.audobon.com)
- National Biological Information Infrastructure (http://biology.usgs.gov)
- Sierra Club (http://www.sierraclub.org)
- National Geographic Society (http://www.nationalgeographic.com)
- New Mexico Natural Heritage Program (http://nmnhp.unm.edu/)
- State and National Parks System
- Local universities
- Tribal organizations

INSTRUCTIONS FOR COMPLETING THE CHECKLIST

The checklist consists of four sections: Site Location, Site Characterization, Habitat Evaluation, and Exposure Pathway Evaluation. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site. Completion of the checklist should provide sufficient information for the preparation of a PCSEM and scoping report and allow for the identification of any data gaps.

Section I - Site Location, provides general site information, which identifies the facility being evaluated, and gives specific location information. Site maps and diagrams, which should be attached to the completed checklist, are an important part of this section. The following elements should be clearly illustrated: 1) the location and boundaries of the site relative to the surrounding area, 2) any buildings, structures or important features of the facility or site, and 3) all ecological areas or habitats identified during completion of the checklist. It is possible that several maps will be needed to clearly and adequately illustrate the required elements. Although topographical information should be illustrated on at least one map, it is not required for every map. Simplified diagrams (preferably to scale) of the site and surrounding areas will usually suffice.

Section II - Site Characterization, is intended to provide additional temporal and contextual information about the site, which may have an impact on determining whether a certain area should be characterized as ecologically viable habitat or contains receptors. Answers to the questions in Section II will help the reviewer develop a broader and more complete evaluation of the ecological aspects of a site.

Section III - Habitat Evaluation, provides information regarding the physical and biological characteristics of the different habitat types present at or in the locality of the site. Aquatic features such as lakes, ponds, streams, arroyos and ephemeral waters can be identified by reviewing aerial photographs, LULC and topographic maps and during site reconnaissance visits. In New Mexico, there are several well-defined terrestrial communities, which occur naturally. Typical communities include wetlands, forest (e.g., mixed conifer,

ponderosa pine and pinyon juniper), scrub/shrub, grassland, and desert. Specific types of vegetation characterize each of these communities and can be used to identify them. Field guides are often useful for identifying vegetation types. A number of sites may be in areas that have been disturbed by human activities and may no longer match any of the naturally occurring communities typical of the southwest. Particularly at heavily used areas at facilities, the two most common of these areas are usually described as "weed fields" and "lawn grass". Vegetation at "weed fields" should be examined to determine whether the weeds consist primarily of species native to the southwest or introduced species such as Kochia. Fields of native weeds and lawn grass are best evaluated using the short grass prairie habitat guides.

The applicable portions of Section III of the checklist should be completed for each individual habitat identified. For example, the questions in Section III.A of the checklist should be answered for each wetland area identified at or in the locality of the site and the individual areas must be identified on a map or maps.

Section IV- Exposure Pathway Evaluation, is used to determine if contaminants at the site have the potential to impact habitat identified in Section III. An exposure pathway is the course a chemical or physical agent takes from a source to an exposed organism. Each exposure pathway includes a source (or release from a source), an environmental transport mechanism, an exposure point, and an exposure route. A complete exposure pathway is one in which each of these components, as well as a receptor to be exposed, is present. Essentially, this section addresses the fate and transport of contaminants that are known or suspected to have been released at the site. In most cases, without a complete exposure pathway between contaminants and receptors, additional ecological evaluation is not warranted.

Potential transport pathways addressed in this checklist include migration of contaminants via air dispersion, leaching into groundwater, soil erosion/runoff, groundwater discharge to surface water, and irradiation. Due to New Mexico's semi-arid climate, vegetation is generally sparse. The sparse vegetation, combined with the intense nature of summer storms in New Mexico, results in soil erosion that occurs sporadically over a very brief time frame. Soil erosion may be of particular concern for sites located in steeply sloped areas. Several questions within Section IV of this checklist have been developed to aid in the identification of those sites where soil erosion/runoff would be an important transport mechanism.

USING THE CHECKLIST TO DEVELOP THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL

The completed Site Assessment Checklist can be used to construct the PCSEM. An example PCSEM diagram is presented in Figure 1. The CSM illustrates actual and potential contaminant migration and exposure pathways to associated receptors. The components of a complete exposure pathway are simplified and grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms may expand into primary, secondary, and tertiary levels. For example, Figure 1 illustrates releases from inactive

lagoons (primary sources) through spills (primary release mechanism), which migrate to surface and subsurface soils (secondary sources), which are then leached (secondary release mechanism) to groundwater (tertiary source). Similarly, exposures of various trophic levels to the contaminant(s) and consequent exposures via the food chain may lead to multiple groups of receptors. For example, Figure 1 illustrates groups of both aquatic and terrestrial receptors which may be exposed and subsequently serve as tertiary release mechanisms to receptors which prey on them.

Although completing the checklist will not provide the user with a readymade PCSEM, a majority of the components of the PCSEM can be found in the answers to the checklist. It is then up to the user to put the pieces together into a comprehensive whole. The answers from Section II of the checklist, Site Characterization, can be used to identify sources of releases. The answers to Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. Appendix B of the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* also contains sample food webs which may be used to develop the PCSEM.

Once all of the components have been identified, one can begin tracing the steps between the primary releases and the potential receptors. For each potential receptor, the user should consider all possible exposure points (e.g., prey items, direct contact with contaminated soil or water, etc.) then begin eliminating pathways, which are not expected to result in exposure to the contaminant at the site. Gradually, the links between the releases and receptors can be filled in, resulting in potential complete exposure pathways.

For further guidance on constructing a PCSEM, consult the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* (2000), and EPA's Office of Solid Waste and Emergency *Response's Soil Screening Guidance: User's Guide* (1996).

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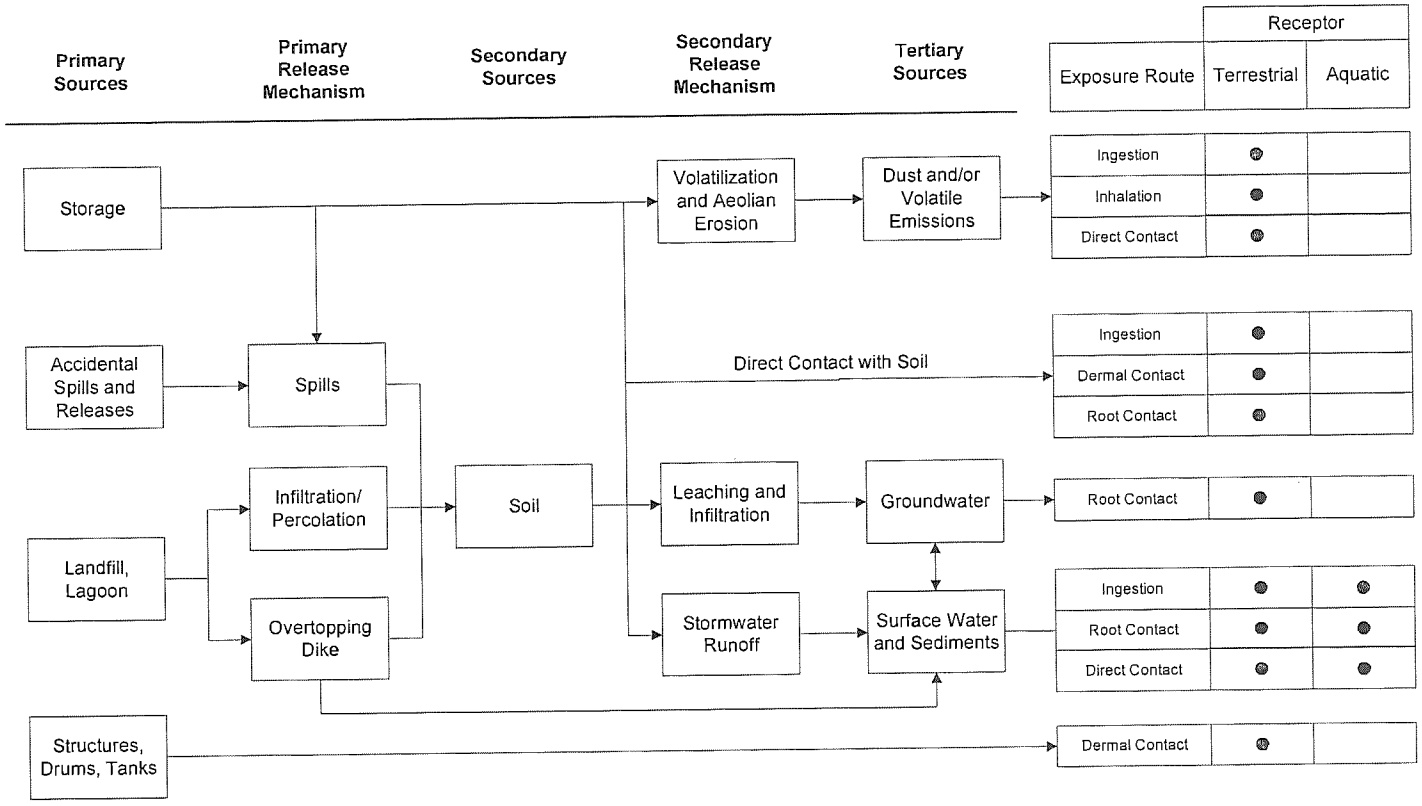

Figure 1. Example Preliminary Conceptual Site Exposure Model Diagram

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NEW MEXICO ENVIRONMENT DEPARTMENT
SITE ASSESSMENT CHECKLIST

I. SITE LOCATION

1. Site Name: Maljamar North
US EPA I.D. Number:
Location: 5 miles southeast of Maljamar
County: Lea
City: Maljamar State: NM

2. Latitude: 32.8136884 Longitude: -103.6927517

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known release areas, sampling locations, and any other important features, if available.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft) ~2 ac.
2. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other[c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, etc.):

[b]For agricultural areas, please list the crops and/or livestock which are present:

[c]For areas designated as "other", please describe the usage of the area:
Undeveloped land, generally utilized for oil/gas production; with numerous pipeline right-of-ways (ROWs) in site area

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3. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other [c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, golf course, etc.):

_____

[b]For agricultural areas, please list the crops and/or livestock which are present:

_____

[c]For areas designated as "other", please describe the usage of the area:

See No. 2

_____

_____

4. Describe reasonable and likely future land and/or water use(s) at the site.

It is likely that land use will not change in this area. No current or future use of water is known.

_____

_____

_____

_____

_____

_____

5. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).

No previous land use other than that described above is known. No previous releases are known.

_____

6. If any movement of soil has taken place at the site, describe the degree of the disturbance. Indicate the likely source of any disturbances (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) and estimate when these events occurred.

_____

An area approximately 100'x150' excavated to depths of 30-50 feet bgs. An approximate total of 1,800 cy disposed off-site. The remainder was returned to the excavation subsequent to NMOCD approval.

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_____¶

_____

_____¶

_____

_____¶

_____

_____

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_____

7. Describe the current uses of the site. Include information on recent (previous 5 years) disturbances or chemical releases that have occurred. For each chemical release, provide information on the form of the chemical released and the causes or mechanism of the release.

Pipeline ROW. Refer to Section 1.1 of URS's Excavation Backfilling and Source Area Characterization Technical Memorandum, dated June 28, 2007.

8. Identify the location or suspected location of chemical releases at the site. Provide an estimate of the distance between these locations and the areas identified in Section III.

Release, due to the result of internal corrosion, occurred along the 6-inch crude oil gathering line approximately 5 feet south of B-9/MW-5. No sensitive receptors known to exist in vicinity of release site.

9. Identify the suspected contaminants of concern (COCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc.).

Petroleum Hydrocarbons (BTEX, TPH)

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, for maximum contaminant levels.

10. Identify the media (e.g., soil (surface or subsurface), surface water, air, groundwater) which are known or suspected to contain COCs.

Subsurface

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].

at least 115 feet bgs

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)

south-southwest

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III. HABITAT EVALUATION

III.A Wetland Habitats

Are any wetland[2] areas such as marshes or swamps on or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location), and clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination that wetland areas are or are not present.

_____

_____

_____

_____

If no wetland areas are present, proceed to Section III.B.

2Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

Wetland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the approximate area of the wetland (acres or ft^2)_____

2. Identify the type(s) of vegetation present in the wetland.

   - ❑ Submergent (i.e., underwater) vegetation
   - ❑ Emergent (i.e., rooted in the water, but rising above it) vegetation
   - ❑ Floating vegetation
   - ❑ Scrub/shrub
   - ❑ Wooded
   - ❑ Other (Please describe):_____

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3. Estimate the vegetation density of the wetland area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

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4. Is standing water present? ☐ Yes ☐ No

   If yes, is the water primarily: ☐ Fresh or ☐ Brackish

   Indicate the approximate area of the standing water (ft^2): _____

   Indicate the approximate depth of the standing water, if known (ft. or in.)_____

5. If known, indicate the source of the water in the wetland.

   - ❑ Stream/River/Creek/Lake/Pond
   - ❑ Flooding
   - ❑ Groundwater
   - ❑ Surface runoff

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6. Is there a discharge from the facility to the wetland? ☐ Yes ☐ No

   If yes, please describe:_____

   _____

   _____

   _____

   _____

Wetland Area Questions (Continued)

7. Is there a discharge from the wetland? ☐ Yes ☐ No
   If yes, indicate the type of aquatic feature the wetland discharges into:

   - ❑ Surface stream/River (Name:_____)
   - ❑ Lake/Pond (Name:_____)
   - ❑ Groundwater
   - ❑ Not sure

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8. Does the area show evidence of flooding? ☐ Yes ☐ No
   If yes, indicate which of the following are present (mark all that apply):

   - ❑ Standing water
   - ❑ Water-saturated soils
   - ❑ Water marks
   - ❑ Buttressing
   - ❑ Debris lines
   - ❑ Mud cracks
   - ❑ Other (Please describe):_____

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9. Animals observed in the wetland area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

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Specify species, if known:

_____
_____
_____
_____

III.B Aquatic Habitats

III.B.1 Non-Flowing Aquatic Features

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.B.2.

Non-Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of aquatic feature present:

   ❑ Natural (e.g., pond or lake)
   ❑ Man-made (e.g., impoundment, lagoon, canal, etc.)

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2. Estimate the approximate size of the water body (in acres or sq. ft.)_____

3. If known, indicate the depth of the water body (in ft. or in.)._____

Non-Flowing Aquatic Feature Questions (Continued)

4. Indicate the general composition of the bottom substrate. Mark all sources that apply from the following list.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

5. Indicate the source(s) of the water in the aquatic feature. Mark all sources that apply from the following list.

- ☐ River/Stream/Creek
- ☐ Groundwater
- ☐ Industrial Discharge
- ☐ Surface Runoff
- ☐ Other (please specify):_____

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6. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:
   _____
   _____
   _____
   _____

7. Does the aquatic feature discharge to the surrounding environment? ☐ Yes ☐ No
   If yes, indicate the features from the following list into which the aquatic feature discharges, and indicate whether the discharge occurs onsite or offsite:

☐ River/Stream/Creek	☐ onsite	☐ offsite
☐ Groundwater	☐ onsite	☐ offsite
☐ Wetland	☐ onsite	☐ offsite
☐ Impoundment	☐ onsite	☐ offsite

☐ Other (please describe)_____

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Non-Flowing Aquatic Feature Questions (Continued)

8. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

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Specify species, if known:

_____

_____

_____

_____

III.B.2 Flowing Aquatic Features

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the flowing aquatic features. If more than one flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map

If no, proceed to Section III.C.

Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of flowing aquatic feature present.

- ☐ River
- ☐ Stream
- ☐ Creek
- ☐ Brook
- ☐ Dry wash
- ☐ Arroyo
- ☐ Intermittent stream
- ☐ Artificially created (ditch, etc.)
- ☐ Other (specify)
- ☐

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2. Indicate the general composition of the bottom substrate.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

3. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover) of the aquatic feature.

_____
_____
_____
_____

4. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

5. Indicate the discharge point of the water body. Specify name, if known.

_____
_____
_____

Flowing Aquatic Feature Questions (Continued)

6. If the flowing aquatic feature is a dry wash or arroyo, answer the following questions.

   ❑ Check here if feature is not a dry wash or arroyo

   If known, specify the average number of days in a year in which flowing water is present in the feature: _____

   Is standing water or mud present? Check all that apply.

   ❑ Standing water
   ❑ Mud
   ❑ Neither standing water or mud

   Does the area show evidence of recent flow (e.g., flood debris clinging to vegetation)?

   ❑ Yes
   ❑ No
   ❑ Not sure

7. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

   ❑ Birds
   ❑ Fish
   ❑ Mammals
   ❑ Reptiles (e.g., snakes, turtles)
   ❑ Amphibians (e.g., frogs, salamanders)
   ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

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III.C Terrestrial Habitats

III.C.1 Wooded

Are any wooded areas on or adjacent to the site? ☐ Yes X No

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If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.2.

Wooded Area Questions – Not Applicable

☐ On-site ☐ Off-site

Name or Designation:_____

1. Estimate the approximate size of the wooded area (in acres or sq. ft.)_____

2. Indicate the dominant type of vegetation in the wooded area.

   - ❑ Evergreen
   - ❑ Deciduous
   - ❑ Mixed

   Dominant plant species, if known:_____

3. Estimate the vegetation density of the wooded area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at chest height.

   - ❑ 0-6 inches
   - ❑ 6-12 inches
   - ❑ >12 inches
   - ❑ No single size range is predominant

5. Animals observed in the wooded area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, lizards)
   - ❑ Amphibians (e.g., toads, salamanders)

   Specify species, if known:

   _____
   _____
   _____
   _____

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III.C.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? X Yes ☐ No

Deleted: ☐

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.3.

Shrub/Scrub Area Questions

X Onsite ☐ Offsite

Name or Designation:

1. Estimate the approximate size of the shrub/scrub area (in acres or sq. ft.). ~1.5 ac.

2. Indicate the dominant type of shrub/scrub vegetation present, if known.

Unknown

3. Estimate the vegetation density of the shrub/scrub area.

- ☐ Dense (i.e., greater than 75% vegetation)
- ☐ Moderate (i.e., 25% to 75% vegetation)
- X Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the scrub/shrub vegetation.

- ☐ 0-2 feet
- X 2-5 feet
- ☐ >5 feet

5. Animals observed in the shrub/scrub area or suspected to be present based on indirect evidence or file material:

- X Birds
- X Mammals
- X Reptiles (e.g., snakes, lizards)
- ☐ Amphibians (e.g., toads, salamanders)

Specify species, if known:

Unknown

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III.C.3 Grassland

Are any grassland areas on or adjacent to the site? ☐ Yes X No

Deleted: ☐

If yes, indicate the grassland area on the attached site map and answer the following questions. If more than one grassland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual grassland area. Distinguish between grassland areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.4.

Grassland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the grassland area (in acres or sq. ft.)._____
2. Indicate the dominant plant type, if known.
   _____
   _____
   _____
   _____
3. Estimate the vegetation density of the grassland area.

   ❑ Dense (i.e., greater than 75% vegetation)
   ❑ Moderate (i.e., 25% to 75% vegetation)
   ❑ Sparse (i.e., less than 25% vegetation)

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4. Indicate the approximate average height of the dominant plant type (in ft. or in.)_
5. Animals observed in the grassland area or suspected to be present based on indirect evidence or file material:

   ❑ Birds
   ❑ Mammals
   ❑ Reptiles (e.g., snakes, lizards)
   ❑ Amphibians (e.g., toads, salamanders)

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Specify species, if known:

III.C.4 Desert

Are any desert areas on or adjacent to the site? ☐ Yes X No

Deleted: □

If yes, indicate the desert area on the attached site map and answer the following questions. If more than one desert area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual desert area. Distinguish between desert areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.5.

Desert Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the desert area (in acres or sq. ft.)._____

2. Describe the desert area (e.g., presence or absence of vegetation, vegetation types, presence/size of rocks, sand, etc.)

_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Animals observed in the desert area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

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Specify species, if known:

_____

III.C.5 Other

1. Are there any other terrestrial communities or habitats on or adjacent to the site which were not previously described?

☐ Yes X No

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If yes, indicate the "other" area(s) on the attached site map and describe the area(s) below. Distinguish between onsite and offsite areas. If no, proceed to Section III.D.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[3] exist adjacent to or within 0.5 miles of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.* _____Have submitted a request, pending response

Deleted: _____

3 Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to **Table 1** at the end of this document for examples of sensitive environments.

2. Are any areas on or near (i.e., within 0.5 miles) the site which are owned or used by local tribes? If yes, describe. *Contact the Tribal Liason in the Office of the Secretary (505)827-2855 to obtain this information.*

None identified, pending response from Mr. Milton Bluehouse.

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4. Does the site serve or potentially serve as a habitat, foraging area, or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

Unknown, awaiting response from the USFWS. However, according to the following website, http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats were identified.

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5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

Based on information obtained from http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats or migratory pathways were identified in the subject area.

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Is the site used by any ecologically[4], recreationally, or commercially important

Seasonal cattle grazing may take place in the general vicinity of the site; however, this commercial endeavor has not been observed during site access/activities.

4 Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or perform a critical ecological function (such as organic matter decomposition) and whose functions will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc.,)

species? If yes, explain.
NA

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate, and extent of contamination at the site?

X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, and Delta's Groundwater Monitoring Report dated June ?, 2009.

2. Do existing data provide sufficient information on the nature, rate, and extent of contamination in offsite affected areas?

☐ Yes
☐ No
☐ Uncertain
X No offsite contamination

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

3. Do existing data address potential migration pathways of contaminants at the site?

X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

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4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

- ☐ Yes
- ☐ No
- ☐ Uncertain
- X No offsite contamination

Please provide an explanation for your answer:

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within 0.5 miles) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 5 feet below ground surface (bgs). If yes, explain.

No

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

No

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8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

No. No groundwater impact above New Mexico Human Health Maximum Concentration Levels identified.

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9. Could chemicals reach receptors through runoff or erosion? Answer the following questions:

What is the approximate distance from the contaminated area to the nearest watercourse or arroyo?

- ❑ 0 feet (i.e., contamination has reached a watercourse or arroyo)
- ❑ 1-10 feet
- ❑ 11-20 feet
- ❑ 21-50 feet
- ❑ 51-100 feet
- ❑ 101-200 feet
- ❑ > 200 feet
- ❑ > 500 feet
- X > 1000 feet

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What is the slope of the ground in the contaminated area?

- X 0-10%
- ❑ 10-30%
- ❑ > 30%

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What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

- ❑ X < 25%
- ❑ 25-75%
- ❑ > 75%

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Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

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Do any structures, pavement, or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

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10. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No. Residual de Minimis soil contamination located at least 35 feet bgs.

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11. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat? No. No NAPLs exist at the site.

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12. Could receptors be impacted by external irradiation at the site? Are gamma emitting radionuclides present at the site? Is the radionuclide contamination buried or at the surface?

No. No radionuclide contamination exists at the site.

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PHOTOGRAPHIC DOCUMENTATION

During the site visit(s), photographs should be taken to document the current conditions at the site and to support the information entered in the checklist. For example, photographs may be used to document the following:

- The nature, quality, and distribution of vegetation at the site
- Receptors or evidence of receptors
- Potentially important ecological features, such as ponds and drainage ditches
- Potential exposure pathways
- Any evidence of contamination or impact

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The following space may be used to record photo subjects.

Please refer to previous reports submitted by Conestoga-Rovers and Associates and URS, Inc.

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SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

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Checklist Completed by Michael Henn

Affiliation Project Manager for Delta Consultants

Author Assisted by

Date June 10, 2009

TABLE 1
EXAMPLES OF SENSITIVE ENVIRONMENTS

National Parks and National Monuments

Designated or Administratively Proposed Federal Wilderness Areas

National Preserves

National or State Wildlife Refuges

National Lakeshore Recreational Areas

Federal land designated for protection of natural ecosystems

State land designated for wildlife or game management

State designated Natural Areas

Federal or state designated Scenic or Wild River

All areas that provide or could potentially provide critical habitat[1] for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern

All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes

All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

---

1 Critical habitats are defined by the Endangered Species Act (50 CFR §424.02(d)) as:

1) Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (ii) that may require special management considerations or protection, and 2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary [of Interior] that such areas are essential for the conservation of the species.

All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)

All areas that provide or could potentially provide habitat for song birds as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)

All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)

All areas that provide or could potentially provide habitat for horned toads and Bullfrogs as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, resp.)

All perennial waters (e.g., rivers, lakes, playas, sloughs, ponds, etc)

All ephemeral drainage (e.g., arroyos, puddles/pools, intermittent streams, etc) that provide significant wildlife habitat or that could potentially transport contaminants off site to areas that provide wildlife habitat

All riparian habitats

All perennial and ephemeral wetlands (not limited to jurisdictional wetlands)

All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle.

ATTACHMENT B

ECOLOGICAL SITE EXCLUSION CRITERIA CHECKLIST AND DECISION TREE

1. New Mexico Ecological Exclusion Criteria Checklist

The following questions are designed to be used in conjunction with the Ecological Exclusion Criteria Decision Tree (Figure 1). After answering each question, refer to the Decision Tree to determine the appropriate next step. In some cases, questions will be omitted as the user is directed to another section as indicated by the flow diagram in the Decision Tree. For example, if the user answers "yes" to Question 1 of Section I, he or she is directed to proceed to Section II.

I. Habitat

In the following questions, "affected property" refers to all property on which a release has occurred or is believed to have occurred, including off-site areas where contamination may have occurred or migrated.

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1. Are any of the below-listed sensitive environments at, adjacent to, or in the locality1 of the affected property? None known.

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- National Park or National Monument
- Designated or administratively proposed Federal Wilderness Area
- National Preserve
- National or State Wildlife Refuge
- Federal or State land designated for wildlife or game management
- State designated Natural Areas
- All areas that are owned or used by local tribes
- All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle
- All areas that provide or could potentially provide habitat for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern
- All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes
- All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

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1 *Locality* of the site refers to any area where an ecological receptor is likely to contact site-related chemicals. The locality of the site considers the likelihood of contamination migrating over time and places the site in the context of its general surrounding. Therefore, the locality is typically larger than the site and the areas adjacent to the site.

- All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)
- All areas that provide or could potentially provide habitat for song birds as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)
- All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)
- All areas that provide or could potentially provide habitat for horned toads and bullfrogs as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, respectively)

2. Does the affected property contain land areas which were not listed in Question 1, but could be considered viable ecological habitat? The following are examples (but not a complete listing) of viable ecological habitats:

- Wooded areas
- Open fields (prairie)
- Other grassy areas
- Desert areas
- Any other areas which support wildlife and/or vegetation, excluding areas which support only opportunistic species (such as house mice, Norway rats, pigeons, etc.) that do not serve as prey to species in adjacent habitats.

The following features are not considered ecologically viable:

- Pavement
- Buildings
- Paved areas of roadways
- Paved/concrete equipment storage pads
- Paved manufacturing or process areas
- Other non-natural surface cover or structure

3. Does the affected property contain any perennial or ephemeral aquatic features which were not listed in Question 1? No

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II. Receptors

1. Is any part of the affected property used for habitat, foraging area, or refuge by any rare, threatened, or endangered species (plant *or* animal), or otherwise protected species (e.g., raptors, migratory birds)? None known.

2. Is any part of the affected property used for habitat, foraging area, or refuge by any species used as a recreational (e.g., game animals) and/or commercial resource? Potentially used for seasonal cattle grazing.

3. Is any part of the affected property used for habitat, foraging area, or refuge by any plant or animal species? This includes plants considered "weeds" and opportunistic insect and animal species (such as cockroaches and rats) if they are used as a food source for other species in the area. None known.

III. Exposure Pathways

1. Could receptors be impacted by contaminants via direct contact?

   Is a receptor located in or using an area where it could contact contaminated air, soil3, or surface water? No.

For Questions 2 and 3, note that one must answer "yes" to all three bullets in order to be directed to the "exclusion denied" box of the decision tree. This is because answering "no" to one of the questions in the bullet list indicates that a complete exposure pathway is not present. For example, in Question 2, if the chemical cannot leach or dissolve to groundwater (bullet 1), there is no chance of ecological receptors being exposed to the chemical through contact with contaminated groundwater. Similarly, the responses to the questions in Question 4 determine whether a complete pathway exists for exposure to NAPL.

2. Could receptors contact contaminants via groundwater? No.
   - Can the chemical leach or dissolve to groundwater4?
   - Can groundwater mobilize the chemical?
   - Could (does) contaminated groundwater discharge into known or potential receptor habitats?

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3 For soil, this means contamination less than 5 feet below ground surface (bgs).

4 Information on the environmental fate of specific chemicals can be found on the Internet at *http://www.epa.gov/opptintr/chemfact/* or at a local library in published copies of the *Hazardous Substances Data Bank*.

3. Could receptors contact contaminants via runoff (i.e., surface water and/or suspended sediment) or erosion by water or wind? No.
   - Are chemicals present in surface soils?
   - Can the chemical be leached from or eroded with surface soils?
   - Is there a receptor habitat located downgradient of the leached/eroded surface soil?

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4. Could receptors contact contaminants via migration of non-aqueous phase liquids (NAPL)? No
   - Is NAPL present at the site?
   - Is NAPL migrating toward potential receptors or habitats?
   - Could NAPL discharge impact receptors or habitats?

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Figure 1 -Ecological Exclusion Criteria Decision Tree

(Refer to corresponding checklist for the full text of each question)

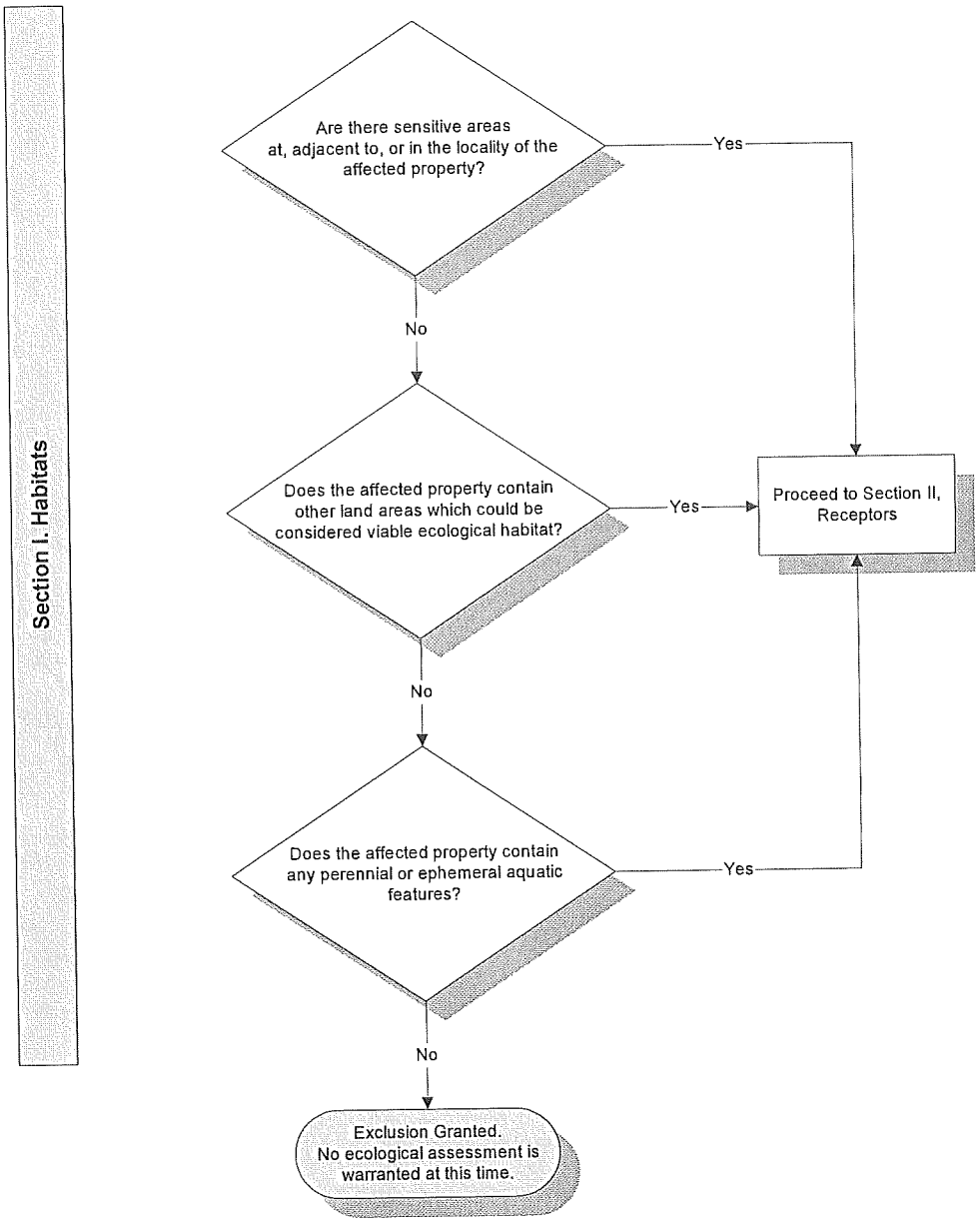


Figure 1 - Exclusion Criteria Decision Tree (continued)

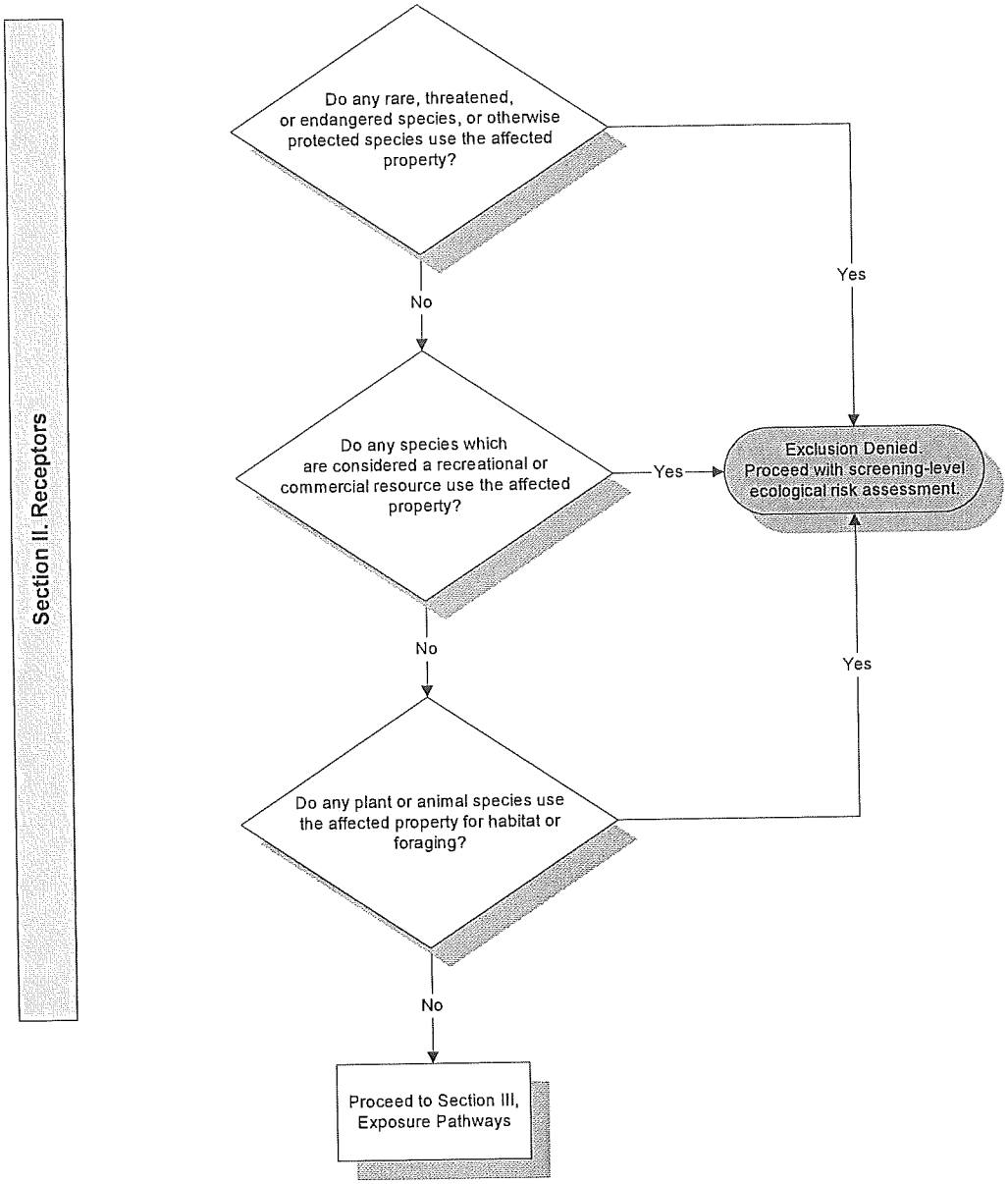
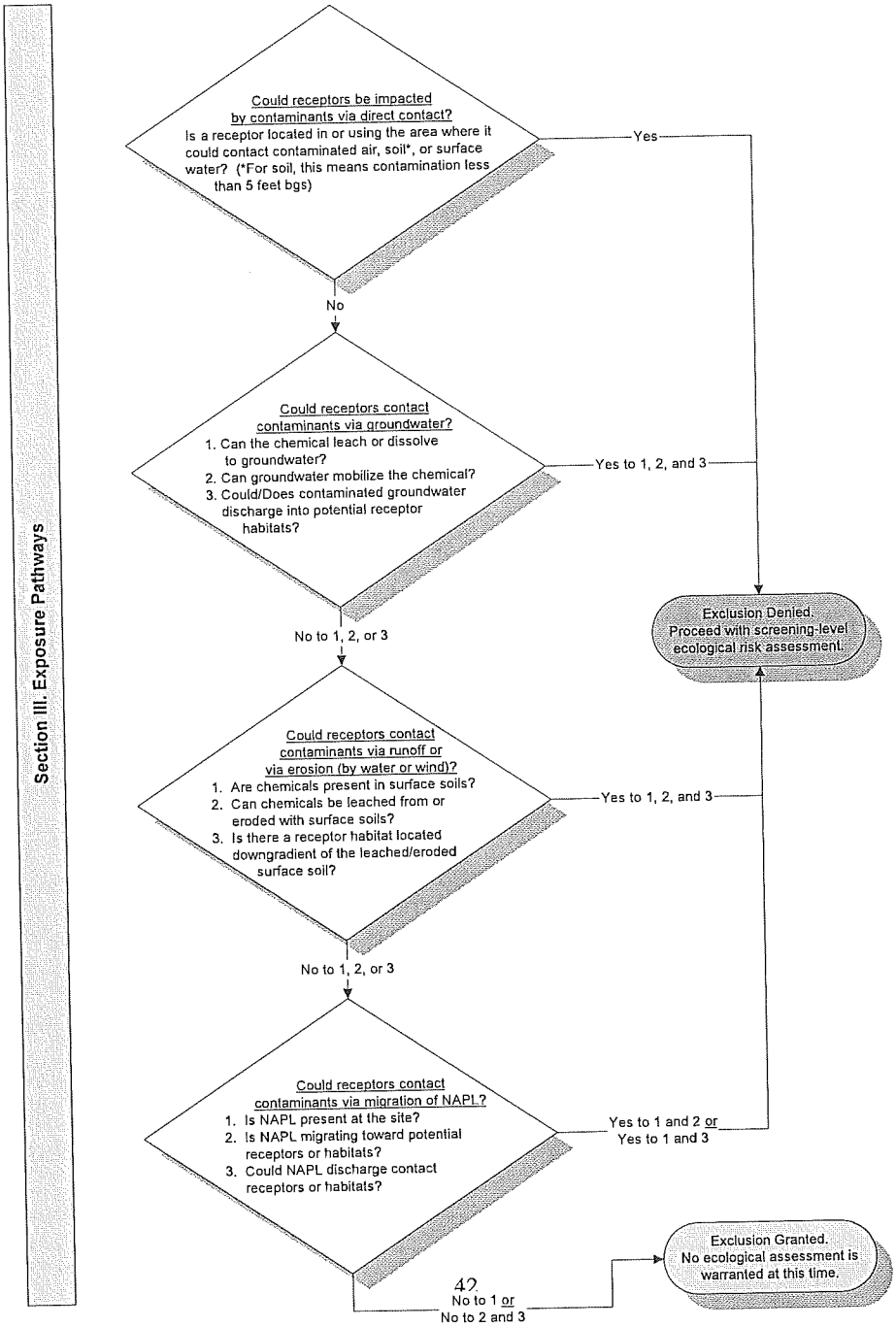


Figure 1 - Exclusion Criteria Decision Tree (continued)



Attachment 3

COMPLETE PATHWAY(S) AND ROUTE(S) OF EXPOSURE

Source and Route of Exposure	Resident		Commercial Worker	Construction Worker
	Child	Adult		
Surficial Soil Outdoor Inhalation (vapors and particulates), Ingestion, and Dermal Contact	☑	☑	☑	☑
Subsurface Soil				
Indoor Inhalation of Vapor Emission	☐	☐	☐	☐
Outdoor Inhalation of Vapor Emission	☑	☑	☑	☑
Groundwater				
Indoor Inhalation of Vapor Emission	☐	☐	☐	☐
Outdoor Inhalation of Vapor Emission	☑	☑	☑	☑

Groundwater Protection: Estimation of groundwater target levels at POC and source, and soil target levels protective of groundwater is based on one of the following two options:

Option 1: Target concentrations at POE are set equal to MCLs or equivalent	☐	If neither of the options is selected, groundwater protection standards will be calculated based on MCLs as default standards.
Option 2: Target concentrations at POE are set equal to WQCC Standards or equivalent	☑	

Equivalent target concentrations for COCs without MCLs and/or WQCC standards are estimated assuming adult water ingestion rate of 2L/day and a target risk of $1x10^{-5}$ or a target hazard quotient of 1.

CONTAMINANTS OF CONCERN, HALF-LIFE AND UNSATURATED ZONE DAF

CONTAMINANTS OF CONCERN	Half-Life [days]	Unsaturated Zone DAF [--]
ORGANICS		
☑ Benzene	1825	1
☑ Toluene	1825	1
☑ Ethylbenzene	1825	1
☑ Xylenes (mixed)	1825	1
☐ 1,2-Dibromoethane (EDB)	1825	1
☐ 1,2-Dichloroethane (EDC)	1825	1
☐ Methyl-tert-butyl-ether (MTBE)	10000000	1
☐ Acenaphthene	1825	1
☐ Anthracene	1825	1
☐ Benzo(a)anthracene	1825	1
☐ Benzo(a)pyrene	1825	1
☐ Benzo(b)fluoranthene	1825	1
☐ Benzo(k)fluoranthene	1825	1
☐ Chrysene	1825	1
☐ Dibenz(a,h)anthracene	1825	1
☐ Fluoranthene	1825	1
☐ Fluorene	1825	1
☐ Naphthalene	1825	1
☐ Phenanthrene	1825	1
☐ Pyrene	1825	1
METALS		
☐ Lead	1	1

PHYSICAL AND CHEMICAL PROPERTIES OF CONTAMINANTS OF CONCERN

CONTAMINANTS OF CONCERN	Water Solubility (µg/L)	Henry's Law Constant (L-water/L-air)	Org. Carbon Ads. Coef. Koc (mL/g)	Soil-Water Partition Coeff. Kd (mL-water /g-soil)		Diffusion Coefficient	
				Vadose zone	Saturated zone	in air (cm^2/s)	in water (cm^2/s)
ORGANICS							
Benzene	1.75E+06	2.20E-01	8.30E+01	1.66E-01	1.66E-01	9.30E-02	1.10E-05
Toluene	5.35E+05	2.60E-01	1.35E+02	2.70E-01	2.70E-01	8.50E-02	9.40E-06
Ethylbenzene	1.52E+05	3.20E-01	1.29E+03	2.58E+00	2.58E+00	7.60E-02	8.50E-06
Xylenes (mixed)	1.98E+05	2.90E-01	2.40E+02	4.80E-01	4.80E-01	7.20E-02	8.50E-06
1,2-Dibromoethane (EDB)	3.40E+06	1.33E-02	2.80E+01	5.60E-02	5.60E-02	7.30E-02	6.35E-06
1,2-Dichloroethane (EDC)	8.52E+06	4.01E-02	3.80E+01	7.60E-02	7.60E-02	1.04E-01	9.90E-06
Methyl-tert-butyl-ether (MTBE)	4.80E+07	4.16E-02	1.20E+01	2.40E-02	2.40E-02	1.02E-01	1.05E-05
Acenaphthene	4.24E+03	6.36E-03	4.90E+03	9.80E+00	9.80E+00	4.21E-02	7.69E-06
Anthracene	4.34E+01	2.67E-03	2.35E+04	4.70E+01	4.70E+01	3.24E-02	7.74E-06
Benzo(a)anthracene	9.40E+00	1.37E-04	3.58E+05	7.16E+02	7.16E+02	5.10E-02	9.00E-06
Benzo(a)pyrene	1.20E+00	5.80E-08	3.89E+05	7.78E+02	7.78E+02	5.00E-02	5.80E-06
Benzo(b)fluoranthene	1.50E+00	4.55E-03	1.23E+06	2.46E+03	2.46E+03	2.26E-02	5.56E-06
Benzo(k)fluoranthene	8.00E-01	3.40E-05	1.23E+06	2.46E+03	2.46E+03	2.26E-02	5.56E-06
Chrysene	1.60E+00	3.88E-03	3.98E+05	7.96E+02	7.96E+02	2.48E-02	6.21E-06
Dibenz(a,h)anthracene	2.49E+00	6.03E-07	1.79E+06	3.58E+03	3.58E+03	2.02E-02	5.18E-06
Fluoranthene	2.06E+02	6.60E-04	4.91E+04	9.82E+01	9.82E+01	3.02E-02	6.35E-06
Fluorene	1.98E+03	2.61E-03	7.71E+03	1.54E+01	1.54E+01	3.63E-02	7.88E-06
Naphthalene	3.10E+04	4.90E-02	1.29E+03	2.58E+00	2.58E+00	7.20E-02	9.40E-06
Phenanthrene	1.00E+03	6.61E-03	1.41E+04	2.82E+01	2.82E+01	3.24E-02	7.74E-06
Pyrene	1.35E+02	4.51E-04	6.80E+04	1.36E+02	1.36E+02	2.72E-02	7.24E-06
METALS							
Lead	N/A	N/A	N/A	1.22E+02	1.22E+02	N/A	N/A

Note: N/A : Not applicable
Soil-water partition coefficient (Kd) is calculated from fractionl organic carbon (foc) and organic carbon adsorption coefficient (Koc).

TOXICOLOGICAL PROPERTIES OF CONTAMINANTS OF CONCERN

CONTAMINANTS OF CONCERN	Slope Factor		Reference Dose		Oral RA Factor	Dermal RA Factor
	Oral (SFo) [kg-day/mg]	Inh. (SFi) [kg-day/mg]	Oral (RfDo) (mg/kg-day)	Inh. (RfDi) (mg/kg-day)	(RAFo)	(RAFd)
ORGANICS						
Benzene	0.029	0.029	NA	0.0017	1	0.5
Toluene	NA	NA	0.2	0.11	1	0.5
Ethylbenzene	NA	NA	0.1	0.29	1	0.5
Xylenes (mixed)	NA	NA	2	0.086	1	0.5
1,2-Dibromoethane (EDB)	85	0.77	NA	NA	1	0.5
1,2-Dichloroethane (EDC)	0.091	0.091	0.03	0.0014	1	0.5
Methyl-tert-butyl-ether (MTBE)	NA	NA	0.005	0.86	1	0.5
Acenaphthene	NA	NA	0.06	0.06	1	0.05
Anthracene	NA	NA	0.3	0.3	1	0.05
Benzo(a)anthracene	0.73	0.61	NA	NA	1	0.05
Benzo(a)pyrene	7.3	6.1	NA	NA	1	0.05
Benzo(b)fluoranthene	0.73	0.61	NA	NA	1	0.05
Benzo(k)fluoranthene	0.73	0.61	NA	NA	1	0.05
Chrysene	0.0073	0.0061	NA	NA	1	0.05
Dibenz(a,h)anthracene	7.3	3.1	NA	NA	1	0.05
Fluoranthene	NA	NA	0.04	0.04	1	0.05
Fluorene	NA	NA	0.04	0.04	1	0.05
Naphthalene	NA	NA	0.04	0.04	1	0.05
Phenanthrene	NA	NA	0.03	0.03	1	0.05
Pyrene	NA	NA	0.03	0.03	1	0.05
METALS						
Lead	NA	NA	NA	NA	1	0.001

EXPOSURE FACTORS

(Page 1 of 2)

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Averaging time for carcinogen	ATc	year	70	70	Tier 1
Averaging time for non-carcinogen	ATnc	year	=ED	=ED	Tier 1
Body weight:					
Resident child	BW	kg	15	15	Tier 1
Resident adult	BW	kg	70	70	Tier 1
Commercial worker	BW	kg	70	70	Tier 1
Construction worker	BW	kg	70	70	Tier 1
Exposure duration:					
Resident child	ED	year	6	6	Tier 1
Resident adult	ED	year	30	30	Tier 1
Commercial worker	ED	year	25	25	Tier 1
Construction worker	ED	year	1	1	Tier 1
Exposure frequency:					
Resident child	EF	day/year	350	350	Tier 1
Resident adult	EF	day/year	350	350	Tier 1
Commercial worker	EF	day/year	250	250	Tier 1
Construction worker	EF	day/year	250	250	Tier 1
Soil ingestion rate:					
Resident child	IRs	mg/day	200	200	Tier 1
Resident adult	IRs	mg/day	100	100	Tier 1
Commercial worker	IRs	mg/day	50	50	Tier 1
Construction worker	IRs	mg/day	100	100	Tier 1
Groundwater ingestion rate:					
Resident adult	IRw	L/day	2	2	Tier 1
Indoor inhalation rate:					
Resident child	IRai	m^3/hr	0.417	0.417	Tier 1
Resident adult	IRai	m^3/hr	0.633	0.633	Tier 1
Commercial worker	IRai	m^3/hr	1.5	1.5	Tier 1
Exposure time for indoor inhalation:					
Resident child	ETin	hr/day	24	24	Tier 1
Resident adult	ETin	hr/day	24	24	Tier 1
Commercial worker	ETin	hr/day	10	10	Tier 1

EXPOSURE FACTORS

(Page 2 of 2)

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Outdoor inhalation rate:					
Resident child	IRao	m^3/hr	1	1	Tier 1
Resident adult	IRao	m^3/hr	1	1	Tier 1
Commercial worker	IRao	m^3/hr	2	2	Tier 1
Construction worker	IRao	m^3/hr	2	2	Tier 1
Exposure time for outdoor inhalation:					
Resident child	ETout	hr/day	10	10	Tier 1
Resident adult	ETout	hr/day	10	10	Tier 1
Commercial worker	ETout	hr/day	10	10	Tier 1
Construction worker	ETout	hr/day	10	10	Tier 1
Skin surface area:					
Resident child	SA	cm^2/day	2500	2500	Tier 1
Resident adult	SA	cm^2/day	5000	5000	Tier 1
Commercial worker	SA	cm^2/day	5000	5000	Tier 1
Construction worker	SA	cm^2/day	5000	5000	Tier 1
Soil to skin adherence factor:					
Resident child	M	mg/cm^2	0.5	0.5	Tier 1
Resident adult	M	mg/cm^2	0.5	0.5	Tier 1
Commercial worker	M	mg/cm^3	0.5	0.5	Tier 1
Construction worker	M	mg/cm^2	0.5	0.5	Tier 1
Target risk level	TR	--	1.00E-05	1.00E-05	Tier 1
Target hazard quotient	THQ	--	1	1	Tier 1

FATE AND TRANSPORT PARAMETERS

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Soil parameters:					
Length of soil source area parallel to wind direction	W_a	cm	1524	1524	Tier 1
Depth to contaminants in subsurface soil	L_s	cm	30.48	30.48	Tier 1
Lower depth of surficial soil zone	d	cm	30.48	30.48	Tier 1
Dry soil bulk density	ρ_s	g/cm^3	1.58	1.58	Tier 1
Fractional organic carbon content in the vadose zone	foc	g-C/g-soil	0.002	0.002	Tier 1
Total soil porosity in the vadose zone	θ_T	cm^3/cm^3-soil	0.25	0.25	Tier 1
Volumetric water content in vadose zone	θ_{ws}	cm^3/cm^3	0.024	0.024	Tier 1
Volumetric air content in vadose zone	θ_{as}	cm^3/cm^3	0.226	0.226	Tier 1
Groundwater parameters:					
Depth to groundwater	Lgw	cm	300	300	Tier 1
Width of groundwater source perpendicular to GW flow direction	Y	cm	1524	1524	Tier 1
Length of groundwater source parallel to GW flow direction	W	cm	1524	1524	Tier 1
Fractional organic carbon content in the saturated zone	foc_s	g-C/g-soil	0.002	0.002	Tier 1
Total soil porosity in the saturated zone	θ_{TS}	cm^3/cm^3-soil	0.25	0.25	Tier 1
Hydraulic conductivity in the saturated zone	K	cm/year	315360	315360	Tier 1
Hydraulic gradient	i	--	0.005	0.005	Tier 1
Groundwater Darcy velocity	Ugw	cm/year	1577	1577	Tier 1
Groundwater mixing zone thickness	δ_{gw}	cm	305	305	Tier 1
Infiltration rate	I	cm/year	41	41	Tier 1
Ambient air parameters:					
Breathing zone height	δ_a	cm	200	200	Tier 1
Wind speed within the breathing zone	Ua	cm/s	225	225	Tier 1
Enclosed space parameters:					
Enclosed space air exchange rate:					Tier 1
Residential	N	1/day	12	12	Tier 1
Commercial	N	1/day	20	20	Tier 1
Height of enclosed space:					
Residential	h	cm	200	200	Tier 1
Commercial	h	cm	300	300	Tier 1
Fraction of cracks in foundation/walls through which diffusion occurs					
Residential	f	cm^2/cm^2	0.01	0.01	Tier 1
Commercial	f	cm^2/cm^2	0.01	0.01	Tier 1
Particulate emission rate:					
Residential and commercial	Pe	g/cm^2sec	6.90E-14	6.90E-14	Tier 1
Construction worker	Pe	g/cm^2sec	6.90E-09	6.90E-09	Tier 1
Averaging time for vapor flux:					
Resident child	τ	sec	1.89E+08	1.89E+08	Tier 1
Resident adult	τ	sec	9.46E+08	9.46E+08	Tier 1
Commercial worker	τ	sec	7.88E+08	7.88E+08	Tier 1
Construction worker	τ	sec	3.15E+07	3.15E+07	Tier 1

GROUNDWATER RESOURCE PROTECTION

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
SITE PARAMETERS:					
Distance to the point of exposure from the downgradient edge of the source	X_{poe}	ft	variable	2.9	
Longitudinal dispersivity	$\alpha_{x,poe}$	ft	variable	0.29	
Transverse dispersivity	$\alpha_{y,poe}$	ft	variable	0.1	
Vertical dispersivity	$\alpha_{z,poe}$	ft	variable	0.0145	
Distance to the point of compliance from the downgradient edge of the Source	X_{poc}	ft	variable	2.9	
Longitudinal dispersivity	$\alpha_{x,poc}$	ft	variable	0.29	
Transverse dispersivity	$\alpha_{y,poc}$	ft	variable	0.1	
Vertical dispersivity	$\alpha_{z,poc}$	ft	variable	0.0145	

Additional input parameters required to calculate the allowable soil concentrations protective of groundwater, whose values are input on other screens include:

Source dimensions

- Width of source area perpendicular to GW flow direction (Y)
- Length of source area parallel to GW flow direction (W)
- Groundwater mixing zone thickness (δ_{gw})

Soil and groundwater properties

- Dry soil bulk density (ρ_s)
- Total soil porosity in the vadose zone (θ_T) and saturated zone (θ_{TS})
- Hydraulic conductivity in the saturated zone (K)
- Hydraulic gradient (i)
- Fractional organic carbon contents in the vadose zone (foc) and saturated zone (foc_s)

Chemical specific properties

- Organic carbon adsorption co-efficient (Koc)

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RISK-BASED SCREENING LEVELS FOR A RESIDENT CHILD

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor	Outdoor	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact		Indoor inhalation of vapor emissions	Indoor inhalation of vapor emissions
	[µg/m^3-air]	[µg/m^3-air]	[mg/kg]		[mg/kg]	[µg/L]
ORGANICS						
Benzene	2.66E+00	2.66E+00	6.91E+01		NC	NC
Toluene	1.72E+02	1.72E+02	3.19E+03	>RES	NC	NC
Ethylbenzene	4.53E+02	4.54E+02	1.83E+03	>RES	NC	NC
Xylenes (mixed)	1.34E+02	1.35E+02	1.11E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not com
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A RESIDENT ADULT

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	3.87E+00	5.87E+00	4.30E+01		NC	NC
Toluene	5.29E+02	8.03E+02	1.06E+04	>RES	NC	NC
Ethylbenzene	1.39E+03	2.12E+03	5.38E+03	>RES	NC	NC
Xylenes (mixed)	4.13E+02	6.28E+02	8.34E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR RESIDENTIAL SCENARIO (LOWER OF THE TARGET LEVELS FOR CHILD AND ADULT)

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	2.66E+00	2.66E+00	4.30E+01		NC	NC
Toluene	1.72E+02	1.72E+02	3.19E+03	>RES	NC	NC
Ethylbenzene	4.53E+02	4.54E+02	1.83E+03	>RES	NC	NC
Xylenes (mixed)	1.34E+02	1.35E+02	1.11E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A COMMERCIAL WORKER

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	6.58E+00	4.93E+00	7.33E+01		NC	NC
Toluene	7.49E+02	5.62E+02	1.48E+04	>RES	NC	NC
Ethylbenzene	1.98E+03	1.48E+03	7.77E+03	>RES	NC	NC
Xylenes (mixed)	5.86E+02	4.39E+02	8.62E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC
>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A CONSTRUCTION WORKER

CONTAMINANTS OF CONCERN	AIR INHALATION	SOIL WITHIN CONSTRUCTION ZONE		GROUNDWATER	
	Outdoor	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact		Outdoor inhalation of vapor emissions	
	[µg/m^3-air]	[mg/kg]		[µg/L]	
ORGANICS					
Benzene	8.69E+00	1.67E+02		3.33E+04	
Toluene	5.62E+02	6.31E+03	>RES	1.99E+06	>SOL
Ethylbenzene	1.48E+03	5.98E+03	>RES	4.77E+06	>SOL
Xylenes (mixed)	4.39E+02	8.00E+03	>RES	1.65E+06	>SOL
1,2-Dibromoethane (EDB)	--	--		--	
1,2-Dichloroethane (EDC)	--	--		--	
Methyl-tert-butyl-ether (MTBE)	--	--		--	
Acenaphthene	--	--		--	
Anthracene	--	--		--	
Benzo(a)anthracene	--	--		--	
Benzo(a)pyrene	--	--		--	
Benzo(b)fluoranthene	--	--		--	
Benzo(k)fluoranthene	--	--		--	
Chrysene	--	--		--	
Dibenz(a,h)anthracene	--	--		--	
Fluoranthene	--	--		--	
Fluorene	--	--		--	
Naphthalene	--	--		--	
Phenanthrene	--	--		--	
Pyrene	--	--		--	
METALS					
Lead	N/A	--		N/A	

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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GROUNDWATER RESOURCE PROTECTION - WITHOUT DECAY

CONTAMINANTS OF CONCERN	Target Groundwater Conc.at POE [µg/L]	User Specified Unsaturated Zone DAF [--]	Saturated Zone DAF		Soil Conc. Protective of Groundwater [mg/kg]	Allowable Groundwater Conc. at POC [µg/L]	Allowable Groundwater Conc. at Source [µg/L]
			at POC [--]	at POE [--]			
ORGANICS							
Benzene	1.00E+01	1	1.00E+00	1.00E+00	1.85E-02	1.00E+01	1.00E+01
Toluene	7.50E+02	1	1.00E+00	1.00E+00	2.10E+00	7.50E+02	7.50E+02
Ethylbenzene	7.50E+02	1	1.00E+00	1.00E+00	1.72E+01	7.50E+02	7.50E+02
Xylenes (mixed)	6.20E+02	1	1.00E+00	1.00E+00	2.89E+00	6.20E+02	6.20E+02
1,2-Dibromoethane (EDB)	--	1	1.00E+00	1.00E+00	--	--	--
1,2-Dichloroethane (EDC)	--	1	1.00E+00	1.00E+00	--	--	--
Methyl-tert-butyl-ether (MTBE)	--	1	1.00E+00	1.00E+00	--	--	--
Acenaphthene	--	1	1.00E+00	1.00E+00	--	--	--
Anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)pyrene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(b)fluoranthene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(k)fluoranthene	--	1	1	1.00E+00	--	--	--
Chrysene	--	1	1.00E+00	1.00E+00	--	--	--
Dibenz(a,h)anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Fluoranthene	--	1	1.00E+00	1.00E+00	--	--	--
Fluorene	--	1	1.00E+00	1.00E+00	--	--	--
Naphthalene	--	1	1.00E+00	1.00E+00	--	--	--
Phenanthrene	--	1	1.00E+00	1.00E+00	--	--	--
Pyrene	--	1	1.00E+00	1.00E+00	--	--	--
METALS							
Lead	--	1	1.00E+00	1.00E+00	--	--	--

NC: Pathway is not complete

'--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration

>SOL: Calculated target level is greater than pure component solubility

Soil concentrations are presented on a dry weight basis.

Half life and unsaturated zone DAF are user specified inputs. Enter the values in COC table (sheet tab "COC").

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GROUNDWATER RESOURCE PROTECTION - WITH DECAY

CONTAMINANTS OF CONCERN	Target Groundwater Conc.at POE [µg/L]	Half-Life [days]	Saturated Zone Retardation Factor [--]	Unsaturated Zone DAF [--]	Saturated Zone DAF		Soil Conc. Protective of Groundwater [mg/kg]	Allowable Groundwater Conc. at POC [µg/L]	Allowable Groundwater Conc. at Source [µg/L]
					at POC [--]	at POE [--]			
ORGANICS									
Benzene	1.00E+01	1.83E+03	2.05E+00	1	1.00E+00	1.00E+00	1.85E-02	1.00E+01	1.00E+01
Toluene	7.50E+02	1.83E+03	2.71E+00	1	1.00E+00	1.00E+00	2.10E+00	7.50E+02	7.50E+02
Ethylbenzene	7.50E+02	1.83E+03	1.73E+01	1	1.00E+00	1.00E+00	1.72E+01	7.50E+02	7.50E+02
Xylenes (mixed)	6.20E+02	1.83E+03	4.03E+00	1	1.00E+00	1.00E+00	2.89E+00	6.20E+02	6.20E+02
1,2-Dibromoethane (EDB)	--	1.83E+03	1.35E+00	1	1.00E+00	1.00E+00	--	--	--
1,2-Dichloroethane (EDC)	--	1.83E+03	1.48E+00	1	1.00E+00	1.00E+00	--	--	--
Methyl-tert-butyl-ether (MTBE)	--	1.00E+07	1.15E+00	1	1.00E+00	1.00E+00	--	--	--
Acenaphthene	--	1.83E+03	6.29E+01	1	1.00E+00	1.00E+00	--	--	--
Anthracene	--	1.83E+03	2.98E+02	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)anthracene	--	1.83E+03	4.53E+03	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)pyrene	--	1.83E+03	4.92E+03	1	1.00E+00	1.00E+00	--	--	--
Benzo(b)fluoranthene	--	1.83E+03	1.55E+04	1	1.00E+00	1.00E+00	--	--	--
Benzo(k)fluoranthene	--	1.83E+03	1.55E+04	1	1.00E+00	1.00E+00	--	--	--
Chrysene	--	1.83E+03	5.03E+03	1	1.00E+00	1.00E+00	--	--	--
Dibenz(a,h)anthracene	--	1.83E+03	2.26E+04	1	1.00E+00	1.00E+00	--	--	--
Fluoranthene	--	1.83E+03	6.22E+02	1	1.00E+00	1.00E+00	--	--	--
Fluorene	--	1.83E+03	9.85E+01	1	1.00E+00	1.00E+00	--	--	--
Naphthalene	--	1.83E+03	1.73E+01	1	1.00E+00	1.00E+00	--	--	--
Phenanthrene	--	1.83E+03	1.79E+02	1	1.00E+00	1.00E+00	--	--	--
Pyrene	--	1.83E+03	8.61E+02	1	1.00E+00	1.00E+00	--	--	--
METALS									
Lead									

NC: Pathway is not complete

'--: Not a COC

Soil concentrations are presented on a dry weight basis.

Half life and unsaturated zone DAF are user specified inputs. Enter the values in COC table (sheet tab "COC").

Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

10/12/2012

Michael Henn
Senior Project Manager
Antea Group

Re: Re-vegetation at Centurion Pipeline

Transmitted via email to Michael.Henn@anteagroup.com on 10/9/2012

Mr. Henn:

On 9/24/2012 Atkins Engineering Associate's staff supervised, with Jim Coburn P.E. (the Antea Group), the re-vegetation of Centurion Pipeline Site located near Maljamar, New Mexico in SW1/4 SW1/4 Section 20 Township 17S Range 33E N.M.P.M.

A safety meeting was conducted and all people present on the site signed the Antea Job Safety Analysis.

Re-vegetation Services provided the certified seed mix (see enclosed letter of certification) a tractor (Case DX48) a 3-point Marliss Drill Seeder drill and crew. Before re-seeding, AEA and Jim Coburn flagged the corners of the site from aerial photographs and the Google Earth Shape provided. The pipeline bisecting the site was flagged approximately 15 feet either side. Revegetation Services drilled the seed across the site bounded by the flags.

Sincerely,

Christopher R. Cortez
Project Manager

Enclosures: Revegetation Services Daily Report, Letter of Seed Certification

Revegetation Services Daily Report

Form is to be completed daily and submitted to the General Contractor and our office each day.

Project Name: Roswell / well Site Reveg. Job No.:

General Contractor: Atkinsen

Date: 9/24/12	Crew size: 1 sup 1 operator (3 laborers on site)

Daily Work Description

Provide a brief description of daily work performed:

4 acres Drill Seeded

Equipment and Notes:

Equipment	Notes
Case DX 48, 3-point Mahliss Drill Seeder, Pick-up & Gooseneck Trailer	

Completed By: _____ Signature

Jason Weitman Print Name

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

Sold To: Revegetation Services
PO Box 1480
Higley, AZ 85236

4 acres

Project No. 1705
Project Name: Roswell Drill site
Seed Mix #: SEPARATES

LETTER OF CERTIFICATION

This memo is written to certify that this seed mix is true to label and has been duly tested by a fully accredited seed testing laboratory using rules sanctioned by the Association of Official Seed Analysts. The material listed herein complies with ADOT Standard Specifications Section 805, the project Special Provisions, and the plans. The specifications of the seed used in the mix are as follows:

All seed is clearly Tagged showing the type of seed, purity, germination, test date and weed content.

Common Name	Variety	Origin	Lot #	Purity	Germ + Dorm	% PLS
Sand Dropseed	VNS	CO	17134	99.69	96	95.70
Sand Lovegrass	BEND	TX	27021A	97.99	88	86.23
Plains Bristlegrass	VNS	TX	SEMA -	70.94	74	52.50
Alkali Sacaton	VNS	UT	17111	99.69	98	97.70
Fourwing Saltbush	VNS	AZ	ATCA - 12	97.53	88	85.83

We further certify the quantities shipped as follows:

Common Name	Lot #	Specified rate PLS/AC	Total PLS Lbs	
Sand Dropseed	17134	1.00	4	5.22
Sand Lovegrass	27021A	1.00	4	5.80
Plains Bristlegrass	SEMA - INV84903	2.00	8	19.05
Alkali Sacaton	17111	1.00	4	5.12
Fourwing Saltbush	ATCA - 12	5.00	20	29.13

Sincerely,

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

Jake Anderson, Vice President
Anrac Farms

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

CERTIFIED COPY OF SEED ANALYSIS

Common Name	Sand Dropseed	Sand Lovegrass	Plains Bristlegrass	Alkali Sacaton	Fourwing Saltbush	
Scientific Name	Sporobolus Cryptandrus	Eragrostis Triticoides	Setaria Macrostachya	Sporobolus Airoides	Atriplex Canescens	
Lot Name	17134	27021A	SEMA - INV84903	17111	ATCA - 12	
Kind and Variety	VNS	BEND	VNS	VNS	VNS	
Pure Seed %	99.69	97.99	70.94	99.69	97.53	
Inert %	0.31	1.38	12.78	0.24	2.47	
Date of Test	1/26/2012	9/10/2012	7/1/2012	01/26/12	1/26/2012	
Origin	CO	TX	TX	UT	AZ	
Germination %	96	88	62	98	88	
Hard Seed %	0		12	0	0	
Total Viable %	96	88	74	98	88	
Crop %	0	0.01	12.78	0.01	0	
Weed %	0	0.62	0.02	0.06	0	
Pure Live Seed %	95.70	86.23	52.50	97.70	85.83	
Name of Lab						
Noxious or Restricted Weeds	NONE/NONE	NONE	NONE	NONE	NONE	

Anrac Farms certifies that this analysis accurately represents the original copy of seed analysis and, where applicable, all testing has been conducted by a certified Seed Technologist using the sanctioned rules established by the Association of Official Seed Analysts.

Signature:
Jake Anderson, Vice President

Date: 9/24/2012

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ATTACHMENT A

SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT
SCOPING ASSESSMENT
SITE ASSESSMENT CHECKLIST

INTRODUCTION

This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways. The completed checklist can then be used to construct the preliminary conceptual site exposure model (PCSEM) for the site. In addition, the checklist and PCSEM will serve as the basis for the scoping assessment report. Section III of this document provides further information on using the completed checklist to develop the PCSEM.

In general, the checklist is designed for applicability to all sites, however, there may be unusual circumstances which require professional judgment in order to determine the need for further ecological evaluation (*e.g.,* cave-dwelling receptors). In addition, some of the questions in the checklist may not be relevant to all sites. Some facilities may have large amounts of data available regarding contaminant concentrations and hydrogeologic conditions at the site, while other may have only limited data. In either case, the questions on the checklist should be addressed as completely as possible with the information available.

Habitats and receptors, which may be present at the site, can be identified by direct or indirect[1] observations and by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing land use and land cover maps (LULC), which are available via the Internet at http://www.nationalatlas.gov/mapit.html. With regard to receptors, it should be noted that receptors are often present at a site even when they are not observed. Therefore, for the purposes of this checklist, it should be assumed that receptors are present if viable habitat is present. The presence of receptors should be confirmed by contacting one or several of the organizations listed below.

Sources of general information available for the identification of ecological receptors and habitats include:

- U.S. Fish and Wildlife Service (http://www.fws.gov)
- Biota Information System of New Mexico (BISON-M) maintained by the New Mexico Department of Game and Fish (NMGF) (http://151.199.74.229/states/nm.htm)
- U.S. Forest Service (USFS) (http://www.fs.fed.us/)
- New Mexico Forestry Division (NMFD) of the Energy, Minerals and Natural Resources Department (http://www.emnrd.state.nm.us/forestry/index.htm)

1 Examples of indirect observations that indicate the presence of receptors include: tracks, feathers, burrows, scat

- U.S. Bureau of Land Management (USBLM) (http://www.blm.gov/nhp/index.htm) or (http://www.nm.blm.gov/www/new_home_2.html)
- United States Geological Service (USGS) (http://www.usgs.gov)
- National Wetland Inventory Maps (http://wetlands.fws.gov)
- National Audubon Society (http://www.audobon.com)
- National Biological Information Infrastructure (http://biology.usgs.gov)
- Sierra Club (http://www.sierraclub.org)
- National Geographic Society (http://www.nationalgeographic.com)
- New Mexico Natural Heritage Program (http://nmnhp.unm.edu/)
- State and National Parks System
- Local universities
- Tribal organizations

INSTRUCTIONS FOR COMPLETING THE CHECKLIST

The checklist consists of four sections: Site Location, Site Characterization, Habitat Evaluation, and Exposure Pathway Evaluation. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site. Completion of the checklist should provide sufficient information for the preparation of a PCSEM and scoping report and allow for the identification of any data gaps.

Section I - Site Location, provides general site information, which identifies the facility being evaluated, and gives specific location information. Site maps and diagrams, which should be attached to the completed checklist, are an important part of this section. The following elements should be clearly illustrated: 1) the location and boundaries of the site relative to the surrounding area, 2) any buildings, structures or important features of the facility or site, and 3) all ecological areas or habitats identified during completion of the checklist. It is possible that several maps will be needed to clearly and adequately illustrate the required elements. Although topographical information should be illustrated on at least one map, it is not required for every map. Simplified diagrams (preferably to scale) of the site and surrounding areas will usually suffice.

Section II - Site Characterization, is intended to provide additional temporal and contextual information about the site, which may have an impact on determining whether a certain area should be characterized as ecologically viable habitat or contains receptors. Answers to the questions in Section II will help the reviewer develop a broader and more complete evaluation of the ecological aspects of a site.

Section III - Habitat Evaluation, provides information regarding the physical and biological characteristics of the different habitat types present at or in the locality of the site. Aquatic features such as lakes, ponds, streams, arroyos and ephemeral waters can be identified by reviewing aerial photographs, LULC and topographic maps and during site reconnaissance visits. In New Mexico, there are several well-defined terrestrial communities, which occur naturally. Typical communities include wetlands, forest (e.g., mixed conifer,

ponderosa pine and pinyon juniper), scrub/shrub, grassland, and desert. Specific types of vegetation characterize each of these communities and can be used to identify them. Field guides are often useful for identifying vegetation types. A number of sites may be in areas that have been disturbed by human activities and may no longer match any of the naturally occurring communities typical of the southwest. Particularly at heavily used areas at facilities, the two most common of these areas are usually described as "weed fields" and "lawn grass". Vegetation at "weed fields" should be examined to determine whether the weeds consist primarily of species native to the southwest or introduced species such as Kochia. Fields of native weeds and lawn grass are best evaluated using the short grass prairie habitat guides.

The applicable portions of Section III of the checklist should be completed for each individual habitat identified. For example, the questions in Section III.A of the checklist should be answered for each wetland area identified at or in the locality of the site and the individual areas must be identified on a map or maps.

Section IV- Exposure Pathway Evaluation, is used to determine if contaminants at the site have the potential to impact habitat identified in Section III. An exposure pathway is the course a chemical or physical agent takes from a source to an exposed organism. Each exposure pathway includes a source (or release from a source), an environmental transport mechanism, an exposure point, and an exposure route. A complete exposure pathway is one in which each of these components, as well as a receptor to be exposed, is present. Essentially, this section addresses the fate and transport of contaminants that are known or suspected to have been released at the site. In most cases, without a complete exposure pathway between contaminants and receptors, additional ecological evaluation is not warranted.

Potential transport pathways addressed in this checklist include migration of contaminants via air dispersion, leaching into groundwater, soil erosion/runoff, groundwater discharge to surface water, and irradiation. Due to New Mexico's semi-arid climate, vegetation is generally sparse. The sparse vegetation, combined with the intense nature of summer storms in New Mexico, results in soil erosion that occurs sporadically over a very brief time frame. Soil erosion may be of particular concern for sites located in steeply sloped areas. Several questions within Section IV of this checklist have been developed to aid in the identification of those sites where soil erosion/runoff would be an important transport mechanism.

USING THE CHECKLIST TO DEVELOP THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL

The completed Site Assessment Checklist can be used to construct the PCSEM. An example PCSEM diagram is presented in Figure 1. The CSM illustrates actual and potential contaminant migration and exposure pathways to associated receptors. The components of a complete exposure pathway are simplified and grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms may expand into primary, secondary, and tertiary levels. For example, Figure 1 illustrates releases from inactive

lagoons (primary sources) through spills (primary release mechanism), which migrate to surface and subsurface soils (secondary sources), which are then leached (secondary release mechanism) to groundwater (tertiary source). Similarly, exposures of various trophic levels to the contaminant(s) and consequent exposures via the food chain may lead to multiple groups of receptors. For example, Figure 1 illustrates groups of both aquatic and terrestrial receptors which may be exposed and subsequently serve as tertiary release mechanisms to receptors which prey on them.

Although completing the checklist will not provide the user with a readymade PCSEM, a majority of the components of the PCSEM can be found in the answers to the checklist. It is then up to the user to put the pieces together into a comprehensive whole. The answers from Section II of the checklist, Site Characterization, can be used to identify sources of releases. The answers to Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. Appendix B of the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* also contains sample food webs which may be used to develop the PCSEM.

Once all of the components have been identified, one can begin tracing the steps between the primary releases and the potential receptors. For each potential receptor, the user should consider all possible exposure points (e.g., prey items, direct contact with contaminated soil or water, etc.) then begin eliminating pathways, which are not expected to result in exposure to the contaminant at the site. Gradually, the links between the releases and receptors can be filled in, resulting in potential complete exposure pathways.

For further guidance on constructing a PCSEM, consult the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* (2000), and EPA's Office of Solid Waste and Emergency *Response's Soil Screening Guidance: User's Guide* (1996).

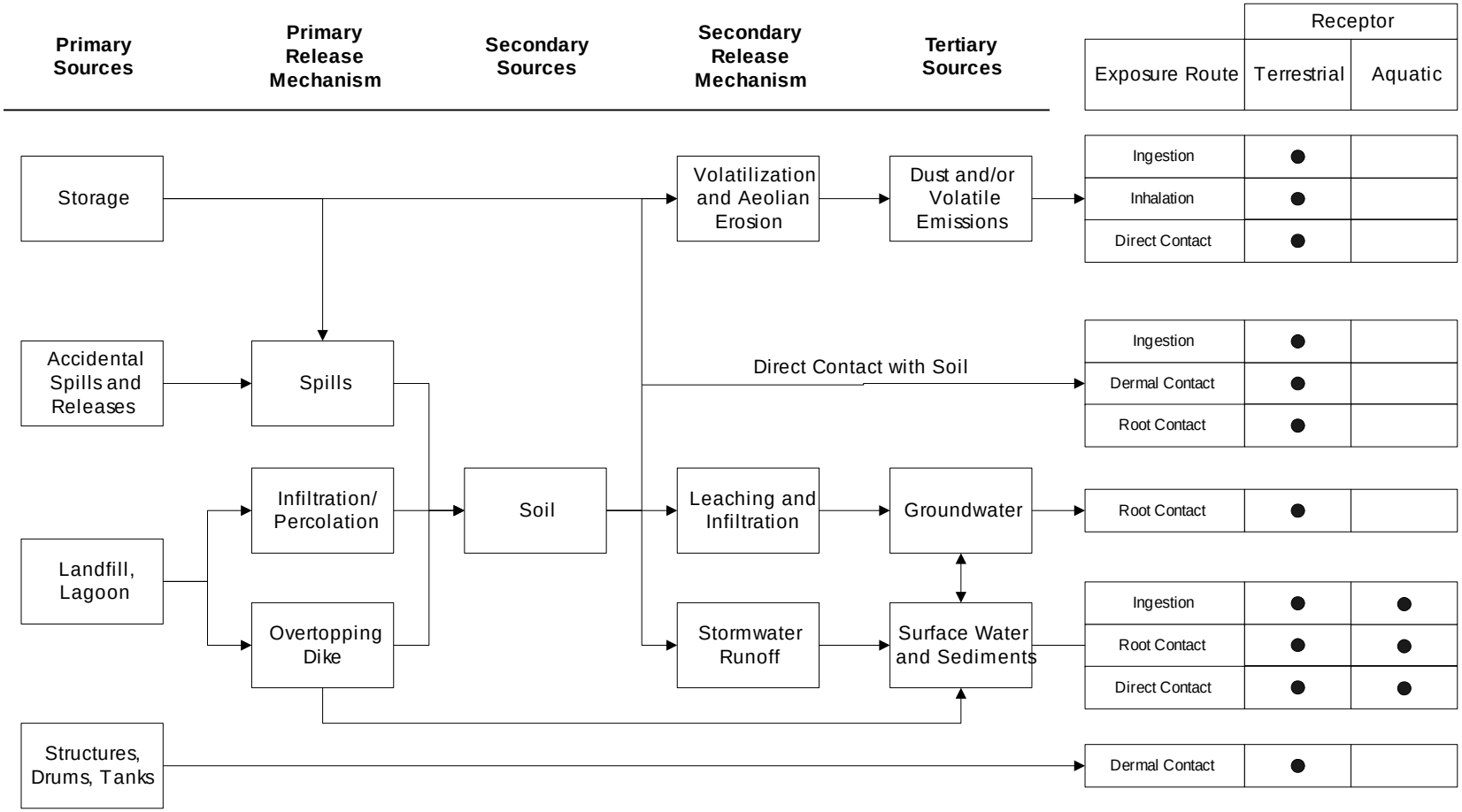


Figure 1. Example Preliminary Conceptual Site Exposure Model Diagram

NEW MEXICO ENVIRONMENT DEPARTMENT
SITE ASSESSMENT CHECKLIST

I. SITE LOCATION

1. Site Name: Maljamar North
US EPA I.D. Number:
Location: 5 miles southeast of Maljamar
County: Lea
City: Maljamar State: NM

2. Latitude: 32.8136884 Longitude: -103.6927517

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known release areas, sampling locations, and any other important features, if available.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft) ~2 ac.
2. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other[c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, etc.):

[b]For agricultural areas, please list the crops and/or livestock which are present:

[c]For areas designated as "other", please describe the usage of the area:

Undeveloped land, generally utilized for oil/gas production; with numerous pipeline right-of-ways (ROWs) in site area

3. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	___90__% Undisturbed	_5____% Other [c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, golf course, etc.):
_____

[b]For agricultural areas, please list the crops and/or livestock which are present:
_____

[c]For areas designated as "other", please describe the usage of the area:
_____See No. 2
_____
_____

4. Describe reasonable and likely future land and/or water use(s) at the site.
_____It is likely that land use will not change in this area. No current or future use of water is known.
_____
_____
_____
_____
_____
_____

5. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).
___No previous land use other than that described above is known. No previous releases are known.
_____

6. If any movement of soil has taken place at the site, describe the degree of the disturbance. Indicate the likely source of any disturbances (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) and estimate when these events occurred.
_____

An area approximately 100'x150' excavated to depths of 30-50 feet bgs. An approximate total of 1,800 cy disposed off-site. The remainder was returned to the excavation subsequent to NMOCD approval.

7. Describe the current uses of the site. Include information on recent (previous 5 years) disturbances or chemical releases that have occurred. For each chemical release, provide information on the form of the chemical released and the causes or mechanism of the release.

Pipeline ROW. Refer to Section 1.1 of URS's Excavation Backfilling and Source Area Characterization Technical Memorandum, dated June 28, 2007.

8. Identify the location or suspected location of chemical releases at the site. Provide an estimate of the distance between these locations and the areas identified in Section III.

Release, due to the result of internal corrosion, occurred along the 6-inch crude oil gathering line approximately 5 feet south of B-9/MW-5. No sensitive receptors known to exist in vicinity of release site.

9. Identify the suspected contaminants of concern (COCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc.).

Petroleum Hydrocarbons (BTEX, TPH)

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, for maximum contaminant levels.

10. Identify the media (e.g., soil (surface or subsurface), surface water, air, groundwater) which are known or suspected to contain COCs.

Subsurface

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].

at least 115 feet bgs

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)

south-southwest

III. HABITAT EVALUATION

III.A Wetland Habitats

Are any wetland[2] areas such as marshes or swamps on or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location), and clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination that wetland areas are or are not present.

_____

_____

_____

_____

If no wetland areas are present, proceed to Section III.B.

2Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

Wetland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the approximate area of the wetland (acres or ft^2)_____

2. Identify the type(s) of vegetation present in the wetland.

   - ❑ Submergent (i.e., underwater) vegetation
   - ❑ Emergent (i.e., rooted in the water, but rising above it) vegetation
   - ❑ Floating vegetation
   - ❑ Scrub/shrub
   - ❑ Wooded
   - ❑ Other (Please describe):_____

3. Estimate the vegetation density of the wetland area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Is standing water present? ☐ Yes ☐ No

   If yes, is the water primarily: ☐ Fresh or ☐ Brackish
   Indicate the approximate area of the standing water (ft^2): _____
   Indicate the approximate depth of the standing water, if known (ft. or in.)_____

5. If known, indicate the source of the water in the wetland.

   - ❑ Stream/River/Creek/Lake/Pond
   - ❑ Flooding
   - ❑ Groundwater
   - ❑ Surface runoff

6. Is there a discharge from the facility to the wetland? ☐ Yes ☐ No

   If yes, please describe:_____
   _____
   _____
   _____
   _____

Wetland Area Questions (Continued)

7. Is there a discharge from the wetland? ☐ Yes ☐ No
   If yes, indicate the type of aquatic feature the wetland discharges into:

   - ❑ Surface stream/River (Name:_____)
   - ❑ Lake/Pond (Name:_____)
   - ❑ Groundwater
   - ❑ Not sure

8. Does the area show evidence of flooding? ☐ Yes ☐ No
   If yes, indicate which of the following are present (mark all that apply):

   - ❑ Standing water
   - ❑ Water-saturated soils
   - ❑ Water marks
   - ❑ Buttressing
   - ❑ Debris lines
   - ❑ Mud cracks
   - ❑ Other (Please describe):_____

9. Animals observed in the wetland area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.B Aquatic Habitats
III.B.1 Non-Flowing Aquatic Features

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.B.2.

Non-Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of aquatic feature present:

   - ❑ Natural (e.g., pond or lake)
   - ❑ Man-made (e.g., impoundment, lagoon, canal, etc.)

2. Estimate the approximate size of the water body (in acres or sq. ft.)_____

3. If known, indicate the depth of the water body (in ft. or in.)._____

Non-Flowing Aquatic Feature Questions (Continued)

4. Indicate the general composition of the bottom substrate. Mark all sources that apply from the following list.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

5. Indicate the source(s) of the water in the aquatic feature. Mark all sources that apply from the following list.

- ❑ River/Stream/Creek
- ❑ Groundwater
- ❑ Industrial Discharge
- ❑ Surface Runoff
- ❑ Other (please specify):_____

6. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:
   _____
   _____
   _____
   _____

7. Does the aquatic feature discharge to the surrounding environment? ☐ Yes ☐ No
   If yes, indicate the features from the following list into which the aquatic feature discharges, and indicate whether the discharge occurs onsite or offsite:

❑ River/Stream/Creek	☐ onsite	☐ offsite
❑ Groundwater	☐ onsite	☐ offsite
❑ Wetland	☐ onsite	☐ offsite
❑ Impoundment	☐ onsite	☐ offsite

❑ Other (please describe)_____

Non-Flowing Aquatic Feature Questions (Continued)

8. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

Specify species, if known:

_____

_____

_____

_____

III.B.2 Flowing Aquatic Features

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the flowing aquatic features. If more than one flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map

If no, proceed to Section III.C.

Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of flowing aquatic feature present.

- ❑ River
- ❑ Stream
- ❑ Creek
- ❑ Brook
- ❑ Dry wash
- ❑ Arroyo
- ❑ Intermittent stream
- ❑ Artificially created (ditch, etc.)
- ❑ Other (specify)
- ❑

2. Indicate the general composition of the bottom substrate.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

3. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover) of the aquatic feature.

_____
_____
_____
_____

4. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

5. Indicate the discharge point of the water body. Specify name, if known.

_____
_____
_____

Flowing Aquatic Feature Questions (Continued)

6. If the flowing aquatic feature is a dry wash or arroyo, answer the following questions.
   - ❑ Check here if feature is not a dry wash or arroyo

   If known, specify the average number of days in a year in which flowing water is present in the feature: _____

   Is standing water or mud present? Check all that apply.
   - ❑ Standing water
   - ❑ Mud
   - ❑ Neither standing water or mud

   Does the area show evidence of recent flow (e.g., flood debris clinging to vegetation)?
   - ❑ Yes
   - ❑ No
   - ❑ Not sure
7. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.C Terrestrial Habitats
III.C.1 Wooded

Are any wooded areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.2.

Wooded Area Questions – Not Applicable

☐ On-site ☐ Off-site

Name or Designation:_____

1. Estimate the approximate size of the wooded area (in acres or sq. ft.)_____

2. Indicate the dominant type of vegetation in the wooded area.

   - ❑ Evergreen
   - ❑ Deciduous
   - ❑ Mixed

   Dominant plant species, if known:_____

3. Estimate the vegetation density of the wooded area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at chest height.

   - ❑ 0-6 inches
   - ❑ 6-12 inches
   - ❑ >12 inches
   - ❑ No single size range is predominant

5. Animals observed in the wooded area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, lizards)
   - ❑ Amphibians (e.g., toads, salamanders)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.C.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? X Yes ☐ No

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.3.

Shrub/Scrub Area Questions

☒ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the shrub/scrub area (in acres or sq. ft.). ~1.5 ac.

2. Indicate the dominant type of shrub/scrub vegetation present, if known.
Unknown

3. Estimate the vegetation density of the shrub/scrub area.

- ☐ Dense (i.e., greater than 75% vegetation)
- ☐ Moderate (i.e., 25% to 75% vegetation)
- ☒ Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the scrub/shrub vegetation.

- ☐ 0-2 feet
- ☒ 2-5 feet
- ☐ >5 feet

5. Animals observed in the shrub/scrub area or suspected to be present based on indirect evidence or file material:
- ☒ Birds
- ☒ Mammals
- ☒ Reptiles (e.g., snakes, lizards)
- ☐ Amphibians (e.g., toads, salamanders)

Specify species, if known:
Unknown

III.C.3 Grassland

Are any grassland areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the grassland area on the attached site map and answer the following questions. If more than one grassland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual grassland area. Distinguish between grassland areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.4.

Grassland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the grassland area (in acres or sq. ft.)._____

2. Indicate the dominant plant type, if known.
_____
_____
_____
_____

3. Estimate the vegetation density of the grassland area.

- ❑ Dense (i.e., greater than 75% vegetation)
- ❑ Moderate (i.e., 25% to 75% vegetation)
- ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the dominant plant type (in ft. or in.)_

5. Animals observed in the grassland area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

Specify species, if known:

III.C.4 Desert

Are any desert areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the desert area on the attached site map and answer the following questions. If more than one desert area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual desert area. Distinguish between desert areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.5.

Desert Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the desert area (in acres or sq. ft.)._____

2. Describe the desert area (e.g., presence or absence of vegetation, vegetation types, presence/size of rocks, sand, etc.)

_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Animals observed in the desert area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

Specify species, if known:

_____

III.C.5 Other

1. Are there any other terrestrial communities or habitats on or adjacent to the site which were not previously described?

☐ Yes ☒ No

If yes, indicate the "other" area(s) on the attached site map and describe the area(s) below. Distinguish between onsite and offsite areas. If no, proceed to Section III.D.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[3] exist adjacent to or within 0.5 miles of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.* _____ Have submitted a request, pending response

3 Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to **Table 1** at the end of this document for examples of sensitive environments.

2. Are any areas on or near (i.e., within 0.5 miles) the site which are owned or used by local tribes? If yes, describe. *Contact the Tribal Liason in the Office of the Secretary (505)827-2855 to obtain this information.*

None identified, pending response from Mr. Milton Bluehouse.

4. Does the site serve or potentially serve as a habitat, foraging area, or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

Unknown, awaiting response from the USFWS. However, according to the following website, http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats were identified.

5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

Based on information obtained from http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats or migratory pathways were identified in the subject area

6. Is the site used by any ecologically[4], recreationally, or commercially important species? If

Seasonal cattle grazing may take place in the general vicinity of the site; however, this commercial endeavor has not been observed during site access/activities.

yes, explain.
NA

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate, and extent of contamination at the site?

☒ X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, and Delta's Groundwater Monitoring Report dated June ?, 2009

2. Do existing data provide sufficient information on the nature, rate, and extent of contamination in offsite affected areas?

☐ Yes
☐ No
☐ Uncertain
☒ X No offsite contamination

Please provide an explanation for your answer:

4 Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or perform a critical ecological function (such as organic matter decomposition) and whose functions will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc.,)

_____ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

3. Do existing data address potential migration pathways of contaminants at the site?

☐ X Yes
❑ No
❑ Uncertain

Please provide an explanation for your answer:

_____ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

- ❑ Yes
- ❑ No
- ❑ Uncertain
- ☒ X No offsite contamination

Please provide an explanation for your answer:

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within 0.5 miles) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 5 feet below ground surface (bgs). If yes, explain.

No

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

No

8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

No. No groundwater impact above New Mexico Human Health Maximum Concentration Levels identified.

9. Could chemicals reach receptors through runoff or erosion? Answer the following questions:

What is the approximate distance from the contaminated area to the nearest watercourse or arroyo?

- ❑ 0 feet (i.e., contamination has reached a watercourse or arroyo)
- ❑ 1-10 feet
- ❑ 11-20 feet
- ❑ 21-50 feet
- ❑ 51-100 feet
- ❑ 101-200 feet
- ❑ > 200 feet
- ❑ > 500 feet
- ☒ X > 1000 feet

What is the slope of the ground in the contaminated area?

- ☒ X 0-10%
- ❑ 10-30%
- ❑ > 30%

What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

- ❑ X < 25%
- ❑ 25-75%
- ❑ > 75%

Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

Do any structures, pavement, or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

10. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No. Residual de Minimis soil contamination located at least 35 feet bgs

11. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat? No. No NAPLs exist at the site.

12. Could receptors be impacted by external irradiation at the site? Are gamma emitting radionuclides present at the site? Is the radionuclide contamination buried or at the surface?

No. No radionuclide contamination exists at the site.

PHOTOGRAPHIC DOCUMENTATION

During the site visit(s), photographs should be taken to document the current conditions at the site and to support the information entered in the checklist. For example, photographs may be used to document the following:

- The nature, quality, and distribution of vegetation at the site
- Receptors or evidence of receptors
- Potentially important ecological features, such as ponds and drainage ditches
- Potential exposure pathways
- Any evidence of contamination or impact

The following space may be used to record photo subjects.

Please refer to previous reports submitted by Conestoga-Rovers and Associates and URS, Inc.

SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.

___ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

Checklist Completed by_____Michael Henn

Affiliation____Project Manager for Delta Consultants

Author Assisted by_____

Date_____June 10, 2009

TABLE 1
EXAMPLES OF SENSITIVE ENVIRONMENTS

National Parks and National Monuments

Designated or Administratively Proposed Federal Wilderness Areas

National Preserves

National or State Wildlife Refuges

National Lakeshore Recreational Areas

Federal land designated for protection of natural ecosystems

State land designated for wildlife or game management

State designated Natural Areas

Federal or state designated Scenic or Wild River

All areas that provide or could potentially provide critical habitat[1] for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern

All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes

All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

---

1 Critical habitats are defined by the Endangered Species Act (50 CFR §424.02(d)) as:

> 1) Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (ii) that may require special management considerations or protection, and 2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary [of Interior] that such areas are essential for the conservation of the species.

All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)

All areas that provide or could potentially provide habitat for song birds as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)

All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)

All areas that provide or could potentially provide habitat for horned toads and Bullfrogs as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, resp.)

All perennial waters (e.g., rivers, lakes, playas, sloughs, ponds, etc)

All ephemeral drainage (e.g., arroyos, puddles/pools, intermittent streams, etc) that provide significant wildlife habitat or that could potentially transport contaminants off site to areas that provide wildlife habitat

All riparian habitats

All perennial and ephemeral wetlands (not limited to jurisdictional wetlands)

All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle.

ATTACHMENT B

ECOLOGICAL SITE EXCLUSION CRITERIA CHECKLIST AND DECISION TREE

1. NEW MEXICO ECOLOGICAL EXCLUSION CRITERIA CHECKLIST

The following questions are designed to be used in conjunction with the Ecological Exclusion Criteria Decision Tree (Figure 1). After answering each question, refer to the Decision Tree to determine the appropriate next step. In some cases, questions will be omitted as the user is directed to another section as indicated by the flow diagram in the Decision Tree. For example, if the user answers "yes" to Question 1 of Section I, he or she is directed to proceed to Section II.

I. Habitat

In the following questions, "affected property" refers to all property on which a release has occurred or is believed to have occurred, including off-site areas where contamination may have occurred or migrated.

1. Are any of the below-listed sensitive environments at, adjacent to, or in the locality1 of the affected property? None known.

- National Park or National Monument
- Designated or administratively proposed Federal Wilderness Area
- National Preserve
- National or State Wildlife Refuge
- Federal or State land designated for wildlife or game management
- State designated Natural Areas
- All areas that are owned or used by local tribes
- All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle
- All areas that provide or could potentially provide habitat for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern
- All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes
- All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

---

1 *Locality* of the site refers to any area where an ecological receptor is likely to contact site-related chemicals. The locality of the site considers the likelihood of contamination migrating over time and places the site in the context of its general surrounding. Therefore, the locality is typically larger than the site and the areas adjacent to the site.

- All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)
- All areas that provide or could potentially provide habitat for song birds as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)
- All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)
- All areas that provide or could potentially provide habitat for horned toads and bullfrogs as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, respectively)

2. Does the affected property contain land areas which were not listed in Question 1, but could be considered viable ecological habitat? The following are examples (but not a complete listing) of viable ecological habitats:

- Wooded areas
- **Shrub/scrub vegetated areas**
- Open fields (prairie)
- Other grassy areas
- Desert areas
- Any other areas which support wildlife and/or vegetation, excluding areas which support only opportunistic species (such as house mice, Norway rats, pigeons, etc.) that do not serve as prey to species in adjacent habitats.

The following features are not considered ecologically viable:

- Pavement
- Buildings
- Paved areas of roadways
- Paved/concrete equipment storage pads
- Paved manufacturing or process areas
- Other non-natural surface cover or structure

3. Does the affected property contain any perennial or ephemeral aquatic features which were not listed in Question 1? No

II. Receptors

1. Is any part of the affected property used for habitat, foraging area, or refuge by any rare, threatened, or endangered species (plant *or* animal), or otherwise protected species (e.g., raptors, migratory birds)? None known.

2. Is any part of the affected property used for habitat, foraging area, or refuge by any species used as a recreational (e.g., game animals) and/or commercial resource? Potentially used for seasonal cattle grazing.

3. Is any part of the affected property used for habitat, foraging area, or refuge by any plant or animal species? This includes plants considered "weeds" and opportunistic insect and animal species (such as cockroaches and rats) if they are used as a food source for other species in the area. None known.

III. Exposure Pathways

1. Could receptors be impacted by contaminants via direct contact?

   Is a receptor located in or using an area where it could contact contaminated air, soil3, or surface water? No.

For Questions 2 and 3, note that one must answer "yes" to all three bullets in order to be directed to the "exclusion denied" box of the decision tree. This is because answering "no" to one of the questions in the bullet list indicates that a complete exposure pathway is not present. For example, in Question 2, if the chemical cannot leach or dissolve to groundwater (bullet 1), there is no chance of ecological receptors being exposed to the chemical through contact with contaminated groundwater. Similarly, the responses to the questions in Question 4 determine whether a complete pathway exists for exposure to NAPL.

2. Could receptors contact contaminants via groundwater? No.
   - Can the chemical leach or dissolve to groundwater4?
   - Can groundwater mobilize the chemical?
   - Could (does) contaminated groundwater discharge into known or potential receptor habitats?

---

3 For soil, this means contamination less than 5 feet below ground surface (bgs).

4 Information on the environmental fate of specific chemicals can be found on the Internet at *http://www.epa.gov/opptintr/chemfact/* or at a local library in published copies of the *Hazardous Substances Data Bank*.

3. Could receptors contact contaminants via runoff (i.e., surface water and/or suspended sediment) or erosion by water or wind? No.
   - Are chemicals present in surface soils?
   - Can the chemical be leached from or eroded with surface soils?
   - Is there a receptor habitat located downgradient of the leached/eroded surface soil?

4. Could receptors contact contaminants via migration of non-aqueous phase liquids (NAPL)? No
   - Is NAPL present at the site?
   - Is NAPL migrating toward potential receptors or habitats?
   - Could NAPL discharge impact receptors or habitats?

Figure 1 -Ecological Exclusion Criteria Decision Tree

(Refer to corresponding checklist for the full text of each question)

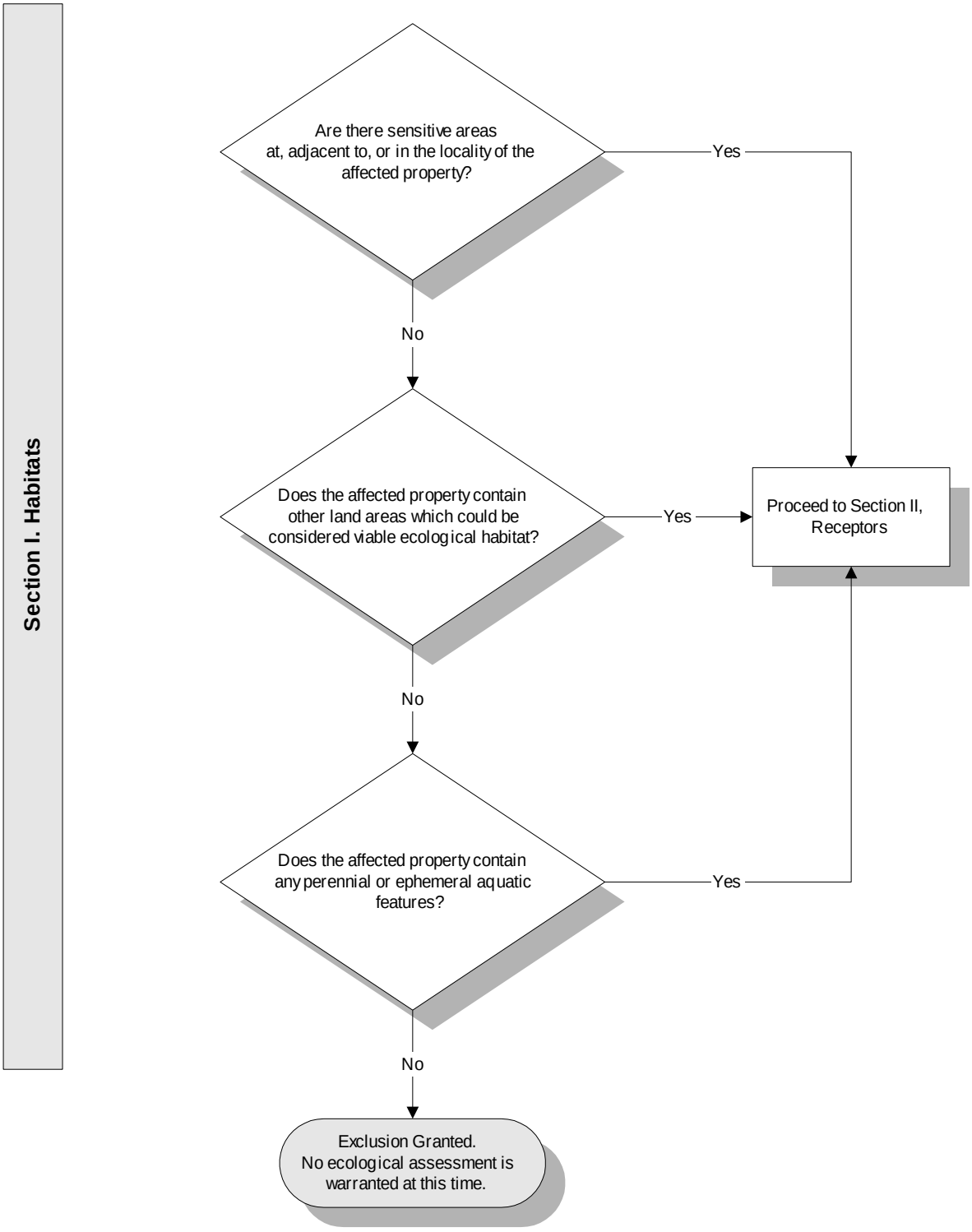


Figure 1 - Exclusion Criteria Decision Tree (continued)

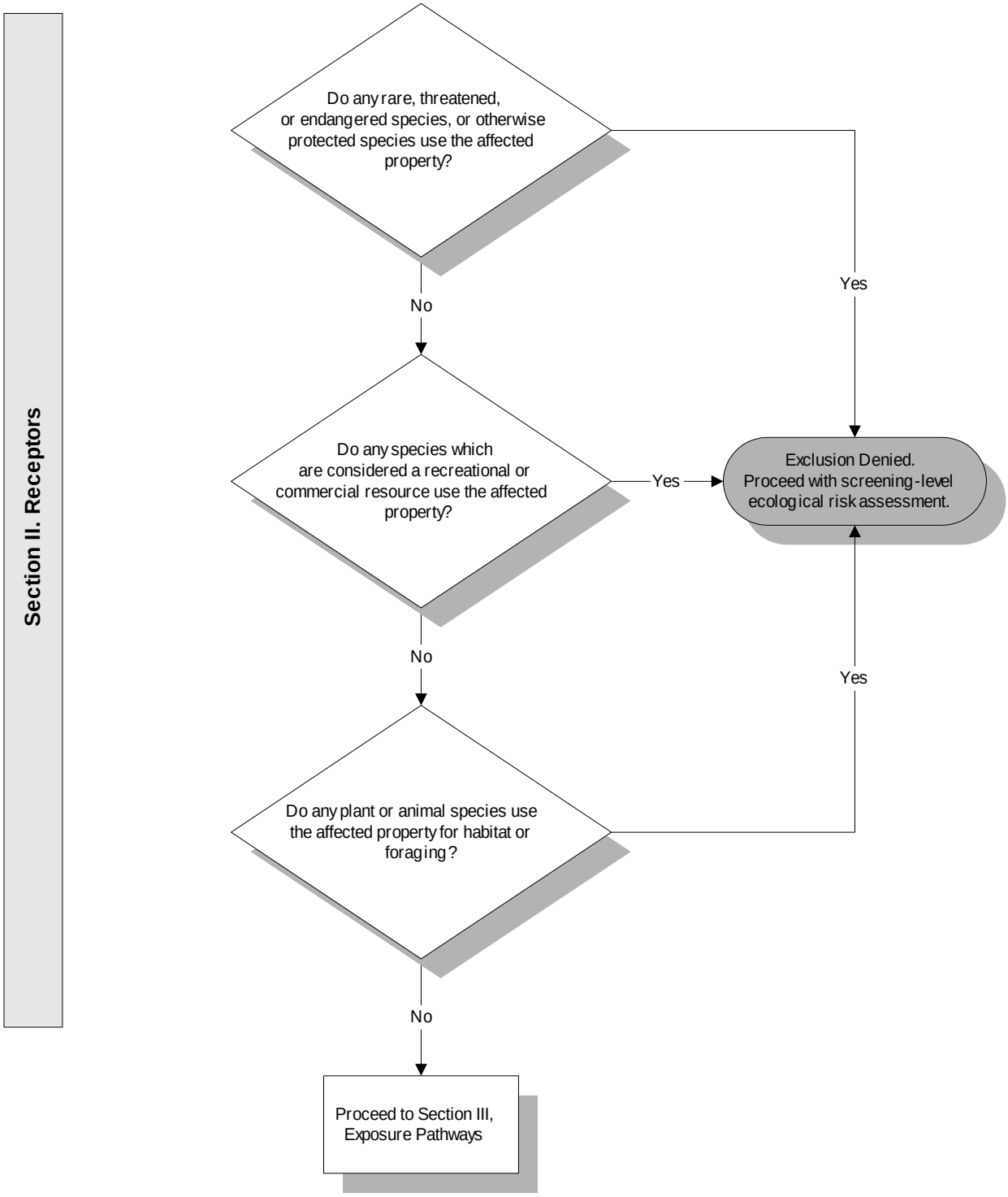
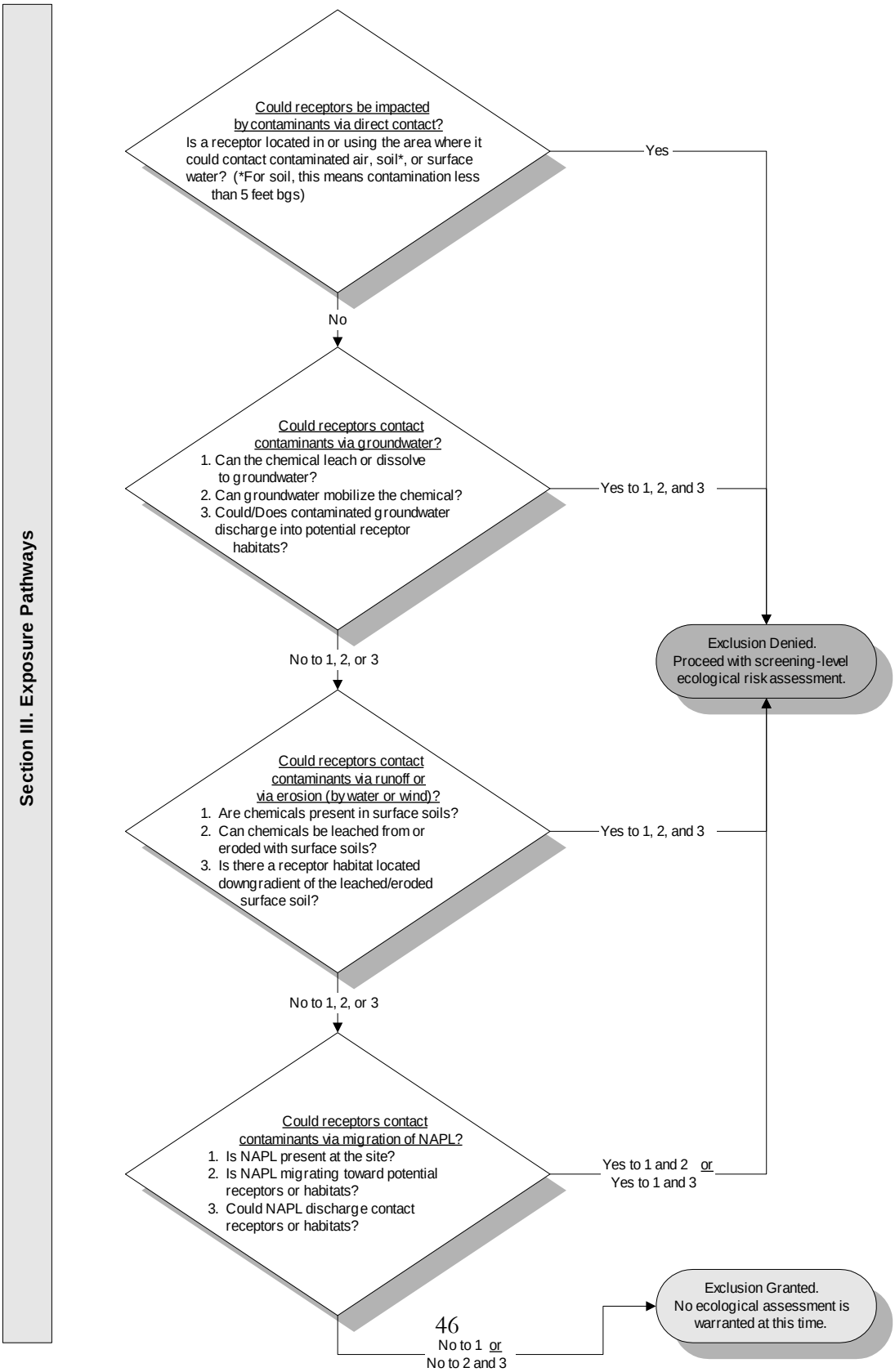


Figure 1 - Exclusion Criteria Decision Tree (continued)



March 25, 2021

Mr. Bradford Billings
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

Re: Request for Closure
Maljamar 6" Pipeline Release Site - South SW/4
Sec 20, T17S, R33E
Maljamar, Lea County, New Mexico NMOCD
ID. 1RP-956
Apex Project No. CPNM2

Dear Mr. Billings:

The attached report details the comprehensive results of investigation and remediation at the Maljamar Release - South Site (Site). On the behalf of Centurion Pipeline L.P., the report was originally submitted to Mr. Tomas J. Oberding via an ftp server download link on June 17, 2016 by Ms. Adrian Baker of Apex Titan, Inc. Mr. Oberding responded that he had received the information to download the report. Neither Apex or Centurion has documentation that Mr. Oberding did download and review the report. Therefore, Apex respectfully re-submits the attached closure request letter, presented as Attachment B.

On behalf of Centurion Pipeline L.P., Apex personnel have prepared this request for closure with information provided by URS Corporation and Delta Consultants. The Site is located on private property owned by Mr. Ross Caviness, approximately five miles southeast of Maljamar, New Mexico. The site is within the Northwest Quarter of Section 29, Township 17 South, Range 33 East and more specifically at latitude N 32.8111111˚, longitude W 103.6927778˚.

After reviewing the work plans (Attachment A) and reports furnished by URS Corporation and Delta Consultants, presented in the March 2016 Closure Request as Attachment 2 in the original closure request, the following conclusions can be drawn:

- The source has effectively been removed from the site via excavation (Excavation Backfilling and Source Area Characterization Report - Submitted June 2007);

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- The laboratory analytical data shows that impact to soils at the south site have been delineated vertically and horizontally during the Intitial Exploratory Soil Boring Program, presented in the March 2016 Closure Request as Attachment 2 (Dec. 2006 – Maljamar Technical Memo_Environmental Sampling);

- No soil impacts, above NMOCD RRALs, exist outside of the immediate area of the approximate release point (March 2016 Closure Request Attachment 2: Dec. 2006 – Maljamar Technical Memo_Environmental Sampling);

- Based on NMED's Screening-Level Ecological Risk Assessment, residual contamination in the soil in the vicinity of soil boring B- 18/MW-7 does not pose an unacceptable threat to onsite receptors. The soils with COC concentrations above NMOCD RRALs are localized and located at least 12 feet bgs, and 40 feet above the groundwater-bearing zone (March 2016 Closure Request Attachment 2: April 14, 2015 Maljamar-South – Site Assessment Checklist – Ecological Risk Assessment);

- Backfill activities conducted from February through March 2007 were completed in accordance with the NMOCD approved backfill plan (Excavation Backfilling and Source Area Characterization Report - Submitted June 2007);

- The Site was re-seeded utilizing a seed drill and seed mix provided by Anrac Farms in September 2012 to aid in re-vegetation (March 2016 Closure Request Attachment 2: October 9 2012 AEA_Centurion Revegetation Letter).

- Five monitoring wells were installed at the South Site. Laboratory analytical data indicates that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the site. A Groundwater Monitoring Report – June 15, 2009 Maljamar North and South Groundwater Monitoring Report - prepared by Delta Consultants dated is presented in the March 2016 Closure Request as Attachment 2.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

APEX

It is requested that a letter of 'No Further Action' at the south site be added to the project file associated with NMOCD ID. 1RP-956.

Sincerely,

Aaron Sides
Project Manager/Biologist
432-425-8336

Hank W. McConnell, P.G.
Branch Manager
432-631-5750

cc: Ms. Kimberly Lambert – Centurion Pipeline, L.P.

Attachment A: Work Plans

Attachment B: March 21, 2016 Request for Closure Letter

Attachment A

CONESTOGA-ROVERS & ASSOCIATES

2135 S. Loop 250West
Midland, Texas 79705
Telephone: (432) 686-0086 Fax: (432) 686-0186
http://www.craworld.com

January 12, 2006 Reference No. 043918-02

Mr. Paul Sheeley
Environmental Engineer
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Soil Remediation Workplan
BP Pipelines (North America) Inc.
Maljamar 6-inch Line Crude Oil Release Site #2
SW/4 of Section 20, Township 17 South, Range 33 East
Lea County, New Mexico

Dear Mr. Sheeley:

Conestoga-Rovers and Associates (CRA) is pleased to present this Soil Remediation Workplan on behalf of BP Pipelines (North America), Inc. (BP) for the above referenced crude oil release site.

The Maljamar 6-inch Line #2 release site is located 1.7-miles north of Highway 529 on County Road 125 approximately 5-miles southeast of Maljamar, Lea County, New Mexico (FIGURE 1). The legal description of the Site is the SW/4 of Section 20, T-17-S, R-33-E with GPS coordinates 32° 48.825' N and 103° 41.545' W. CRA understands the surface property is owned by the State of New Mexico.

A crude oil release of approximately 10-barrels occurred on December 22, 2005. The release was the result of internal corrosion inside the 6-inch gathering line. The line was clamped and subsequently repaired by replacing a section of the line with new pipe. CRA understands that the line was installed in 1989 at 6-feet deep and handles approximately 150-barrels per day at a working pressure of 300-psi. BP reported that the crude oil has an average 39.0 API specific gravity and approximately 20-ppm hydrogen sulfide. A copy of the submitted OCD form C-141, Release Notification and Corrective Action is included as an enclosure to this correspondence.

The OCD has regulatory jurisdiction over oil and gas production operations including pipeline spill/closure in the State of New Mexico. This project will be conducted under the regulatory jurisdiction of the OCD, which requires that soil impacted by a crude oil spill be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The OCD hydrocarbon remediation levels are determined by ranking criteria on a site-by-site basis, which is outlined in the OCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993. The ranking criteria are based on three site characteristics: depth to groundwater, wellhead protection and distance to surface water.

Equal
Employment Opportunity
Employer

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CONESTOGA-ROVERS
& ASSOCIATES

Information obtained by CRA form the New Mexico Office of the State Engineer on January 10, 2006 indicated that the depth-to-groundwater in the vicinity of the Site is greater than 100-feet. A copy of a water well record (attached) for a location in section 20, T-17-S; R-33-E demonstrated a depth to water of 190 feet. Based on these Site characteristics and associated OCD ranking criteria presented in the table below, the following hydrocarbon remediation levels apply at the Site: benzene- 10 ppm, Total BTEX- 50 ppm and TPH- 5,000 ppm.

CHARACTERISTIC	SELECTION	SCORE
Depth to Groundwater	> 100 feet	0
Wellhead Protection Area	>1,000 feet	0
Distance to Surface Water	>1,000 feet	0

Total Ranking Score = 0

Hydrocarbon-impacted soils associated with the crude oil release will be excavated by BP designated subcontractors and delineated using a trackhoe. The vertical and horizontal extents of the excavation will be assessed by field personnel using OCD procedures for headspace analysis of soil samples. Confirmation soil samples will be collected for determination of the final soil contaminant concentrations pursuant to section VI.A of the OCD *Guidelines for Remediation of Spills, Leaks, and Releases*, dated August 13, 1993.

Soil samples collected at the site will placed into a laboratory-supplied soil jar equipped with a Teflon-lined lid and placed on ice in an insulated cooler. These samples will be submitted to TraceAnalysis, Inc. (Trace) in Lubbock, Texas for analysis of total petroleum hydrocarbons (TPH) diesel-range organics (DRO) and gasoline-range organics (GRO) by EPA Method 8015 modified and analysis of benzene, toluene, ethylbenzene and xylene (BTEX) by EPA Method 8021B. The submitted coolers will be sealed for shipment and proper chain-of-custody documentation will accompany the samples to the laboratory.

Soils exhibiting concentrations above hydrocarbon remediation levels will be brought to the ground surface (to the practical extent possible) and staged onsite. Pending authorization from the surface property owner, the soils will be blended with onsite soils and amendments to the soils may be added in efforts to reduce the hydrocarbon concentrations in the soils. Soils will then be analyzed to determine concentrations relative to the hydrocarbon remediation levels. Soils exhibiting concentrations below regulatory levels (TPH – 5,000 ppm; Total BTEX – 50 ppm and benzene 10 ppm) will be placed back into the remedial excavation. Alternative waste management options will be considered as appropriate.

CONESTOGA-ROVERS
& ASSOCIATES

January 12, 2006 3 Reference No. 043918-02

Please note that BP is currently active in the remedial actions associated with this location. If you have any questions or comments with regards to this Soil Remediation Workplan please call do not hesitate to contact our Midland office at (432) 686-0086. Your timely response to this correspondence is appreciated.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Edward D. (Ted) Philley
Project Geologist

Thomas C. Larson
Operations Manager

Enclosures:
Site Location Map
Form C-141
Water Well Record

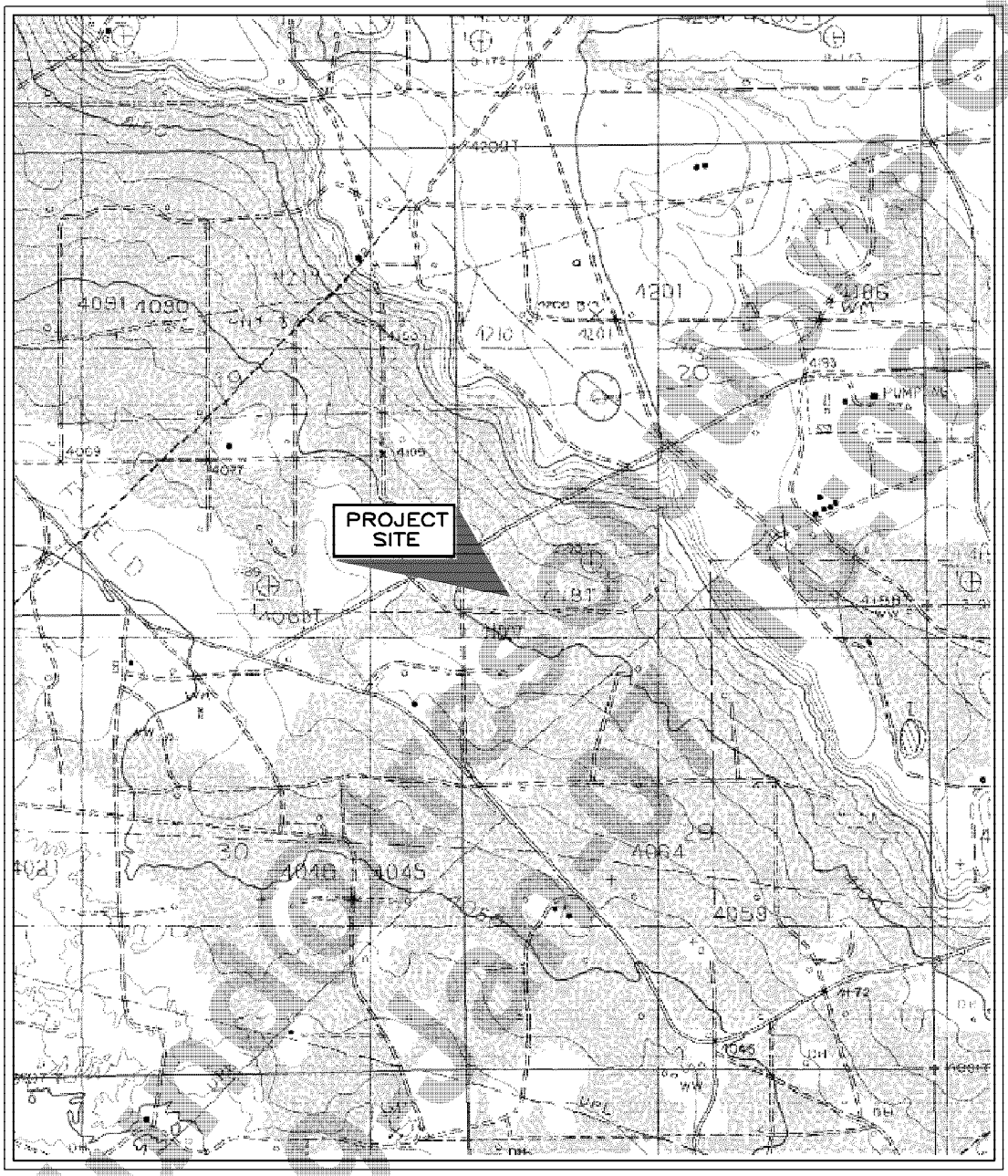
c.c.: Jimmy Humble, BP Pipelines (North America) Inc., Lovington, New Mexico
CRA – Midland File

geklund@trcsolutions.com 29-Jan-07 18:08

DOG LAKE QUADRANGLE
NEW MEXICO

LAT=32° 48.825' N
LONG=103° 41.545' W

PHOTOREVISED 1985



USGS MAP SERIES 1:24000

0 1/2 1 2
(Miles)

0 2000 4000 6000 8000
(Feet)

CONTOUR INTERVAL 10 FEET

NORTH

043918 SLR 011206

SITE LOCATION MAP	JOB No. 043918-02
BP PIPELINE (NORTH AMERICA) INC. MALJAMAR 6-INCH CRUDE OIL RELEASE SITE #2 LEA COUNTY, NM	FIGURE 1

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-14
Revised October 10, 200

Submit 2 Copies to appropria
District Office in accordan
with Rule 116 on ba
side of for

Release Notification and Corrective Action

OPERATOR

X Initial Report ☐ Final Rep

Name of Company BP PIPELINES N.A., INC	Contact JIMMY HUMBLE
Address 302 EAST AVE. A LOVINGTON, NM 88260	Telephone No. (505) 396-2817
Facility Name MALJAMAR 6" LINE #2	Facility Type GATHERING PIPELINE

Surface Owner STATE OF NEW MEXICO	Mineral Owner UNKNOWN	Lease No. UNKNOWN

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County LEA
	20	17S	33E		500		600	

Latitude N32 ° 48.825
Longitude_W103 ° 41.545

NATURE OF RELEASE

Type of Release CRUDE OIL	Volume of Release 10 BARRELS	Volume Recovered 0 BARRELS
Source of Release PIPELINE	Date and Hour of Occurrence UNKNOWN	Date and Hour of Discovery 12/22/05 2:30PM
Was Immediate Notice Given? ☐ Yes ☐ No X Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
THE OCCURRED DUE TO INTERNAL CORROSION IN THE PIPE. ALL CONTAMINATED SOIL WILL BE BROUGHT TO THE SURFACE AND A REMEDATION PLAN WILL BE DEVELOPED

Describe Area Affected and Cleanup Action Taken.*
6 FEET BY 120 FEET. PIPE WAS EXCAVATED AND LEAK CLAMPED OFF. THE PIPE IS TO BE REPLACED12/27/05. ALL FREE OIL WAS PICKED UP AND ALL CONTAMINATED SOIL WILL BE BROUGHT TO THE SURFACE FOR REMEDIATION DISPOSAL.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: JIMMY HUMBLE	Approved by District Supervisor:	
Title: TEAM LEADER	Approval Date:	Expiration Date:
E-mail Address: humbleja@bp.com	Conditions of Approval:	Attached ☐
Date: 12/27/05 Phone: (505) 396-2817		

* Attach Additional Sheets If Necessary

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New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 02875	17S	33E	20	2	2				

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name: MURRELL ABBOTT
Source: Shallow
Drill Start Date: 05/18/1955
Drill Finish Date: 05/20/1955
Log File Date: 05/26/1955
PCW Received Date:
Pump Type:
Pipe Discharge Size:
Casing Size: 7
Estimated Yield:
Depth Well: 250
Depth Water: 190

Water Bearing Stratifications:	Top	Bottom	Description
	190	235	Shallow Alluvium/Basin Fil

Casing Perforations:	Top	Bottom
	190	250

geklund@trcsolutions.com
29-Jan-07 18:09

New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 02875 APPRO	17S	33E	20	2	2				

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name:
Source: Shallow
Drill Start Date: 05/18/1955
Drill Finish Date: 05/20/1955
Log File Date: 05/26/1955
PCW Received Date:
Pump Type:
Pipe Discharge Size:
Casing Size:
Estimated Yield:
Depth Well: 250
Depth Water: 190

geklund@trcsolutions.com
29-Jan-07 18:09

New Mexico Office of the State Engineer
Point of Diversion Summary

Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 03713	17S	33E	28	1	4	3			

Driller Licence: 46 ABBOTT BROTHERS COMPANY
Driller Name: ABBOTT, MURRELL
Drill Start Date: 10/21/1957
Log File Date: 12/30/1957
Pump Type: TURBIN
Casing Size:
Depth Well: 210

Source: Shallow
Drill Finish Date: 10/23/1957
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water:

eKuudors solutions.com
29-Jan-07 18:09

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Project Name:Sahara
Index No: 8.4.12.3
Title: Maljamar 6 in[1]. wp appr.&cond. 020306
User: Eklund, Gwen
Date: Mon Jan 29 18:09:11 CST 2007
Document Total Page Count: 1

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

February 3, 2006

Jimmy Humble
BP Pipelines N. A., Inc. (BP)
302 East Ave. A
Lovington, NM 88260

Re: Remediation Work Plan Approval w/conditions
Maljamar 6-inch Line Crude Oil Release Sites #1, and #2
location: UL- Sec. 20 and 29 – T17E-R33E

Dear Mr. Humble,

The New Mexico Oil Conservation Division (OCD) reviewed the plan submitted by Conestoga-Rovers & Associates (Conestoga), for BP, and referenced above. The plan is **herby approved** according to the information provided with the following conditions:

1. BP shall provide notification by email to paul.sheeley@state.nm.us and Larry.Johnson@state.nm.us a minimum 48-hours in advance of any sampling, backfilling and/or construction activities. Notification(s) shall be documented in the closure plan with the event, time, date and OCD representatives name.

2. BP shall vertically and horizontally delineate the vadose zone at each location according to OCD guidelines, ("Guidelines for Remediation of Leaks, Spills and Releases"):

3. BP shall submit a plan, by April 28, 2006, for repair and/or replacement of this line to prevent future releases.

Please be advised that OCD approval of this plan does not relieve BP of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve BP of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Sincerely,

Paul Sheeley-Environmental Engineer District 1, paul.sheeley@state.nm.us

Cc: Larry Johnson - Environmental Engineer, Dist. 1
Chris Williams - District 1 Supervisor.
Thomas Larson - Conestoga

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NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

FEBRUARY 14, 2007

Mr. Michael Whelan
Atlantic Richfield Company
Remediation Management
501 Westlake Park Boulevard
Houston, Texas 77079

RE: BACKFILLING PLAN
BP PIPELINES MALJAMAR PIPELINE RELEASE SITE
SECTIONS 20 AND 29, TOWNSHIP 17 SOUTH, RANGE 33 EAST
LEA COUNTY, NEW MEXICO
NMOCD 1R0956

Dear Mr. Whelan:

The New Mexico Oil Conservation Division (OCD) has reviewed the *Backfilling Plan* for the BP Pipelines Maljamar Pipeline Release Site (1R0956) located in Sections 20 and 29, Township 17 South, Range 33 East, Lea County, submitted by URS Corporation on behalf of BP Pipelines (North America), Inc. and Atlantic Richfield Company Remediation Management on January 25, 2007. OCD approves the *Backfilling Plan* with the following conditions.

1. OCD suggests that BP Pipelines thin-spread and disc the segregated soils (see Section 2.3, page 7) rather than stockpile this material. Given the time frames, this segregated soil may bioremediate on-site.

2. OCD will require BP Pipelines to backfill the excavations with soil that has a TPH concentration of 1000 mg/kg or less from 5 feet below ground surface (bgs) to the bottom of the excavation rather that the proposed concentration of 5000 mg/kg or less (see Section 2.4, page 9 and Section 2.5.2, page 11).

3. BP Pipelines shall inform the OCD Santa Fe Office and the OCD Hobbs District Office on the progress of this work in writing at least monthly until the work has been completed. BP Pipelines shall submit a final report on the backfilling program 30 days after it has completed the

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backfill activities to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office.

4. BP Pipelines shall submit a Remediation Plan pursuant to OCD Rule 116D no more than 45 days after it has completed the backfill activities. BP Pipelines must submit two paper copies and an electronic copy of its Remediation Plan to OCD's Santa Fe office with a copy provided to the OCD Hobbs District Office. The Remediation Plan must specify how BP Pipelines will investigate the extent of the hydrocarbon contamination in both soils and ground water. The workplan must also include a complete description of the site, including a site map, the site history including the nature of the release, and a summary of previous investigations and the backfill program. BP Pipelines must install as many soil borings and monitoring wells as necessary to delineate the extent of the hydrocarbon contamination in both soil and ground water using an appropriate number of isoconcentration maps and cross sections. BP's proposal must include the installation of at least one monitor well inside the perimeter of the former excavation centered on the release site to determine whether hydrocarbon contamination has migrated directly down to ground water.

If BP's soil and ground water investigation detects contamination at concentrations that exceed the Water Quality Control Commission (WQCC) abatement standards specified at 20.6.2.3103 NMAC, then it must immediately notify OCD of this fact and submit a Stage 1 Abatement Plan proposal within sixty (60) days if it has not completely delineated the release. If the extent of the release has been determined, then BP Pipelines must submit a Stage 2 Abatement Plan proposal. After it has completely delineated the release, OCD will determine whether to require additional action from BP Pipelines.

In all future submittals, BP Pipelines must include the location of the release site using Township, Section, and Range coordinates. Please note that all remediation work of this type that is not known to have impacted ground water is handled by OCD's District Offices unless OCD informs BP Pipelines otherwise.

OCD understands that the proposed backfilling work is only being proposed at this time because of safety concerns and that BP Pipelines is committed to the complete delineation and remediation of this release. If you have any questions, please call me at 505-476-3488.

Sincerely,

Glenn von Gonten
Senior Hydrologist

xc: Larry Johnson, OCD Hobbs District Office
Shannon Hoover, URS

Attachments B

March 21, 2016

Mr. Tomas J. Oberding, PhD
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

Re: Request for Closure
Maljamar 6" Pipeline Release Site - South SW/4
Sec 20, T17S, R33E
Maljamar, Lea County, New Mexico NMOCD
ID. 1RP-956
Apex Project No. CPNM2

Dear Dr. Oberding:

This report details the comprehensive results of historical events at the Maljamar Release - South Site (Site) on behalf of Glenn Springs Holdings, Inc., Apex personnel have prepared this request for closure with information provided by URS Corporation and Delta Consultants. The Site is located on private property owned by Mr. Ross Caviness, approximately five miles southeast of Maljamar, New Mexico. The site is within the Northwest Quarter of Section 29, Township 17 South, Range 33 East and more specifically at latitude N 32.8111111˚, longitude W 103.6927778˚. Figure 1 is provided in Attachment 1 as the Topographic Map.

Releases occurred along a six (6) inch crude oil gathering line, currently operated by Centurion, were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The two project sites (identified as the north and south sites) are located approximately 1,000 feet from each other in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.). The following closure request report is for the south side spill.

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line and retained Conestoga-Rovers and Associates (CRA) to perform initial response activities. These activities included the excavation of impacted soils to remove source area material and investigate the extent of the impacts. During CRA's limited exploratory excavation that was conducted at the south site in March 2006, no confirmation soil samples were collected; however, subsequent to removal of visually impacted soils, field samples exhibited elevated photoionization detection (PID) readings. Figure 2 is provided in Attachment 1 for excavation boundaries.

After receiving the New Mexico Oil Conservation Division's (NMOCD's) letter dated February 3, 2006, BP retained the services of URS Corporation (URS) to conduct further response activities at the sites to comply with the stated directive, "BP shall vertically and horizontally delineate the vadose zone at each location according to NMOCD guidelines ..." URS's activities included an exploratory boring program, a geophysical study of the area surrounding the sites, installation and monitoring of groundwater monitoring wells five (5),and backfilling the excavations at each site.

As identified in previous submittals to the NMOCD by URS (e.g., *Technical Memorandum - Initial Exploratory Soil Boring Program,* dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum,* dated June 28, 2007), subsequent to the remedial/assessment activities at the south site, URS only reported soil samples collected from one delineation/confirmation soil boring/monitor well exhibited concentrations of constituents of concern (COCs) above the NMOCD Recommended Remediation Action Levels (RRALs). Soil samples collected from Boring B-18/MW-7, between the approximate depths of 12 feet to 68 feet below grade surface (bgs), exhibited elevated COC concentrations. Soil Boring B-18 was installed to a depth of at least 120 feet bgs, approximately 20 feet downgradient of the approximate release point, along the former pipeline. The highest COC concentrations in soil (benzene - 110 milligrams per kilogram (mg/Kg); total benzene, toluene, ethylbenzene and total xylenes (total BTEX) - 1,163 mg/Kg; total petroleum hydrocarbons (TPH) - 20,900 mg/Kg (diesel range organics (DRO) - 13,000 mg/Kg and gasoline range organics (GRO) - 7,900 mg/Kg)) were identified in the sample collected at 47-47.5 feet bgs. No COC concentrations above NMOCD RRALs were identified in the samples collected below 68 feet bgs. Groundwater at the south site is located at least 108 feet bgs.

Although analytical reports collected from Delta Consultants identified concentrations of COCs in soil samples collected from borings installed in up- and cross gradient locations from the approximate release point (e.g., B-14/MW-6, B-15/MW-8 and B-17/MW-10), no concentrations were above NMOCD RRALs.

Regarding groundwater, no COC concentrations were furnished from URS or Delta reported above the New Mexico Human Health Maximum Concentration Levels (MCLs - 20.6.2 NMAC) have been identified in the groundwater samples collected from the five (5) on-site monitoring well wells subsequent to installation in April 2007.

As reported in Delta's Groundwater Monitoring Report dated June 15, 2009, in December 2008, samples were collected from MW-7 and MW-9 at the south site and analyzed for BTEX by Method

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SW8021 B, TPH by Texas Method TX1005, total dissolved solids (TDS) by Method E160.1 and total chloride by Method E325.2. In January 2009, monitoring well wells MW-6, MW-7, MW-8, MW-9 and MW-10 were sampled and analyzed for BTEX by Method SW8021B, TPH-GRO and TPH-DRO by Method SW8015B and total chloride by Method E325.2.

Based on Delta's laboratory analytical results from both of the groundwater sampling events, no petroleum hydrocarbon constituent concentrations (BTEX and TPH) above the New Mexico Human Health MCLs were identified. In April 2007, manganese was identified in the groundwater samples collected from MW-6 and MW-7 at concentrations that are slightly above the New Mexico Human Health MCL of 0.2 milligram per liter (mg/L), at 0.22 mg/L and 0.24 mg/L, respectively; however, manganese is considered naturally occurring and is not typically indicative of a petroleum hydrocarbon release. None of the groundwater samples collected by Delta personal from the on- site monitoring well wells exhibited concentrations of total dissolved solids (TDS) and total chloride concentrations above the New Mexico Human Health MCLs. In December 2008, a TDS concentration of 60,300 mg/L was identified in the sample collected from MW-9. However, this concentration is anomalous, and likely the result of laboratory error, as the confirmation sample collected in January 2009 indicated a total dissolved solid concentration of 281 mg/L, which is consistent with the concentrations identified in the samples collected from the other on-site wells, and the sample collected from MW-9 by URS in April 2007 (255 mg/L).

Delta completed the Screening-Level Ecological Risk Assessment, Scoping Assessment and Site Assessment Checklist (refer to Attachment 2). "This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways." Based on the results of the checklist, and using the associated Ecological Exclusion Criteria Decision Tree, no further ecological assessment is required.

Although designed to drive remediation associated with underground storage tanks (USTs), Delta completed the New Mexico Environment Department (NMED) Risk-Based Decision Making Computational Software package for the site (refer to Attachment 3) to further evaluate potential risk of exposure via ingestion, inhalation (vapor emissions and particulates) and dermal contact. This tool is used to evaluate risk-based screening levels for various exposure pathways (e.g., resident child/adult, commercial adult and construction worker). Delta's results indicate that

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surface soil is the only complete exposure pathway, given the site specifics. Given that the site is located within an oil and gas production field, and as the residual soil impact is localized and at a depth of at least 12 feet bgs, it is likely that only construction workers would be potentially exposed to COCs. The results furnished by Delta of the screening indicate that the risk-based screening level for benzene in soil within a construction zone is 167 mg/Kg. The maximum benzene concentration identified at this site was 110 mg/Kg at a depth of 47-47.5 feet bgs. After further review of URS and Delta's compilation of reports there does not appear to be a risk to construction workers via excavation activities. Based on the above-referenced findings from Delta, the following conclusions can be drawn:

- The source has effectively been removed from the site via excavation;
- The laboratory analytical data shows that impact to soils at the south site have been delineated vertically and horizontally, and the identified residual contamination in the soil in the vicinity of soil boring B- 18/MW-7 does not pose an unacceptable threat to onsite receptors;
- No soil impacts, above NMOCD RRALs, exist outside of the immediate area of the approximate release point;
- The soils with COC concentrations above NMOCD RRALs are localized and located at least 12 feet bgs, and 40 feet above the groundwater-bearing zone; and,
- Laboratory analytical data indicates that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the site.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

It is requested that a letter of 'No Further Action' at the south site be added to the project file associated with NMOCD ID. 1RP-956, and authorization to properly plug and abandon the five (5) on-site monitoring well wells be provided to Centurion.

APEX

Page 706 of 1388

Apex's services will be performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed hereunder. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g. laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services will be based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

Sincerely,

Adrian Baker

Adrian Baker
Project Manager

Cc via email: Dusty Wilson – Glenn Springs Holdings, Inc.

Attachments 1 Figure 1 – Topographic Map

APEX

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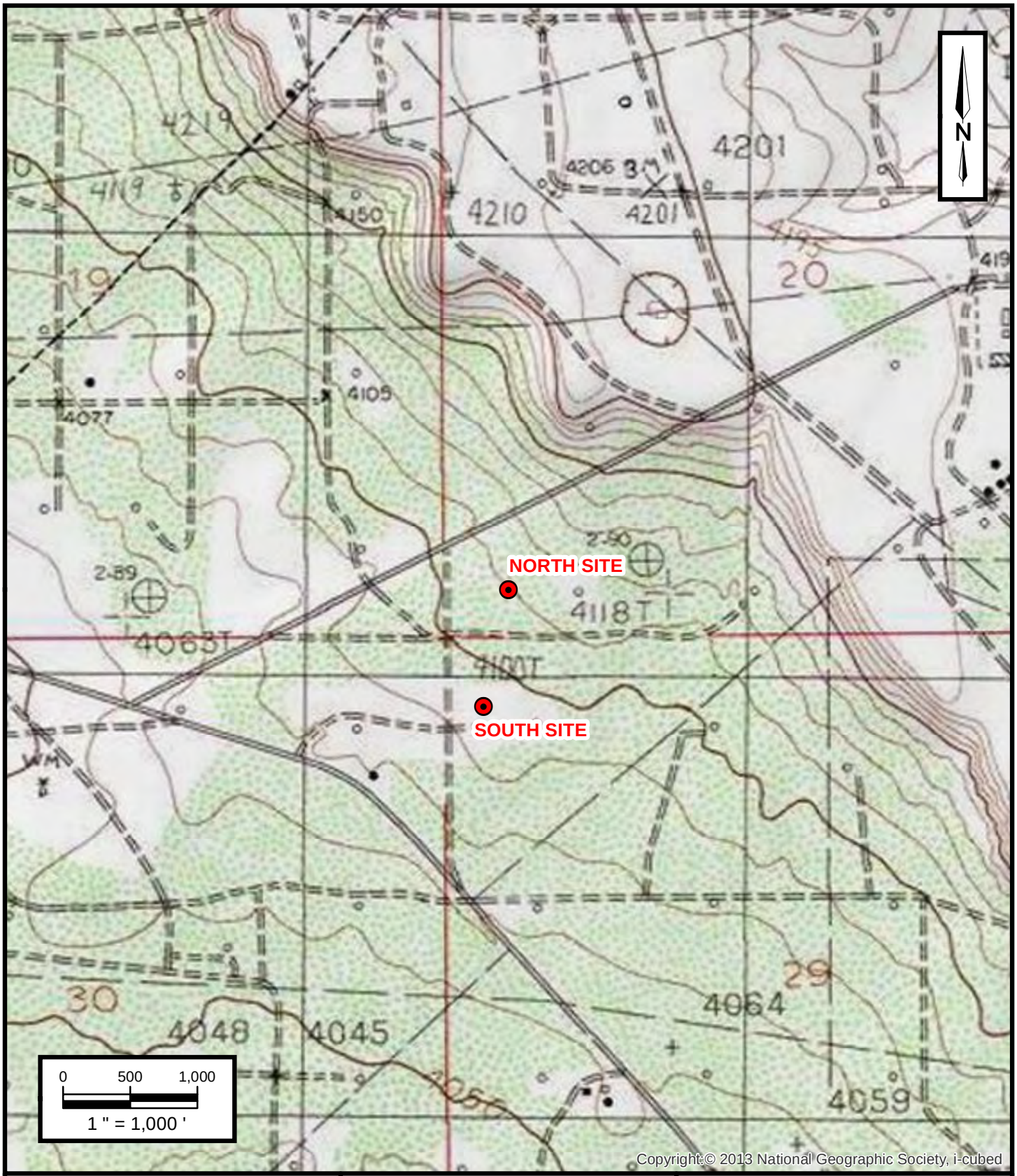
Figure 2 – Site Vicinity Map
Figure 3 – Site Map

Attachments 2

Dec. 2006 – Maljamar Technical Memo_Environmental Sampling
June 2007 URS – Excavation and Backfill Report
July 2007 URS – Geotech and Slope Stability Analysis
June 15 2009 Maljamar – North&South-GW Mont. Rpt.-signed
June 23 2009 Maljamar – South – Closure Request
October 9 2012 AEA_Centurion_Reveg_Letter
April 14 2015 Maljamar-South – Site Assess. Checklist-Eco.Risk Assess.

Attachments 1



Centurion Pipeline
Maljamar 6" Pipeline Site - North
Maljamar 6" Pipeline Site - South
Maljamar, Lea County, New Mexico
North Site - 32.813702 N, 103.692408 W
South Site - 32.811315 N, 103.693032 W

Project No. 7250715066

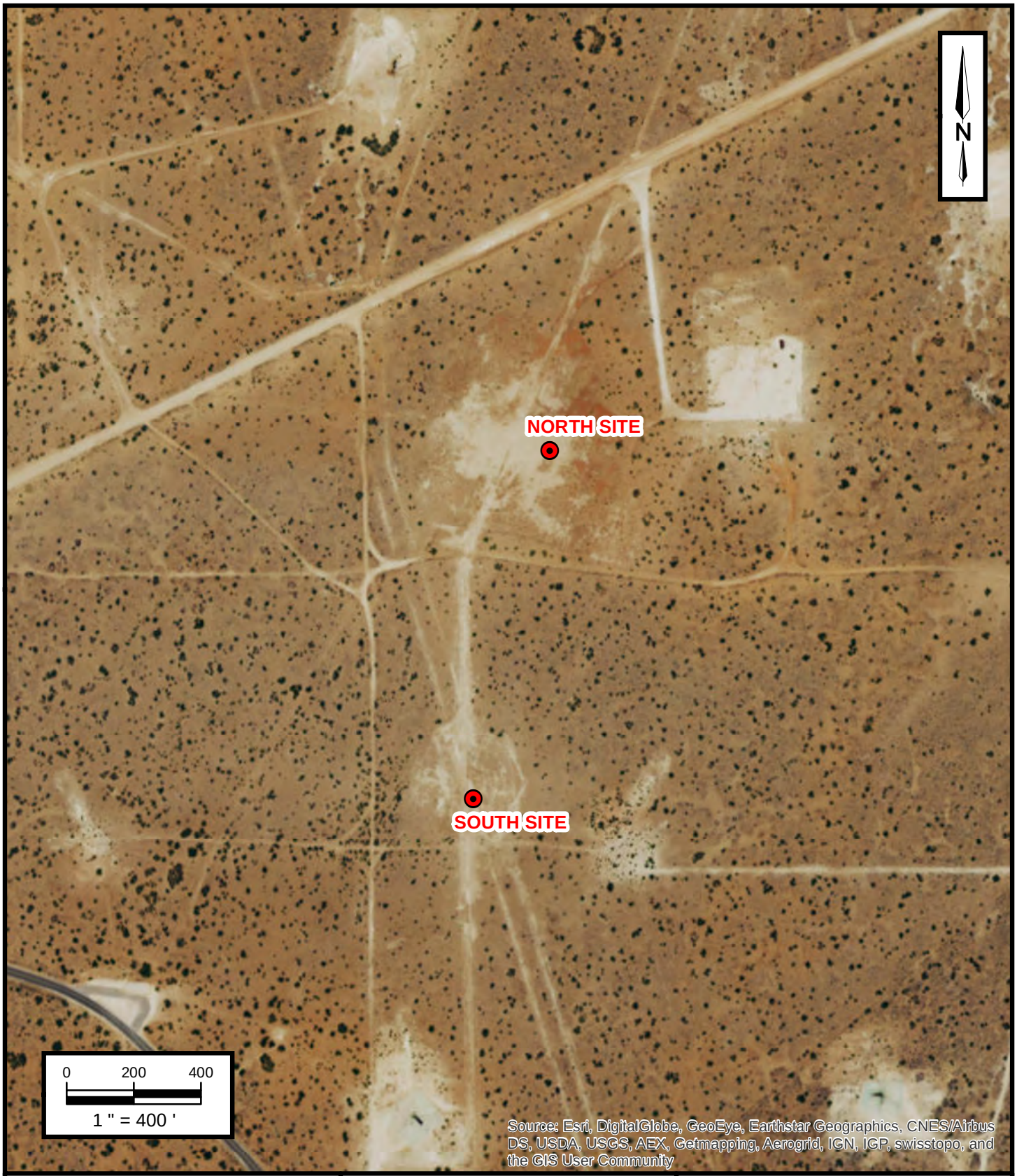
Apex TITAN, Inc.
505 N Big Spring St., Suite 301A
Midland, Texas 79701
Phone: (432) 695-6016
www.apexcos.com
A Subsidiary of Apex Companies, LLC

FIGURE 1

Topographic Map

Dog Lake, New Mexico Quadrangle
1985

Z:\Houston South\Drafting\Midland 07\2015\7250715066\Figure 1.mxd 11/12/2015 NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US Projected Coordinate System



Centurion Pipeline
Maljamar 6" Pipeline Site - North
Maljamar 6" Pipeline Site - South
Maljamar, Lea County, New Mexico
North Site - 32.813702 N, 103.692408 W
South Site - 32.811315 N, 103.693032 W

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Midland, Texas 79701
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www.apexcos.com
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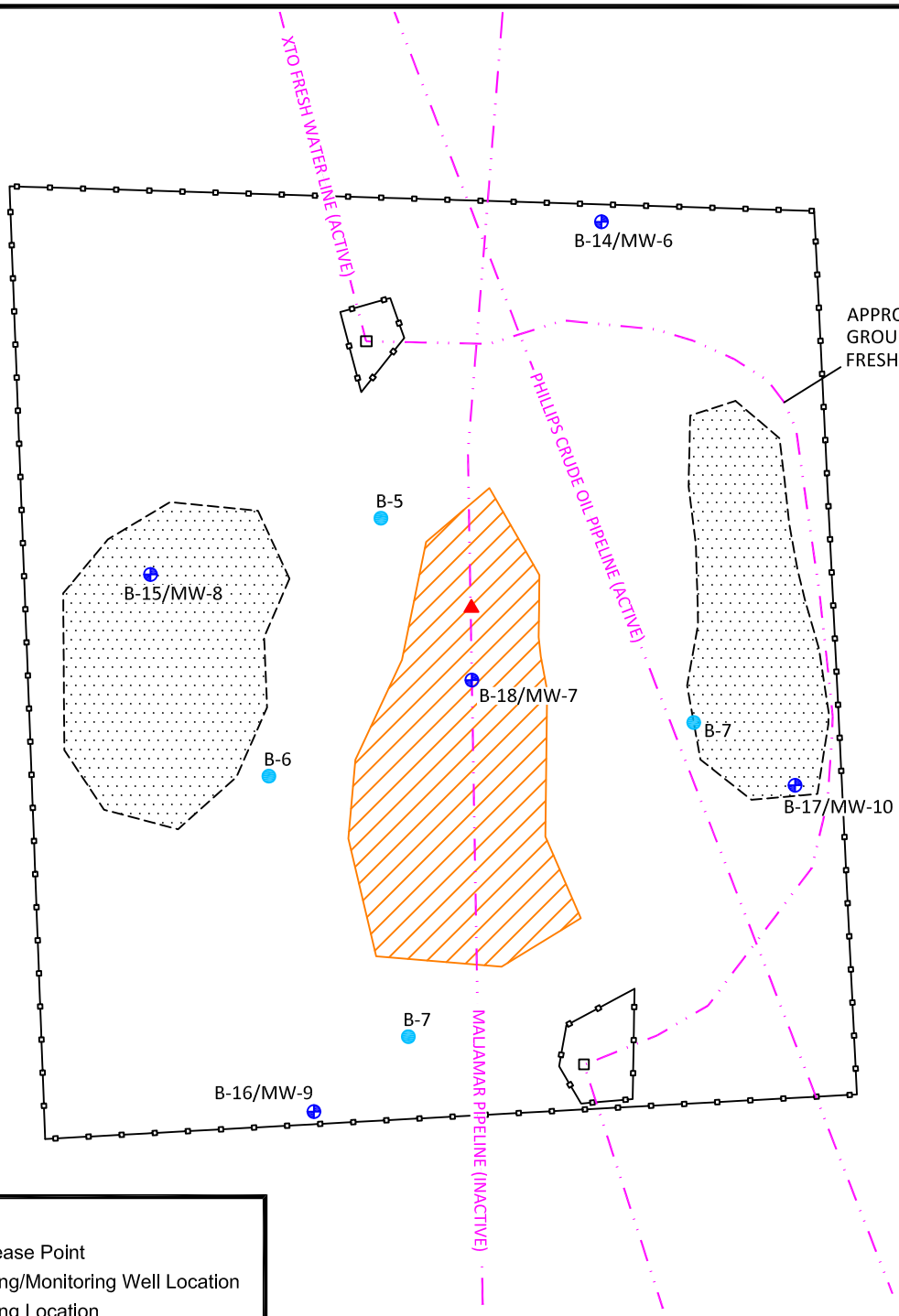
FIGURE 2

Site Vicinity Map

Z:\Houston South\Drafting\Midland 07\2015\7250715066\Figure 2.mxd 9/8/2015 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System



LEGEND:

- Release Point
- Boring/Monitoring Well Location
- Boring Location
- Pipeline Location
- Fence
- Final Limits of Excavation
- Stockpile Locations (Prior to February/March 2007 Backfilling Activities)

0 30 60

1 " = 60 '

Note: Information was pulled from Delta Consultant Information

Centurion Pipeline
Maljamar 6" Pipeline Site - North
Maljamar 6" Pipeline Site - South
Maljamar, Lea County, New Mexico
North Site - 32.813702 N, 103.692408 W
South Site - 32.811315 N, 103.693032 W

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Midland, Texas 79701
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FIGURE 3

Site Map
South Site

Z:\Houston South\Drafting\Midland 07\2015\7250715066\Figure 3 North South.dwg 11/12/15

Attachments 2

TECHNICAL MEMORANDUM

INITIAL EXPLORATORY SOIL BORING PROGRAM

MALJAMAR PIPELINE RELEASE SITE

MALJAMAR (LEA COUNTY), NEW MEXICO

NMOCD 1-RP NO. 956

Prepared for
BP Pipelines (North America), Inc.
302 East Avenue A
Lovington, New Mexico 88260

And

Atlantic Richfield Company
(a BP Affiliate) Remediation Management
501 Westlake Park Boulevard
Houston, Texas 77079

December 2006

Prepared by

9400 Amberglen Boulevard
Austin, Texas 78729

Project No. 41008243

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Figure 6: Cross-Section A-A'
Figure 7: Groundwater Potentiometric Surface – North Site

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Table 3: Summary of Soil Analytical Results – BTEX and TPH
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Appendix B: Photographs
Appendix C: Data Validation Report and Laboratory Analytical Reports

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Technical Memorandum INITIAL EXPLORATORY SOIL BORING PROGRAM

1.0 INTRODUCTION

BP Pipelines (North America), Inc. (BP Pipeline NA) operates a 6-inch crude oil gathering line in Lea County, New Mexico. Releases occurred at two locations along the line in December 2005, and are believed to have been the result of internal corrosion. The releases were discovered during aerial reconnaissance of the line. The two project sites (identified as the North and South Sites) are located within approximately 1,000 feet of each other, approximately 5 miles southeast of the town of Maljamar in Lea County (Figure 1). The North Site is located on State of New Mexico land, and the South Site is located on private property owned by Mr. Ross Caviness.

1.1 Background

BP Pipelines NA immediately repaired the lines at the two release locations and retained Conestoga-Rovers & Associates (CRA) to perform initial response activities. CRA submitted Soil Remediation Work Plans dated January 12, 2006 for each of the sites. These documents included the Release Notification and Corrective Action form (Form C-141) submitted to the New Mexico Oil Conservation Division (NMOCD) by BP Pipelines NA on December 27, 2005. The initial response activities included the excavation of impacted soils at each site to remove source area material and investigate the extent of the impacts. Soil samples were collected from the initial response test trenches at the North Site in January 2006 prior to excavation activities and submitted for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) (Table 1). Excavation activities began in February 2006 at the North Site upon approval of the Soil Remediation Work Plans in NMOCD letters dated February 3, 2006. The North Site excavation eventually reached an approximate depth of 50 feet below ground surface (bgs) when excavation was halted in March 2003. CRA collected soil confirmation samples from the North Site excavation in March 2006 between approximately 32 to 50 feet bgs and submitted for BTEX and TPH analysis. Concentrations of these chemicals of concern (COC) were detected in exceedence of remediation action levels listed in the NMOCDs *Guidelines for Remediation of Leaks, Spills and Releases*. Results from the confirmation samples collected during initial response activities are included in Table 1. Samples 1 through 5 represent areas that were subsequently removed during further excavation activities. TPH results from the March 2006 confirmation soil samples are depicted on Figure 2. Laboratory reports for samples collected by CRA during initial response activities are included in Appedix C. Limited exploratory excavation that did not progress past 10 to 15 feet bgs was performed at the

South Site, but no soil samples were submitted for laboratory analysis. However, CRA indicated that limited field screening was performed and PID readings were still elevated. Photographs of the South Site excavation show residual staining.

Further response at the sites is being conducted to comply with NMOCD requirements. Appropriate actions are being taken to ensure that there is no remaining threat from the release to injure or be detrimental to public health, fresh waters, animal or plant life, or property or unreasonably interfere with the public welfare or use of the property.

Following the initial response activities, and pursuant to the NMOCD's letter dated February 3, 2006, which directs that "BP shall vertically and horizontally delineate the vadose zone at each location according to OCD guidelines…," the primary objective of the project at this time is to determine the horizontal and vertical extent of residual impacts. Once the extent of residual impacts is known, a determination for the next appropriate phase of response action will be made.

Observations of the current conditions at the sites indicate that the excavations do not meet minimum required conditions for excavation safety. Due to the nature of the loose fine sand and the presence of weak to no cementation, OSHA categorizes the soils as Class C (the worst class), and appropriate sloping of sidewalls for excavation safety would need to be or exceed 2 horizontal (H):1 vertical (V). Current slope conditions of the excavation sidewalls are 2H:1V or less.

Empirical observations (staining and sampling during initial response actions and soil type) indicate that the crude oil migration pathway in the subsurface was predominantly vertical, with limited horizontal spread. Therefore, determination of the vertical extent of residual impacts necessitates that any investigative activities be conducted at and in the immediate vicinity of the release (e.g., bottom of the excavation). However, since the excavation does not currently meet minimum standards for safety, URS does not recommend that workers or equipment enter the area for further delineation investigation.

The initial exploratory boring program conducted in September 2006 was performed to collect data to support the development of a plan to appropriately modify the current excavations to meet or exceed the requirements for excavation safety so that workers and equipment can enter the excavations for further delineation investigation. Additionally, environmental data was acquired during the initial exploratory soil boring program to provide an indication of potential extent of impacts in soil and groundwater.

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1.2 Objective

The objective of this technical memorandum is to document the results of the September 2006 environmental sampling activities (performed in accordance with the August 2006 ***Initial Exploratory Borings Maljamar Pipeline Release Site Work Plan*** [Work Plan]). A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.

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2.0 INVESTIGATION ACTIVITIES

To ensure a safe work zone for further investigation of residual impacts from the release, URS proposed the initial exploratory soil boring program. This soil boring program was primarily intended to acquire geotechnical data to facilitate further slope stability analysis and excavation plan development for the management of the existing excavations. However, during the mobilization to acquire the geotechnical data, URS also utilized the soil borings for the purpose of investigating the horizontal extent of residual impacts and assessing groundwater conditions (e.g., presence and possible impacts), primarily at the North Site during the initial mobilization.

In order to achieve the objective of obtaining initial indications of the potential horizontal and vertical extent of residual impacts, while managing the current conditions at the sites, the following steps were conducted in September 2006 in accordance with the August 2006 Work Plan:

- Installation of four exploratory soil borings at the North Site, which were subsequently converted to groundwater monitoring wells.
- Installation of four exploratory soil borings at the South Site to 50 feet bgs.
- Collection of soil samples for geotechnical and environmental analysis.
- Collection of groundwater samples from the four monitoring wells installed at the North Site for groundwater assessment.

This technical memorandum describes only the activities associated with the initial exploratory soil boring task and only presents the results from environmental samples collected to provide an initial indication of horizontal extent of impacts.

The initial exploratory soil boring program is discussed in the following subsections for the North and South Sites.

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2.1 North Site

- Four borings (B-1 through B-4) were installed to approximately 10 feet within the first saturated zone (Figure 3). Total depths of exploration ranged from 128.5-132.5 feet bgs. Bedrock was not encountered in any of the borings installed at the site.
- Standard penetration testing (SPT) was performed every 5 feet.
- Split spoon samples were collected every 5 feet for lithologic description and field screening (i.e., headspace analysis) with a properly calibrated photoionization detector (PID) for the presence of volatile organic compound (VOC) vapors. One sample collected per 10-foot interval was submitted to AMEC in Albuquerque, New Mexico for analysis of grain size. Atterberg Limits were also proposed in the August 2006 Work Plan; however, the samples did not contain sufficient amounts of clay. Therefore, Atterberg Limits testing was not performed.
- For additional geotechnical analysis, two undisturbed samples were collected from each soil boring for direct shear tests, with one sample representing the upper 50 feet bgs and the second sample representing the interval between 50 and 75 feet bgs (in the event that future remedial action includes excavation beyond a depth of 50 feet bgs). The samples were also submitted to AMEC in Albuquerque, New Mexico. A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.
- To support the delineation investigation, six soil samples were collected from borings B-1 and B-2 and five soil samples were collected from borings B-3 and B-4. Samples were submitted to Severn Trent Laboratories (STL) in Austin, Texas for laboratory analysis of BTEX and TPH. In the absence of intervals that exhibited crude oil impacts, (e.g., staining, odor, and PID readings), samples were selected spatially with depth to provide vertical profile information (e.g., approximately one sample per 20 foot interval). The deepest sample represented the interval immediately above the saturated zone.
- Groundwater was encountered in all soil borings; therefore, the soil borings were converted to monitoring wells (MW-1 through MW-4). The monitoring wells were developed, and samples were collected no sooner than 24 hours after well development. Development consisted of surging and bailing with the drilling rig. Prior to sampling, the wells were purged using a low-flow pumping technique in accordance with EPA standards. Upon stabilization of field parameters and the removal of at least three well volumes, the well water was sampled from dedicated discharge tubing.

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- The wells were surveyed for top-of-casing elevation, and water levels were measured to the nearest 0.01 inch with an electronic water level indicator to facilitate determination of groundwater flow direction.

2.2 South Site

- Four soil borings (B-5 through B-8) were installed to total depths of 51.5 feet bgs (Figure 4). Neither bedrock nor groundwater were encountered in any of the borings installed at the South Site.
- SPT was performed every 5 feet.
- Split spoon samples were collected every 5 feet for lithologic description and field screening (i.e., headspace analysis) with a properly calibrated PID for the presence of VOC vapors. One sample collected per 10-foot interval was submitted to AMEC in Albuquerque, New Mexico for analysis of grain size. Atterberg Limits were also proposed in the August 2006 Work Plan; however, the samples did not contain sufficient amounts of clay. Therefore, Atterberg Limits testing was not performed.
- For geotechnical purposes, two undisturbed samples were collected per soil boring for direct shear tests, with one sample representing the upper 25 feet bgs and the second sample representing the interval between 25 and 50 feet bgs. The samples were also submitted to AMEC in Albuquerque, New Mexico. A separate technical memorandum will be submitted that will include the results of the geotechnical sampling and slope stability analysis.
- To support the delineation investigation, three soil samples per boring were submitted for laboratory analysis of BTEX and TPH. In the absence of intervals that exhibited crude oil impacts, (e.g., staining, odor, and PID readings), samples were selected spatially with depth to provide vertical profile information (e.g., approximately one sample per 20 foot interval).

URS retained the services of WDC Exploration, a State of New Mexico-licensed driller, for boring installation and monitoring well completion. Borings were installed at the locations shown on Figures 3 (North Site) and 4 (South Site) utilizing hollow stem auger (HSA) drilling. Locations were selected to be close enough to the existing excavation edge to acquire geotechnical information from the adjacent area where heavy equipment operation and earth-moving are anticipated, but far enough away that monitoring wells completed in the borings will likely not need to be properly plugged prior to future earth-moving activities. Boring logs, including well completion details, are included in Appendix A.

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Monitoring wells were constructed of 2-inch diameter, flush-threaded polyvinyl chloride (PVC) casing and machine-slot 0.010-inch screen, and the annular space was completed with an appropriate sandpack, bentonite seal, and cement grout. The wells were constructed so that the screened interval intersects the top of the saturated zone. The saturated zone is unconfined; therefore, a 15-foot screen was used with approximately 10 feet of screen below the water table and approximately 5 feet of screen above the water table. Surface completion for monitoring wells MW-1, MW-2, and MW-4 consisted of concrete pads with metal upright well covers. However, MW-3 was not installed with a concrete pad because it will likely be within the excavation zone during future earth-moving activities. If feasible, well MW-3 will be protected during excavation modification for future use. If the integrity of well MW-3 cannot be protected, it will be properly plugged and abandoned prior to earth-moving activities.

Soil borings at the South Site were properly plugged and abandoned with cement grout in accordance with New Mexico regulations.

All non-dedicated drilling, sampling, and down-hole equipment were decontaminated prior to the initiation of investigation activities. Drilling equipment was decontaminated using a steam cleaner, and all sampling equipment was scrubbed with a non-phosphate detergent (Liquinox) and distilled water wash, rinsed with distilled water, and allowed to air dry before being reused. All samples were handled with fresh nitrile gloves.

Soil and groundwater samples were collected in laboratory-supplied containers using standard industry protocols. Samples were continuously kept in the ice-filled cooler from collection until delivery to the laboratory to be maintained at a temperature of approximately four degrees Celsius (4ºC). Soil and groundwater samples selected for laboratory analysis were transported to the laboratory under appropriate chain-of-custody protocol.

Soil and groundwater samples were analyzed in accordance with NMOCD guidance. Both soil and groundwater samples collected for the purposes of determining residual crude oil impacts were analyzed for TPH by EPA Method 8015 for gasoline- and diesel-range organics (GRO and DRO). Soil and groundwater samples were also analyzed for BTEX by EPA Method 8260. Although the August 2006 Work Plan proposed analyzing groundwater samples for polynuclear aromatic hydrocarbons (PAHs), due to laboratory

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error, the samples were not analyzed for PAHs. However, due to the lack of COC detections, further groundwater analysis of PAHs does not appear warranted at this time. Groundwater samples will be analyzed for PAHs in future sampling events conducted at the site. In accordance with NMOCD guidance, groundwater samples were also analyzed for total dissolved solids (TDS) by EPA Method 160.1, major cations and anions by appropriate EPA methods, and dissolved heavy metals by various EPA 7000 series methods.

URS proposed the use of EPA Methods 8260B and 8270C, in lieu of EPA Methods 8020 and 8100 mentioned in the 1993 NMOCD guidance document, respectively, during a meeting with the NMOCD District 1 Office in Hobbs on August 15, 2006. At that time, Mr. Larry Johnson of the NMOCD District 1 Office in Hobbs verbally approved the use of these methods for BTEX and PAH analyses. Mr. Johnson approved the Work Plan, which included the alternate methods, in an email dated September 5, 2006. Note: the samples collected during the September 2006 field effort were not analyzed for PAHs.

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3.0 SITE CHARACTERISTICS

3.1 Geology

Regional Geology

According to the Hobbs Sheet of the Geologic Atlas of Texas (includes the southeast portion of New Mexico), the area is underlain by Quaternary-aged colluvial slopewash and talus deposits of sands, silts, and gravels from the Ogallala Formation of the caprock to the north. These colluvial deposits are reportedly up to 20 feet thick. The Gatuña Formation, which consists primarily of fine friable sand, is believed to underlie the area, with these surficial deposits ultimately overlying Triassic- or Permian-aged bedrock of claystone, siltstone, and sandstone. The applicable section of the geologic map showing the site location is included on Figure 5. A representative cross-section of the North Site is depicted on Figure 6.

Site Geology

The North and South Sites are underlain by moderately well sorted very fine to fine sand with weak to poor calcareous cementation and lenses of caliche and caliche gravel. The moderately well sorted sand extends to depths of approximately 50-60 feet bgs, where alternating areas of poorly sorted and moderately well sorted sand are present. At depths of approximately 40-60 feet bgs, the sand includes pockets of well-cemented lithified sandstone. At approximately 120 feet bgs silty sand may be present above gravelly sand or sand with trace amounts of gravel. While removing the augers from MW-2/B-2, the bottom of the lead auger was observed to have dark red silty clay.

Observations of lithology through the initial investigated depth of 132.5 feet bgs at the North Site and 51.5 feet bgs at the South Site are consistent with the colluvial deposits and Gatuña Formation. No bedrock was observed in the soil borings installed at the North and South Sites. The boring logs are provided in Appendix A.

3.2 Hydrogeology

State well records indicate that depth to water in registered water wells in the area are on the order of 170 to 190 feet bgs; however, the coordinates of these wells indicate they are located to the north of the site at positions atop the caprock, which appears to be approximately 75-100 feet higher in elevation than the site. State well records were also identified for the property to the south, owned by Mr. Caviness, but the well records did

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not include depth to water information. Mr. Caviness recalled that depth to groundwater in one of his water wells located approximately one mile south of the sites was approximately 125 feet bgs.

Based on the fluid levels measured on September 29, 2006, depth of groundwater beneath the North Site ranges from approximately 115-122 feet bgs (approximately 118-125 feet below the top of casing), with groundwater flow to the south-southwest. The hydraulic gradient is approximately 0.005 feet/feet. The fluid level measurements are shown on Table 1, and the groundwater potentiometric surface map is included as Figure 7.

Groundwater was not encountered in any of the borings installed at the South Site. No non-aqueous phase liquid (NAPL) was observed in any of the monitoring wells installed at the North Site. Additionally, no petroleum sheen or odor was observed in groundwater samples collected from the North Site monitoring wells.

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4.0 RESULTS

This section provides results for the environmental samples collected during the initial exploratory soil borings installed in September 2006. Results from the grain size analyses indicate that the site is predominantly underlain by silty sand. A separate technical memorandum will be submitted that will include the results of the geotechnical and slope stability analyses. A work plan for excavation modification and further source area characterization will also be prepared for review and approval.

4.1 Soil

Soil sample analytical results are summarized in Table 2. The data validation report (DVR) and laboratory analytical reports are included in Appendix C. The results indicate that all of the data are useful for their intended purpose.

The BTEX compounds and TPH-GRO were not detected in the soil samples collected from the North and South Sites. TPH-DRO was detected in all samples collected from the North and South Sites; however, TPH-DRO was also reported in the method blank at similar concentrations resulting in these data being qualified with a B flag. Based on this, the presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

The lack of detections of analytes in soil, along with the lack of field evidence of impacts (e.g, visual, PID readings), indicates that the release has not migrated laterally to the locations of the monitoring wells and that the maximum lateral extent of impacts to soil has been delineated at the North Site. The lack of detections and field evidence of impacts in the soil samples collected immediately above the saturated zone support the indication of little to no significant impacts to groundwater (see below). The maximum lateral extent of impacts to soil has been delineated at the South Site from the surface to a depth of 51.5 feet bgs.

4.2 Groundwater

Groundwater sample analytical results are summarized in Table 3 (BTEX and TPH), Table 4 (inorganics), and Table 5 (other parameters). The DVR and laboratory

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analytical reports are included in Appendix C. The results indicate that all of the data are useful for their intended purpose.

Benzene, ethylbenzene, xylenes, and TPH-GRO were not detected in the groundwater samples collected from the North Site. Toluene was detected at a concentration of 1.2 micrograms per liter (µg/L) from MW-3. This concentration is below the New Mexico Water Quality Control Commission Groundwater Standard of 750 µg/L. MW-3 is upgradient from the release point and the sample collected from downgradient well MW-1 was reported as non-detect for all BTEX compounds. TPH-DRO was detected in all groundwater samples collected from the North Site; however, TPH-DRO was also reported in the method blank at similar concentrations resulting in these data being qualified with a "B" flag. Based on this, the presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment, this issue is further discussed in the DVR (Appendix C).

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5.0 CONCLUSIONS

No evidence of impacts was observed at the soil borings installed at the North and South Sites. The lack of detections of analytes in soil, along with the lack of field evidence of impacts, indicates that the release has not migrated laterally to the location of the monitoring wells at the North Site and the soil borings at the South Site. The maximum lateral extent of impacts to soil has been delineated at the North Site. The maximum lateral extent of impacts to soil has been delineated at the South Site from the surface to a depth of 51.5 feet bgs.

Toluene was detected at a concentration of 1.2 µg/L from MW-3. This concentration is below the New Mexico Water Quality Control Commission Groundwater Standard of 750 µg/L. MW-3 is upgradient from the release point and the sample collected from downgradient well MW-1 was reported as non-detect for all BTEX compounds. No other detections of analytes were reported in groundwater samples.

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Table 1
Summary of Soil Analytical Results From Initial Response Action Activities
Initial Exploratory Soil Boring Program Maljamar Pipeline Release Site (NMOCD 1-RP No. 956)
Maljamar, New Mexico

Sample Location	Sample ID	Date	Direction from Release Point[1]	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-DRO	TPH-GRO	Total TPH
North Site											
1	Release Point 27’	1/10/2006	@ Release Point	27	--	--	--	--	17,600	19,700	37,300
2	S. Bottom 30’	1/24/2006	40’ S	30	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
3	S. Wall 17’	1/24/2006	55’ S	17	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
4	N. Bottom 30’	1/24/2006	5’ N	30	7.09	43.4	26.7	53.1	4,150	2,390	6,540
5	N. Wall 15’	1/24/2006	30’ N	15	0.124	7.83	8.72	572	17.54	1,490	2,062
6	B1 (19-19.5)	2/1/2006	75’ N	19-19.5	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
7	B1 (29-31)	2/1/2006	75’ N	29-31	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
8	B1 (39-40)	2/1/2006	75’ N	39-40	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
9	10’ S @ 32’	3/17/2006	10’ S	32	--	--	--	--	4,980	2,770	7,750
10	15’ N @ 33’	3/17/2006	15’ N	33	--	--	--	--	7,910	5,350	13,260
11	02 Bottom 44’ 30’ S	3/21/2006	30’ S	44	22.7	159	95.7	154	1,780	1,710	3,490
12	02 Bottom 44’ 15’ S	3/21/2006	15’ S	44	81.2	267	158	194	4,780	3,020	11,920
13	02 Bottom 44’ 10’ N	3/21/2006	10’ N	44	0.068	3.10	3.92	6.45	652	161	813
14	02 Wall 39’, 25’ S & 10’ W	3/21/2006	25’ S, 10’W	39	17.1	129	91.8	120	2780	1,260	4,040
15	02 Wall 39’ 38’ S	3/21/2006	38’ S	39	<0.005	0.006	<0.005	<0.015	72.0	<10.0	72.0
16	02 Wall 39’, 25’ S & 9’ E	3/21/2006	25’ S & 9’E	39	<0.005	<0.005	<0.005	<0.015	22.7	<10.0	22.7
17	Release 50’ Bottom	3/24/2006	@ Release	50	106	416	195	239.3	8,320	11,540	19,900

Notes:
[1] Pipeline oriented approximately N-S.
All concentrations shown in milligrams per kilogram.
-- Not analyzed for BTEX.
ND - Not detected.
Sample locations 1-5 were removed during subsequent excavation activities.
BTEX analysis by EPA Method 8021B.
TPH analysis by EPA Method 8015 Modified.
Results taken from CRA investigation.

Table 2
Groundwater Measurements Table
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Top of PVC Elevation (ft amsl)	Top of Screen Elevation (ft amsl)	Bottom of Screen Elevation (ft amsl)	DTW (ft btoc)	Groundwater Elevation (ft amsl)
MW-1	4027.26	3912.76	3897.76	119.73	3907.53
MW-2	4026.71	3913.21	3898.21	118.45	3908.26
MW-3	4031.86	3914.36	3899.36	122.71	3909.15
MW-4	4032.80	3915.30	3900.30	124.76	3908.04

Notes:
Groundwater survey performed on 9/29/2006.
DTW = Depth to top of water below top of PVC casing.
ft amsl = feet above mean sea level.
ft btoc = feet below top of casing.

Table 3
Summary of Soil Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Boring	Depth (feet bgs)	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
North Site									
B-1	20-21.5	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 J	<0.10
B-1	45-46.5	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4	<0.10
B-1	80-81.5	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B-1	95-96.5	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-1	115-116.5	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1	<0.11
B-1	120-121.5	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7	<0.12
B-2	15-16.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	40-41.5	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10
B-2	70-71.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	80-81.5	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3	<0.10
B-2	105-106.5	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99	<0.10
B-2	115-116.5	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2	<0.12
B-3	20-20.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99	<0.10
B-3	45-46.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9	<0.10
B-3	70-71.5	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9	<0.10
B-3	95-96.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5	<0.10
B-3	120-121.5	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5	<0.10
B-4	25-26.5	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96	<0.10
B-4	50-51.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-4	75-76.5	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91	<0.10
B-4	95-96.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89	<0.10
B-4	120-121.5	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91	<0.11
South Site									
B-5	25-26.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0	<0.10
B-5	35-36.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.11
B-5	50-51.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92	<0.10
B-6	20-21.5	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0	<0.10
B-6	35-36.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98	<0.10
B-6	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9	<0.10
B-7	25-26.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97	<0.10
B-7	35-36.5	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1	<0.10
B-7	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5	<0.10
B-8	25-26.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98	<0.10
B-8	35-36.5	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4	<0.11
B-8	50-51.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10

Notes:
All depths shown in feet below ground surface.
All concentrations shown in milligrams per kilogram.
Results and reporting limits have been adjusted by the laboratory for dry weight.
-- = Sample not analyzed for indicated parameter.
bgs - below ground surface.
TPH-DRO results are flagged “B” for method blank contamination. With the exception of samples B-1 (45-46.5), B-6 (50-51.5), and B-7 (50-51.5), the TPH-DRO results are flagged “J” because the result is less than the reporting limit.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

Table 4
Summary of Groundwater Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
North Site							
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062	<0.10

Notes:
All concentrations shown in milligrams per liter.
TPH-DRO results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit, respectively.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

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Table 5
Summary of Groundwater Analytical Results - Inorganics
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
North Site											
MW-1	09/28/06	0.025	0.0061	0.086	0.069	<0.0020	57.7	0.0021	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021	0.0035	0.10	0.065	<0.0020	66.3	0.0025	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026	0.0033	0.12	0.064	<0.0020	59.3	0.0033	<0.050	<0.025	<0.10

Well Number	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
North Site												
MW-1	09/28/06	<0.0030	13.7	0.014	<0.00020	0.0041	0.0050	4.1	<0.0050	<0.0050	30.5	0.0093
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025	0.016	19.2	<0.0050	<0.0050	145	0.014
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057	0.0081	5.0	<0.0050	<0.0050	31.8	0.0077
MW-4	09/29/09	<0.0030	11.7	0.014	<0.00020	0.0074	0.0071	5.3	<0.0050	<0.0050	28.7	0.0054

Notes:

All concentrations shown in milligrams per liter.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
Aluminum, molybdenum, and zinc results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit.
Arsenic and chromium results from MW-1, MW-3, and MW-4, manganese results from MW-1 and MW-4, all nickel results, and the potassium result from MW-1 are flagged with “J” because the result is below the detection limit.

Table 6
Summary of Groundwater Analytical Results - Other Parameters
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD RP-1 No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
North Site						
MW-1	9/28/2006	49.6	0.60	2.8	37.9	357
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66	2.9	32.7	303

Notes:
All concentrations shown in milligrams per liter.
TDS - Total dissolved solids.
Fluoride results from MW-1, MW-3, and MW-4 and chloride results from MW-1 are flagged with “J” because the result is less than the reporting limit.

FIGURES

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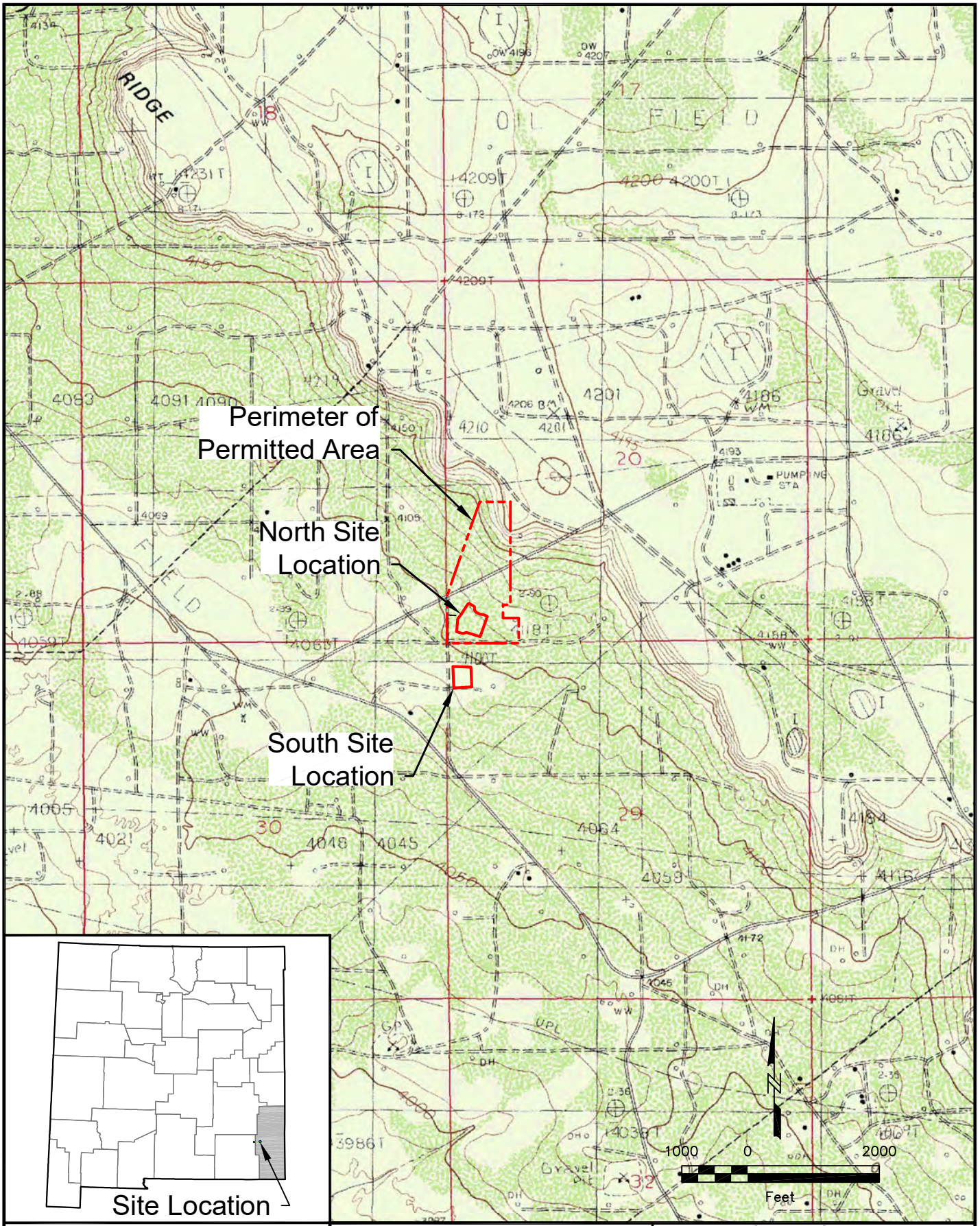

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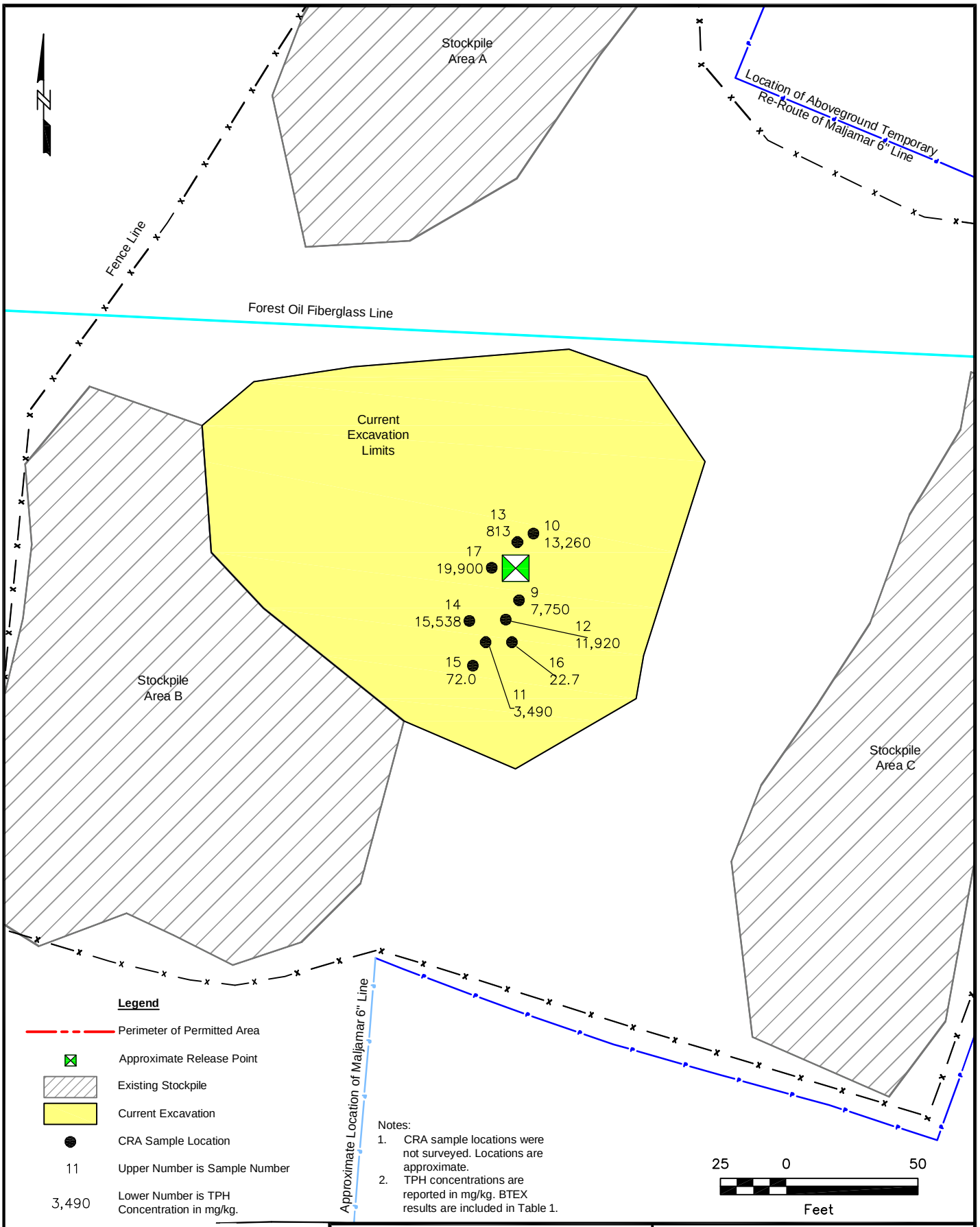
BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

DATE: DRWN:

Site Location Map
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 1



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Maljamar, New Mexico

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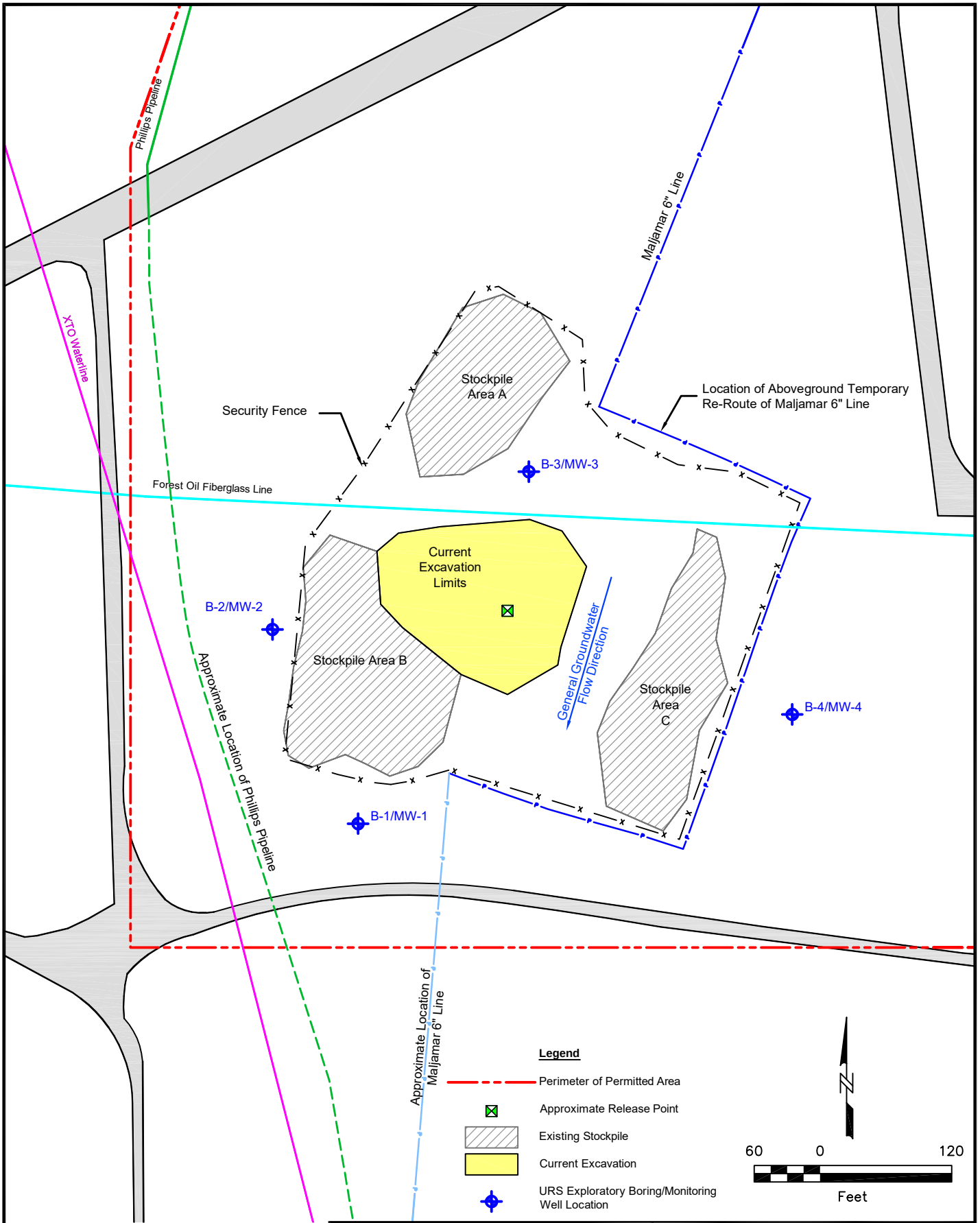
TPH Results From Initial Response Activities - North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 2



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Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

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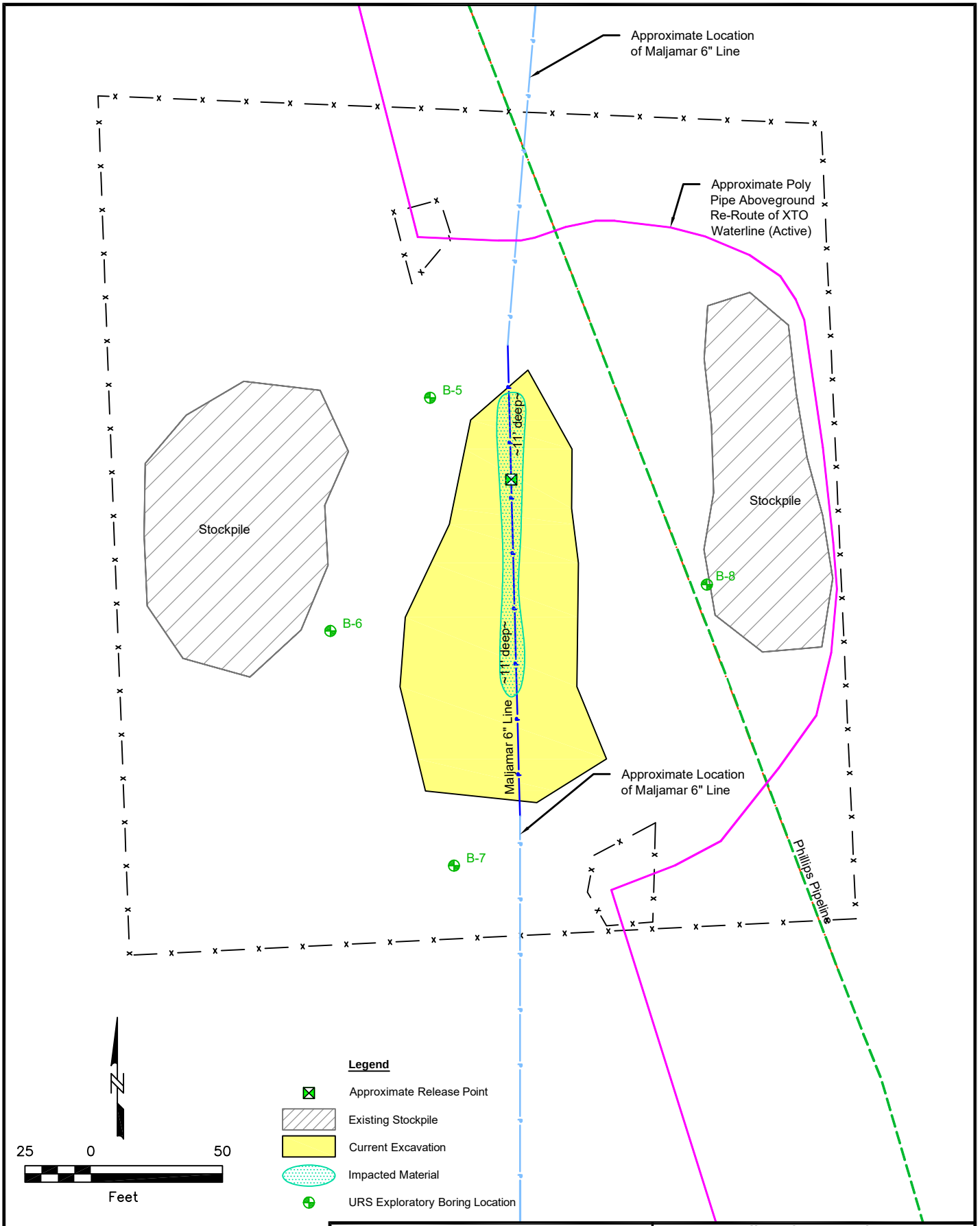
Soil Boring/Monitoring Well Locations
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 3

File: Q:\BP Pipeline\Maljamar_OCD 1-RP No 956\Drawings\Tech_Memo_1106\Tech_Memo_Figures.dwg Layout: Fig 3 Plotted: Nov 29, 2006 - 3:03pm



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BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

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Soil Boring Locations
South Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 4

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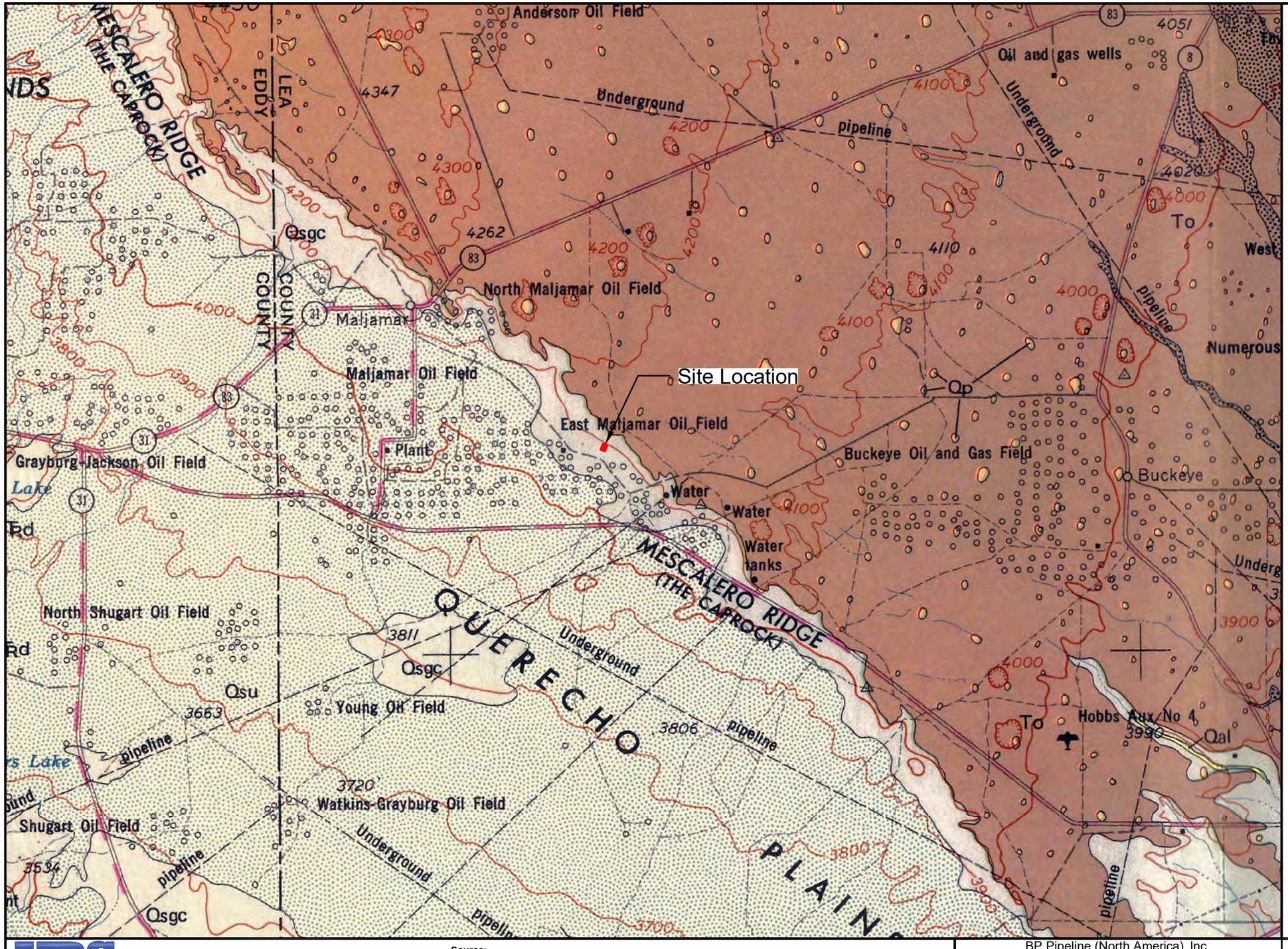

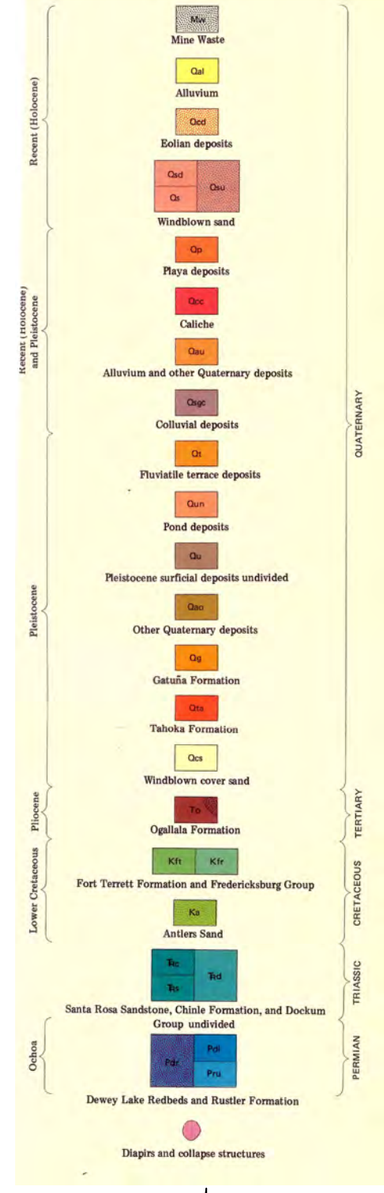

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Source:
Geologic Atlas of Texas, Hobbs Sheet, 1976.

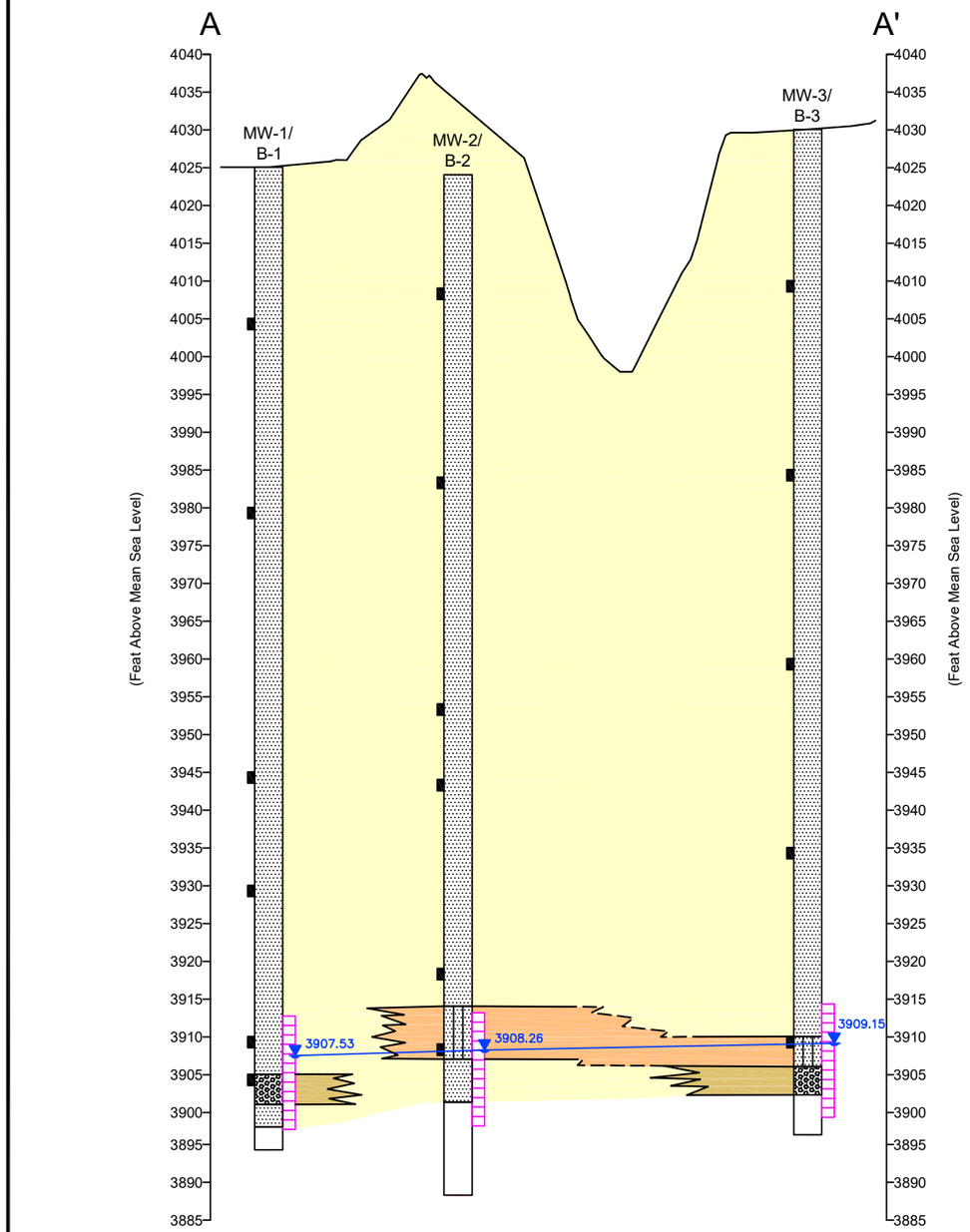
BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMODC 1-RP No. 956
Maljamar, New Mexico

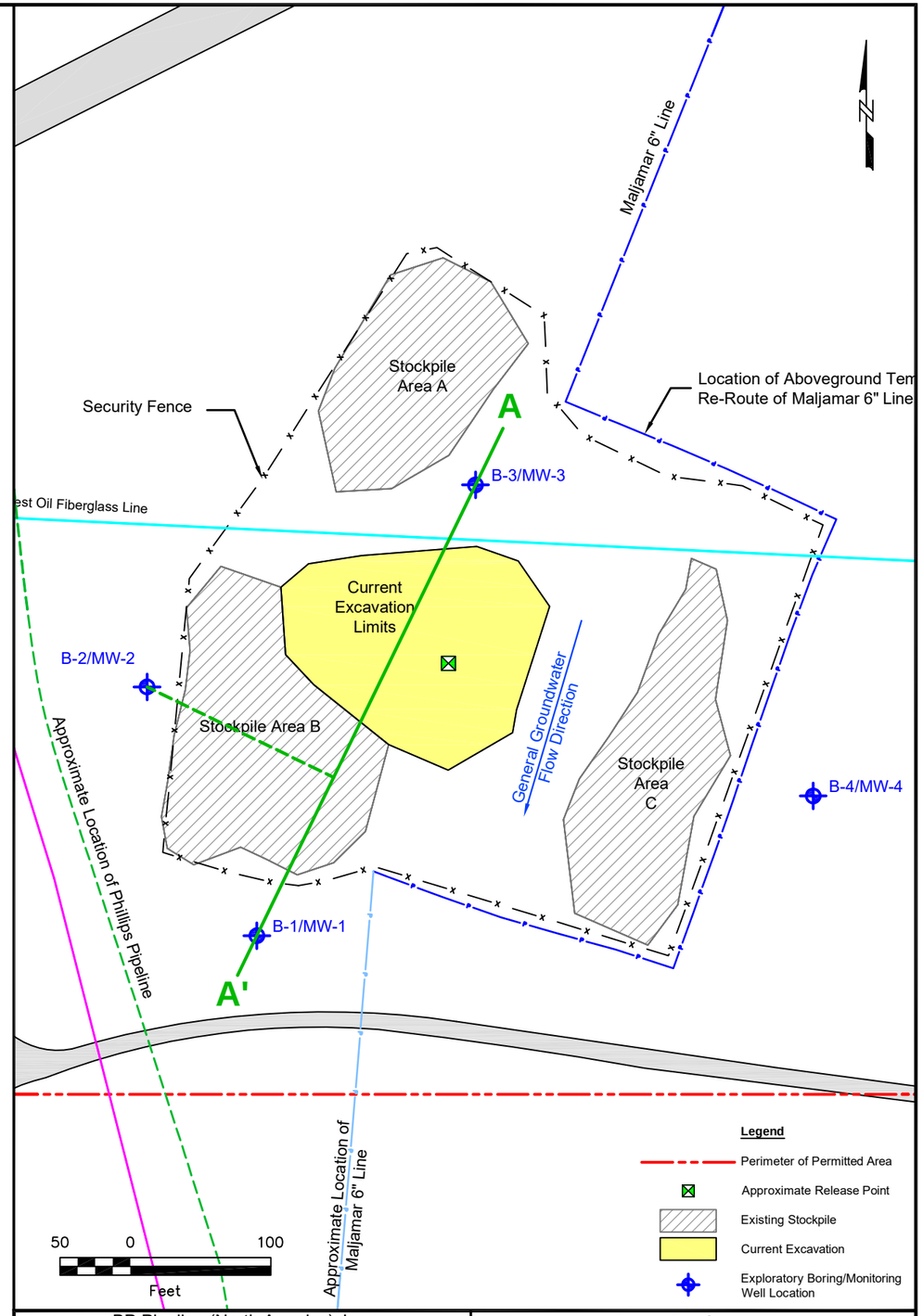
DATE: | DRWN:

Geologic Map
Initial Exploratory Soil Boring Program
Technical Memorandum

Fig 4 GAT Map.dwg 11/13/06 - AUS

Figure 5





50 0 100

Horizontal Scale in Feet
Vertical Exaggeration 5X

Legend

Lithostratigraphic Units

- Sand
- Silty Sand
- Gravelly Sand

Soil Types

- Sand
- Silty Sand
- Gravelly Sand
- Not Sampled
- Water Level
- Groundwater Elevation
- Well Screen
- Soil Sample Location Submitted for Laboratory Analysis
- Contact; Dashed Where Inferred

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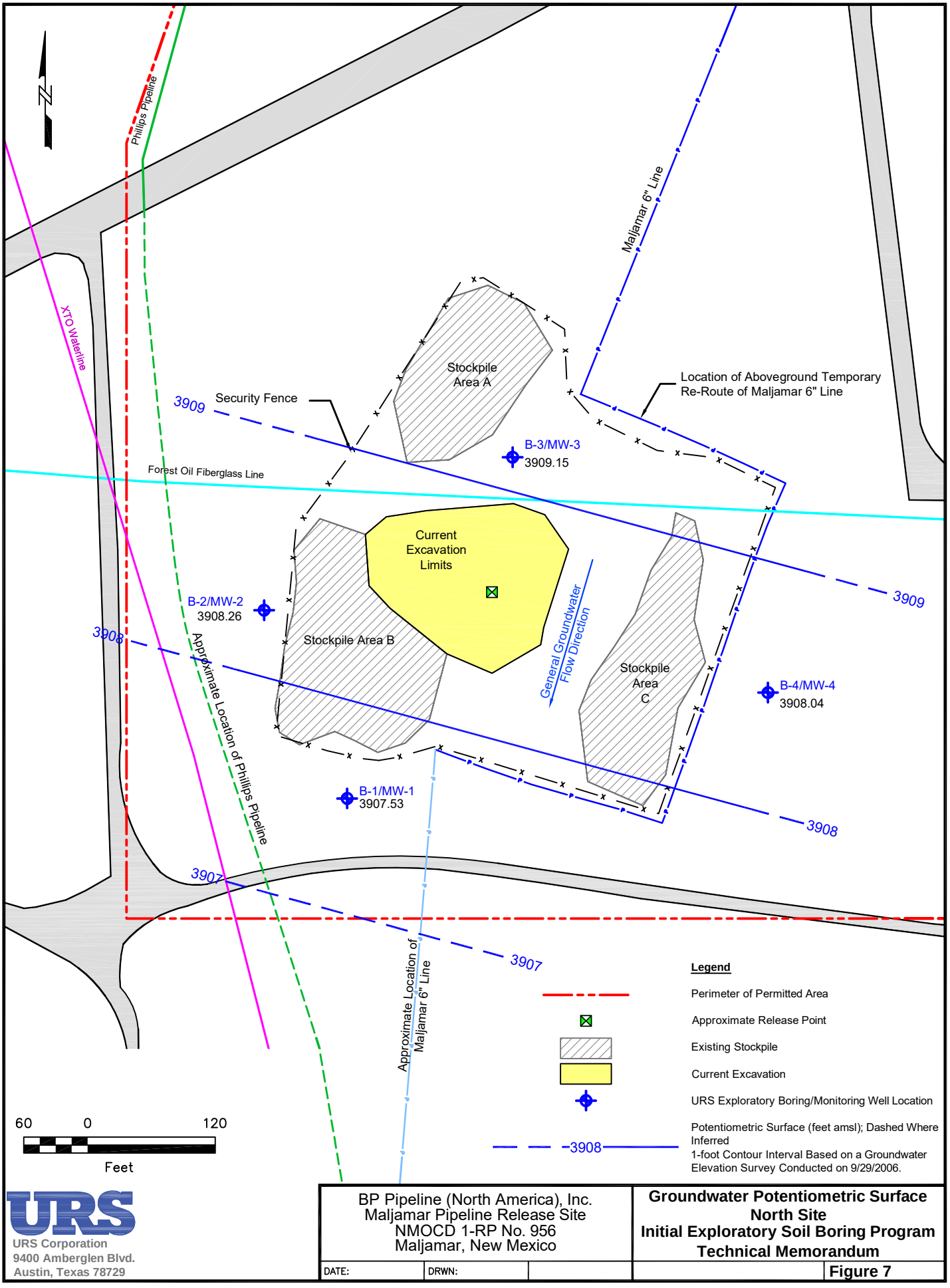
BP Pipeline (North America), Inc.
Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

Cross-Section A-A'
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

DATE: | DRWN: | Tech_Memo_Figures.dwg 11/29/06 - AUS | **Figure 6**



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Maljamar Pipeline Release Site
NMOCD 1-RP No. 956
Maljamar, New Mexico

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Groundwater Potentiometric Surface
North Site
Initial Exploratory Soil Boring Program
Technical Memorandum

Figure 7

TABLES

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Table 1
Summary of Soil Analytical Results From Initial Response Action Activities
Initial Exploratory Soil Boring Program Maljamar Pipeline Release Site (NMOCD 1-RP No. 956)
Maljamar, New Mexico

Sample Location	Sample ID	Date	Direction from Release Point[1]	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-DRO	TPH-GRO	Total TPH
North Site											
1	Release Point 27’	1/10/2006	@ Release Point	27	--	--	--	--	17,600	19,700	37,300
2	S. Bottom 30’	1/24/2006	40’ S	30	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
3	S. Wall 17’	1/24/2006	55’ S	17	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0
4	N. Bottom 30’	1/24/2006	5’ N	30	7.09	43.4	26.7	53.1	4,150	2,390	6,540
5	N. Wall 15’	1/24/2006	30’ N	15	0.124	7.83	8.72	572	17.54	1,490	2,062
6	B1 (19-19.5)	2/1/2006	75’ N	19-19.5	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
7	B1 (29-31)	2/1/2006	75’ N	29-31	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
8	B1 (39-40)	2/1/2006	75’ N	39-40	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.0	<50.0
9	10’ S @ 32’	3/17/2006	10’ S	32	--	--	--	--	4,980	2,770	7,750
10	15’ N @ 33’	3/17/2006	15’ N	33	--	--	--	--	7,910	5,350	13,260
11	02 Bottom 44’ 30’ S	3/21/2006	30’ S	44	22.7	159	95.7	154	1,780	1,710	3,490
12	02 Bottom 44’ 15’ S	3/21/2006	15’ S	44	81.2	267	158	194	4,780	3,020	11,920
13	02 Bottom 44’ 10’ N	3/21/2006	10’ N	44	0.068	3.10	3.92	6.45	652	161	813
14	02 Wall 39’, 25’ S & 10’ W	3/21/2006	25’ S, 10’W	39	17.1	129	91.8	120	2780	1,260	4,040
15	02 Wall 39’ 38’ S	3/21/2006	38’ S	39	<0.005	0.006	<0.005	<0.015	72.0	<10.0	72.0
16	02 Wall 39’, 25’ S & 9’ E	3/21/2006	25’ S & 9’E	39	<0.005	<0.005	<0.005	<0.015	22.7	<10.0	22.7
17	Release 50’ Bottom	3/24/2006	@ Release	50	106	416	195	239.3	8,320	11,540	19,900

Notes:
[1] Pipeline oriented approximately N-S.
All concentrations shown in milligrams per kilogram.
-- Not analyzed for BTEX.
ND - Not detected.
Sample locations 1-5 were removed during subsequent excavation activities.
BTEX analysis by EPA Method 8021B.
TPH analysis by EPA Method 8015 Modified.
Results taken from CRA investigation.

Table 2
Groundwater Measurements Table
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Top of PVC Elevation (ft amsl)	Top of Screen Elevation (ft amsl)	Bottom of Screen Elevation (ft amsl)	DTW (ft btoc)	Groundwater Elevation (ft amsl)
MW-1	4027.26	3912.76	3897.76	119.73	3907.53
MW-2	4026.71	3913.21	3898.21	118.45	3908.26
MW-3	4031.86	3914.36	3899.36	122.71	3909.15
MW-4	4032.80	3915.30	3900.30	124.76	3908.04

Notes:
Groundwater survey performed on 9/29/2006.
DTW = Depth to top of water below top of PVC casing.
ft amsl = feet above mean sea level.
ft btoc = feet below top of casing.

Table 3
Summary of Soil Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Boring	Depth (feet bgs)	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
North Site									
B-1	20-21.5	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 J	<0.10
B-1	45-46.5	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4	<0.10
B-1	80-81.5	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B-1	95-96.5	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-1	115-116.5	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1	<0.11
B-1	120-121.5	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7	<0.12
B-2	15-16.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	40-41.5	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10
B-2	70-71.5	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.10
B-2	80-81.5	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3	<0.10
B-2	105-106.5	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99	<0.10
B-2	115-116.5	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2	<0.12
B-3	20-20.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99	<0.10
B-3	45-46.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9	<0.10
B-3	70-71.5	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9	<0.10
B-3	95-96.5	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5	<0.10
B-3	120-121.5	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5	<0.10
B-4	25-26.5	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96	<0.10
B-4	50-51.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2	<0.10
B-4	75-76.5	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91	<0.10
B-4	95-96.5	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89	<0.10
B-4	120-121.5	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91	<0.11
South Site									
B-5	25-26.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0	<0.10
B-5	35-36.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1	<0.11
B-5	50-51.5	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92	<0.10
B-6	20-21.5	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0	<0.10
B-6	35-36.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98	<0.10
B-6	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9	<0.10
B-7	25-26.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97	<0.10
B-7	35-36.5	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1	<0.10
B-7	50-51.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5	<0.10
B-8	25-26.5	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98	<0.10
B-8	35-36.5	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4	<0.11
B-8	50-51.5	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1	<0.10

Notes:
All depths shown in feet below ground surface.
All concentrations shown in milligrams per kilogram.
Results and reporting limits have been adjusted by the laboratory for dry weight.
-- = Sample not analyzed for indicated parameter.
bgs - below ground surface.
TPH-DRO results are flagged “B” for method blank contamination. With the exception of samples B-1 (45-46.5), B-6 (50-51.5), and B-7 (50-51.5), the TPH-DRO results are flagged “J” because the result is less than the reporting limit.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

Table 4
Summary of Groundwater Analytical Results - BTEX and TPH
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
North Site							
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062	<0.10

Notes:
All concentrations shown in milligrams per liter.
TPH-DRO results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit, respectively.
The presence of TPH-DRO in site samples is the result of laboratory contamination and is not indicative of a release to the environment. This issue is further discussed in the DVR (Appendix C).

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Table 5
Summary of Groundwater Analytical Results - Inorganics
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD 1-RP No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
North Site											
MW-1	09/28/06	0.025	0.0061	0.086	0.069	<0.0020	57.7	0.0021	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021	0.0035	0.10	0.065	<0.0020	66.3	0.0025	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026	0.0033	0.12	0.064	<0.0020	59.3	0.0033	<0.050	<0.025	<0.10

Well Number	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
North Site												
MW-1	09/28/06	<0.0030	13.7	0.014	<0.00020	0.0041	0.0050	4.1	<0.0050	<0.0050	30.5	0.0093
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025	0.016	19.2	<0.0050	<0.0050	145	0.014
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057	0.0081	5.0	<0.0050	<0.0050	31.8	0.0077
MW-4	09/29/09	<0.0030	11.7	0.014	<0.00020	0.0074	0.0071	5.3	<0.0050	<0.0050	28.7	0.0054

Notes:

All concentrations shown in milligrams per liter.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
Aluminum, molybdenum, and zinc results are flagged with “B” and “J” for method blank contamination and because the result is less than the reporting limit.
Arsenic and chromium results from MW-1, MW-3, and MW-4, manganese results from MW-1 and MW-4, all nickel results, and the potassium result from MW-1 are flagged with “J” because the result is below the detection limit.

Table 6
Summary of Groundwater Analytical Results - Other Parameters
Initial Exploratory Soil Boring Program
Maljamar Pipeline Release Site
(NMOCD RP-1 No. 956)
Maljamar, New Mexico

Well Number	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
North Site						
MW-1	9/28/2006	49.6	0.60	2.8	37.9	357
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66	2.9	32.7	303

Notes:
All concentrations shown in milligrams per liter.
TDS - Total dissolved solids.
Fluoride results from MW-1, MW-3, and MW-4 and chloride results from MW-1 are flagged with “J” because the result is less than the reporting limit.

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APPENDIX A
SOIL BORING LOGS

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SOIL BORING AND WELL LOG

Boring/Well ID: B-1 / MW-1 | **Total Depth:** 130 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 13-14, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Airknife for utility clearance, logged from surface, pale brown (10 YR 6/3), tan fine loose sand, soft, friable, nonplastic, some silt, trace caliche nodules, moderately well sorted, dry, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	5 7 10	0	SP	SAND	Very pale brown (10 YR 7/3), loose, dry, moderately well sorted, very fine to fine sand with some silt, no odor, no staining	Grout to 110.5'
16	17/18	6 9 15	0	SP	SAND	Same as above, no odor, no staining	
20	18/18	4 20 28	0	SP	SAND	As above, trace silt, slightly moist, no odor, no staining	
26	12/12	19 50	0	SP	SAND	As above with caliche nodules, slightly moist, no odor, no staining	
30	17/18	17 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
36	18/18	15 29 50	0	SP	SAND	35.5', 1" Caliche gravel 36.0', 2" White caliche 38', Hard caliche layer (driller note)	
40	12/18	50	0	SP	SAND	Same as above, no odor, no staining	
46	9/18	42 50	0	SP	SAND	As above, trace 1" gravel, no odor, no staining	
50	16/18	40 50	0	SW	SAND	Light yellowish brown (10 YR 5/4), dense, some silt, trace (2%) fine to medium gravel, subangular sand is fine to medium with trace coarse sand, poorly sorted, slightly moist 50.5', Color change to brown (7.5 YR 5/4), no odor, no staining	
56	0/18	34 50	0			No recovery 56-57', Caliche layer (driller note) 58-59', Caliche layer (driller note)	
60	9/18	50	0	SW	SAND	Brown (7.5 YR 5/4), some silt, some friable sandstone; fine to medium sand, dense, trace fine subangular gravel, poorly sorted	
64							

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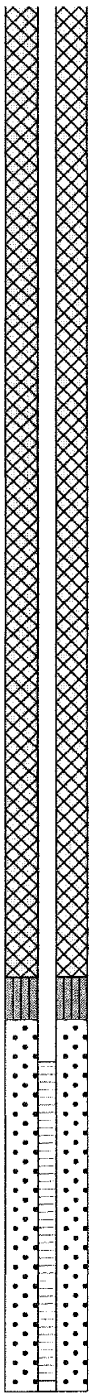
URS

SOIL BORING AND WELL LOG

Boring/Well ID: B-1 / MW-1 | **Total Depth:** 130 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol		Lithology Description and Notes
66	4/18	50	0	SW		SAND	As above, no odor, no staining, slightly moist
68							
70	12/12	31 50	0	SW		SAND	Yellow (10 YR 7/6), very dense, slightly moist, 15% fine to medium angular to subrounded gravel, 10% silt, no odor, no staining, sand is very fine to very coarse, very poorly sorted. 70.25', Color change to brownish yellow (10 YR 6/6,) no staining, no odor. 71', <1" Green sandstone, friable, slightly moist
72							
74							
76	6/18	50	0	SW		SAND	Brownish yellow (10 YR 6/6), dense, slightly moist, no staining, no odor, fine to medium sand, trace silt, trace fine subrounded gravel 76-77.5', Caliche layer (driller note)
78							
80	6/18	50	0	SW		SAND	As above 81', Hard drilling with augers
82							
84							
86	15/18	27 50	0	SP		SAND	Pinkish gray (7.5 YR 7/2), slightly moist, weakly cemented, very dense, moderately well sorted very fine to fine sand, trace silt
88							
90	2/18	50		SP		SAND	As above
92							
94							
96	13/18	30 50	0	SP		SAND	As above except sand is fine to medium, trace fine rounded gravel, no odor, no staining, slightly moist
98							
100	9/18	30 50	0	SP SW		SAND	As above, slightly moist, no odor, no staining 100.5', Light brown (7.5 YR 6/4) very dense, slightly moist, very fine to very coarse sand, trace fine subangular gravel, very poorly sorted
102							
104							
106	14/18	39 50	0	SP		SAND	Light brown (7.5 YR 6/4), slightly moist, dense very fine to fine sand with some silt, moderately well sorted, no odor, no staining
108							
110	9/18	48 50	0	SP		SAND	As above, except color is light reddish brown (5 YR 6/4), moist
112							
114							
116	13/18	46 50	0	SP		SAND	As above except nodules of hard friable lithified sandstone (2%)
118							
120	9/18	100	0	SW		GRAVELLY SAND	Brown (7.5 YR 5/4), dense, wet, some clay and silt, fine subangular to subrounded gravel (up to 0.5 inch), no odor, no staining 120.5', Clay layer, reddish brown (5 YR 5/4), moist, stiff, trace subrounded fine gravel, no odor, no staining
122							
124							
126	6/18	NA		SW		SAND	As above, except saturated
128							
130							
132							
134							
136							
138							



Well Construction

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URS

SOIL BORING AND WELL LOG

Boring/Well ID: B-2 / MW-2 | **Total Depth:** 135 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 16-25, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, light brown (7.5 YR 6/3), loose, moderately well sorted, very fine to medium sand, trace silt and clay, dry, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	8 12 17	0	SP	SAND	Pink (7.5 YR 7/3), loose, moderately well sorted, very fine to medium sand (mostly fine sized). Caliche nodules, trace manganese nodules (1 cm) and FeOx staining, trace silt, no odor, no staining	Grout to 109.5'
16	18/18	13 24 31	0	SP	SAND	As above, except increased caliche and manganese nodules. Manganese nodules are 2 cm, weak cement, dense, slightly moist, no odor, no staining	
20	12/12	22 43	0	SP	SAND	As above, no odor, no staining	
26	18/18	24 50	0	SP	SAND	As above, very fine to medium sand (mostly medium sized)	
30	18/18	22 50	0	SP	SAND	As above, no odor, no staining	
36	18/18	13 15 31	0	SP	SAND	As above, except very dense, increased caliche cement, no odor, no staining	
40	18/18	18 30 50	0	SP	SAND	As above with trace fine caliche gravel, no odor, no staining	
46	18/18	32 50	0	SW	SAND	Pink (7.5 YR 7/4), very dense, slightly moist, poorly sorted, very fine to very coarse subangular sand, trace (2%) fine subangular gravel, 1 cm pockets of strongly cemented lithified sandstone	
50	18/18	36 42 50	0	SW	SAND	As above, except no gravel, yellow FeOx staining, sand is mostly fine sized, ranging from very fine to coarse with little silt, no odor, no staining 51.5', 0.5" hard white caliche,	
56	18/18	37 47 50	0	SW	SAND	As above with two 0.5" white hard caliche layers at 55' 55.75', 2" gravelly sand, fine to medium angular gravel (up to 1.5 cm) 56.0', sand is very fine to very coarse, subangular, mostly medium sized trace fine subangular gravel, no odor, no staining	
60	12/12	43 50	0	SP	SAND	Pinkish gray (7.5 YR 7/2), moderately well sorted, dense, slightly moist, weakly cemented, very fine to medium sand (mostly fine), trace silt, thinly bedded (1cm bedding layers)	
64							

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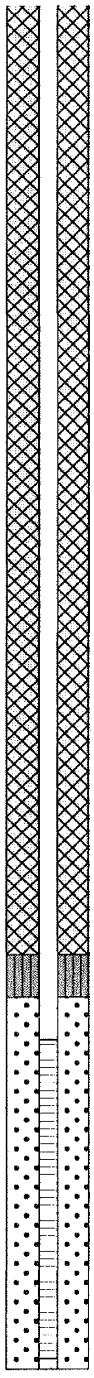
SOIL BORING AND WELL LOG

Boring/Well ID: B-2 / MW-2 | **Total Depth:** 135 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol		Lithology Description and Notes
66	18/18	43 50	0	SP		SAND	As above with trace yellow FeOx staining, trace fine subrounded gravel (green rhyolite porphyry)
68							
70	18/18	15 24 47		SP		SAND	As above, coarsening with depth, sand is mostly medium sized
72							
74							
76	18/18	34 41 50	0	SP		SAND	As above, except sand is very fine to fine (mostly fine), three 1 cm white hard caliche layers between 75-75.5', very dense, no odor, no staining
78							
80	18/18	20 25 44	0	SP CL SP		SAND CLAY SAND	80-81 as above, coarsening to very fine to medium 81-81.3 clay, reddish brown, very stiff, medium plasticity, moist, no odor, no staining 81.3' sand, pink (7.5 YR 8/3) dense, slightly moist, moderately well sorted, very fine to fine sand, little silt, no odor, no staining
82							
84							
86	18/18	37 35 50	0	SP		SAND	As above, no odor, no staining
88							
90	12/18	50	0	SP		SAND	As above, with 1 cm pockets of lithified sandstone, moist
92							
94							
96							No split spoon sample
98							
100	12/18	27 50	0	SP		SAND	Light reddish brown (5 YR 6/4), slightly moist, fine to medium sand, trace silt, trace white rounded caliche gravel, no odor, no staining
102							
104							
106	15/18	41 50	0	SP		SAND	Coarsening with depth, fine to medium sand, moist, no caliche nodules, pockets of strongly cemented sandstone
108							
110	18/18	23 50	0	SM		SILTY SAND	Reddish yellow (5 YR 6/6), moist, dense poorly sorted very fine to medium sand, trace white caliche, no odor, no staining
112							
114							
116	11/18	27 50	0	SM		SILTY SAND	As above except wet 116', Saturated gravel (driller note) 117', Gravel (driller note)
118							
120	8/18	60	0	SW		SAND	Light brown (7.5 YR 6/3), dense, saturated, poorly sorted, very fine to very coarse sand, little subangular to subrounded fine gravel, little silt and clay
122							
124							
126							
128							
130							
132							
134							
136							Dark red silty clay on lead auger, dry, very hard, little to no plasticity, no odor, no staining
138							

Well Construction



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SOIL BORING AND WELL LOG

Boring/Well ID: B-3 / MW-3 | **Total Depth:** 133 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 26-27, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, light brown (7.5 YR 6/3), dry, loose, moderately well sorted very fine to medium sand, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	12 13 24	5.5	SP	SAND	Pink (7.5 YR 7/3), dry, loose moderately well sorted very fine to fine sand, trace silt, white caliche nodules, no odor, no staining 11', black 1 cm manganese nodules	Grout to 113'
16	18/18	20 43 50	4.0	SP	SAND	As above, with increased caliche, weak cement, dense	
20	12/12	12 50	0	SP	SAND	As above	
26	18/18	18 50	0	SP	SAND	As above, except less cement, less caliche, increase manganese nodules, slightly moist, no odor, no staining	
30	18/18	24 41 50	0.7	SP	SAND	As above, except sand is fine to medium, dense, no odor, no staining	
36	18/18	24 50	0.7	SP	SAND	As above, no odor, no staining	
40	18/18	24 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
46	18/18	21 40 50	0	SP	SAND	As above with increased caliche, fine white caliche gravel	
50	12/12	15 50	0	SP	SAND	As above, with 1 cm pockets of well cemented lithified sandstone	
56	10/18	50	0	SP	SAND	As above, except sand is very fine to fine, no odor, no staining	
60	6/18	50	0	SW	SAND	60.25', Pink (7.5 YR 7/3), dense, poorly sorted, very fine to very coarse subangular to subrounded sand, trace silt, slightly moist, no odor, no staining	

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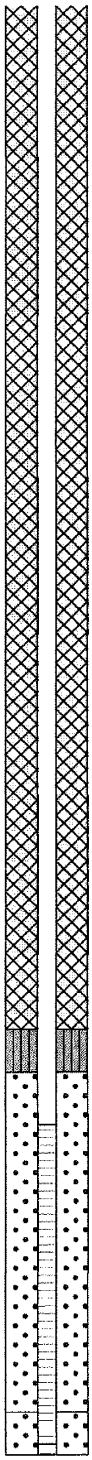
SOIL BORING AND WELL LOG

Boring/Well ID: B-3 / MW-3 | **Total Depth:** 133 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol		Lithology Description and Notes
66	18/18	27 43 50	0	SW		SAND	As above with FeOx staining, sand is mostly medium sized
70	8/18	50	0	SW		SAND	As above, with increased caliche
76	7/18	45 50	0	SP		SAND	Light brown (7.5 YR 6/3), slightly moist, dense, moderately well sorted, very fine to fine sand, no odor, no staining
80	18/18	13 43 50	0	SP		SAND	As above, except sand is fine to medium (mostly medium), red and yellow FeOx staining, no odor, no staining
86	18/18	44 50	0	SP		SAND	Same as above
90	18/18	34 50	0	SW		SAND	Pink (7.5 YR 7/4), moist, very fine to very coarse sand, (mostly medium), trace silt, trace fine subangular gravel, no odor, no staining, poorly sorted
96	18/18	21 30 50	0	SW		SAND	As above
100	18/18	28 37 50	0	SW		SAND	As above, no odor, no staining
106	18/18	30 50	0	SW		SAND	As above, no odor, no staining
110	6/18	50	0	SP		SAND	Strong brown (7.5 YR 5/6), moist, dense, moderately well sorted, very fine to fine sand, trace silt, no odor, no staining
116	9/18	50	0	SP		SAND	As above, except color is reddish yellow (7.5 YR 6/6), sand is fine to medium (mostly medium sized), no odor, no staining
120	18/18	50		SM		SILTY SAND	Yellowish red (5 YR 5/6), very moist, dense, poorly sorted, very fine to very course, subangular to subrounded sand (mostly very fine sized), no odor, no staining
126	5/18	75	0	SW		GRAVELLY SAND	Reddish brown (5 YR 4/4), saturated, dense, very fine to very coarse sand, fine subangular to subrounded gravel (up to 1 inch), no odor, no staining, estimated depth to water is 124' (driller note)
138							

Well Construction



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SOIL BORING AND WELL LOG

Boring/Well ID: B-4 / MW-4 | **Total Depth:** 135 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: North Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 27-28, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand with little silt, no odor, no staining	2" PVC well (extends above grade inside 3" steel casing)
10	18/18	4 4 7	0	SP	SAND	Pink (7.5 YR 7/3), dry, loose, moderately well sorted, very fine to fine sand, trace fines, white caliche, 1 cm black manganese nodules, no odor, no staining	Grout to 112.5'
16	18/18	15 30 40	0	SP	SAND	As above, except slightly moist, medium dense, increased white caliche gravel	
20	12/12	17 38	0	SP	SAND	As above, except sand is very fine to medium	
26	18/18	11 23 40	0	SP	SAND	As above, with weak cement, no odor, no staining, dense	
30	18/18	17 34 50	0	SP	SAND	As above, decrease in fines, no odor, no staining	
36	18/18	31 50	0	SP	SAND	As above 36', sand is very fine to fine with little fines, no odor, no staining	
40	18/18	27 50	0	SP	SAND	As above, except sand is very fine to medium (mostly medium), 1" pockets of strongly cemented lithified sandstone	
46	18/18	37 50	0	SP	SAND	As above, no odor, no staining	
50	12/12	20 50	0	SP	SAND	As above	
56	9/18	43 50	0	SP	SAND	As above, gradual color change to light brown (7.5 YR 6/4), slightly moist, no odor, no staining	
60	18/18	18 38 50	0	SP	SAND	As above, no odor, no staining	

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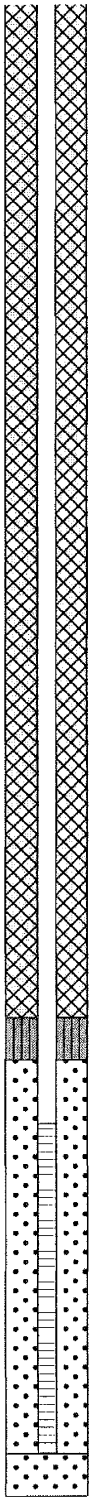
SOIL BORING AND WELL LOG

Boring/Well ID: B-4 / MW-4 | **Total Depth:** 135 feet bgs

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes
66	18/18	19 41 50	0	SW	SAND	Very pale brown (10 YR 7/3), slightly moist, very dense, very fine to very coarse, subangular to subrounded sand (mostly fine sized), 1.5" caliche layer at 65', poorly sorted, coarsening with depth 66.5', sand is hard and strongly cemented, little fine subrounded gravel (18%), gravel includes strong brown (7.5 YR 4/6) silty clay, poorly sorted
70	11/18	50	0	SP	SAND	Pink (7.5 YR 7/3), dense, moderately well sorted, very fine to medium sand (mostly fine sized), trace silt, slightly moist, no odor, no staining 70.5', 1.5" hard, strongly cemented lithified sandstone
74	18/18	40 50	0	SP	SAND	As above, with trace very course subangular sand (4%) 76', strong brown (7.5 YR 4/6) silty clay nodule (1"), no odor, no staining
78	18/18	26 50	0	SP	SAND	Light brown (7.5 YR 6/3), slightly moist, moderately well sorted, very fine to medium sand (mostly fine), no odor, no staining
82	18/18	25/50	inoper-able	SW	SAND	Pale brown (10 YR 6/3), slightly moist, dense very find to very coarse subrounded sand, trace fines, subrounded gravel, trace silt, no odor, no staining
86	18/18	31 50		SW	SAND	As above, sand is mostly medium sized, gravel up to 1 cm, includes quartzite and red clay
90	13/18	50		SW	SAND	As above, decrease in gravel
94	18/18	31 50		SW SP	SAND	As above, 100.6-100.8', sandstone, light gray (10 YR 7/2), moist, friable, no odor, no staining, 100.8-100.9', silty sand, brown (7.5 YR 5/3), loose, poorly sorted, very fine to fine sand, moist, no odor, no staining, 100.9', sand, light brown (7.5 YR 6/3), dense, moderately well sorted, very fine to fine sand, trace silt, moist, no odor, no staining, weak cement
98	10/18	36 50		SW	SAND	105-105.3', sandstone, light brown (7.5 YR 6/3), hard, dry very fine to very coarse subrounded sand, yellow FeOx staining, some fine subrounded gravel (25%), gravel is quartz, red clay, 105.3', sand, light brown, dense, moist, poorly sorted, very fine to very coarse, subrounded sand, (mostly fine sized), trace silt, no odor, no staining, yellow and red FeOx staining
102	7/18	50		SP	SAND	Brown (7.5 YR 5/4), dense, moderately well sorted, very fine to fine sand, trace silt, no odor, no staining
106	8/18	50		SP	SAND	As above, with increasing moisture
110	11/18	40 50		SP	SAND	As above, color change to strong brown (7.5 YR 4/6), increasing moisture, no odor, no staining
114	7/18	60		SP	SAND	As above, except saturated. Trace fine subrounded gravel
118						
122						
126						
130						
134						
138						



Well Construction

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URS

SOIL BORING AND WELL LOG

Boring/Well ID: B-5 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 14, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	Air knife 0-6' for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), loose, moderately well sorted very fine to fine sand, white caliche nodules, dry	
10	18/18	3 8 12	0	SP	SAND	Pink (7.5 YR 7/4), loose, moderately well sorted, very fine to fine sand, trace silt, dry, no odor, no staining, caliche nodules	
16	18/18	8 19 35	0	SP	SAND	As above, very weakly cemented, increased caliche nodules	
20	12/12	24 38	0	SP	SAND	As above, gradational color change to light brown (7.5 YR 6/4), trace black (2 mm) nodules, possibly manganese nodules	
26	18/18	19 40 50	0	SP	SAND	As above, except dense	
30	18/18	37 50	0	SP	SAND	As above 30.5', 1" hard caliche layer, slightly moist	
36	18/18	30 50	0	SP	SAND	As above, except color is reddish yellow (7.5 YR 6/6) 30.5', 1" white hard caliche layer 31.0', color is pink (7.5 YR 7/3), fine caliche gravel	
40	12/12	50	0	SW	SAND	Pink (7.5 YR 7/3), dense, slightly moist, poorly sorted, very fine to very coarse sand (mostly medium), trace silt, trace fine subrounded gravel, some nodules of sand are hard and strongly cemented, no odor, no staining	
46	18/18	27 50	0	SW	SAND	As above 45.5', 1-cm white hard caliche layer	
50	18/18	20 30 50	0	SW	SAND	As above 50.2', reddish brown (5 YR 4/4) clay nodule Total depth, 51.5'	

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URS

SOIL BORING AND WELL LOG

Boring/Well ID: B-6 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' air knife for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), loose, moderately well sorted, very fine to fine sand, trace silt, caliche nodules, dry	
10	18/18	4 4 7	0	SP	SAND	Pink (7.5 YR 7/3), loose, moderately well sorted, very fine to fine sand, with some silt, fine caliche gravel, dry, no odor, no staining	
16	18/18	3 4 7	0	SP	SAND	As above, except reddish yellow (7.5YR 6/6), very slightly cemented, dense, increased caliche nodules, no odor, no staining	
20	12/12	25 50	0	SP	SAND	As above, with black manganese nodules, slightly moist, no odor, no staining	
26	12/12	21 37	0	SP	SAND	As above, with 1" nodules of hard, strongly cemented sandstone	
30	18/18	25 37 50	0	SP	SAND	As above 30.5, caliche layer (1"), hard, no odor, no staining	
36	14/18	29 50	0	SW	SAND	As above, poorly sorted, very fine to medium, with trace coarse to very coarse sand, trace silt, slightly moist, no odor, no staining	
40	10/12	45 50	0	SW	SAND	Coarsening with depth, color gradually changed to light brown (7.5 YR 6/3), slightly moist, no odor, no staining, sand is very fine to very coarse, trace fine subangular gravel, sand is subangular to subrounded, dense	
46	18/18	20 39 50	0	SW	SAND	As above, except sand is mostly medium sized 46', very dense, slightly lithified	
50	18/18	30 50		SW	SAND	As above, except no gravel Total depth, 51.5'	

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SOIL BORING AND WELL LOG

Boring/Well ID: B-7 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	Air knife 0-6' for utility clearance, logged from surface, sand, brown (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand, trace silt, hard white caliche gravel	
10	18/18	5 4 5	0	SP	SAND	Pink (7.5 YR 7/3), loose, dry, moderately well sorted, very fine to fine sand, some silt, white hard 1-cm caliche gravel nodules	
16	18/18	5 10 13	0	SP	SAND	As above, except decrease to trace silt, black 2-cm manganese nodules, sand is very fine to fine, no odor, no staining, very weakly cemented	
20	12/12	15 44		SP	SAND	As above, except color is reddish yellow (7.5 YR 6/6), slightly moist, no odor, no staining	
26	18/18	17 30 50	0	SP	SAND	As above	
30	12/18	29 50	0	SP	SAND	As above, 30.5', color abruptly changes to light brown (1.5 YR 6/3), 1- to 2-cm nodules of hard, strongly cemented sandstone, no odor, no staining	
36	14/18	25 50	0	SP	SAND	As above 36.0', 2-cm white hard caliche layer, no odor, no staining	
40	12/12	37 50	0	SW	SAND	Light brown (7.5 YR 6/4), dense, poorly sorted, very fine to very coarse sand (mostly medium sized), trace fine subrounded to angular gravel, trace silt, no odor, no staining, slightly moist	
46	18/18	17 40 50	0	SW	SAND	As above, except no gravel 46.25', 1" hard lithified, cemented sandstone	
50	11/18	50	0	SW	SAND	As above, with trace FeOx staining, slightly moist, no odor, no staining Total depth 51.5'	

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SOIL BORING AND WELL LOG

Boring/Well ID: B-8 | **Total Depth:** 51.5 feet bgs

PROJECT INFORMATION	DRILLING INFORMATION
Project: BP Pipeline	**Drilling Company:** WDC
Location: Maljamar, New Mexico	**Drilling Equipment:** CME 85
Site Name: South Excavation	**Drilling Method:** Hollow Stem Auger
Project Number: 41008243.00005	**Sampling Method:** Split Spoon
Logged By: Rita Krebs	**Driller:** George Guzman
Project Manager: Shannon Hoover, P.G.	**Dates Drilled:** September 15, 2006

Depth (feet bgs)	Sample Recovery (inches)	Blow Counts (per 6 inches)	PID (ppmv)	USCS Symbol	Lithology Symbol	Lithology Description and Notes	Well Construction
0				SP	SAND	0-6' Air knife for utility clearance, logged from surface, sand, (7.5 YR 5/4), dry, loose, moderately well sorted, very fine to fine sand, trace silt, hard, white caliche gravel	
10	18/18	6 10 15	0	SP	SAND	Pink (7.5 YR 7/3), dry, loose, moderately well sorted, very fine to medium, mostly fine sized, no odor, no staining, hard, white caliche nodules 11.25', slightly moist	
16	18/18	9 16 26	0	SP	SAND	15', color is light brown (7.5 YR 6/3), 2-cm manganese nodules	
20	12/12	29 50	0	SP	SAND	As above, except weakly cemented, sand is mostly medium sized	
26	16/18	28 50	0	SP	SAND	As above, slightly moist, no odor, no staining	
30	18/18	22 31 50	0	SP	SAND	Pale brown (10 YR 7/3), moderately well sorted, very fine to fine sand, little silt, fine caliche gravel, no odor, no staining	
36	18/18	30 38 49	0	SW	SAND	Pink (7.5 YR 7/3), slightly moist, dense, poorly sorted, very fine to very coarse subangular to subrounded sand, weakly cemented, mostly medium sized sand, no odor, no staining, trace subangular gravel	
40	12/12	50	0	SW	GRAVELLY SAND	Light brown (7.5 YR 6/4), very fine to very coarse subangular sand, fine to medium subangular to rounded gravel, trace silt, gravel up to 3-cm, little cementation, no odor, no staining	
46	18/18	30 44 48	0	SP	SAND	Light brown (7.5 YR 6/3), slightly moist, dense, moderately well sorted, very fine to coarse sand, (mostly medium sized), no odor, no staining, weakly cemented trace pockets of strongly cemented sandstone	
50	2/18	25 50		SP	SAND	As above, very fine to coarse sand, (mostly medium sized), no odor, no staining Total depth, 51.5'	

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APPENDIX B
PHOTOGRAPHS

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Photograph 1. The south and east walls of the North Site excavation.

Photograph 2. Installation of MW-2/B-2 at the North Site, view looking south.

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Photograph 3. The South Site prior to drilling activities.

Photograph 4. Installation of B-6 at the South Site, view looking north.

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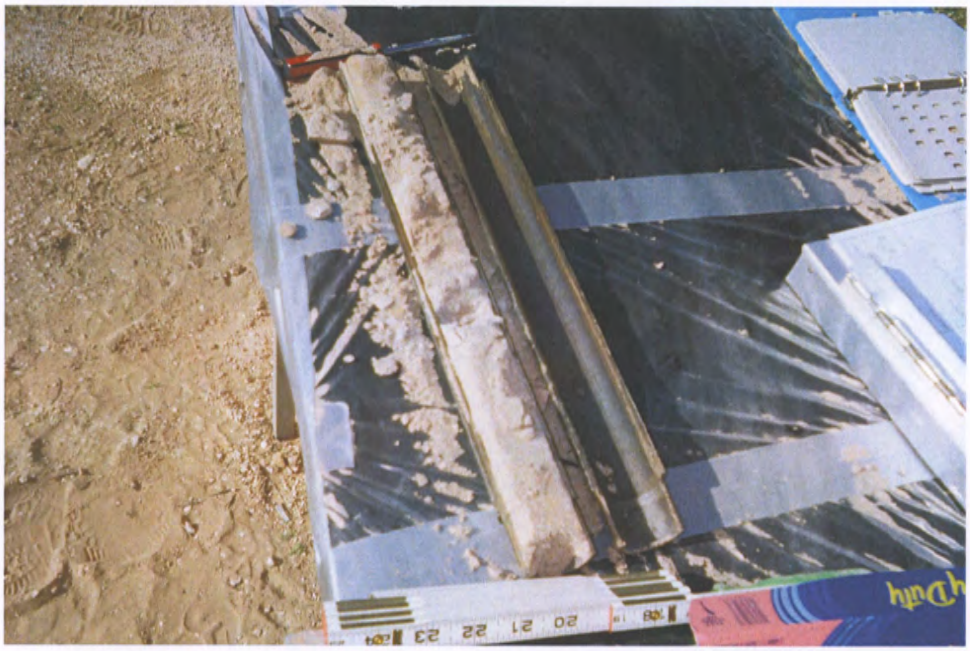

Photograph 5. Typical split spoon sample of moderately wells sorted fine sand.

Photograph 6. Caliche sample from ring-sampler.

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APPENDIX C
DATA VALIDATION REPORT AND LABORATORY ANALYTICAL REPORTS

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INITIAL EXPLORATORY SOIL BORING PROGRAM – SEPTEMBER 2006

This laboratory Data Validation Report (DVR) describes the data quality for the September 2006 soil and groundwater sampling event conducted at the North and South Site excavations along the BP Pipelines (North America), Inc. (BP Pipeline NA) 6-inch crude oil gathering line, approximately five miles southeast of the town of Maljamar in Lea County, New Mexico. This event includes 34 soil samples, 3 soil field duplicate samples, 4 groundwater samples, and 1 groundwater field duplicate sample collected by URS Corporation (URS) in September 2006 and analyzed by Severn Trent Laboratories, Austin, Texas (STL Austin).

The purpose of the initial exploratory boring program was to collect data to support the development of a plan to appropriately modify the current excavations to create a safe work environment as well as to provide an indication of potential extent of impacts in soil and groundwater.

Sample identifications, dates sampled, matrices, and methods used for analyses are provided in Table C-1. Analytical results are presented in Attachment A and the laboratory analytical reports are included in Attachment B. A list of potential data flags used in describing data is included in Attachment A. The purpose of this laboratory data validation was to confirm that the analyses were performed according to method protocols and to assess the quality of the reported laboratory data.

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Table C-1

Sample Identification	Laboratory Identification	Date Sampled	TDS SM160.1	Total Metals SW6010B	Dissolved Metals SW6010B	Dissolved Mercury SW7470A	TPH SW8015B	BTEX SW8260B	Anions SW9056
Soils									
B1 (20-21.5)	I6I180155001	09/13/06	NA	NA	NA	NA	1	1	NA
B1 (45-46.5)	I6I180155002	09/13/06	NA	NA	NA	NA	1	1	NA
B1 (80-81.5)	I6I180155003	09/13/06	NA	NA	NA	NA	NA	1	NA
B1 (95-96.5)	I6I180155004	09/14/06	NA	NA	NA	NA	1	1	NA
DUP-1 (FD of B1 [95-96.5])	I6I180155005	09/14/06	NA	NA	NA	NA	1	1	NA
B1 (115-116.5)	I6I180155006	09/14/06	NA	NA	NA	NA	1	1	NA
B1 (120-121.5)	I6I180155007	09/14/06	NA	NA	NA	NA	1	1	NA
B2 (15-16.5)	I6I190109011	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (40-41.5)	I6I190109012	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (70-71.5)	I6I190109013	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (80-81.5)	I6I190109014	09/16/06	NA	NA	NA	NA	1	1	NA
B2 (105-106.5)	I6I280173001	09/25/06	NA	NA	NA	NA	1	1	NA
B2 (115-116.5)	I6I280173002	09/25/06	NA	NA	NA	NA	1	1	NA
B3 (20-20.5)	I6I280173003	09/26/06	NA	NA	NA	NA	1	1	NA
DUP-3 (FD of B3 [20-20.5])	I6I280173008	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (45-46.5)	I6I280173004	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (70-71.5)	I6I280173005	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (95-96.5)	I6I280173006	09/26/06	NA	NA	NA	NA	1	1	NA
B3 (120-121.5)	I6I280173007	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (25-26.5)	I6I300123001	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (50-51.5)	I6I300123002	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (75-76.5)	I6I300123003	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (95-96.5)	I6I300123004	09/27/06	NA	NA	NA	NA	1	1	NA
B4 (120-121.5)	I6I300123005	09/28/06	NA	NA	NA	NA	1	1	NA
B5 (25-26.5)	I6I180155008	09/14/06	NA	NA	NA	NA	1	1	NA
B5 (35-36.5)	I6I180155009	09/14/06	NA	NA	NA	NA	1	1	NA
B5 (50-51.5)	I6I180155010	09/14/06	NA	NA	NA	NA	1	1	NA
B6 (20-21.5)	I6I190109001	09/15/06	NA	NA	NA	NA	1	1	NA
B6 (35-36.5)	I6I190109002	09/15/06	NA	NA	NA	NA	1	1	NA
B6 (50-51.5)	I6I190109003	09/15/06	NA	NA	NA	NA	1	1	NA
B7 (25-26.5)	I6I190109004	09/15/06	NA	NA	NA	NA	1	1	NA

Table C-1
(Continued)

Sample Identification	Laboratory Identification	Date Sampled	TDS SM160.1	Total Metals SW6010B	Dissolved Metals SW6010B	Dissolved Mercury SW7470A	TPH SW8015B	BTEX SW8260B	Anions SW9056
Soils (Continued)									
B7 (35-36.5)	I6I190109005	09/15/06	NA	NA	NA	NA	1	1	NA
DUP-2 (FD of B7 [35-36.5])	I6I190109010	09/15/06	NA	NA	NA	NA	1	1	NA
B7 (50-51.5)	I6I190109006	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (25-26.5)	I6I190109007	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (35-36.5)	I6I190109008	09/15/06	NA	NA	NA	NA	1	1	NA
B8 (50-51.5)	I6I190109009	09/15/06	NA	NA	NA	NA	1	1	NA
Groundwater									
MW-1	I6I300123006	09/28/06	1	1	1	1	1	1	1
DUP-1 (FD of MW-1)	I6I300123008	09/28/06	1	1	1	1	1	1	1
MW-2	I6I300123009	09/29/06	1	1	1	1	1	1	1
MW-3	I6I300123007	09/29/06	1	1	1	1	1	1	1
MW-4	I6I3001230010	09/29/06	1	1	1	1	1	1	1

1 - Analyzed by STL Austin.
BTEX – Benzene, toluene, ethylbenzene, xylenes.
FD – Field Duplicate.
NA - Not analyzed.
SM - Standard Methods.
SW - EPA SW-846 method.
TDS - Total Dissolved Solids.
TPH – Total Petroleum Hydrocarbons.
VOCs - Volatile Organic Compounds.

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Analytical results were evaluated against their respective method protocols. The results indicate that all of the data are useful for their intended purpose. Sample results that were detected between the method detection limits (MDLs) and the reporting limits (RLs) were qualified with "J" as estimated. Only samples that required qualification or that are considered anomalies are discussed in this DVR. All soil results are reported as dry weight. No trip blanks were submitted with the samples that were analyzed by Environmental Protection Agency (EPA) Method SW8260B. The field team was counseled upon the importance of submitting trip blanks for all samples to be analyzed by this method.

Total Dissolved Solids by Standard Method SM160.1

Samples were analyzed for total dissolved solids (TDS) by Standard Method SM160.1. The quality control (QC) requirements that were evaluated include holding times, blanks, laboratory control samples (LCSs), field duplicate samples, and analytical duplicate samples. Overall, the QC results indicate that all of the data are useful for their intended purpose. No results were qualified.

Metals by EPA Method SW6010B

Samples were analyzed for client-specified metals by EPA Method SW6010B. Samples were analyzed for calcium, potassium, magnesium, and sodium for total metals concentrations. Samples were analyzed for the remainder of the metals for dissolved metals concentrations. The QC requirements that were evaluated include holding times, blanks, LCS/laboratory control sample duplicates (LCSDs) results, matrix spike/matrix spike duplicate (MS/MSD) results, and field duplicate samples. Overall, the QC results indicate that the data are useful for the intended purposes.

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Blanks

Samples were evaluated against their associated method blanks. All associated sample results that were detected above the MDLs and ≤ five times the concentrations in the blanks were qualified with "B" as similar to the blank concentrations. Aluminum, molybdenum, and zinc were detected in one method blank at levels above the MDLs but below the RLs. All of the water samples were associated with this method blank. Qualified results are presented in Table C-2.

Table C-2
Metal Results Qualified Due to Blanks

Sample ID	Analyte	Result (mg/L)	Qualifier	Reason
MW-1	Aluminum	0.025	B	Result within 5x of method blank
	Molybdenum	0.0041		
	Zinc	0.0093		
DUP-1	Aluminum	0.021		
	Molybdenum	0.0034		
	Zinc	0.0052		
MW-2	Aluminum	0.020		
	Molybdenum	0.0025		
	Zinc	0.014		
MW-3	Aluminum	0.021		
	Molybdenum	0.0057		
	Zinc	0.0077		
MW-4	Aluminum	0.026		
	Molybdenum	0.0074		
	Zinc	0.0054		

B – Similar to blank concentration.

Field Duplicates

Results were evaluated if at least one result of the field duplicate sample pair was above the RL. The results for selenium in one field duplicate pair, MW-1 and its field duplicate DUP-1, were not reproducible. The relative percent difference (RPD) for selenium was 200%, which was above the acceptance criterion of 30%. The not detected result for selenium in MW-1 was qualified with "UJ" as not detected/estimated and the detected result of 0.0060 mg/L for selenium in DUP-1 was qualified with "J" as estimated.

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Mercury by EPA Method SW7470A

Samples were analyzed for mercury by EPA Method SW7470A. The QC requirements that were evaluated include holding times, blanks, LCS/LCSD results, MS/MSD results, and field duplicate samples. Overall, the QC results indicate that the data are useful for the intended purposes. No results were qualified.

Total Petroleum Hydrocarbons by EPA Method SW8015B

Samples were analyzed for total petroleum hydrocarbons (TPH) by EPA Method SW8015B. The results were reported as gasoline range organics (GRO) and diesel range organics (DRO). The QC requirements that were evaluated included holding times, blanks, LCS/LCSD results, MS/MSD results, field duplicate samples, and surrogate spike results. Overall, the QC results indicate that all of the data are useful for the intended purposes.

Laboratory Control Samples

LCSs were prepared and analyzed with each batch of samples. All of the recoveries were within acceptance criteria. The RPD for DRO for the LCS/LCSD pair associated with the groundwater samples was 61%, which was above the acceptance criterion of 30%. The DRO result of 0.062 mg/L in sample MW-4 was qualified with "J" as estimated. All of the other groundwater results had already been qualified with "J" due to concentrations between the MDLs and RLs; therefore, no further qualifications were made.

Blanks

Samples were evaluated against their associated method blanks. Detected results in associated samples ≤ five times the concentrations in the method blanks were qualified with "B" as similar to the blank concentrations. All of the DRO soil and water method blanks had detections of hydrocarbons at levels above the MDLs but below the RLs. All of the soil and groundwater samples had DRO concentrations that were within five times of the concentrations in the method blanks; therefore, all DRO results were qualified with "B" as similar to the method blanks. The laboratory was questioned about this contamination. The response was that the MDLs for DRO are very low; therefore, the laboratory always detects DRO in their method blanks when requested to report to the MDLs. The MDLs are considered valid since the lab analyzes a low-

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level check standard quarterly to confirm the MDLs. All of the sample results were less than 5 mg/kg for soils and 0.1 mg/L for groundwater.

BTEX by EPA Method SW8260B

Samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method SW8260B. The QC requirements that were evaluated included holding times, blanks, LCS/LCSD results, MS/MSD results, field duplicate samples, and surrogate spike results. Overall, the QC results indicate that all of the data are useful for the intended purposes. No results were qualified.

Anions by EPA Method SW9056

Samples were analyzed for chloride, fluoride, nitrate, and sulfate by EPA Method SW9056. The QC requirements that were evaluated include holding times, blanks, LCS/LCSD results, MS/MSD results, and field duplicate samples. Overall, the QC results indicate that all of the data are useful for the intended purposes.

Holding Times

Most of the analyses were performed within holding times. However, the analysis for nitrate in sample DUP-1 was performed four hours past the 48-hour holding time. The holding time had already expired by the time that the laboratory had received the sample. The result of 2.8 mg/L was qualified with "JL" as estimated/biased low due to this.

Field Duplicates

Results were evaluated if at least one result of the field duplicate sample pair was above the RL. The results for chloride in one field duplicate pair, MW-1 and its field duplicate DUP-1, were not reproducible. The RPD for chloride was 55%, which was above the acceptance criterion of 30%. The detected results for chloride in MW-1 and DUP-1, 49.6 mg/L and 87.3 mg/L respectively, were qualified with "J" as estimated.

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Table A-1
Summary of Soil Analytical Results - BTEX and TPH

Sample Identification	Date Collected	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	TPH-DRO	TPH-GRO
B1 (20-21.5)	09/13/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B1 (45-46.5)	09/13/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	4.4 B	<0.10
B1 (80-81.5)	09/13/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	--	--
B1 (95-96.5)	09/14/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2 JB	<0.10
DUP-1 (FD of B1 (95-96.5))	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.11
B1 (115-116.5)	09/14/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.1 JB	<0.12
B1 (120-121.5)	09/14/06	<0.0061	<0.0061	<0.0061	<0.012	<0.0061	1.7 JB	<0.10
B2 (15-16.5)	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B2 (40-41.5)	09/16/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1 JB	<0.10
B2 (70-71.5)	09/16/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.10
B2 (80-81.5)	09/16/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.3 JB	<0.10
B2 (105-106.5)	09/25/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.99 JB	<0.10
B2 (115-116.5)	09/25/06	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	1.2 JB	<0.12
B3 (20-20.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.99 JB	<0.10
DUP-3 (FD of B3 (20-20.5))	09/26/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.4 JB	<0.10
B3 (45-46.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.9 JB	<0.10
B3 (70-71.5)	09/26/06	<0.0050	<0.0050	<0.0050	<0.0099	<0.0050	0.9 JB	<0.10
B3 (95-96.5)	09/26/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.5 JB	<0.10
B3 (120-121.5)	09/27/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.5 JB	<0.10
B4 (25-26.5)	09/27/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.96 JB	<0.10
B4 (50-51.5)	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.2 JB	<0.10
B4 (75-76.5)	09/27/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	0.91 JB	<0.10
B4 (95-96.5)	09/27/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.89 JB	<0.10
B4 (120-121.5)	09/28/06	<0.0055	<0.0055	<0.0055	<0.011	<0.0055	0.91 JB	<0.11
B5 (25-26.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.0 JB	<0.10
B5 (35-36.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.1 JB	<0.11
B5 (50-51.5)	09/14/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.92 JB	<0.10
B6 (20-21.5)	09/15/06	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	1.0 JB	<0.10
B6 (35-36.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.98 JB	<0.10
B6 (50-51.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	1.9 B	<0.10
B7 (25-26.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	0.97 JB	<0.10
B7 (35-36.5)	09/15/06	<0.0053	<0.0053	<0.0053	<0.011	<0.0053	1.1 JB	<0.10
DUP-2 (FD of B7 (35-36.5))	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.2 B	<0.10
B7 (50-51.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	2.5 B	<0.10
B8 (25-26.5)	09/15/06	<0.0052	<0.0052	<0.0052	<0.010	<0.0052	0.98 JB	<0.10
B8 (35-36.5)	09/15/06	<0.0054	<0.0054	<0.0054	<0.011	<0.0054	1.4 JB	<0.11
B8 (50-51.5)	09/15/06	<0.0051	<0.0051	<0.0051	<0.010	<0.0051	1.1 JB	<0.10

Notes:
All concentrations shown in mg/kg.
< = Value is reporting limit.
-- = Sample not analyzed for indicated parameter.
BTEX = Benzene, toluene, ethylbenzene, xylenes.
FD = Field duplicate.
TPH-DRO = Total Petroleum Hydrocarbons – Diesel Range Organics.
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics.

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Table A-2
Summary of Groundwater Analytical Results - BTEX and TPH

Sample Identification	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-DRO	TPH-GRO
MW-1	09/28/06	<0.001	<0.001	<0.001	<0.003	0.025 JB	<0.10
DUP-1 (FD of MW-1)	09/28/06	<0.001	<0.001	<0.001	<0.003	0.026 JB	<0.10
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.003	0.036 JB	<0.10
MW-3	09/29/06	<0.001	0.0012	<0.001	<0.003	0.045 JB	<0.10
MW-4	09/29/06	<0.001	<0.001	<0.001	<0.003	0.062 JB	<0.10

Notes:
All concentrations shown in mg/L.
< = Value is reporting limit.
BTEX = Benzene, toluene, ethylbenzene, xylenes.
FD = Field duplicate.
TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics.
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics.

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Table A-3
Summary of Groundwater Analytical Results – Metals

Sample Identification	Date Collected	Aluminum	Arsenic	Barium	Boron	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron
MW-1	09/28/06	0.025 JB	0.0061 J	0.086 J	0.069	<0.0020	57.7	0.0021 J	<0.050	<0.025	<0.10
DUP-1 (FD of MW-1)	09/28/06	0.021 JB	0.0060 J	0.083 J	0.066	<0.0020	57.1	0.0024 J	<0.050	<0.025	<0.10
MW-2	09/29/06	0.020 JB	<0.010	0.39	0.083	<0.0020	899	<0.0050	<0.050	<0.025	<0.10
MW-3	09/29/06	0.021 JB	0.0035 J	0.10 J	0.065	<0.0020	66.3	0.0025 J	<0.050	<0.025	<0.10
MW-4	09/29/09	0.026 JB	0.0033 J	0.12 J	0.064	<0.0020	59.3	0.0033 J	<0.050	<0.025	<0.10

Sample Identification	Date Collected	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel	Potassium	Selenium	Silver	Sodium	Zinc
MW-1	09/28/06	<0.0030	13.7	0.014 J	<0.00020	0.0041 JB	0.0050 J	4.1 J	<0.0050 UJ	<0.0050	30.5	0.0093 JB
DUP-1 (FD of MW-1)	09/28/06	<0.0030	13.6	0.011 J	<0.00020	0.0034 JB	0.0045 J	4.1 J	0.0060 J	<0.0050	30.4	0.0052 JB
MW-2	09/29/06	<0.0030	257	0.21	<0.00020	0.0025 JB	0.016 J	19.2	<0.0050	<0.0050	145	0.014 JB
MW-3	09/29/06	<0.0030	15.5	0.024	<0.00020	0.0057 JB	0.0081 J	5.0	<0.0050	<0.0050	31.8	0.0077 JB
MW-4	09/29/09	<0.0030	11.7	0.014 J	<0.00020	0.0074 JB	0.0071 J	5.3	<0.0050	<0.0050	28.7	0.0054 JB

Note:
All concentrations shown in mg/L.
Calcium, potassium, magnesium, and sodium concentrations are total concentrations. All other target metal concentrations are dissolved.
< = Value is reporting limit.
FD = Field duplicate.

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Table A-4
Summary of Groundwater Analytical Results - Other Parameters

Sample Identification	Date Collected	Chloride	Fluoride	Nitrate	Sulfate	TDS
MW-1	9/28/2006	49.6 J	0.60 J	2.8	37.9	357
DUP-1 (FD of MW-1)	9/28/2006	87.3 J	0.74 J	2.8 JL	40.5	348
MW-2	9/29/2006	2600	<1.0	2.8	81.8	6010
MW-3	9/29/2006	77.2	0.59 J	2.9	35.3	369
MW-4	9/29/2006	25.8	0.66 J	2.9	32.7	303

Notes:
All concentrations shown in mg/L.
FD = Field duplicate.
TDS - Total dissolved solids.

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Attachment A
Analytical Results

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Flag Definitions

B	Analyte detected in a blank at a concentration within five times this sample result (ten times for common laboratory contaminants).
H	Result may be biased high. See data validation report for details.
J	Estimated: The analyte was detected and positively identified. The associated numerical value is the approximate concentration of the analyte in the sample.
L	Result may be biased low. See data validation report for details.
ND	Not detected, no instrument response was recorded for the analyte.
R	Result is rejected. The data are unusable.
U	Not detected: Analysis for the analyte was performed, but the analyte was not detected above the level of the associated value.

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Attachment B
Laboratory Analytical Reports

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I180155

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

September 22, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I180155**

This report contains the analytical results for the 10 samples received under chain of custody by Severn Trent Laboratories (STL) on September 16, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6262380, diesel range organics was detected in the associated method blank at 0.98 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I180155

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-1(20-21.5) 09/13/06 14:40 001				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.6	0.50	%	ASTM D 2216-90
B-1(45-46.5) 09/13/06 15:40 002				
Diesel Range Organics	4.4 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.4	0.50	%	ASTM D 2216-90
B-1(80-81.5) 09/13/06 17:50 003				
Percent Moisture	6.5	0.50	%	ASTM D 2216-90
B-1(95-96.5) 09/14/06 09:45 004				
Diesel Range Organics	1.2 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.4	0.50	%	ASTM D 2216-90
DUP-1 09/14/06 08:00 005				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90
B-1(115-116.5) 09/14/06 11:20 006				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	6.5	0.50	%	ASTM D 2216-90
B-1(120-121.5) 09/14/06 11:50 007				
Diesel Range Organics	1.7 J,B	2.0	mg/kg	SW846 8015B
Percent Moisture	16.4	0.50	%	ASTM D 2216-90
B-5(25-26.5) 09/14/06 16:00 008				
Diesel Range Organics	1.0 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.8	0.50	%	ASTM D 2216-90
B-5(35-36.5) 09/14/06 16:20 009				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	5.0	0.50	%	ASTM D 2216-90

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EXECUTIVE SUMMARY - Detection Highlights

I6I180155

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-5(50-51.5) 09/14/06 16:45 010				
Diesel Range Organics	0.92 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.3	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I180155

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

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WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEHLQ	001	B-1(20-21.5)	09/13/06	14:40
JEHLX	002	B-1(45-46.5)	09/13/06	15:40
JEHL0	003	B-1(80-81.5)	09/13/06	17:50
JEHL1	004	B-1(95-96.5)	09/14/06	09:45
JEHL3	005	DUP-1	09/14/06	08:00
JEHL4	006	B-1(115-116.5)	09/14/06	11:20
JEHL8	007	B-1(120-121.5)	09/14/06	11:50
JEHMA	008	B-5(25-26.5)	09/14/06	16:00
JEHMD	009	B-5(35-36.5)	09/14/06	16:20
JEHMF	010	B-5(50-51.5)	09/14/06	16:45

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I180155

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
002	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
003	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
004	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
005	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
006	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
007	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
008	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235
009	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235

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QC DATA ASSOCIATION SUMMARY

I6I180155

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
010	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262169	6262112
	SOLID	SW846 8260B		6263374	6263235

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-001	Work Order #...: JEHLQ1AC	Matrix.....: SOLID
Date Sampled...: 09/13/06 14:40	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 16:09	
Dilution Factor: 1.02		
% Moisture.....: 1.6	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC Volatiles

Lot-Sample #...:	I6I180155-001	Work Order #...:	JEHLQ1AD	Matrix.....:	SOLID
Date Sampled...:	09/13/06 14:40	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	16:46		
Dilution Factor:	1				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(20-21.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-001	Work Order #...:	JEHLQ1AE	Matrix.....:	SOLID
Date Sampled...:	09/13/06 14:40	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	18:07		
Dilution Factor:	1				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	91	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(20-21.5)

General Chemistry

Lot-Sample #...: I6I180155-001 Work Order #...: JEHLQ Matrix.....: SOLID
Date Sampled...: 09/13/06 14:40 Date Received..: 09/16/06
% Moisture.....: 1.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.6	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:00 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(45-46.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-002	Work Order #...:	JEHLX1AC
Date Sampled...:	09/13/06 15:40	Date Received..:	09/16/06
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06
Prep Batch #...:	6263374	Analysis Time..:	16:31
Dilution Factor:	0.98		
% Moisture.....:	2.4	Method.....:	SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(45-46.5)

GC Volatiles

Lot-Sample #...:	I6I180155-002	Work Order #...:	JEHLX1AD	Matrix.....:	SOLID
Date Sampled...:	09/13/06 15:40	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	17:14		
Dilution Factor:	1				
% Moisture.....:	2.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	75	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(45-46.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-002	Work Order #...:	JEHLX1AE	Matrix.....:	SOLID
Date Sampled...:	09/13/06 15:40	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	18:48		
Dilution Factor:	1				
% Moisture.....:	2.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	4.4 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	87	(37 - 131)
Dotriacontane	104	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(45-46.5)

General Chemistry

Lot-Sample #...: I6I180155-002 Work Order #...: JEHLX Matrix.....: SOLID
Date Sampled...: 09/13/06 15:40 Date Received..: 09/16/06
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:04 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(80-81.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-003	Work Order #...: JEHL01AC	Matrix.....: SOLID
Date Sampled...: 09/13/06 17:50	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 16:53	
Dilution Factor: 1.01		
% Moisture.....: 6.5	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-1(80-81.5)

General Chemistry

Lot-Sample #...: I6I180155-003 Work Order #...: JEHL0 Matrix.....: SOLID
Date Sampled...: 09/13/06 17:50 Date Received..: 09/16/06
% Moisture.....: 6.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	6.5	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:06 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(95-96.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-004	Work Order #...:	JEHL11AC	Matrix.....:	SOLID
Date Sampled...:	09/14/06 09:45	Date Received..:	09/16/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	17:16		
Dilution Factor:	1				
% Moisture.....:	2.4	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-1(95-96.5)

GC Volatiles

Lot-Sample #...: I6I180155-004	Work Order #...: JEHL11AD	Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45	Date Received..: 09/16/06	MS Run #.....: 6263247
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263387	Analysis Time..: 17:41	
Dilution Factor: 0.99		
% Moisture.....: 2.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(95-96.5)

GC Semivolatiles

Lot-Sample #...: I6I180155-004	Work Order #...: JEHL11AE	Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45	Date Received..: 09/16/06	MS Run #.....: 6262373
Prep Date.....: 09/19/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6262380	Analysis Time..: 19:28	
Dilution Factor: 1		
% Moisture.....: 2.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-1(95-96.5)

General Chemistry

Lot-Sample #...: I6I180155-004 Work Order #...: JEHL1 Matrix.....: SOLID
Date Sampled...: 09/14/06 09:45 Date Received..: 09/16/06
% Moisture.....: 2.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:08 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: DUP-1

GC/MS Volatiles

Lot-Sample #...: I6I180155-005	Work Order #...: JEHL31AC	Matrix.....: SOLID
Date Sampled...: 09/14/06 08:00	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 17:38	
Dilution Factor: 0.99		
% Moisture.....: 4.4	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: DUP-1

GC Volatiles

Lot-Sample #...:	I6I180155-005	Work Order #...:	JEHL31AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 08:00	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	18:09		
Dilution Factor:	0.99				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: DUP-1

GC Semivolatiles

Lot-Sample #...: I6I180155-005	Work Order #...: JEHL31AE	Matrix.....: SOLID
Date Sampled...: 09/14/06 08:00	Date Received..: 09/16/06	MS Run #.....: 6262373
Prep Date.....: 09/19/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6262380	Analysis Time..: 20:08	
Dilution Factor: 1		
% Moisture.....: 4.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: DUP-1

General Chemistry

Lot-Sample #...: I6I180155-005 Work Order #...: JEHL3 Matrix.....: SOLID
Date Sampled...: 09/14/06 08:00 Date Received..: 09/16/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:10 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(115-116.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-006	**Work Order #...:**	JEHL41AC	**Matrix.....:**	SOLID
Date Sampled...:	09/14/06 11:20	**Date Received..:**	09/16/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	18:00		
Dilution Factor:	1.01				
% Moisture.....:	6.5	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(115-116.5)

GC Volatiles

Lot-Sample #...:	I6I180155-006	Work Order #...:	JEHL41AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:20	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	18:37		
Dilution Factor:	1				
% Moisture.....:	6.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(115-116.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-006	Work Order #...:	JEHL41AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:20	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	20:48		
Dilution Factor:	1				
% Moisture.....:	6.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	84	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(115-116.5)

General Chemistry

Lot-Sample #...: I6I180155-006 Work Order #...: JEHL4 Matrix.....: SOLID
Date Sampled...: 09/14/06 11:20 Date Received..: 09/16/06
% Moisture.....: 6.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	6.5	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:12 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-007	Work Order #...: JEHL81AC	Matrix.....: SOLID
Date Sampled...:	09/14/06 11:50	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....:	09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...:	6263374	Analysis Time..: 18:23	
Dilution Factor:	1.02		
% Moisture.....:	16	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	6.1	ug/kg
Ethylbenzene	ND	6.1	ug/kg
Toluene	ND	6.1	ug/kg
m-Xylene & p-Xylene	ND	12	ug/kg
o-Xylene	ND	6.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	6.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC Volatiles

Lot-Sample #...:	I6I180155-007	Work Order #...:	JEHL81AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:50	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	19:05		
Dilution Factor:	1.01				
% Moisture.....:	16	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	120	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-1(120-121.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-007	Work Order #...:	JEHL81AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 11:50	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	21:29		
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.7 J,B	2.0	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	101	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-1(120-121.5)

General Chemistry

Lot-Sample #...: I6I180155-007 Work Order #...: JEHL8 Matrix.....: SOLID
Date Sampled...: 09/14/06 11:50 Date Received..: 09/16/06
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	16.4	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:14 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: B-5(25-26.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-008	**Work Order #...:**	JEHMA1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/14/06 16:00	**Date Received..:**	09/16/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	18:44		
Dilution Factor:	1.02				
% Moisture.....:	1.8	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(25-26.5)

GC Volatiles

Lot-Sample #...:	I6I180155-008	Work Order #...:	JEHMA1AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:00	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	19:32		
Dilution Factor:	0.99				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(25-26.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-008	Work Order #...:	JEHMA1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:00	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	22:09		
Dilution Factor:	1				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.0 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-5(25-26.5)

General Chemistry

Lot-Sample #...: I6I180155-008 Work Order #...: JEHMA Matrix.....: SOLID
Date Sampled...: 09/14/06 16:00 Date Received..: 09/16/06
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.8	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:16 MS Run #.....: 6262112

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URS Corporation

Client Sample ID: B-5(35-36.5)

GC/MS Volatiles

Lot-Sample #...:	I6I180155-009	Work Order #...:	JEHMD1AC	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:20	Date Received..:	09/16/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	19:07		
Dilution Factor:	0.98				
% Moisture.....:	5.0	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(35-36.5)

GC Volatiles

Lot-Sample #...: I6I180155-009	Work Order #...: JEHMD1AD	Matrix.....: SOLID
Date Sampled...: 09/14/06 16:20	Date Received..: 09/16/06	MS Run #.....: 6263247
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263387	Analysis Time..: 20:00	
Dilution Factor: 1		
% Moisture.....: 5.0	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(35-36.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-009	Work Order #...:	JEHMD1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:20	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	22:49		
Dilution Factor:	1				
% Moisture.....:	5.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-5(35-36.5)

General Chemistry

Lot-Sample #...: I6I180155-009 Work Order #...: JEHMD Matrix.....: SOLID
Date Sampled...: 09/14/06 16:20 Date Received..: 09/16/06
% Moisture.....: 5.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	5.0	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:18 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-5(50-51.5)

GC/MS Volatiles

Lot-Sample #...: I6I180155-010	Work Order #...: JEHMF1AC	Matrix.....: SOLID
Date Sampled...: 09/14/06 16:45	Date Received..: 09/16/06	MS Run #.....: 6263235
Prep Date.....: 09/19/06	Analysis Date..: 09/19/06	
Prep Batch #...: 6263374	Analysis Time..: 19:29	
Dilution Factor: 1.01		
% Moisture.....: 2.3	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	97	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(50-51.5)

GC Volatiles

Lot-Sample #...:	I6I180155-010	Work Order #...:	JEHMF1AD	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:45	Date Received..:	09/16/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	20:28		
Dilution Factor:	1				
% Moisture.....:	2.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-5(50-51.5)

GC Semivolatiles

Lot-Sample #...:	I6I180155-010	Work Order #...:	JEHMF1AE	Matrix.....:	SOLID
Date Sampled...:	09/14/06 16:45	Date Received..:	09/16/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6262380	Analysis Time..:	23:29		
Dilution Factor:	1				
% Moisture.....:	2.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.92 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	74	(37 - 131)
Dotriacontane	88	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-5(50-51.5)

General Chemistry

Lot-Sample #...: I6I180155-010 Work Order #...: JEHMF Matrix.....: SOLID
Date Sampled...: 09/14/06 16:45 Date Received..: 09/16/06
% Moisture.....: 2.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.3	0.50	%	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:20 MS Run #.....: 6262112

Received by OCD: 3/25/2021 2:14:32 PM

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 Work Order #...: JENK81AA Matrix.....: SOLID
MB Lot-Sample #: I6I200000-374

Prep Date.....: 09/19/06 Analysis Time..: 15:45
Analysis Date..: 09/19/06 Prep Batch #...: 6263374
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I180155 Work Order #...: JENM21AA Matrix.....: SOLID
MB Lot-Sample #: I6I200000-387

Prep Date.....: 09/19/06 Analysis Time..: 16:18
Analysis Date..: 09/19/06 Prep Batch #...: 6263387
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AA Matrix.....: SOLID
MB Lot-Sample #: I6I190000-380

Prep Date.....: 09/19/06 Analysis Time..: 16:47
Analysis Date..: 09/20/06 Prep Batch #...: 6262380
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.98 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	94	(68 - 128)	1.6	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	89	(65 - 125)	3.4	(0-30)	SW846 8260B
Toluene	87	(64 - 124)			SW846 8260B
	88	(64 - 124)	2.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	87	(64 - 124)	3.0	(0-30)	SW846 8260B
o-Xylene	93	(65 - 125)			SW846 8260B
	90	(65 - 125)	3.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	105	(58 - 118)			SW846 8260B
	114	(58 - 118)	8.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I180155 Work Order #...: JENK81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263374 Analysis Time..: 14:38
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	46.9	ug/kg	94	1.6	SW846 8260B
Ethylbenzene	50.0	45.9	ug/kg	92		SW846 8260B
	50.0	44.3	ug/kg	89	3.4	SW846 8260B
Toluene	50.0	43.3	ug/kg	87		SW846 8260B
	50.0	44.2	ug/kg	88	2.1	SW846 8260B
m-Xylene & p-Xylene	100	90.0	ug/kg	90		SW846 8260B
	100	87.3	ug/kg	87	3.0	SW846 8260B
o-Xylene	50.0	46.4	ug/kg	93		SW846 8260B
	50.0	45.0	ug/kg	90	3.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	52.4	ug/kg	105		SW846 8260B
	50.0	56.8	ug/kg	114	8.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I180155 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Gasoline Range Organics	**97**	**(66 - 129)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I180155 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Gasoline Range Organics	**2000**	**1940**	**ug/kg**	**97**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**79**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I180155 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	33.3	26.2	mg/kg	79	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:33		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(68 - 128)			SW846 8260B
	92	(68 - 128)	0.30	(0-30)	SW846 8260B
Ethylbenzene	83	(65 - 125)			SW846 8260B
	85	(65 - 125)	0.91	(0-30)	SW846 8260B
Toluene	80	(64 - 124)			SW846 8260B
	81	(64 - 124)	0.52	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(64 - 124)			SW846 8260B
	82	(64 - 124)	0.30	(0-30)	SW846 8260B
o-Xylene	85	(65 - 125)			SW846 8260B
	87	(65 - 125)	1.5	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	8.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:33		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.7	46.6	ug/kg	92		SW846 8260B
	ND	50.3	46.4	ug/kg	92	0.30	SW846 8260B
Ethylbenzene	ND	50.7	42.1	ug/kg	83		SW846 8260B
	ND	50.3	42.5	ug/kg	85	0.91	SW846 8260B
Toluene	ND	50.7	40.4	ug/kg	80		SW846 8260B
	ND	50.3	40.6	ug/kg	81	0.52	SW846 8260B
m-Xylene & p-Xylene	ND	101	81.9	ug/kg	81		SW846 8260B
	ND	101	82.2	ug/kg	82	0.30	SW846 8260B
o-Xylene	ND	50.7	43.0	ug/kg	85		SW846 8260B
	ND	50.3	43.6	ug/kg	87	1.5	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.7	48.3	ug/kg	95		SW846 8260B
	ND	50.3	52.4	ug/kg	104	8.3	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AH-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	10:27		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	93	(66 - 129)			SW846 8015B
	91	(66 - 129)	1.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AH-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	10:27		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	ND	2020	1880	ug/kg	93		SW846 8015B
	ND	2040	1860	ug/kg	91	1.0	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AN-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:49		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	91	(32 - 132)			SW846 8015B
	84	(32 - 132)	8.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I180155	Work Order #...:	JEJQV1AN-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:49		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	1.0	33.8	31.9	mg/kg	91		SW846 8015B
	1.0	33.8	29.4	mg/kg	84	8.0	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I180155 Work Order #...: JEHLQ-SMP Matrix.....: SOLID
JEHLQ-DUP
Date Sampled...: 09/13/06 14:40 Date Received..: 09/16/06
% Moisture.....: 1.6

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: I6I180155-001		
	1.6	1.6	%	0.63	(0-20)	ASTM D 2216-90	09/19/06	6262169

Dilution Factor: 1 Analysis Time..: 10:00 MS Run Number..: 6262112

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2, Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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SEVERN TRENT STL

CHAIN-OF-CUSTODY ADDENDUM

Lot No: IGI180155

RECEIVED BY: UA

DATE/TIME RECEIVED: 9/16/16 0830

UNPACKED DATE/TIME: 9/16/16 1000

CLIENT/PROJECT: URS Austin

Number of Shipping Containers Received with Chain of Custody 1

COC NUMBER:

QUOTE/PROFILE: 72371

SAMPLES LOGGED IN: CC

LOG-IN REVIEWED: M

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: UA

Container Sealed: ☑ YES ☐ NO

Custody Seal Present: ☑ YES ☐ NO

Custody Seal Signed/Dated: ☑ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s):

2.0 VOC CANISTERS EXAMINED UPON RECEIPT:

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)
None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: UA **IR THERMOMETER #:** 7

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB 2.0 SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____ OK to analyze samples: ☑ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☑ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** UA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS

VERIFIED BY: [signature]

Samples received match COC:	☑ YES ☐ NO	Bottles received intact:	☑ YES ☐ NO
See additional discrepancies/comments section:	☐ YES ☑ NO	Samples received from USDA restricted area:	☐ YES ☑ NO
Chain-of-Custody form properly maintained:	☑ YES ☐ NO	VOA trip blanks included:	☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments
Dup-1	9-14-06 0900	Dup-1	9-14-06 0845	Log per COC

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: [signature] Date: 9/26/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Chain of Custody Record

I61180155

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50851

STL4149 (1202)

Client	Project Manager	Date	Page
URS Corporation	Shannon Hoover	9-14-06	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	
9400 Amberglen Blvd.	512-419-6552	STL-Austin	
City / State / Zip Code	**Site Contact**		
Austin / TX / 78729	Shannon Hoover		
Project Number/Name	**Carrier/Waybill Number**		
41008243 / BP Maljamar	Fed Ex /		
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	Analysis: BTEX 8260	Analysis: TPH DRO 1664 8015
B-1 (20-21.5)	9-13-06	1440	SOIL	4 oz	jar	2	None	2.0 Cool 9/16/06	X	X
B-1 (45-46.5)	9-13-06	1540	SOIL	4 oz	jar	2	None	Good	X	X
B-1 (80-81.5)	9-13-06	1750	SOIL	4 oz	jar	1	None		X	
B-1 (95-96.5)	9-14-06	945	SOIL	4 oz	jar	2	None		X	X
DUP-1	9-14-06	800	SOIL	4 oz	jar	2	None		X	X
B-1 (115-116.5)	9-14-06	1120	SOIL	4 oz	jar	2	None		X	X
B-1 (120-121.5)	9-14-06	1150	SOIL	4 oz	jar	2	None		X	X
B-5 (25-26.5)	9-14-06	1600	SOIL	4 oz	jar	2	None		X	X
B-5 (35-36.5)	9-14-06	1620	SOIL	4 oz	jar	2	None		X	X
B-5 (50-51.5)	9-14-06	1645	SOIL	4 oz	jar	2	None		X	X

RK 9-14-06

Special Instructions

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Robert Krobs	9-14-06	700	1. Received By:	9/16/06	0830
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: HOLD ~~TH~~ RIC for PAH analysis — Need prelim TPH within 14 days

WHITE - Returned to Client with Report: YELLOW - Laboratory Copy: PINK - Field Copy

66/66

[redacted]

Chain of Custody Record

I6I180155

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50851

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 9-14-06	Page 1 of 1
Address: 9400 Amberglen Blvd.	Telephone Number (Area Code)/Fax Number: 512-419-6552	Lab Location: STL-Austin	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Shannon Hoover		
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260	TPH DRO/GRO 8015
B-1 (20-21.5)	9-13-06	1440	SOIL	4 oz	Jar	2	None	2.0 LH 9/16/06	X	X
B-1 (45-46.5)	9-13-06	1540	SOIL	4 oz	Jar	2	None	GOOD	X	X
B-1 (80-81.5)	9-13-06	1750	SOIL	4 oz	Jar	1	None		X	
B-1 (95-96.5)	9-14-06	945	SOIL	4 oz	Jar	2	None		X	X
DUP-1	9-14-06	800	SOIL	4 oz	Jar	2	None		X	X
B-1 (115-116.5)	9-14-06	1120	SOIL	4 oz	Jar	2	None		X	X
B-1 (120-121.5)	9-14-06	1150	SOIL	4 oz	Jar	2	None		X	X
B-5 (25-26.5)	9-14-06	1600	SOIL	4 oz	Jar	2	None		X	X
B-5 (35-36.5)	9-14-06	1620	SOIL	4 oz	Jar	2	None		X	X
B-5 (50-51.5)	9-14-06	1645	SOIL	4 oz	Jar	2	None		X	X

RK 9-14-06

Special Instructions

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Kita Krebs	9-14-06	700	1. Received By: [signature]	9/16/06	0830
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: HOLD ~~TPH~~ for PAH analysis — Need prelim. TPH within 14 days

DISTRIBUTION: WHITE - Accompanies Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I190109

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

September 28, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I190109**

This report contains the analytical results for the 14 samples received under chain of custody by Severn Trent Laboratories (STL) on September 19, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6262380, diesel range organics was detected in the associated method blank at 0.98 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

For SW8015B analytical batch # 6265097, diesel range organics was detected in the associated method blank at 0.76 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I190109

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-6(20'-21.5') 09/15/06 09:40 001				
Diesel Range Organics	1.0 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.4	0.50	%	ASTM D 2216-90
B-6(35'-36.5') 09/15/06 10:15 002				
Diesel Range Organics	0.98 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90
B-6(50'-51.5') 09/15/06 10:40 003				
Diesel Range Organics	1.9 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.1	0.50	%	ASTM D 2216-90
B-7(25'-26.5') 09/15/06 12:00 004				
Diesel Range Organics	0.97 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.6	0.50	%	ASTM D 2216-90
B-7(35'-36.5') 09/15/06 12:15 005				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.6	0.50	%	ASTM D 2216-90
B-7(50'-51.5') 09/15/06 12:45 006				
Diesel Range Organics	2.5 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-8(25'-26.5') 09/15/06 15:05 007				
Diesel Range Organics	0.98 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-8(35'-36.5') 09/15/06 15:20 008				
Diesel Range Organics	1.4 J,B	1.9	mg/kg	SW846 8015B
Percent Moisture	8.2	0.50	%	ASTM D 2216-90
B-8(50'-51.5') 09/15/06 15:50 009				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90

(Continued on next page)

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EXECUTIVE SUMMARY - Detection Highlights

I6I190109

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP-2 09/15/06 08:00 010				
Diesel Range Organics	2.2 B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.8	0.50	%	ASTM D 2216-90
B-2(15'-16.5') 09/16/06 15:20 011				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.4	0.50	%	ASTM D 2216-90
B-2(40'-41.5') 09/16/06 16:00 012				
Diesel Range Organics	1.1 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.2	0.50	%	ASTM D 2216-90
B-2(70'-71.5') 09/16/06 17:00 013				
Diesel Range Organics	1.1 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.5	0.50	%	ASTM D 2216-90
B-2(80'-81.5') 09/16/06 17:30 014				
Diesel Range Organics	1.3 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I190109

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I190109

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEJQV	001	B-6(20'-21.5')	09/15/06	09:40
JEJQ9	002	B-6(35'-36.5')	09/15/06	10:15
JEJRC	003	B-6(50'-51.5')	09/15/06	10:40
JEJRD	004	B-7(25'-26.5')	09/15/06	12:00
JEJRF	005	B-7(35'-36.5')	09/15/06	12:15
JEJRJ	006	B-7(50'-51.5')	09/15/06	12:45
JEJRK	007	B-8(25'-26.5')	09/15/06	15:05
JEJRM	008	B-8(35'-36.5')	09/15/06	15:20
JEJRR	009	B-8(50'-51.5')	09/15/06	15:50
JEJRW	010	DUP-2	09/15/06	08:00
JEJRX	011	B-2(15'-16.5')	09/16/06	15:20
JEJR2	012	B-2(40'-41.5')	09/16/06	16:00
JEJR4	013	B-2(70'-71.5')	09/16/06	17:00
JEJR6	014	B-2(80'-81.5')	09/16/06	17:30

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I190109

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
002	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
003	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6263374	6263235
004	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
005	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
006	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6263387	6263247
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
007	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
008	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
009	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153

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QC DATA ASSOCIATION SUMMARY

I6I190109

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
009	SOLID	SW846 8260B		6264511	6264346
010	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
011	SOLID	SW846 8015B		6262380	6262373
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
012	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
013	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346
014	SOLID	SW846 8015B		6265097	6265071
	SOLID	SW846 8015B		6265141	6265100
	SOLID	ASTM D 2216-90		6262223	6262153
	SOLID	SW846 8260B		6264511	6264346

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URS Corporation

Client Sample ID: B-6(20'-21.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-001	**Work Order #...:** JEJQV1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 09:40	**Date Received..:** 09/19/06	**MS Run #.....:** 6263235
Prep Date.....: 09/19/06	**Analysis Date..:** 09/19/06	
Prep Batch #...: 6263374	**Analysis Time..:** 22:26	
Dilution Factor: 0.99		
% Moisture.....: 1.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	98	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(20'-21.5')

GC Volatiles

Lot-Sample #...:	I6I190109-001	Work Order #...:	JEJQV1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263387	Analysis Time..:	20:56		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	50	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-6(20'-21.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-001	Work Order #...:	JEJQV1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:09		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.0 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	90	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-6(20'-21.5')

General Chemistry

Lot-Sample #...: I6I190109-001 Work Order #...: JEJQV Matrix.....: SOLID
Date Sampled...: 09/15/06 09:40 Date Received..: 09/19/06
% Moisture.....: 1.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:00 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-6(35'-36.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AC	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	22:49		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-6(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	11:23		
Dilution Factor:	0.99				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-6(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-002	Work Order #...:	JEJQ91AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:15	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	02:08		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.98 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-6(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-002 Work Order #...: JEJQ9 Matrix.....: SOLID
Date Sampled...: 09/15/06 10:15 Date Received..: 09/19/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:04 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AC	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6263235
Prep Date.....:	09/19/06	Analysis Date..:	09/19/06		
Prep Batch #...:	6263374	Analysis Time..:	23:10		
Dilution Factor:	1.02				
% Moisture.....:	2.1	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	97	(69 - 129)
1,2-Dichloroethane-d4	101	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC Volatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	11:51		
Dilution Factor:	1				
% Moisture.....:	2.1	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-6(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-003	Work Order #...:	JEJRC1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 10:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	02:48		
Dilution Factor:	1				
% Moisture.....:	2.1	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.9 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-6(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-003 Work Order #...: JEJRC Matrix.....: SOLID
Date Sampled...: 09/15/06 10:40 Date Received..: 09/19/06
% Moisture.....: 2.1

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.1	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:06 MS Run #.....: 6262153

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URS Corporation

Client Sample ID: B-7(25'-26.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-004	**Work Order #...:**	JEJRD1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 12:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	17:48		
Dilution Factor:	1				
% Moisture.....:	1.6	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(25'-26.5')

GC Volatiles

Lot-Sample #...:	I6I190109-004	Work Order #...:	JEJRD1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:00	Date Received..:	09/19/06	MS Run #.....:	6263247
Prep Date.....:	09/19/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6263387	Analysis Time..:	12:18		
Dilution Factor:	0.99				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-7(25'-26.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-004	Work Order #...:	JEJRD1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:00	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	04:08		
Dilution Factor:	1				
% Moisture.....:	1.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.97 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	91	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-7(25'-26.5')

General Chemistry

Lot-Sample #...: I6I190109-004 Work Order #...: JEJRD Matrix.....: SOLID
Date Sampled...: 09/15/06 12:00 Date Received..: 09/19/06
% Moisture.....: 1.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:08 MS Run #.....: 6262153

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Client Sample ID: B-7(35'-36.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-005	**Work Order #...:** JEJRF1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:15	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 18:10	
Dilution Factor: 1.02		
% Moisture.....: 3.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-7(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-005	**Work Order #...:**	JEJRF1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 12:15	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	12:46		
Dilution Factor:	1.01				
% Moisture.....:	3.6	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-7(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-005	Work Order #...:	JEJRF1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:15	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	04:48		
Dilution Factor:	1				
% Moisture.....:	3.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	86	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-7(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-005 Work Order #...: JEJRF Matrix.....: SOLID
Date Sampled...: 09/15/06 12:15 Date Received..: 09/19/06
% Moisture.....: 3.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:10 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-7(50'-51.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-006	**Work Order #...:** JEJRJ1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:45	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 18:32	
Dilution Factor: 1.01		
% Moisture.....: 2.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-7(50'-51.5')

GC Volatiles

Lot-Sample #...: I6I190109-006	**Work Order #...:** JEJRJ1AD	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 12:45	**Date Received..:** 09/19/06	**MS Run #.....:** 6263247
Prep Date.....: 09/19/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6263387	**Analysis Time..:** 13:14	
Dilution Factor: 1		
% Moisture.....: 2.2	**Method.....:** SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-7(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-006	Work Order #...:	JEJRJ1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 12:45	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	05:28		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	2.5 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	107	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-7(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-006 Work Order #...: JEJRJ Matrix.....: SOLID
Date Sampled...: 09/15/06 12:45 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:12 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-8(25'-26.5')

GC/MS Volatiles

Lot-Sample #...:	I6I190109-007	**Work Order #...:**	JEJRK1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 15:05	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	18:54		
Dilution Factor:	1.02				
% Moisture.....:	2.2	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(25'-26.5')

GC Volatiles

Lot-Sample #...: I6I190109-007	Work Order #...: JEJRK1AD	Matrix.....: SOLID
Date Sampled...: 09/15/06 15:05	Date Received..: 09/19/06	MS Run #.....: 6265100
Prep Date.....: 09/20/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6265141	Analysis Time..: 18:28	
Dilution Factor: 0.99		
% Moisture.....: 2.2	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(25'-26.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-007	Work Order #...:	JEJRK1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:05	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	06:08		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.98 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	89	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-8(25'-26.5')

General Chemistry

Lot-Sample #...: I6I190109-007 Work Order #...: JEJRK Matrix.....: SOLID
Date Sampled...: 09/15/06 15:05 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:14 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-8(35'-36.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-008	**Work Order #...:** JEJRM1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 15:20	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 19:16	
Dilution Factor: 0.99		
% Moisture.....: 8.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.4	ug/kg
Ethylbenzene	ND	5.4	ug/kg
Toluene	ND	5.4	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.4	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.4	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(35'-36.5')

GC Volatiles

Lot-Sample #...:	I6I190109-008	Work Order #...:	JEJRM1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	18:55		
Dilution Factor:	1				
% Moisture.....:	8.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(35'-36.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-008	Work Order #...:	JEJRM1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	06:48		
Dilution Factor:	1				
% Moisture.....:	8.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.4 J,B	1.9	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	87	(37 - 131)
Dotriacontane	97	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-8(35'-36.5')

General Chemistry

Lot-Sample #...: I6I190109-008 Work Order #...: JEJRM Matrix.....: SOLID
Date Sampled...: 09/15/06 15:20 Date Received..: 09/19/06
% Moisture.....: 8.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	8.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:16 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-009	**Work Order #...:** JEJRR1AC	**Matrix.....:** SOLID
Date Sampled...: 09/15/06 15:50	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 19:38	
Dilution Factor: 0.99		
% Moisture.....: 2.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC Volatiles

Lot-Sample #...:	I6I190109-009	Work Order #...:	JEJRR1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:50	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	19:23		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	81	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-8(50'-51.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-009	Work Order #...:	JEJRR1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 15:50	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	07:28		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-8(50'-51.5')

General Chemistry

Lot-Sample #...: I6I190109-009 Work Order #...: JEJRR Matrix.....: SOLID
Date Sampled...: 09/15/06 15:50 Date Received..: 09/19/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:18 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: DUP-2

GC/MS Volatiles

Lot-Sample #...:	I6I190109-010	**Work Order #...:**	JEJRW1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/15/06 08:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	20:01		
Dilution Factor:	1.02				
% Moisture.....:	2.8	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	99	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: DUP-2

GC Volatiles

Lot-Sample #...:	I6I190109-010	Work Order #...:	JEJRW1AD	Matrix.....:	SOLID
Date Sampled...:	09/15/06 08:00	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	19:51		
Dilution Factor:	0.99				
% Moisture.....:	2.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	85	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-2

GC Semivolatiles

Lot-Sample #...:	I6I190109-010	Work Order #...:	JEJRW1AE	Matrix.....:	SOLID
Date Sampled...:	09/15/06 08:00	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	08:07		
Dilution Factor:	1				
% Moisture.....:	2.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	2.2 B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	73	(37 - 131)
Dotriacontane	83	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: DUP-2

General Chemistry

Lot-Sample #...: I6I190109-010 Work Order #...: JEJRW Matrix.....: SOLID
Date Sampled...: 09/15/06 08:00 Date Received..: 09/19/06
% Moisture.....: 2.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.8	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:20 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-2(15'-16.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-011	**Work Order #...:** JEJRX1AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 15:20	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 20:23	
Dilution Factor: 1.02		
% Moisture.....: 1.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(15'-16.5')

GC Volatiles

Lot-Sample #...: I6I190109-011	Work Order #...: JEJRX1AD	Matrix.....: SOLID
Date Sampled...: 09/16/06 15:20	Date Received..: 09/19/06	MS Run #.....: 6265100
Prep Date.....: 09/20/06	Analysis Date..: 09/20/06	
Prep Batch #...: 6265141	Analysis Time..: 20:18	
Dilution Factor: 0.99		
% Moisture.....: 1.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	92	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(15'-16.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-011	Work Order #...:	JEJRX1AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 15:20	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	08:47		
Dilution Factor:	1				
% Moisture.....:	1.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	98	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2(15'-16.5')

General Chemistry

Lot-Sample #...: I6I190109-011 Work Order #...: JEJRX Matrix.....: SOLID
Date Sampled...: 09/16/06 15:20 Date Received..: 09/19/06
% Moisture.....: 1.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:22 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-2(40'-41.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-012	**Work Order #...:** JEJR21AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 16:00	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 20:45	
Dilution Factor: 0.99		
% Moisture.....: 2.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(40'-41.5')

GC Volatiles

Lot-Sample #...:	I6I190109-012	Work Order #...:	JEJR21AD	Matrix.....:	SOLID
Date Sampled...:	09/16/06 16:00	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	20:46		
Dilution Factor:	0.99				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(40'-41.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-012	Work Order #...:	JEJR21AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 16:00	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/27/06		
Prep Batch #...:	6265097	Analysis Time..:	23:43		
Dilution Factor:	1				
% Moisture.....:	2.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	76	(37 - 131)
Dotriacontane	92	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2(40'-41.5')

General Chemistry

Lot-Sample #...: I6I190109-012 Work Order #...: JEJR2 Matrix.....: SOLID
Date Sampled...: 09/16/06 16:00 Date Received..: 09/19/06
% Moisture.....: 2.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.2	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:24 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

Released to Imaging: 4/26/2023 2:01:09 PM

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URS Corporation

Client Sample ID: B-2(70'-71.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-013	**Work Order #...:** JEJR41AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 17:00	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 21:07	
Dilution Factor: 1.01		
% Moisture.....: 3.5	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(70'-71.5')

GC Volatiles

Lot-Sample #...:	I6I190109-013	**Work Order #...:**	JEJR41AD	**Matrix.....:**	SOLID
Date Sampled...:	09/16/06 17:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	21:14		
Dilution Factor:	0.99				
% Moisture.....:	3.5	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(70'-71.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-013	Work Order #...:	JEJR41AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:00	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/28/06		
Prep Batch #...:	6265097	Analysis Time..:	01:43		
Dilution Factor:	1				
% Moisture.....:	3.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.1 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(37 - 131)
Dotriacontane	96	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2(70'-71.5')

General Chemistry

Lot-Sample #...: I6I190109-013 Work Order #...: JEJR4 Matrix.....: SOLID
Date Sampled...: 09/16/06 17:00 Date Received..: 09/19/06
% Moisture.....: 3.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.5	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:26 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-2(80'-81.5')

GC/MS Volatiles

Lot-Sample #...: I6I190109-014	**Work Order #...:** JEJR61AC	**Matrix.....:** SOLID
Date Sampled...: 09/16/06 17:30	**Date Received..:** 09/19/06	**MS Run #.....:** 6264346
Prep Date.....: 09/20/06	**Analysis Date..:** 09/20/06	
Prep Batch #...: 6264511	**Analysis Time..:** 21:29	
Dilution Factor: 1.02		
% Moisture.....: 4.4	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(80'-81.5')

GC Volatiles

Lot-Sample #...:	I6I190109-014	Work Order #...:	JEJR61AD	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:30	Date Received..:	09/19/06	MS Run #.....:	6265100
Prep Date.....:	09/20/06	Analysis Date..:	09/20/06		
Prep Batch #...:	6265141	Analysis Time..:	21:42		
Dilution Factor:	1				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	81	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-2(80'-81.5')

GC Semivolatiles

Lot-Sample #...:	I6I190109-014	Work Order #...:	JEJR61AE	Matrix.....:	SOLID
Date Sampled...:	09/16/06 17:30	Date Received..:	09/19/06	MS Run #.....:	6265071
Prep Date.....:	09/26/06	Analysis Date..:	09/28/06		
Prep Batch #...:	6265097	Analysis Time..:	02:23		
Dilution Factor:	1				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.3 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	75	(37 - 131)
Dotriacontane	95	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-2(80'-81.5')

General Chemistry

Lot-Sample #...: I6I190109-014 Work Order #...: JEJR6 Matrix.....: SOLID
Date Sampled...: 09/16/06 17:30 Date Received..: 09/19/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:28 MS Run #.....: 6262153

Received by OCD: 3/25/2021 2:14:32 PM

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AA **Matrix.....:** SOLID
MB Lot-Sample #: I6I200000-374

Prep Date.....: 09/19/06 **Analysis Time..:** 15:45
Analysis Date..: 09/19/06 **Prep Batch #...:** 6263374
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AA **Matrix.....:** SOLID
MB Lot-Sample #: I6I210000-511

Prep Date.....: 09/20/06 **Analysis Time..:** 17:03
Analysis Date..: 09/20/06 **Prep Batch #...:** 6264511
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	94	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	93	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AA Matrix.....: SOLID
MB Lot-Sample #: I6I200000-387

Prep Date.....: 09/19/06 Analysis Time..: 16:18
Analysis Date..: 09/19/06 Prep Batch #...: 6263387
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AA Matrix.....: SOLID
MB Lot-Sample #: I6I220000-141

Prep Date.....: 09/20/06 Analysis Time..: 17:04
Analysis Date..: 09/20/06 Prep Batch #...: 6265141
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	89	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I190109
Work Order #...: JELG01AA
Matrix.....: SOLID
MB Lot-Sample #: I6I190000-380

Prep Date.....: 09/19/06
Analysis Time..: 16:47
Analysis Date..: 09/20/06
Prep Batch #...: 6262380
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.98 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JETLX1AA Matrix.....: SOLID
MB Lot-Sample #: I6I220000-097

Prep Date.....: 09/26/06 Analysis Time..: 22:22
Analysis Date..: 09/27/06 Prep Batch #...: 6265097
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.76 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	78	(37 - 131)
Dotriacontane	93	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

Received by OCD: 3/25/2021 2:14:32 PM

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	94	(68 - 128)	1.6	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	89	(65 - 125)	3.4	(0-30)	SW846 8260B
Toluene	87	(64 - 124)			SW846 8260B
	88	(64 - 124)	2.1	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	87	(64 - 124)	3.0	(0-30)	SW846 8260B
o-Xylene	93	(65 - 125)			SW846 8260B
	90	(65 - 125)	3.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	105	(58 - 118)			SW846 8260B
	114	(58 - 118)	8.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JENK81AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I200000-374 JENK81AD-LCSD
Prep Date.....: 09/19/06 **Analysis Date..:** 09/19/06
Prep Batch #...: 6263374 **Analysis Time..:** 14:38
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	46.9	ug/kg	94	1.6	SW846 8260B
Ethylbenzene	50.0	45.9	ug/kg	92		SW846 8260B
	50.0	44.3	ug/kg	89	3.4	SW846 8260B
Toluene	50.0	43.3	ug/kg	87		SW846 8260B
	50.0	44.2	ug/kg	88	2.1	SW846 8260B
m-Xylene & p-Xylene	100	90.0	ug/kg	90		SW846 8260B
	100	87.3	ug/kg	87	3.0	SW846 8260B
o-Xylene	50.0	46.4	ug/kg	93		SW846 8260B
	50.0	45.0	ug/kg	90	3.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	52.4	ug/kg	105		SW846 8260B
	50.0	56.8	ug/kg	114	8.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	100	(67 - 127)
	101	(67 - 127)
Toluene-d8	112	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	98	(67 - 127)
1,2-Dichloroethane-d4	94	(65 - 125)
	97	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I210000-511 JER121AD-LCSD
Prep Date.....: 09/20/06 **Analysis Date..:** 09/20/06
Prep Batch #...: 6264511 **Analysis Time..:** 15:53
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	93	(68 - 128)			SW846 8260B
	93	(68 - 128)	0.84	(0-30)	SW846 8260B
Ethylbenzene	90	(65 - 125)			SW846 8260B
	90	(65 - 125)	0.70	(0-30)	SW846 8260B
Toluene	86	(64 - 124)			SW846 8260B
	84	(64 - 124)	1.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	88	(64 - 124)	1.3	(0-30)	SW846 8260B
o-Xylene	91	(65 - 125)			SW846 8260B
	90	(65 - 125)	1.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	102	(58 - 118)			SW846 8260B
	110	(58 - 118)	7.2	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	100	(67 - 127)
Toluene-d8	114	(76 - 136)
	115	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	99	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	99	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I190109 **Work Order #...:** JER121AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6I210000-511 JER121AD-LCSD
Prep Date.....: 09/20/06 **Analysis Date..:** 09/20/06
Prep Batch #...: 6264511 **Analysis Time..:** 15:53
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	46.3	ug/kg	93		SW846 8260B
	50.0	46.7	ug/kg	93	0.84	SW846 8260B
Ethylbenzene	50.0	45.1	ug/kg	90		SW846 8260B
	50.0	44.8	ug/kg	90	0.70	SW846 8260B
Toluene	50.0	42.8	ug/kg	86		SW846 8260B
	50.0	42.2	ug/kg	84	1.4	SW846 8260B
m-Xylene & p-Xylene	100	89.6	ug/kg	90		SW846 8260B
	100	88.4	ug/kg	88	1.3	SW846 8260B
o-Xylene	50.0	45.7	ug/kg	91		SW846 8260B
	50.0	45.2	ug/kg	90	1.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	51.1	ug/kg	102		SW846 8260B
	50.0	55.0	ug/kg	110	7.2	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	100	(67 - 127)
Toluene-d8	114	(76 - 136)
	115	(76 - 136)
Dibromofluoromethane	96	(67 - 127)
	99	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	99	(65 - 125)

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Gasoline Range Organics	**97**	**(66 - 129)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JENM21AC Matrix.....: SOLID
LCS Lot-Sample#: I6I200000-387
Prep Date.....: 09/19/06 Analysis Date..: 09/19/06
Prep Batch #...: 6263387 Analysis Time..: 15:23
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Gasoline Range Organics	**2000**	**1940**	**ug/kg**	**97**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-141 JETP81AD-LCSD
Prep Date.....: 09/20/06 Analysis Date..: 09/20/06
Prep Batch #...: 6265141 Analysis Time..: 16:09
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**90**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**11**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	96	(49 - 147)
	102	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I190109 Work Order #...: JETP81AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-141 JETP81AD-LCSD
Prep Date.....: 09/20/06 Analysis Date..: 09/20/06
Prep Batch #...: 6265141 Analysis Time..: 16:09
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**1800**	**ug/kg**	**90**		**SW846 8015B**
	2000	**1620**	**ug/kg**	**81**	**11**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	96	(49 - 147)
	102	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**79**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JELG01AC Matrix.....: SOLID
LCS Lot-Sample#: I6I190000-380
Prep Date.....: 09/19/06 Analysis Date..: 09/20/06
Prep Batch #...: 6262380 Analysis Time..: 17:27
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**26.2**	**mg/kg**	**79**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	98	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I190109 **Work Order #...:** JETLX1AC **Matrix.....:** SOLID
LCS Lot-Sample#: I6I220000-097
Prep Date.....: 09/26/06 **Analysis Date..:** 09/27/06
Prep Batch #...: 6265097 **Analysis Time..:** 23:03
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	55	(32 - 132)	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	80	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I190109 Work Order #...: JETLX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6I220000-097
Prep Date.....: 09/26/06 Analysis Date..: 09/27/06
Prep Batch #...: 6265097 Analysis Time..: 23:03
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	33.3	18.3	mg/kg	55	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	77	(37 - 131)
Dotriacontane	80	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	23:33		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	92	(68 - 128)			SW846 8260B
	92	(68 - 128)	0.30	(0-30)	SW846 8260B
Ethylbenzene	83	(65 - 125)			SW846 8260B
	85	(65 - 125)	0.91	(0-30)	SW846 8260B
Toluene	80	(64 - 124)			SW846 8260B
	81	(64 - 124)	0.52	(0-30)	SW846 8260B
m-Xylene & p-Xylene	81	(64 - 124)			SW846 8260B
	82	(64 - 124)	0.30	(0-30)	SW846 8260B
o-Xylene	85	(65 - 125)			SW846 8260B
	87	(65 - 125)	1.5	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	8.3	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AG-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263235
Prep Date.....:	09/19/06	**Analysis Date..:**	09/19/06		
Prep Batch #...:	6263374	**Analysis Time..:**	23:33		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.7	46.6	ug/kg	92		SW846 8260B
	ND	50.3	46.4	ug/kg	92	0.30	SW846 8260B
Ethylbenzene	ND	50.7	42.1	ug/kg	83		SW846 8260B
	ND	50.3	42.5	ug/kg	85	0.91	SW846 8260B
Toluene	ND	50.7	40.4	ug/kg	80		SW846 8260B
	ND	50.3	40.6	ug/kg	81	0.52	SW846 8260B
m-Xylene & p-Xylene	ND	101	81.9	ug/kg	81		SW846 8260B
	ND	101	82.2	ug/kg	82	0.30	SW846 8260B
o-Xylene	ND	50.7	43.0	ug/kg	85		SW846 8260B
	ND	50.3	43.6	ug/kg	87	1.5	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.7	48.3	ug/kg	95		SW846 8260B
	ND	50.3	52.4	ug/kg	104	8.3	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	104	(59 - 119)
Toluene-d8	114	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)
	97	(67 - 127)

NOTE(S):

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Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJRD1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-004		JEJRD1AG-MSD		
Date Sampled...:	09/15/06 12:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	21:51		
Dilution Factor:	1.02	**% Moisture.....:**	1.6		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	97	(68 - 128)			SW846 8260B
	93	(68 - 128)	5.5	(0-30)	SW846 8260B
Ethylbenzene	89	(65 - 125)			SW846 8260B
	88	(65 - 125)	2.4	(0-30)	SW846 8260B
Toluene	84	(64 - 124)			SW846 8260B
	83	(64 - 124)	2.3	(0-30)	SW846 8260B
m-Xylene & p-Xylene	87	(64 - 124)			SW846 8260B
	86	(64 - 124)	2.0	(0-30)	SW846 8260B
o-Xylene	91	(65 - 125)			SW846 8260B
	90	(65 - 125)	1.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	101	(58 - 118)	5.6	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(59 - 119)
	103	(59 - 119)
Toluene-d8	109	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	99	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	95	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJRD1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-004		JEJRD1AG-MSD		
Date Sampled...:	09/15/06 12:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6264346
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6264511	**Analysis Time..:**	21:51		
Dilution Factor:	1.02	**% Moisture.....:**	1.6		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	51.6	50.1	ug/kg	97		SW846 8260B
	ND	51.2	47.5	ug/kg	93	5.5	SW846 8260B
Ethylbenzene	ND	51.6	46.0	ug/kg	89		SW846 8260B
	ND	51.2	44.9	ug/kg	88	2.4	SW846 8260B
Toluene	ND	51.6	43.5	ug/kg	84		SW846 8260B
	ND	51.2	42.5	ug/kg	83	2.3	SW846 8260B
m-Xylene & p-Xylene	ND	103	89.5	ug/kg	87		SW846 8260B
	ND	102	87.7	ug/kg	86	2.0	SW846 8260B
o-Xylene	ND	51.6	46.8	ug/kg	91		SW846 8260B
	ND	51.2	46.3	ug/kg	90	1.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	51.6	49.0	ug/kg	95		SW846 8260B
	ND	51.2	51.9	ug/kg	101	5.6	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(59 - 119)
	103	(59 - 119)
Toluene-d8	109	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	99	(69 - 129)
	96	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	95	(67 - 127)

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	10:27		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	93	(66 - 129)			SW846 8015B
	91	(66 - 129)	1.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AJ-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6263247
Prep Date.....:	09/19/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6263387	**Analysis Time..:**	10:27		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2020**	**1880**	**ug/kg**	**93**		**SW846 8015B**
	ND	**2040**	**1860**	**ug/kg**	**91**	**1.0**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	98	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR61AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-014		JEJR61AG-MSD		
Date Sampled...:	09/16/06 17:30	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	17:32		
Dilution Factor:	1	**% Moisture.....:**	4.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	75	(66 - 129)			**SW846 8015B**
	85	(66 - 129)	11	(0-30)	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR61AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-014		JEJR61AG-MSD		
Date Sampled...:	09/16/06 17:30	**Date Received..:**	09/19/06	**MS Run #.....:**	6265100
Prep Date.....:	09/20/06	**Analysis Date..:**	09/20/06		
Prep Batch #...:	6265141	**Analysis Time..:**	17:32		
Dilution Factor:	1	**% Moisture.....:**	4.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2100**	**1580**	**ug/kg**	**75**		**SW846 8015B**
	ND	**2090**	**1770**	**ug/kg**	**85**	**11**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(37 - 153)
	98	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	Work Order #...:	JEJQV1AN-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	Date Received..:	09/19/06	MS Run #.....:	6262373
Prep Date.....:	09/19/06	Analysis Date..:	09/21/06		
Prep Batch #...:	6262380	Analysis Time..:	00:49		
Dilution Factor:	1	% Moisture.....:	1.4		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	91	(32 - 132)			SW846 8015B
	84	(32 - 132)	8.0	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJQV1AN-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-001		JEJQV1AP-MSD		
Date Sampled...:	09/15/06 09:40	**Date Received..:**	09/19/06	**MS Run #.....:**	6262373
Prep Date.....:	09/19/06	**Analysis Date..:**	09/21/06		
Prep Batch #...:	6262380	**Analysis Time..:**	00:49		
Dilution Factor:	1	**% Moisture.....:**	1.4		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**1.0**	**33.8**	**31.9**	**mg/kg**	**91**		**SW846 8015B**
	1.0	**33.8**	**29.4**	**mg/kg**	**84**	**8.0**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	114	(37 - 131)
	98	(37 - 131)
Dotriacontane	108	(10 - 151)
	95	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR21AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-012		JEJR21AG-MSD		
Date Sampled...:	09/16/06 16:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265071
Prep Date.....:	09/26/06	**Analysis Date..:**	09/28/06		
Prep Batch #...:	6265097	**Analysis Time..:**	00:23		
Dilution Factor:	1	**% Moisture.....:**	2.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**77**	**(32 - 132)**			**SW846 8015B**
	65	**(32 - 132)**	**16**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	96	(37 - 131)
	87	(37 - 131)
Dotriacontane	98	(10 - 151)
	90	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I190109	**Work Order #...:**	JEJR21AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I190109-012		JEJR21AG-MSD		
Date Sampled...:	09/16/06 16:00	**Date Received..:**	09/19/06	**MS Run #.....:**	6265071
Prep Date.....:	09/26/06	**Analysis Date..:**	09/28/06		
Prep Batch #...:	6265097	**Analysis Time..:**	00:23		
Dilution Factor:	1	**% Moisture.....:**	2.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	1.1	34.1	27.4	mg/kg	77		SW846 8015B
	1.1	34.0	23.3	mg/kg	65	16	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	96	(37 - 131)
	87	(37 - 131)
Dotriacontane	98	(10 - 151)
	90	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I190109 **Work Order #...:** JEJQV-SMP JEJQV-DUP **Matrix.....:** SOLID

Date Sampled...: 09/15/06 09:40 **Date Received..:** 09/19/06

% Moisture.....: 1.4

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #:	I6I190109-001	
	1.4	1.8	%	27	(0-20)	ASTM D 2216-90	09/19/06	6262223

Dilution Factor: 1 Analysis Time..: 11:00 MS Run Number..: 6262153

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SEVERN TRENT **STL**

CHAIN-OF-CUSTODY ADDENDUM

Lot No: 160190109

RECEIVED BY: KA

DATE/TIME RECEIVED: 9/19/06 0815

UNPACKED DATE/TIME: 9/19/06 0840

CLIENT/PROJECT: URS

Number of Shipping Containers Received with Chain of Custody 1

COC NUMBER:

QUOTE/PROFILE: 72371

SAMPLES LOGGED IN: KA

LOG-IN REVIEWED: JR

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: KA

Container Sealed: ☒ YES ☒ NO

Custody Seal Present: ☒ YES ☐ NO

Custody Seal Signed/Dated: ☒ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☒ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s):

2.0 VOC CANISTERS EXAMINED UPON RECEIPT:

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)
None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: KA **IR THERMOMETER #:** R-1

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB / SC 4.2	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC	TB / SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☒ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☒ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** KA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: _____

Samples received match COC:	☑ YES ☐ NO	Bottles received intact:	☑ YES ☐ NO
See additional discrepancies/comments section:	☐ YES ☑ NO	Samples received from USDA restricted area:	☐ YES ☑ NO
Chain-of-Custody form properly maintained:	☑ YES ☐ NO	VOA trip blanks included:	☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

Wrote Dup-2 twice only 2x120ml Rec'd

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: _____ Informed verbally on: _____ By: _____

Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: 9/29/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50852

I6I190109

STL4149 (1202)

Client	Project Manager	Date	Page 1 of 1
ARS	Shannon Hoover	15 Sep 2006	
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6552 512 454 8807	Lab Location: Austin	Analysis
City: Austin / State: TX / Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 BP Maljamar	Carrier/Waybill Number		
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO + DRO
B-6 (20-21.5')	15 Sep 06	0940	soil	40z	glass	4	ice	MS/MSD	X	X
B-6 (35-36.5')	15 Sep 06	1015	soil	40z	glass	2	ice		X	X
B-6 (50-51.5')	15 Sep 06	1040	soil	40z	glass	2	ice	M. Olcott 9/19/06	X	X
B-7 (25-26.5')	15 Sep 06	1200	soil	40z	glass	2	ice	VOA	X	X
B-7 (35-36.5')	15 Sep 06	1215	soil	40z	glass	2	ice		X	X
B-7 (50-51.5')	15 Sep 06	1245	soil	40z	glass	2	ice		X	X
B-8 (25-26.5)	15 Sep 06	1505	soil	40z	glass	2	ice		X	X
B-8 (35-36.5)	15 Sep 06	1520	soil	40z	glass	2	ice		X	X
B-8 (50-51.5)	15 Sep 06	1550	soil	40z	glass	2	ice		X	X
Dup-2	15 Sep 06	0800	soil	40z	glass	2	ice		X	X
Dup-2	15 Sep 06	0800	soil	40z	glass	2	ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify): Hold TPH for PAHs

	Date	Time		Date	Time
1. Relinquished By	9.18.06	0930	1. Received By	9/19/06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Stays with Sample / CANARY - Returned to Client with Report: PINK - Field Copy

98/99

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Chain of Custody Record

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

51004

STL4149 (1202)

Client: URS	Project Manager: Shannon Hoover	Date: 16 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512.419.6552	Lab Location:	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO+DRO
B-2 (15'-16.5')	16Sep06	1520	Soil	4oz	glass		ice	4.0 [illegible] 9/19/06	X	X
B-2 (40'-41.5')	16Sep06	1600	Soil	4oz	glass		ice	wood	X	X
B-2 (70-71.5')	16Sep06	1700	Soil	4oz	glass		ice		X	X
B-2 (80-81.5)	16Sep06	1730	Soil	4oz	glass		ice		X	X
~~B-2~~			Soil	4oz	glass		ice			

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature]	18Sep06	0930	1. Received By: [signature]	9/19/06	0817
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

66/99

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

50852

I16I190109

STL4149 (1202)

Client	Project Manager	Date	Page 1 of 1
URS	Shannon Hoover	15 Sep 2006	
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6551 512 454 8807	Lab Location: Austin	Analysis
City: Austin / State: TX / Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 60108243 Br Maljamar	Carrier/Waybill Number		
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	BTEX (8260B)	TPH Gro (8015B) DRO
B-6 (20-21.5)	15 Sep 06	0940	Soil	4oz	glass	4	Ice	MS/MSD	X	X
B-6 (25-26.5')	15 Sep 06	1015	Soil	4oz	glass	2	Ice		X	X
B-6 (50-51.5)	15 Sep 06	1040	Soil	4oz	glass	2	Ice		X	X
B-7 (25-26.5)	15 Sep 06	1200	Soil	4oz	glass	2	Ice	* Lucent signal was poor	X	X
B-7 (35-36.5')	15 Sep 06	1215	Soil	4oz	glass	2	Ice		X	X
B-7 (90-91.5')	15 Sep 06	1245	Soil	4oz	glass	2	Ice		X	X
B-8 (25-26.5)	15 Sep 06	1305	Soil	4oz	glass	2	Ice		X	X
B-8 (35-36.5)	15 Sep 06	1320	Soil	4oz	glass	2	Ice		X	X
B-8 (50-51.5)	15 Sep 06	1350	Soil	4oz	glass	2	Ice		X	X
Dup-2	15 Sep 06	0800	Soil	4oz	glass	2	Ice		X	X
Dup-2	15 Sep 06	0800	Soil	4oz	glass	2	Ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify): Hold TPH for PAHs

	Relinquished By	Date	Time	Received By	Date	Time
1		9.19.06	0930		9/19/06	0815
2						
3						

Comments

DISTRIBUTION: WHITE - Returned to Client with Report: CANARY - Returned to Client with Report: PINK - Field Copy

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Received by OCD: 3/25/2021 2:14:32 PM

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

51004

STL4149 (1202)

Client	Project Manager	Date	Page / of
URS	Shannon Hoover	16 Sept 2006	1 of 1
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512.419.6552		
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78729	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
H008243 BP Mallamar			
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments
B-2 (15-16.5')	16 Sept 06	1520	Soil	4oz	glass		Ice	4 glass containers used
B-2 (40-41.5')	16 Sept 06	1620	Soil	4oz	glass		Ice	
B-2 (70-71.5')	16 Sept 06	1700	Soil	4oz	glass		Ice	
B-2 (80-81.5')	16 Sept 06	1730	Soil	4oz	glass		Ice	
~~B-2~~	~~16 Sept 06~~	~~1800~~	~~Soil~~	~~4oz~~	~~glass~~		~~Ice~~	

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	18 Sept 06	0930	1. Received By	9/19/06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I280173

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

October 4, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

Received by OCD: 3/25/2021 2:14:32 PM

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Case Narrative

STL LOT NUMBER: **I6I280173**

This report contains the analytical results for the eight samples received under chain of custody by Severn Trent Laboratories (STL) on September 28, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6275179, diesel range organics was detected in the associated method blank at 0.94 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I280173

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-2 (105-106.5) 09/25/06 16:40 001				
Diesel Range Organics	0.99 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.3	0.50	%	ASTM D 2216-90
B-2 (115-116.5) 09/25/06 17:15 002				
Diesel Range Organics	1.2 J,B	2.1	mg/kg	SW846 8015B
Percent Moisture	17.8	0.50	%	ASTM D 2216-90
B-3 (20-20.5) 09/26/06 14:45 003				
Diesel Range Organics	0.99 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.0	0.50	%	ASTM D 2216-90
B-3 (45-46.5) 09/26/06 15:25 004				
Diesel Range Organics	0.90 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90
B-3 (70-71.5) 09/26/06 16:15 005				
Diesel Range Organics	0.90 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.5	0.50	%	ASTM D 2216-90
B-3 (95-96.5) 09/26/06 17:30 006				
Diesel Range Organics	1.5 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.9	0.50	%	ASTM D 2216-90
B-3 (120-121.5) 09/27/06 09:35 007				
Diesel Range Organics	1.5 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	4.4	0.50	%	ASTM D 2216-90
DUP-3 09/26/06 08:00 008				
Diesel Range Organics	1.4 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	2.6	0.50	%	ASTM D 2216-90

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ANALYTICAL METHODS SUMMARY

I6I280173

PARAMETER	ANALYTICAL METHOD
Extractable Petroleum Hydrocarbons	SW846 8015B
Method for Determination of Water Content of Soil	ASTM D 2216-90
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I280173

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JE78A	001	B-2 (105-106.5)	09/25/06	16:40
JE78L	002	B-2 (115-116.5)	09/25/06	17:15
JE78P	003	B-3 (20-20.5)	09/26/06	14:45
JE78T	004	B-3 (45-46.5)	09/26/06	15:25
JE78V	005	B-3 (70-71.5)	09/26/06	16:15
JE78W	006	B-3 (95-96.5)	09/26/06	17:30
JE782	007	B-3 (120-121.5)	09/27/06	09:35
JE784	008	DUP-3	09/26/06	08:00

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I280173

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
002	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
003	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
004	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
005	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
006	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
007	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051
008	SOLID	SW846 8015B		6275179	6275114
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6272360	6272246
	SOLID	SW846 8260B		6275067	6275051

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Client Sample ID: B-2 (105-106.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-001	**Work Order #...:** JE78A1AC	**Matrix.....:** SOLID
Date Sampled...: 09/25/06 16:40	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 15:06	
Dilution Factor: 1.01		
% Moisture.....: 3.3	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
1,2-Dichloroethane-d4	96	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2 (105-106.5)

GC Volatiles

Lot-Sample #...:	I6I280173-001	Work Order #...:	JE78A1AD	Matrix.....:	SOLID
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	11:49		
Dilution Factor:	0.99				
% Moisture.....:	3.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	90	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2 (105-106.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-001	Work Order #...:	JE78A1AE	Matrix.....:	SOLID
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	19:45		
Dilution Factor:	1				
% Moisture.....:	3.3	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.99 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	94	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2 (105-106.5)

General Chemistry

Lot-Sample #...: I6I280173-001 Work Order #...: JE78A Matrix.....: SOLID
Date Sampled...: 09/25/06 16:40 Date Received..: 09/28/06
% Moisture.....: 3.3

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.3	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:56 MS Run #.....: 6272246

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Client Sample ID: B-2 (115-116.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-002	**Work Order #...:**	JE78L1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	15:28		
Dilution Factor:	1.02				
% Moisture.....:	18	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	6.2	ug/kg
Ethylbenzene	ND	6.2	ug/kg
Toluene	ND	6.2	ug/kg
m-Xylene & p-Xylene	ND	12	ug/kg
o-Xylene	ND	6.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	6.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2 (115-116.5)

GC Volatiles

Lot-Sample #...:	I6I280173-002	Work Order #...:	JE78L1AD	Matrix.....:	SOLID
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	12:17		
Dilution Factor:	1				
% Moisture.....:	18	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	120	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-2 (115-116.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-002	Work Order #...:	JE78L1AE	Matrix.....:	SOLID
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	21:45		
Dilution Factor:	1				
% Moisture.....:	18	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	2.1	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	100	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-2 (115-116.5)

General Chemistry

Lot-Sample #...: I6I280173-002 Work Order #...: JE78L Matrix.....: SOLID
Date Sampled...: 09/25/06 17:15 Date Received..: 09/28/06
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	17.8	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:58 MS Run #.....: 6272246

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Client Sample ID: B-3 (20-20.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-003	**Work Order #...:**	JE78P1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 14:45	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	15:50		
Dilution Factor:	0.99				
% Moisture.....:	2.0	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (20-20.5)

GC Volatiles

Lot-Sample #...:	I6I280173-003	Work Order #...:	JE78P1AD	Matrix.....:	SOLID
Date Sampled...:	09/26/06 14:45	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	12:45		
Dilution Factor:	1				
% Moisture.....:	2.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (20-20.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-003	Work Order #...:	JE78P1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 14:45	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	22:25		
Dilution Factor:	1				
% Moisture.....:	2.0	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.99 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	94	(37 - 131)
Dotriacontane	105	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (20-20.5)

General Chemistry

Lot-Sample #...: I6I280173-003 Work Order #...: JE78P Matrix.....: SOLID
Date Sampled...: 09/26/06 14:45 Date Received..: 09/28/06
% Moisture.....: 2.0

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.0	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:00 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: B-3 (45-46.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-004	**Work Order #...:** JE78T1AC	**Matrix.....:** SOLID
Date Sampled...: 09/26/06 15:25	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 16:12	
Dilution Factor: 1		
% Moisture.....: 2.6	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	96	(69 - 129)
1,2-Dichloroethane-d4	103	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (45-46.5)

GC Volatiles

Lot-Sample #...: I6I280173-004	Work Order #...: JE78T1AD	Matrix.....: SOLID
Date Sampled...: 09/26/06 15:25	Date Received..: 09/28/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 13:13	
Dilution Factor: 1		
% Moisture.....: 2.6	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	83	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (45-46.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-004	Work Order #...:	JE78T1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 15:25	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	23:05		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.90 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	90	(37 - 131)
Dotriacontane	100	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (45-46.5)

General Chemistry

Lot-Sample #...: I6I280173-004 Work Order #...: JE78T Matrix.....: SOLID
Date Sampled...: 09/26/06 15:25 Date Received..: 09/28/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:02 MS Run #.....: 6272246

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Client Sample ID: B-3 (70-71.5)

GC/MS Volatiles

Lot-Sample #...: I6I280173-005	**Work Order #...:** JE78V1AC	**Matrix.....:** SOLID
Date Sampled...: 09/26/06 16:15	**Date Received..:** 09/28/06	**MS Run #.....:** 6275051
Prep Date.....: 09/29/06	**Analysis Date..:** 09/29/06	
Prep Batch #...: 6275067	**Analysis Time..:** 16:35	
Dilution Factor: 0.98		
% Moisture.....: 1.5	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	9.9	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (70-71.5)

GC Volatiles

Lot-Sample #...: I6I280173-005	Work Order #...: JE78V1AD	Matrix.....: SOLID
Date Sampled...: 09/26/06 16:15	Date Received..: 09/28/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 13:41	
Dilution Factor: 0.99		
% Moisture.....: 1.5	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	87	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (70-71.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-005	Work Order #...:	JE78V1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 16:15	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	23:45		
Dilution Factor:	1				
% Moisture.....:	1.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.90 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	74	(37 - 131)
Dotriacontane	102	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (70-71.5)

General Chemistry

Lot-Sample #...: I6I280173-005 Work Order #...: JE78V Matrix.....: SOLID
Date Sampled...: 09/26/06 16:15 Date Received..: 09/28/06
% Moisture.....: 1.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.5	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:04 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: B-3 (95-96.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-006	**Work Order #...:**	JE78W1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 17:30	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	16:57		
Dilution Factor:	0.99				
% Moisture.....:	3.9	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	98	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (95-96.5)

GC Volatiles

Lot-Sample #...:	I6I280173-006	**Work Order #...:**	JE78W1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 17:30	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	15:04		
Dilution Factor:	1				
% Moisture.....:	3.9	**Method.....:**	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	97	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: B-3 (95-96.5)

GC Semivolatiles

Lot-Sample #...:	I6I280173-006	Work Order #...:	JE78W1AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 17:30	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/03/06		
Prep Batch #...:	6275179	Analysis Time..:	00:25		
Dilution Factor:	1				
% Moisture.....:	3.9	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.5 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	103	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: B-3 (95-96.5)

General Chemistry

Lot-Sample #...: I6I280173-006 Work Order #...: JE78W Matrix.....: SOLID
Date Sampled...: 09/26/06 17:30 Date Received..: 09/28/06
% Moisture.....: 3.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.9	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:06 MS Run #.....: 6272246

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Client Sample ID: B-3 (120-121.5)

GC/MS Volatiles

Lot-Sample #...:	I6I280173-007	**Work Order #...:**	JE7821AC	**Matrix.....:**	SOLID
Date Sampled...:	09/27/06 09:35	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	17:19		
Dilution Factor:	1.02				
% Moisture.....:	4.4	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.3	ug/kg
Ethylbenzene	ND	5.3	ug/kg
Toluene	ND	5.3	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.3	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	97	(59 - 119)
Toluene-d8	109	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (120-121.5)

GC Volatiles

Lot-Sample #...:	I6I280173-007	Work Order #...:	JE7821AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 09:35	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	15:32		
Dilution Factor:	0.99				
% Moisture.....:	4.4	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	83	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-3 (120-121.5)

GC Semivolatiles

Lot-Sample #...: I6I280173-007	Work Order #...: JE7821AE	Matrix.....: SOLID
Date Sampled...: 09/27/06 09:35	Date Received..: 09/28/06	MS Run #.....: 6275114
Prep Date.....: 09/29/06	Analysis Date..: 10/03/06	
Prep Batch #...: 6275179	Analysis Time..: 01:04	
Dilution Factor: 1		
% Moisture.....: 4.4	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.5 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	104	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-3 (120-121.5)

General Chemistry

Lot-Sample #...: I6I280173-007 Work Order #...: JE782 Matrix.....: SOLID
Date Sampled...: 09/27/06 09:35 Date Received..: 09/28/06
% Moisture.....: 4.4

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	4.4	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:08 MS Run #.....: 6272246

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URS Corporation

Client Sample ID: DUP-3

GC/MS Volatiles

Lot-Sample #...:	I6I280173-008	**Work Order #...:**	JE7841AC	**Matrix.....:**	SOLID
Date Sampled...:	09/26/06 08:00	**Date Received..:**	09/28/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	17:41		
Dilution Factor:	1.02				
% Moisture.....:	2.6	**Method.....:**	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	95	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: DUP-3

GC Volatiles

Lot-Sample #...:	I6I280173-008	Work Order #...:	JE7841AD	Matrix.....:	SOLID
Date Sampled...:	09/26/06 08:00	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	15:59		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Client Sample ID: DUP-3

GC Semivolatiles

Lot-Sample #...:	I6I280173-008	Work Order #...:	JE7841AE	Matrix.....:	SOLID
Date Sampled...:	09/26/06 08:00	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/03/06		
Prep Batch #...:	6275179	Analysis Time..:	01:44		
Dilution Factor:	1				
% Moisture.....:	2.6	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.4 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	92	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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Client Sample ID: DUP-3

General Chemistry

Lot-Sample #...: I6I280173-008 Work Order #...: JE784 Matrix.....: SOLID
Date Sampled...: 09/26/06 08:00 Date Received..: 09/28/06
% Moisture.....: 2.6

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.6	0.50	%	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 14:10 MS Run #.....: 6272246

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AA **Matrix.....:** SOLID
MB Lot-Sample #: I6J020000-067

Prep Date.....: 09/29/06 **Analysis Time..:** 10:16
Analysis Date..: 09/29/06 **Prep Batch #...:** 6275067
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
1,2-Dichloroethane-d4	100	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I280173 Work Order #...: JFJT01AA Matrix.....: SOLID
MB Lot-Sample #: I6J030000-318

Prep Date.....: 10/02/06 Analysis Time..: 11:22
Analysis Date..: 10/02/06 Prep Batch #...: 6276318
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	73	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I280173
Work Order #...: JFGNX1AA
Matrix.....: SOLID
MB Lot-Sample #: I6J020000-179
Prep Date.....: 09/29/06
Analysis Time..: 18:25
Analysis Date..: 10/02/06
Prep Batch #...: 6275179
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.94 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	90	(37 - 131)
Dotriacontane	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J020000-067 JFGGL1AD-LCSD
Prep Date.....: 09/29/06 **Analysis Date..:** 09/29/06
Prep Batch #...: 6275067 **Analysis Time..:** 09:05
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	90	(68 - 128)			SW846 8260B
	88	(68 - 128)	2.3	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	93	(65 - 125)	1.4	(0-30)	SW846 8260B
Toluene	88	(64 - 124)			SW846 8260B
	88	(64 - 124)	0.0	(0-30)	SW846 8260B
m-Xylene & p-Xylene	91	(64 - 124)			SW846 8260B
	91	(64 - 124)	0.090	(0-30)	SW846 8260B
o-Xylene	92	(65 - 125)			SW846 8260B
	93	(65 - 125)	0.86	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	95	(58 - 118)			SW846 8260B
	104	(58 - 118)	9.0	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	102	(67 - 127)
Toluene-d8	115	(76 - 136)
	110	(76 - 136)
Dibromofluoromethane	97	(67 - 127)
	93	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	93	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I280173 **Work Order #...:** JFGGL1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J020000-067 JFGGL1AD-LCSD
Prep Date.....: 09/29/06 **Analysis Date..:** 09/29/06
Prep Batch #...: 6275067 **Analysis Time..:** 09:05
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	45.2	ug/kg	90		SW846 8260B
	50.0	44.2	ug/kg	88	2.3	SW846 8260B
Ethylbenzene	50.0	45.8	ug/kg	92		SW846 8260B
	50.0	46.5	ug/kg	93	1.4	SW846 8260B
Toluene	50.0	44.0	ug/kg	88		SW846 8260B
	50.0	44.0	ug/kg	88	0.0	SW846 8260B
m-Xylene & p-Xylene	100	91.1	ug/kg	91		SW846 8260B
	100	91.2	ug/kg	91	0.090	SW846 8260B
o-Xylene	50.0	46.0	ug/kg	92		SW846 8260B
	50.0	46.4	ug/kg	93	0.86	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	47.6	ug/kg	95		SW846 8260B
	50.0	52.0	ug/kg	104	9.0	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	101	(67 - 127)
	102	(67 - 127)
Toluene-d8	115	(76 - 136)
	110	(76 - 136)
Dibromofluoromethane	97	(67 - 127)
	93	(67 - 127)
1,2-Dichloroethane-d4	96	(65 - 125)
	93	(65 - 125)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I280173 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	107	(66 - 129)			SW846 8015B
	107	(66 - 129)	0.67	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I280173 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**2150**	**ug/kg**	**107**		**SW846 8015B**
	2000	**2130**	**ug/kg**	**107**	**0.67**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I280173 Work Order #...: JFGNX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-179
Prep Date.....: 09/29/06 Analysis Date..: 10/02/06
Prep Batch #...: 6275179 Analysis Time..: 19:05
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**85**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	100	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I280173 Work Order #...: JFGNX1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-179
Prep Date.....: 09/29/06 Analysis Date..: 10/02/06
Prep Batch #...: 6275179 Analysis Time..: 19:05
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**28.4**	**mg/kg**	**85**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	100	(37 - 131)
Dotriacontane	99	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JFA871AE-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I290104-003		JFA871AF-MSD		
Date Sampled...:	09/28/06 15:30	**Date Received..:**	09/29/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	14:00		
Dilution Factor:	0.99	**% Moisture.....:**	12		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	100	(68 - 128)			SW846 8260B
	101	(68 - 128)	0.08	(0-30)	SW846 8260B
Ethylbenzene	94	(65 - 125)			SW846 8260B
	95	(65 - 125)	0.36	(0-30)	SW846 8260B
Toluene	102	(64 - 124)			SW846 8260B
	107	(64 - 124)	3.7	(0-30)	SW846 8260B
m-Xylene & p-Xylene	94	(64 - 124)			SW846 8260B
	94	(64 - 124)	1.2	(0-30)	SW846 8260B
o-Xylene	96	(65 - 125)			SW846 8260B
	95	(65 - 125)	1.7	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	98	(58 - 118)			SW846 8260B
	94	(58 - 118)	5.1	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(59 - 119)
	102	(59 - 119)
Toluene-d8	113	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	94	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JFA871AE-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I290104-003		JFA871AF-MSD		
Date Sampled...:	09/28/06 15:30	**Date Received..:**	09/29/06	**MS Run #.....:**	6275051
Prep Date.....:	09/29/06	**Analysis Date..:**	09/29/06		
Prep Batch #...:	6275067	**Analysis Time..:**	14:00		
Dilution Factor:	0.99	**% Moisture.....:**	12		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	56.3	56.3	ug/kg	100		SW846 8260B
	ND	55.6	56.3	ug/kg	101	0.08	SW846 8260B
Ethylbenzene	ND	56.3	52.9	ug/kg	94		SW846 8260B
	ND	55.6	52.7	ug/kg	95	0.36	SW846 8260B
Toluene	ND	56.3	57.4	ug/kg	102		SW846 8260B
	ND	55.6	59.6	ug/kg	107	3.7	SW846 8260B
m-Xylene & p-Xylene	ND	113	105	ug/kg	94		SW846 8260B
	ND	111	104	ug/kg	94	1.2	SW846 8260B
o-Xylene	ND	56.3	53.8	ug/kg	96		SW846 8260B
	ND	55.6	52.9	ug/kg	95	1.7	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	56.3	55.0	ug/kg	98		SW846 8260B
	ND	55.6	52.2	ug/kg	94	5.1	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	104	(59 - 119)
	102	(59 - 119)
Toluene-d8	113	(76 - 136)
	113	(76 - 136)
Dibromofluoromethane	95	(69 - 129)
	94	(69 - 129)
1,2-Dichloroethane-d4	97	(67 - 127)
	94	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I280173	**Work Order #...:**	JE78L1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	14:08		
Dilution Factor:	0.99	**% Moisture.....:**	18		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**85**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**3.3**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78L1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	14:08		
Dilution Factor:	0.99	% Moisture.....:	18		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	ND	2410	2050	ug/kg	85		SW846 8015B
	ND	2440	1990	ug/kg	81	3.3	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78A1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-001		JE78A1AG-MSD		
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	20:25		
Dilution Factor:	1	% Moisture.....:	3.3		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	74	(32 - 132)			SW846 8015B
	89	(32 - 132)	17	(0-30)	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	97	(37 - 131)
	106	(37 - 131)
Dotriacontane	102	(10 - 151)
	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I280173	Work Order #...:	JE78A1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-001		JE78A1AG-MSD		
Date Sampled...:	09/25/06 16:40	Date Received..:	09/28/06	MS Run #.....:	6275114
Prep Date.....:	09/29/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6275179	Analysis Time..:	20:25		
Dilution Factor:	1	% Moisture.....:	3.3		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	0.99	34.4	26.6	mg/kg	74		SW846 8015B
	0.99	34.4	31.5	mg/kg	89	17	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	97	(37 - 131)
	106	(37 - 131)
Dotriacontane	102	(10 - 151)
	103	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I280173 **Work Order #...:** JFA83-SMP JFA83-DUP **Matrix.....:** SOLID

Date Sampled...: 09/28/06 14:00 **Date Received..:** 09/29/06

% Moisture.....: 18

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #:	I6I290104-001	
	17.9	19.0	%	6.0	(0-20)	ASTM D 2216-90	09/29/06	6272360

Dilution Factor: 1 Analysis Time..: 13:30 MS Run Number..: 6272246

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SEVERN TRENT STL

CHAIN–OF–CUSTODY ADDENDUM

Lot No: I6I280173

RECEIVED BY: [signature]

COC NUMBER: _____

DATE/TIME RECEIVED: 9-28-04 0815

QUOTE/PROFILE: 72371

UNPACKED DATE/TIME: 9-23-06 0925

CLIENT/PROJECT: ORS

SAMPLES LOGGED IN: [signature]

LOG-IN REVIEWED: CC

Number of Shipping Containers Received with Chain of Custody 1

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: CC

Container Sealed: ☑ YES ☐ NO

Custody Seal Signed/Dated: ☐ ~~YES~~ ☐ NO

Custody Seal Present: ☑ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

Packing Material Used: (circle)

None / Absorbent / Paper / Bubble Wrap

Samples Received Match Chain: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

Can Size: ☐ 6L ☐ 15L Other _____

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: CC **IR THERMOMETER #:** P5

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

TB	TB	TB	TB	TB	TB	TB	TB	TB	TB
SC 3.3°C	SC	SC	SC	SC	SC	SC	SC	SC	SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☑ YES ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☑ NA ☐ YES ☐ VOA Samples **VERIFIED BY:** _____

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☐ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: CC

Samples received match COC: ☑ YES ☐ NO Bottles received intact: ☑ YES ☐ NO
See additional discrepancies/comments section: ☐ YES ☑ NO Samples received from USDA restricted area: ☐ YES ☑ NO
Chain-of-Custody form properly maintained: ☑ YES ☐ NO VOA trip blanks included: ☐ YES ☐ NO ☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments

6.0 SHIPPING DOCUMENTATION:
Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____
Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

CORRECTIVE ACTION:
Client's Name: _____ Informed verbally on: _____ By: _____
Client's Name: _____ Informed verbally on: _____ By: _____
Sample(s) processed "as is" comments: _____

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:
Project Management: _____ Date: 10/10/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

Revised 08/04/06

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2; Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

51006

STL4149 (1202)

IOI280173

Client	Project Manager	Date	Page 1 of 1
URS Corporation	Shannon Hoover	25 Sept 2006	
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	
9400 Amberglen Blvd	512.419.6552	Austin	
City / **State** / **Zip Code**	**Site Contact**		
Austin / TX / 78642	Rita Krebs		
Project Number/Name	**Carrier/Waybill Number**		
BP Maljamar / 41008243			
Contract/Purchase Order/Quote Number			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	Analysis: BTEX 8260B	Analysis: TPH 8015 GRO + DRO
B-2 (105-106.5)	25 Sep 06	1640	Soil	40z	glass	2	Ice	3.2° @ 28-06 CC	X	X
B-2 (115-116.5)	25 Sep 06	1715	Soil	40z	glass	2	Ice		X	X
B-3 (20-20.5)	26 Sep 06	1445	Soil	40z	glass	2	Ice		X	X
B-3 (45-46.5)	26 Sep 06	1525	Soil	40z	glass	2	Ice		X	X
B-3 (70-71.5)	26 Sep 06	1615	Soil	40z	glass	2	Ice		X	X
B-3 (95-96.5)	26 Sep 06	1730	Soil	40z	glass	2	Ice		X	X
B-3 (120-121.5)	27 Sep 06	0935	Soil	40z	glass	2	Ice		X	X
DUP-3	26 Sep 06	0800	Soil	40z	glass	4	Ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other _____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-27-06	1100	1. Received By:	9-28-06	0815
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

58/58

DISTRIBUTION: WHITE - Stays with SAMPLE; CANARY - Returned to Client with Report; PINK - Field Copy

[redacted]

Chain of Custody Record

STL4149 (1202)

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

51006

I6I280173

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 25 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512.419.6552	Lab Location: Austin	Analysis
City: Austin; State: TX; Zip Code: 78642	Site Contact: Rita Krebs		
Project Number/Name: BP Maljamar / 41008243	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260B	TPH 8015 GRO DRO
B-2 (105-106.5)	25Sep06	1640	Soil	4oz	Glass	2	Ice	9.2° 9-28-06	X	X
B-2 (115-116.5)	25Sep06	1715	Soil	4oz	Glass	2	Ice		X	X
B-3 (20-20.5)	26Sep06	1445	Soil	4oz	Glass	2	Ice		X	X
B-3 (45-46.5)	26Sep06	1525	Soil	4oz	Glass	2	Ice		X	X
B-3 (70-71.5)	26Sep06	1615	Soil	4oz	Glass	2	Ice		X	X
B-3 (95-96.5)	26Sep06	1730	Soil	4oz	Glass	2	Ice		X	X
B-3 (120-121.5)	27Sep06	0935	Soil	4oz	Glass	2	Ice		X	X
DUP-3	26Sep06	0800	Soil	4oz	Glass	4	Ice		X	X

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-27-06	1100	1. Received By: [signature]	9-28-06	0815
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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SEVERN TRENT STL Leaders in Environmental Testing

Certificate of Analysis

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ANALYTICAL REPORT

PROJECT NO. 41008243

BP Maljamar

Lot #: I6I300123

Shannon Hoover

URS Corporation
9400 Amberglen Blvd
PO Box 201088
Austin, TX 78729

SEVERN TRENT LABORATORIES, INC.

Dane J. Wacasey
Project Manager

October 13, 2006

American Council of Independent Laboratories
International Association of Environmental Testing Laboratories

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Case Narrative

STL LOT NUMBER: **I6I300123**

This report contains the analytical results for the 10 samples received under chain of custody by Severn Trent Laboratories (STL) on September 30, 2006. These samples are associated with your BP Maljamar project.

All samples were received in good condition and within temperature requirements, with the exception of DUP-1 for the analysis of nitrate, where the sample had expired prior to receipt by the laboratory.

All applicable quality control procedures met method-specified acceptance criteria except where noted in the case narrative or flagged on the result pages.

For SW8015B analytical batch # 6275398, there was insufficient sample volume provided to prepare a project specific MS/MSD. A duplicate LCS was analyzed to provide accuracy and precision data for this batch. Diesel range organics was detected in the associated method blank at 0.022 J mg/L. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is. The LCS RPD criterion was exceeded for diesel range organics, however the individual recoveries were within criteria, therefore the data was flagged and are reported as is.

For SW8015B analytical batch # 6275401, diesel range organics was detected in the associated method blank at 0.84 J mg/kg. The contamination level was less than the reporting limit; therefore the data was flagged and are reported as is.

For SW6010B analytical batch # 6276373, aluminum was detected in the associated method blank at 0.063 B mg/L, molybdenum was detected in the associated method blank at 0.0036 B mg/L, and zinc was detected in the associated method blank at 0.0022 B mg/L. The contamination levels were less than the reporting limit; therefore the data was flagged and are reported as is.

For SW6010B analytical batch # 6276369, where the recoveries and RPD could not be calculated for calcium and sodium because the native concentration was greater than (4) four times that of the spike amount; therefore the data was flagged and are reported as is.

For E300.0A analytical batch # 6278068, sample DUP-1 was analyzed less than (4) four hours outside of holding time due to lack of holding time remaining upon receipt. The data is flagged and is reported as is per client instruction.

This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (512) 310-5284.

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
B-4(25-26.5) 09/27/06 16:15 001				
Diesel Range Organics	0.96 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.2	0.50	%	ASTM D 2216-90
B-4(50-51.5) 09/27/06 16:50 002				
Diesel Range Organics	1.2 J,B	1.7	mg/kg	SW846 8015B
Percent Moisture	1.8	0.50	%	ASTM D 2216-90
B-4(75-76.5) 09/27/06 17:35 003				
Diesel Range Organics	0.91 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	2.9	0.50	%	ASTM D 2216-90
B-4(95-96.5) 09/28/06 09:05 004				
Diesel Range Organics	0.89 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	3.8	0.50	%	ASTM D 2216-90
B-4(120-121.5) 09/28/06 10:45 005				
Diesel Range Organics	0.91 J,B	1.8	mg/kg	SW846 8015B
Percent Moisture	7.5	0.50	%	ASTM D 2216-90
MW-1 09/28/06 15:50 006				
Diesel Range Organics	0.025 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.025 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0061 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.086 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.069	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0021 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.014 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0041	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0050 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0093	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	57.7	5.0	mg/L	SW846 6010B
Potassium	4.1 B	5.0	mg/L	SW846 6010B
Magnesium	13.7	5.0	mg/L	SW846 6010B
Sodium	30.5	5.0	mg/L	SW846 6010B
Total Dissolved Solids	357	40.0	mg/L	MCAWW 160.1

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-1 09/28/06 15:50 006				
Chloride	49.6	10.0	mg/L	SW846 9056
Fluoride	0.60 B	1.0	mg/L	SW846 9056
Sulfate	37.9	10.0	mg/L	SW846 9056
Nitrate as N	2.8	0.50	mg/L	SW846 9056
MW-3 09/29/06 08:05 007				
Diesel Range Organics	0.045 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.021 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0035 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.10 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.065	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0025 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.024	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0057	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0081 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0077	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	66.3	5.0	mg/L	SW846 6010B
Potassium	5.0	5.0	mg/L	SW846 6010B
Magnesium	15.5	5.0	mg/L	SW846 6010B
Sodium	31.8	5.0	mg/L	SW846 6010B
Toluene	1.2	1.0	ug/L	SW846 8260B
Total Dissolved Solids	369	40.0	mg/L	MCAWW 160.1
Chloride	77.2	20.0	mg/L	SW846 9056
Fluoride	0.59 B	1.0	mg/L	SW846 9056
Sulfate	35.3	20.0	mg/L	SW846 9056
Nitrate as N	2.9	0.50	mg/L	SW846 9056
DUP-1 09/28/06 08:00 008				
Diesel Range Organics	0.026 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.021 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0060 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.083 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.066	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0024 B	0.0050	mg/L	SW846 6010B
Manganese - DISSOLVED	0.011 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0034	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0045 B	0.040	mg/L	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DUP-1 09/28/06 08:00 008				
Selenium - DISSOLVED	0.0060	0.0050	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0052	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	57.1	5.0	mg/L	SW846 6010B
Potassium	4.1 B	5.0	mg/L	SW846 6010B
Magnesium	13.6	5.0	mg/L	SW846 6010B
Sodium	30.4	5.0	mg/L	SW846 6010B
Total Dissolved Solids	348	40.0	mg/L	MCAWW 160.1
Chloride	87.3	10.0	mg/L	SW846 9056
Fluoride	0.74 B	1.0	mg/L	SW846 9056
Sulfate	40.5	10.0	mg/L	SW846 9056
Nitrate as N	2.8 H	0.50	mg/L	SW846 9056
MW-2 09/29/06 10:20 009				
Diesel Range Organics	0.036 J,B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.020 B,J	0.20	mg/L	SW846 6010B
Barium - DISSOLVED	0.39	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.083	0.060	mg/L	SW846 6010B
Manganese - DISSOLVED	0.21	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0025	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.016 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.014 B,J	0.020	mg/L	SW846 6010B
Calcium	899	5.0	mg/L	SW846 6010B
Potassium	19.2	5.0	mg/L	SW846 6010B
Magnesium	257	5.0	mg/L	SW846 6010B
Sodium	145	5.0	mg/L	SW846 6010B
Total Dissolved Solids	6010	40.0	mg/L	MCAWW 160.1
Chloride	2600	500	mg/L	SW846 9056
Sulfate	81.8	50.0	mg/L	SW846 9056
Nitrate as N	2.8	0.50	mg/L	SW846 9056
MW-4 09/29/06 12:10 010				
Diesel Range Organics	0.062 B	0.048	mg/L	SW846 8015B
Aluminum - DISSOLVED	0.026 B,J	0.20	mg/L	SW846 6010B
Arsenic - DISSOLVED	0.0033 B	0.010	mg/L	SW846 6010B
Barium - DISSOLVED	0.12 B	0.20	mg/L	SW846 6010B
Boron - DISSOLVED	0.064	0.060	mg/L	SW846 6010B
Chromium - DISSOLVED	0.0033 B	0.0050	mg/L	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

I6I300123

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW-4 09/29/06 12:10 010				
Manganese - DISSOLVED	0.014 B	0.015	mg/L	SW846 6010B
Molybdenum - DISSOLVED	0.0074	0.040	mg/L	SW846 6010B
	Qualifiers: B,J			
Nickel - DISSOLVED	0.0071 B	0.040	mg/L	SW846 6010B
Zinc - DISSOLVED	0.0054	0.020	mg/L	SW846 6010B
	Qualifiers: B,J			
Calcium	59.3	5.0	mg/L	SW846 6010B
Potassium	5.3	5.0	mg/L	SW846 6010B
Magnesium	11.7	5.0	mg/L	SW846 6010B
Sodium	28.7	5.0	mg/L	SW846 6010B
Total Dissolved Solids	303	40.0	mg/L	MCAWW 160.1
Chloride	25.8	10.0	mg/L	SW846 9056
Fluoride	0.66 B	1.0	mg/L	SW846 9056
Sulfate	32.7	10.0	mg/L	SW846 9056
Nitrate as N	2.9	0.50	mg/L	SW846 9056

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ANALYTICAL METHODS SUMMARY

I6I300123

PARAMETER	ANALYTICAL METHOD
Chloride	SW846 9056
Extractable Petroleum Hydrocarbons	SW846 8015B
Filterable Residue (TDS)	MCAWW 160.1
Fluoride	SW846 9056
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Method for Determination of Water Content of Soil	ASTM D 2216-90
Nitrate as N	SW846 9056
Sulfate	SW846 9056
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Volatile Organics by GC/MS	SW846 8260B
Volatile Petroleum Hydrocarbons	SW846 8015B

References:

ASTM Annual Book Of ASTM Standards.

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

I6I300123

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JFFA1	001	B-4(25-26.5)	09/27/06	16:15
JFFD0	002	B-4(50-51.5)	09/27/06	16:50
JFFD2	003	B-4(75-76.5)	09/27/06	17:35
JFFD4	004	B-4(95-96.5)	09/28/06	09:05
JFFD9	005	B-4(120-121.5)	09/28/06	10:45
JFFED	006	MW-1	09/28/06	15:50
JFFFC	007	MW-3	09/29/06	08:05
JFFFK	008	DUP-1	09/28/06	08:00
JFFFM	009	MW-2	09/29/06	10:20
JFFFN	010	MW-4	09/29/06	12:10

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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QC DATA ASSOCIATION SUMMARY

I6I300123

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
002	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
003	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
004	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
005	SOLID	SW846 8015B		6275401	6275271
	SOLID	SW846 8015B		6276318	6276185
	SOLID	ASTM D 2216-90		6276446	6276282
	SOLID	SW846 8260B		6279367	6279233
006	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
007	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	

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QC DATA ASSOCIATION SUMMARY

I6I300123

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
007	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
008	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
009	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	
010	WATER	MCAWW 160.1		6276243	6276146
	WATER	SW846 9056		6279315	6279200
	WATER	SW846 9056		6278066	6278048
	WATER	SW846 9056		6279320	6279202
	WATER	SW846 9056		6278068	6278049
	WATER	SW846 8015B		6275398	
	WATER	SW846 8015B		6278167	6278106
	WATER	SW846 7470A		6284112	6284074
	WATER	SW846 8260B		6284128	6284080
	WATER	SW846 6010B		6276369	6276227
	WATER	SW846 6010B		6276373	

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URS Corporation

Client Sample ID: B-4(25-26.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-001	**Work Order #...:** JFFA11AA	**Matrix.....:** SOLID
Date Sampled...: 09/27/06 16:15	**Date Received..:** 09/30/06	**MS Run #.....:** 6279233
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6279367	**Analysis Time..:** 17:47	
Dilution Factor: 1.02		
% Moisture.....: 1.2	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.2	ug/kg
Ethylbenzene	ND	5.2	ug/kg
Toluene	ND	5.2	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.2	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.2	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	110	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(25-26.5)

GC Volatiles

Lot-Sample #...:	I6I300123-001	Work Order #...:	JFFA11AC	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:15	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	17:03		
Dilution Factor:	1				
% Moisture.....:	1.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(25-26.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-001	Work Order #...:	JFFA11AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:15	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	13:59		
Dilution Factor:	1				
% Moisture.....:	1.2	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.96 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	89	(37 - 131)
Dotriacontane	111	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-4(25-26.5)

General Chemistry

Lot-Sample #...: I6I300123-001 Work Order #...: JFFA1 Matrix.....: SOLID
Date Sampled...: 09/27/06 16:15 Date Received..: 09/30/06
% Moisture.....: 1.2

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.2	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:22 MS Run #.....: 6276282

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URS Corporation

Client Sample ID: B-4(50-51.5)

GC/MS Volatiles

Lot-Sample #...:	I6I300123-002	Work Order #...:	JFFD01AA	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:50	Date Received..:	09/30/06	MS Run #.....:	6279233
Prep Date.....:	10/04/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6279367	Analysis Time..:	18:09		
Dilution Factor:	1				
% Moisture.....:	1.8	Method.....:	SW846 8260B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(50-51.5)

GC Volatiles

Lot-Sample #...:	I6I300123-002	Work Order #...:	JFFD01AC	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:50	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	17:30		
Dilution Factor:	0.99				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	84	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(50-51.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-002	Work Order #...:	JFFD01AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 16:50	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	16:00		
Dilution Factor:	1				
% Moisture.....:	1.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	1.2 J,B	1.7	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	94	(37 - 131)
Dotriacontane	111	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-4(50-51.5)

General Chemistry

Lot-Sample #...: I6I300123-002 Work Order #...: JFFD0 Matrix.....: SOLID
Date Sampled...: 09/27/06 16:50 Date Received..: 09/30/06
% Moisture.....: 1.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	1.8	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:24 MS Run #.....: 6276282

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URS Corporation

Client Sample ID: B-4(75-76.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-003	**Work Order #...:** JFFD21AA	**Matrix.....:** SOLID
Date Sampled...: 09/27/06 17:35	**Date Received..:** 09/30/06	**MS Run #.....:** 6279233
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6279367	**Analysis Time..:** 18:32	
Dilution Factor: 0.98		
% Moisture.....: 2.9	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.0	ug/kg
Ethylbenzene	ND	5.0	ug/kg
Toluene	ND	5.0	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.0	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(75-76.5)

GC Volatiles

Lot-Sample #...:	I6I300123-003	Work Order #...:	JFFD21AC	Matrix.....:	SOLID
Date Sampled...:	09/27/06 17:35	Date Received..:	09/30/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	17:58		
Dilution Factor:	0.99				
% Moisture.....:	2.9	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	94	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(75-76.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-003	Work Order #...:	JFFD21AD	Matrix.....:	SOLID
Date Sampled...:	09/27/06 17:35	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	16:40		
Dilution Factor:	1				
% Moisture.....:	2.9	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.91 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	85	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-4(75-76.5)

General Chemistry

Lot-Sample #...: I6I300123-003 Work Order #...: JFFD2 Matrix.....: SOLID
Date Sampled...: 09/27/06 17:35 Date Received..: 09/30/06
% Moisture.....: 2.9

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	2.9	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:26 MS Run #.....: 6276282

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URS Corporation

Client Sample ID: B-4(95-96.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-004	Work Order #...: JFFD41AA	Matrix.....: SOLID
Date Sampled...: 09/28/06 09:05	Date Received..: 09/30/06	MS Run #.....: 6279233
Prep Date.....: 10/04/06	Analysis Date..: 10/05/06	
Prep Batch #...: 6279367	Analysis Time..: 10:14	
Dilution Factor: 0.99		
% Moisture.....: 3.8	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.1	ug/kg
Ethylbenzene	ND	5.1	ug/kg
Toluene	ND	5.1	ug/kg
m-Xylene & p-Xylene	ND	10	ug/kg
o-Xylene	ND	5.1	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.1	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	98	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(95-96.5)

GC Volatiles

Lot-Sample #...: I6I300123-004	Work Order #...: JFFD41AC	Matrix.....: SOLID
Date Sampled...: 09/28/06 09:05	Date Received..: 09/30/06	MS Run #.....: 6276185
Prep Date.....: 10/02/06	Analysis Date..: 10/02/06	
Prep Batch #...: 6276318	Analysis Time..: 18:26	
Dilution Factor: 1		
% Moisture.....: 3.8	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	86	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(95-96.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-004	Work Order #...:	JFFD41AD	Matrix.....:	SOLID
Date Sampled...:	09/28/06 09:05	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	17:21		
Dilution Factor:	1				
% Moisture.....:	3.8	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.89 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	88	(37 - 131)
Dotriacontane	106	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-4(95-96.5)

General Chemistry

Lot-Sample #...: I6I300123-004 Work Order #...: JFFD4 Matrix.....: SOLID
Date Sampled...: 09/28/06 09:05 Date Received..: 09/30/06
% Moisture.....: 3.8

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	3.8	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:28 MS Run #.....: 6276282

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: B-4(120-121.5)

GC/MS Volatiles

Lot-Sample #...: I6I300123-005	**Work Order #...:** JFFD91AA	**Matrix.....:** SOLID
Date Sampled...: 09/28/06 10:45	**Date Received..:** 09/30/06	**MS Run #.....:** 6279233
Prep Date.....: 10/04/06	**Analysis Date..:** 10/05/06	
Prep Batch #...: 6279367	**Analysis Time..:** 10:37	
Dilution Factor: 1.02		
% Moisture.....: 7.5	**Method.....:** SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	5.5	ug/kg
Ethylbenzene	ND	5.5	ug/kg
Toluene	ND	5.5	ug/kg
m-Xylene & p-Xylene	ND	11	ug/kg
o-Xylene	ND	5.5	ug/kg
Methyl tert-butyl ether (MTBE)	ND	5.5	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	111	(76 - 136)
Dibromofluoromethane	92	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(120-121.5)

GC Volatiles

Lot-Sample #...: I6I300123-005	**Work Order #...:** JFFD91AC		**Matrix.....:** SOLID
Date Sampled...: 09/28/06 10:45	**Date Received..:** 09/30/06		**MS Run #.....:** 6276185
Prep Date.....: 10/02/06	**Analysis Date..:** 10/02/06		
Prep Batch #...: 6276318	**Analysis Time..:** 18:54		
Dilution Factor: 1			
% Moisture.....: 7.5	**Method.....:** SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	110	ug/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	93	(37 - 153)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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URS Corporation

Client Sample ID: B-4(120-121.5)

GC Semivolatiles

Lot-Sample #...:	I6I300123-005	Work Order #...:	JFFD91AD	Matrix.....:	SOLID
Date Sampled...:	09/28/06 10:45	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	18:01		
Dilution Factor:	1				
% Moisture.....:	7.5	Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.91 J,B	1.8	mg/kg

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	81	(37 - 131)
Dotriacontane	108	(10 - 151)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: B-4(120-121.5)

General Chemistry

Lot-Sample #...: I6I300123-005 Work Order #...: JFFD9 Matrix.....: SOLID
Date Sampled...: 09/28/06 10:45 Date Received..: 09/30/06
% Moisture.....: 7.5

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture	7.5	0.50	%	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:30 MS Run #.....: 6276282

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URS Corporation

Client Sample ID: MW-1

GC/MS Volatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A2	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 13:36	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	91	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	98	(88 - 119)

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URS Corporation

Client Sample ID: MW-1

GC Volatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A4	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 13:27	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(75 - 122)

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URS Corporation

Client Sample ID: MW-1

GC Semivolatiles

Lot-Sample #...: I6I300123-006	Work Order #...: JFFED1A3	Matrix.....: WATER
Date Sampled...: 09/28/06 15:50	Date Received..: 09/30/06	MS Run #.....:
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275398	Analysis Time..: 20:42	
Dilution Factor: 0.96		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.025 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(48 - 153)
Dotriacontane	100	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-1

TOTAL Metals

Lot-Sample #...: I6I300123-006 Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	57.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A5
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Potassium	4.1 B	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A6
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Magnesium	13.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A7
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	
Sodium	30.5	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A8
		Dilution Factor: 1		Analysis Time..: 11:31	MS Run #.....: 6276227	

NOTE(S):

B Estimated result. Result is less than RL.

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URS Corporation

Client Sample ID: MW-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-006 Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AH
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Aluminum	**0.025 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AJ**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Arsenic	**0.0061 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AK**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Barium	**0.086 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AL**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Boron	**0.069**	**0.060**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AM**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AN
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AP
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Chromium	**0.0021 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AQ**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AR
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AT
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Manganese	**0.014 B**	**0.015**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AU**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Molybdenum	**0.0041 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AV**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	

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URS Corporation

Client Sample ID: MW-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-006 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0050 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1AW**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/03-10/04/06	JFFED1AX
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFFED1A0
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Zinc	**0.0093 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFFED1A1**
		Dilution Factor: 1		Analysis Time..: 12:58	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFED1AG
		Dilution Factor: 1		Analysis Time..: 00:00	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-1

General Chemistry

Lot-Sample #...: I6I300123-006 Work Order #...: JFFED Matrix.....: WATER
Date Sampled...: 09/28/06 15:50 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	49.6	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 10:48	MS Run #.....: 6279200	
Fluoride	0.60 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 09:55	MS Run #.....: 6278048	
Nitrate as N	2.8	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 09:55	MS Run #.....: 6278049	
Sulfate	37.9	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 10:48	MS Run #.....: 6279202	
Total Dissolved Solids	357	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:07	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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Client Sample ID: MW-3

GC/MS Volatiles

Lot-Sample #...: I6I300123-007	Work Order #...: JFFFC1A2	Matrix.....: WATER
Date Sampled...: 09/29/06 08:05	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 14:01	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	**1.2**	**1.0**	**ug/L**
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	92	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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URS Corporation

Client Sample ID: MW-3

GC Volatiles

Lot-Sample #...: I6I300123-007	**Work Order #...:** JFFFC1A4	**Matrix.....:** WATER
Date Sampled...: 09/29/06 08:05	**Date Received..:** 09/30/06	**MS Run #.....:** 6278106
Prep Date.....: 10/04/06	**Analysis Date..:** 10/04/06	
Prep Batch #...: 6278167	**Analysis Time..:** 13:54	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	91	(75 - 122)

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URS Corporation

Client Sample ID: MW-3

GC Semivolatiles

Lot-Sample #...: I6I300123-007	Work Order #...: JFFFC1A3	Matrix.....: WATER
Date Sampled...: 09/29/06 08:05	Date Received..: 09/30/06	MS Run #.....:
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275398	Analysis Time..: 21:22	
Dilution Factor: 0.97		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.045 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	82	(48 - 153)
Dotriacontane	99	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-3

TOTAL Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	66.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A5
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Potassium	5.0	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A6
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Magnesium	15.5	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A7
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	
Sodium	31.8	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFC1A8
		Dilution Factor: 1		Analysis Time..: 11:36	MS Run #.....: 6276227	

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URS Corporation

Client Sample ID: MW-3

DISSOLVED Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AH
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Aluminum	**0.021 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AJ**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Arsenic	**0.0035 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AK**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Barium	**0.10 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AL**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Boron	**0.065**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AM**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AN
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AP
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Chromium	**0.0025 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AQ**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AR
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AT
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Manganese	**0.024**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AU**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Molybdenum	**0.0057 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AV**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	

(Continued on next page)

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URS Corporation

Client Sample ID: MW-3

DISSOLVED Metals

Lot-Sample #...: I6I300123-007 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0081 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1AW**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1AX
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFC1A0
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Zinc	**0.0077 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFC1A1**
		Dilution Factor: 1		Analysis Time..: 13:02	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFC1AG
		Dilution Factor: 1		Analysis Time..: 09:07	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-3

General Chemistry

Lot-Sample #...: I6I300123-007 Work Order #...: JFFFC Matrix.....: WATER
Date Sampled...: 09/29/06 08:05 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	77.2	20.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 20		Analysis Time..: 11:03	MS Run #.....: 6279200	
Fluoride	0.59 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 10:55	MS Run #.....: 6278048	
Nitrate as N	2.9	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 10:55	MS Run #.....: 6278049	
Sulfate	35.3	20.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 20		Analysis Time..: 11:03	MS Run #.....: 6279202	
Total Dissolved Solids	369	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:11	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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URS Corporation

Client Sample ID: DUP-1

GC/MS Volatiles

Lot-Sample #...: I6I300123-008	Work Order #...: JFFFK1A2	Matrix.....: WATER
Date Sampled...: 09/28/06 08:00	Date Received..: 09/30/06	MS Run #.....: 6284080
Prep Date.....: 10/06/06	Analysis Date..: 10/06/06	
Prep Batch #...: 6284128	Analysis Time..: 14:27	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(67 - 130)
Toluene-d8	97	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	99	(88 - 119)

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URS Corporation

Client Sample ID: DUP-1

GC Volatiles

Lot-Sample #...: I6I300123-008	Work Order #...: JFFFK1A4	Matrix.....: WATER
Date Sampled...: 09/28/06 08:00	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 14:22	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	88	(75 - 122)

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URS Corporation

Client Sample ID: DUP-1

GC Semivolatiles

Lot-Sample #...: I6I300123-008	Work Order #...: JFFFK1A3	Matrix.....: WATER
Date Sampled...: 09/28/06 08:00	Date Received..: 09/30/06	MS Run #.....:
Prep Date.....: 10/02/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6275398	Analysis Time..: 22:02	
Dilution Factor: 0.95		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.026 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	95	(48 - 153)
Dotriacontane	120	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: DUP-1

TOTAL Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	57.1	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A5
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Potassium	4.1 B	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A6
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Magnesium	13.6	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A7
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	
Sodium	30.4	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFK1A8
		Dilution Factor: 1		Analysis Time..: 11:41	MS Run #.....: 6276227	

NOTE(S):

B Estimated result. Result is less than RL.

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URS Corporation

Client Sample ID: DUP-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AH
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Aluminum	0.021 B,J	0.20	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AJ
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Arsenic	0.0060 B	0.010	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AK
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Barium	0.083 B	0.20	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AL
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Boron	0.066	0.060	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AM
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AN
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AP
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Chromium	0.0024 B	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AQ
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AR
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AT
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Manganese	0.011 B	0.015	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AU
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Molybdenum	0.0034 B,J	0.040	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AV
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	

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URS Corporation

Client Sample ID: DUP-1

DISSOLVED Metals

Lot-Sample #...: I6I300123-008 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0045 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1AW**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFK1AX
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Selenium	**0.0060**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1A0**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Zinc	**0.0052 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFK1A1**
		Dilution Factor: 1		Analysis Time..: 13:07	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFK1AG
		Dilution Factor: 1		Analysis Time..: 09:08	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: DUP-1

General Chemistry

Lot-Sample #...: I6I300123-008 Work Order #...: JFFFK Matrix.....: WATER
Date Sampled...: 09/28/06 08:00 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	87.3	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 11:19	MS Run #.....: 6279200	
Fluoride	0.74 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 11:25	MS Run #.....: 6278048	
Nitrate as N	2.8 H	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 11:25	MS Run #.....: 6278049	
Sulfate	40.5	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 11:19	MS Run #.....: 6279202	
Total Dissolved Solids	348	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:09	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

H The sample was prepared or analyzed after the EPA recommended holding time had been exceeded.

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URS Corporation

Client Sample ID: MW-2

GC/MS Volatiles

Lot-Sample #...: I6I300123-009	**Work Order #...:** JFFFM1A2	**Matrix.....:** WATER
Date Sampled...: 09/29/06 10:20	**Date Received..:** 09/30/06	**MS Run #.....:** 6284080
Prep Date.....: 10/06/06	**Analysis Date..:** 10/06/06	
Prep Batch #...: 6284128	**Analysis Time..:** 14:52	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	95	(67 - 130)
Toluene-d8	96	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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URS Corporation

Client Sample ID: MW-2

GC Volatiles

Lot-Sample #...: I6I300123-009	Work Order #...: JFFFM1A4	Matrix.....: WATER
Date Sampled...: 09/29/06 10:20	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 14:50	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	89	(75 - 122)

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: MW-2

GC Semivolatiles

Lot-Sample #...:	I6I300123-009	Work Order #...:	JFFFM1A3	Matrix.....:	WATER
Date Sampled...:	09/29/06 10:20	Date Received..:	09/30/06	MS Run #.....:	
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275398	Analysis Time..:	22:42		
Dilution Factor:	0.97				
		Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.036 J,B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	89	(48 - 153)
Dotriacontane	100	(35 - 143)

NOTE(S):

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-2

TOTAL Metals

Lot-Sample #...: I6I300123-009 Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	899	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A5
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Potassium	19.2	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A6
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Magnesium	257	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A7
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	
Sodium	145	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFM1A8
		Dilution Factor: 1		Analysis Time..: 11:46	MS Run #.....: 6276227	

Received by OCD: 3/25/2021 2:14:32 PM

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URS Corporation

Client Sample ID: MW-2

DISSOLVED Metals

Lot-Sample #...: I6I300123-009 Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AH
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Aluminum	**0.020 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AJ**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Arsenic	ND	0.010	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AK
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Barium	**0.39**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AL**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Boron	**0.083**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AM**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AN
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AP
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Chromium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AQ
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AR
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AT
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Manganese	**0.21**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AU**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Molybdenum	**0.0025 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AV**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	

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URS Corporation

Client Sample ID: MW-2

DISSOLVED Metals

Lot-Sample #...: I6I300123-009 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.016 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1AW**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1AX
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFM1A0
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Zinc	**0.014 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFM1A1**
		Dilution Factor: 1		Analysis Time..: 13:12	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFM1AG
		Dilution Factor: 1		Analysis Time..: 09:09	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-2

General Chemistry

Lot-Sample #...: I6I300123-009 Work Order #...: JFFFM Matrix.....: WATER
Date Sampled...: 09/29/06 10:20 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	2600	500	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 500		Analysis Time..: 15:05	MS Run #.....: 6279200	
Fluoride	ND	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 10:40	MS Run #.....: 6278048	
Nitrate as N	2.8	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 10:40	MS Run #.....: 6278049	
Sulfate	81.8	50.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 50		Analysis Time..: 11:34	MS Run #.....: 6279202	
Total Dissolved Solids	6010	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:13	MS Run #.....: 6276146	

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URS Corporation

Client Sample ID: MW-4

GC/MS Volatiles

Lot-Sample #...: I6I300123-010	**Work Order #...:** JFFFN1A2	**Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10	**Date Received..:** 09/30/06	**MS Run #.....:** 6284080
Prep Date.....: 10/06/06	**Analysis Date..:** 10/06/06	
Prep Batch #...: 6284128	**Analysis Time..:** 15:18	
Dilution Factor: 1		
	Method.....: SW846 8260B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Benzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Xylenes (total)	ND	3.0	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	96	(67 - 130)
Toluene-d8	97	(83 - 115)
4-Bromofluorobenzene	91	(79 - 119)
Dibromofluoromethane	101	(88 - 119)

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URS Corporation

Client Sample ID: MW-4

GC Volatiles

Lot-Sample #...: I6I300123-010	Work Order #...: JFFFN1A4	Matrix.....: WATER
Date Sampled...: 09/29/06 12:10	Date Received..: 09/30/06	MS Run #.....: 6278106
Prep Date.....: 10/04/06	Analysis Date..: 10/04/06	
Prep Batch #...: 6278167	Analysis Time..: 15:17	
Dilution Factor: 1		
	Method.....: SW846 8015B	

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Gasoline Range Organics	ND	100	ug/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	90	(75 - 122)

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URS Corporation

Client Sample ID: MW-4

GC Semivolatiles

Lot-Sample #...:	I6I300123-010	Work Order #...:	JFFFN1A3	Matrix.....:	WATER
Date Sampled...:	09/29/06 12:10	Date Received..:	09/30/06	MS Run #.....:	
Prep Date.....:	10/02/06	Analysis Date..:	10/05/06		
Prep Batch #...:	6275398	Analysis Time..:	00:02		
Dilution Factor:	0.97				
		Method.....:	SW846 8015B		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Diesel Range Organics	0.062 B	0.048	mg/L

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	80	(48 - 153)
Dotriacontane	104	(35 - 143)

NOTE(S):

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-4

TOTAL Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276369						
Calcium	59.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A5
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Potassium	5.3	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A6
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Magnesium	11.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A7
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	
Sodium	28.7	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFFFN1A8
		Dilution Factor: 1		Analysis Time..: 11:51	MS Run #.....: 6276227	

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URS Corporation

Client Sample ID: MW-4

DISSOLVED Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6276373						
Silver	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AH
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Aluminum	**0.026 B,J**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AJ**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Arsenic	**0.0033 B**	**0.010**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AK**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Barium	**0.12 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AL**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Boron	**0.064**	**0.060**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AM**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AN
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Cobalt	ND	0.050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AP
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Chromium	**0.0033 B**	**0.0050**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AQ**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Copper	ND	0.025	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AR
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Iron	ND	0.10	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AT
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Manganese	**0.014 B**	**0.015**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AU**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Molybdenum	**0.0074 B,J**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AV**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	

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URS Corporation

Client Sample ID: MW-4

DISSOLVED Metals

Lot-Sample #...: I6I300123-010 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Nickel	**0.0071 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1AW**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Lead	ND	0.0030	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1AX
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Selenium	ND	0.0050	mg/L	SW846 6010B	10/06-10/04/06	JFFFN1A0
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Zinc	**0.0054 B,J**	**0.020**	**mg/L**	**SW846 6010B**	**10/06-10/04/06**	**JFFFN1A1**
		Dilution Factor: 1		Analysis Time..: 13:16	MS Run #.....:	
Prep Batch #...: 6284112						
Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JFFFN1AG
		Dilution Factor: 1		Analysis Time..: 09:11	MS Run #.....: 6284074	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

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URS Corporation

Client Sample ID: MW-4

General Chemistry

Lot-Sample #...: I6I300123-010 Work Order #...: JFFFN Matrix.....: WATER
Date Sampled...: 09/29/06 12:10 Date Received..: 09/30/06

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride	25.8	10.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 10		Analysis Time..: 11:49	MS Run #.....: 6279200	
Fluoride	0.66 B	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1		Analysis Time..: 11:10	MS Run #.....: 6278048	
Nitrate as N	2.9	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1		Analysis Time..: 11:10	MS Run #.....: 6278049	
Sulfate	32.7	10.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 10		Analysis Time..: 11:49	MS Run #.....: 6279202	
Total Dissolved Solids	303	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1		Analysis Time..: 11:15	MS Run #.....: 6276146	

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 Work Order #...: JFWCG1AA Matrix.....: SOLID
MB Lot-Sample #: I6J060000-367

Prep Date.....: 10/04/06 Analysis Time..: 15:55
Analysis Date..: 10/04/06 Prep Batch #...: 6279367
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
m-Xylene & p-Xylene	ND	10	ug/kg	SW846 8260B
o-Xylene	ND	5.0	ug/kg	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/kg	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	96	(59 - 119)
Toluene-d8	112	(76 - 136)
Dibromofluoromethane	91	(69 - 129)
1,2-Dichloroethane-d4	93	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AA **Matrix.....:** WATER
MB Lot-Sample #: I6J110000-128

Prep Date.....: 10/06/06 **Analysis Time..:** 12:44
Analysis Date..: 10/06/06 **Prep Batch #...:** 6284128
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	93	(67 - 130)
Toluene-d8	95	(83 - 115)
4-Bromofluorobenzene	95	(79 - 119)
Dibromofluoromethane	99	(88 - 119)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFJT01AA Matrix.....: SOLID
MB Lot-Sample #: I6J030000-318

Prep Date.....: 10/02/06 Analysis Time..: 11:22
Analysis Date..: 10/02/06 Prep Batch #...: 6276318
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	73	(37 - 153)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFPHC1AA Matrix.....: WATER
MB Lot-Sample #: I6J050000-167

Prep Date.....: 10/04/06 Analysis Time..: 12:59
Analysis Date..: 10/04/06 Prep Batch #...: 6278167
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Gasoline Range Organics	ND	100	ug/L	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	88	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHJ51AA Matrix.....: WATER
MB Lot-Sample #: I6J020000-398

Prep Date.....: 10/02/06 Analysis Time..: 18:41
Analysis Date..: 10/04/06 Prep Batch #...: 6275398
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.022 J	0.050	mg/L	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	79	(48 - 153)
Dotriacontane	102	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AA Matrix.....: SOLID
MB Lot-Sample #: I6J020000-401

Prep Date.....: 10/02/06 Analysis Time..: 12:39
Analysis Date..: 10/04/06 Prep Batch #...: 6275401
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Diesel Range Organics	0.84 J	1.7	mg/kg	SW846 8015B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	83	(37 - 131)
Dotriacontane	102	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Estimated result. Result is less than RL.

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: I6J030000-369 **Prep Batch #...:** 6276369						
Calcium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AM
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Magnesium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AP
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Potassium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AN
		Dilution Factor: 1				
		Analysis Time..: 11:20				
Sodium	ND	5.0	mg/L	SW846 6010B	10/03-10/04/06	JFJ781AQ
		Dilution Factor: 1				
		Analysis Time..: 11:20				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: I6J030000-373 **Prep Batch #...:** 6276373						
Aluminum	**0.063 B**	**0.20**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AC**
		Dilution Factor: 1 Analysis Time..: 12:44				
Arsenic	ND	0.010	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AD
		Dilution Factor: 1 Analysis Time..: 12:44				
Barium	ND	0.20	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AE
		Dilution Factor: 1 Analysis Time..: 12:44				
Boron	ND	0.060	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AF
		Dilution Factor: 1 Analysis Time..: 12:44				
Cadmium	ND	0.0020	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AG
		Dilution Factor: 1 Analysis Time..: 12:44				
Chromium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AJ
		Dilution Factor: 1 Analysis Time..: 12:44				
Cobalt	ND	0.050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AH
		Dilution Factor: 1 Analysis Time..: 12:44				
Copper	ND	0.025	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AK
		Dilution Factor: 1 Analysis Time..: 12:44				
Iron	ND	0.10	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AL
		Dilution Factor: 1 Analysis Time..: 12:44				
Lead	ND	0.0030	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AQ
		Dilution Factor: 1 Analysis Time..: 12:44				
Manganese	ND	0.015	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AM
		Dilution Factor: 1 Analysis Time..: 12:44				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Molybdenum	**0.0036 B**	**0.040**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AN**
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Nickel	ND	0.040	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AP
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Selenium	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AR
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Silver	ND	0.0050	mg/L	SW846 6010B	10/03-10/04/06	JFJ8N1AA
		Dilution Factor: 1				
		Analysis Time..: 12:44				
Zinc	**0.0022 B**	**0.020**	**mg/L**	**SW846 6010B**	**10/03-10/04/06**	**JFJ8N1AT**
		Dilution Factor: 1				
		Analysis Time..: 12:44				

MB Lot-Sample #: I6J110000-112 **Prep Batch #...:** 6284112

Mercury	ND	0.00020	mg/L	SW846 7470A	10/10-10/11/06	JF5ME1AA
		Dilution Factor: 1				
		Analysis Time..: 00:00				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: JFV4G1AA		MB Lot-Sample #:	I6J060000-315	
	ND	1.0	mg/L	SW846 9056	10/05/06	6279315
		Dilution Factor: 1				
		Analysis Time..: 10:19				
Fluoride		Work Order #: JFPCT1AA		MB Lot-Sample #:	I6J050000-066	
	ND	1.0	mg/L	SW846 9056	09/30/06	6278066
		Dilution Factor: 1				
		Analysis Time..: 09:25				
Nitrate as N		Work Order #: JFPCV1AA		MB Lot-Sample #:	I6J050000-068	
	ND	0.50	mg/L	SW846 9056	09/30/06	6278068
		Dilution Factor: 1				
		Analysis Time..: 09:25				
Sulfate		Work Order #: JFV4X1AA		MB Lot-Sample #:	I6J060000-320	
	ND	1.0	mg/L	SW846 9056	10/05/06	6279320
		Dilution Factor: 1				
		Analysis Time..: 10:19				
Total Dissolved Solids		Work Order #: JFJGW1AA		MB Lot-Sample #:	I6J030000-243	
	ND	40.0	mg/L	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1				
		Analysis Time..: 10:45				

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFWCG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J060000-367 JFWCG1AD-LCSD
Prep Date.....: 10/04/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6279367 **Analysis Time..:** 14:15
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	95	(68 - 128)			SW846 8260B
	98	(68 - 128)	2.8	(0-30)	SW846 8260B
Ethylbenzene	101	(65 - 125)			SW846 8260B
	95	(65 - 125)	6.2	(0-30)	SW846 8260B
Toluene	94	(64 - 124)			SW846 8260B
	89	(64 - 124)	5.4	(0-30)	SW846 8260B
m-Xylene & p-Xylene	99	(64 - 124)			SW846 8260B
	94	(64 - 124)	5.4	(0-30)	SW846 8260B
o-Xylene	101	(65 - 125)			SW846 8260B
	97	(65 - 125)	4.0	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	108	(58 - 118)			SW846 8260B
	115	(58 - 118)	6.9	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(67 - 127)
	102	(67 - 127)
Toluene-d8	112	(76 - 136)
	119	(76 - 136)
Dibromofluoromethane	92	(67 - 127)
	100	(67 - 127)
1,2-Dichloroethane-d4	91	(65 - 125)
	100	(65 - 125)

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFWCG1AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J060000-367 JFWCG1AD-LCSD
Prep Date.....: 10/04/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6279367 **Analysis Time..:** 14:15
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	50.0	47.7	ug/kg	95		SW846 8260B
	50.0	49.1	ug/kg	98	2.8	SW846 8260B
Ethylbenzene	50.0	50.4	ug/kg	101		SW846 8260B
	50.0	47.4	ug/kg	95	6.2	SW846 8260B
Toluene	50.0	46.9	ug/kg	94		SW846 8260B
	50.0	44.4	ug/kg	89	5.4	SW846 8260B
m-Xylene & p-Xylene	100	99.3	ug/kg	99		SW846 8260B
	100	94.1	ug/kg	94	5.4	SW846 8260B
o-Xylene	50.0	50.5	ug/kg	101		SW846 8260B
	50.0	48.5	ug/kg	97	4.0	SW846 8260B
Methyl tert-butyl ether (MTBE)	50.0	53.9	ug/kg	108		SW846 8260B
	50.0	57.7	ug/kg	115	6.9	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	102	(67 - 127)
	102	(67 - 127)
Toluene-d8	112	(76 - 136)
	119	(76 - 136)
Dibromofluoromethane	92	(67 - 127)
	100	(67 - 127)
1,2-Dichloroethane-d4	91	(65 - 125)
	100	(65 - 125)

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J110000-128 JF5NV1AD-LCSD
Prep Date.....: 10/06/06 **Analysis Date..:** 10/06/06
Prep Batch #...: 6284128 **Analysis Time..:** 07:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	109	(70 - 118)			SW846 8260B
	106	(70 - 118)	2.9	(0-20)	SW846 8260B
Toluene	104	(76 - 120)			SW846 8260B
	104	(76 - 120)	0.32	(0-20)	SW846 8260B
Ethylbenzene	106	(72 - 121)			SW846 8260B
	106	(72 - 121)	0.20	(0-20)	SW846 8260B
Xylenes (total)	106	(72 - 121)			SW846 8260B
	106	(72 - 121)	0.19	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(75 - 115)
	91	(75 - 115)
Toluene-d8	98	(90 - 114)
	96	(90 - 114)
4-Bromofluorobenzene	95	(86 - 117)
	92	(86 - 117)
Dibromofluoromethane	102	(81 - 110)
	98	(81 - 110)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JF5NV1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J110000-128 JF5NV1AD-LCSD
Prep Date.....: 10/06/06 **Analysis Date..:** 10/06/06
Prep Batch #...: 6284128 **Analysis Time..:** 07:14
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Benzene	20.0	21.8	ug/L	109		SW846 8260B
	20.0	21.1	ug/L	106	2.9	SW846 8260B
Toluene	20.0	20.7	ug/L	104		SW846 8260B
	20.0	20.8	ug/L	104	0.32	SW846 8260B
Ethylbenzene	20.0	21.1	ug/L	106		SW846 8260B
	20.0	21.2	ug/L	106	0.20	SW846 8260B
Xylenes (total)	60.0	63.4	ug/L	106		SW846 8260B
	60.0	63.5	ug/L	106	0.19	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	100	(75 - 115)
	91	(75 - 115)
Toluene-d8	98	(90 - 114)
	96	(90 - 114)
4-Bromofluorobenzene	95	(86 - 117)
	92	(86 - 117)
Dibromofluoromethane	102	(81 - 110)
	98	(81 - 110)

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFJT01AC-LCS Matrix.....: SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 Analysis Date..: 10/02/06
Prep Batch #...: 6276318 Analysis Time..: 09:59
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**107**	**(66 - 129)**			**SW846 8015B**
	107	**(66 - 129)**	**0.67**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I300123 **Work Order #...:** JFJT01AC-LCS **Matrix.....:** SOLID
LCS Lot-Sample#: I6J030000-318 JFJT01AD-LCSD
Prep Date.....: 10/02/06 **Analysis Date..:** 10/02/06
Prep Batch #...: 6276318 **Analysis Time..:** 09:59
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**2150**	**ug/kg**	**107**		**SW846 8015B**
	2000	**2130**	**ug/kg**	**107**	**0.67**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	98	(49 - 147)
	99	(49 - 147)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFPHC1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: I6J050000-167 JFPHC1AD-LCSD
Prep Date.....: 10/04/06 Analysis Date..: 10/04/06
Prep Batch #...: 6278167 Analysis Time..: 11:36
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**99**	**(85 - 115)**			**SW846 8015B**
	92	**(85 - 115)**	**7.3**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	99	(81 - 123)
	98	(81 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: I6I300123 Work Order #...: JFPHC1AC-LCS Matrix.....: WATER
LCS Lot-Sample#: I6J050000-167 JFPHC1AD-LCSD
Prep Date.....: 10/04/06 Analysis Date..: 10/04/06
Prep Batch #...: 6278167 Analysis Time..: 11:36
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Gasoline Range Organics	**2000**	**1980**	**ug/L**	**99**		**SW846 8015B**
	2000	**1840**	**ug/L**	**92**	**7.3**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO)	99	(81 - 123)
	98	(81 - 123)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I300123 **Work Order #...:** JFHJ51AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J020000-398 JFHJ51AD-LCSD
Prep Date.....: 10/02/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6275398 **Analysis Time..:** 19:21
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**103**	**(28 - 121)**			**SW846 8015B**
	55 p	**(28 - 121)**	**61**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	116	(48 - 153)
	79	(48 - 153)
Dotriacontane	115	(35 - 143)
	97	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I300123 **Work Order #...:** JFHJ51AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I6J020000-398 JFHJ51AD-LCSD
Prep Date.....: 10/02/06 **Analysis Date..:** 10/04/06
Prep Batch #...: 6275398 **Analysis Time..:** 19:21
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Diesel Range Organics	**1.00**	**1.03**	**mg/L**	**103**		**SW846 8015B**
	1.00	**0.552 p**	**mg/L**	**55**	**61**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	116	(48 - 153)
	79	(48 - 153)
Dotriacontane	115	(35 - 143)
	97	(35 - 143)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

p Relative percent difference (RPD) is outside stated control limits.

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-401
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275401 Analysis Time..: 13:19
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Diesel Range Organics	**78**	**(32 - 132)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	106	(37 - 131)
Dotriacontane	113	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: I6I300123 Work Order #...: JFHQF1AC Matrix.....: SOLID
LCS Lot-Sample#: I6J020000-401
Prep Date.....: 10/02/06 Analysis Date..: 10/04/06
Prep Batch #...: 6275401 Analysis Time..: 13:19
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Diesel Range Organics	**33.3**	**26.0**	**mg/kg**	**78**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	106	(37 - 131)
Dotriacontane	113	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J030000-369 **Prep Batch #...:** 6276369					
Calcium	103	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A2
		Dilution Factor: 1		Analysis Time..: 11:25	
Potassium	99	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A3
		Dilution Factor: 1		Analysis Time..: 11:25	
Magnesium	101	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A4
		Dilution Factor: 1		Analysis Time..: 11:25	
Sodium	97	(80 - 120)	SW846 6010B	10/03-10/04/06	JFJ781A5
		Dilution Factor: 1		Analysis Time..: 11:25	

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J030000-369 Prep Batch #...: 6276369							
Calcium	50.0	51.4	mg/L	103	SW846 6010B	10/03-10/04/06	JFJ781A2
			Dilution Factor: 1		Analysis Time..: 11:25		
Potassium	50.0	49.6	mg/L	99	SW846 6010B	10/03-10/04/06	JFJ781A3
			Dilution Factor: 1		Analysis Time..: 11:25		
Magnesium	50.0	50.6	mg/L	101	SW846 6010B	10/03-10/04/06	JFJ781A4
			Dilution Factor: 1		Analysis Time..: 11:25		
Sodium	50.0	48.5	mg/L	97	SW846 6010B	10/03-10/04/06	JFJ781A5
			Dilution Factor: 1		Analysis Time..: 11:25		

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Aluminum	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.5	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Arsenic	96	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	98	(80 - 120)	1.7	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Barium	98	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	99	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Boron	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	2.9	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Cadmium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.9	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Chromium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Cobalt	97	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	98	(80 - 120)	1.5	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Copper	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Iron	102	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	103	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Lead	101	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.2	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP-BATCH #
Manganese	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Molybdenum	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.7	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Nickel	102	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	104	(80 - 120)	1.6	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Selenium	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	100	(80 - 120)	1.4	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Silver	99	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	101	(80 - 120)	1.8	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		
Zinc	100	(80 - 120)			SW846 6010B	10/03-10/04/06	6276373
	102	(80 - 120)	2.0	(0-20)	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1			Analysis Time..: 12:48		

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Aluminum	50.0	50.0	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	50.0	50.8	mg/L	102	1.5	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Arsenic	0.500	0.482	mg/L	96		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.490	mg/L	98	1.7	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Barium	0.500	0.489	mg/L	98		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.497	mg/L	99	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Boron	0.500	0.495	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.510	mg/L	102	2.9	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Cadmium	0.500	0.493	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.9	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Chromium	0.500	0.495	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Cobalt	0.500	0.485	mg/L	97		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.492	mg/L	98	1.5	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Copper	0.500	0.500	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.508	mg/L	102	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Iron	50.0	50.8	mg/L	102		SW846 6010B	10/03-10/04/06	6276373
	50.0	51.5	mg/L	103	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Lead	0.500	0.503	mg/L	101		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.509	mg/L	102	1.2	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Lot-Sample #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Manganese	0.500	0.501	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.509	mg/L	102	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Molybdenum	0.500	0.493	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.502	mg/L	100	1.7	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Nickel	0.500	0.510	mg/L	102		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.518	mg/L	104	1.6	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Selenium	0.500	0.494	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.501	mg/L	100	1.4	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Silver	0.100	0.0989	mg/L	99		SW846 6010B	10/03-10/04/06	6276373
	0.100	0.101	mg/L	101	1.8	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		
Zinc	0.500	0.500	mg/L	100		SW846 6010B	10/03-10/04/06	6276373
	0.500	0.510	mg/L	102	2.0	SW846 6010B	10/03-10/04/06	6276373
		Dilution Factor: 1				Analysis Time..: 12:48		

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J110000-112 **Prep Batch #...:** 6284112					
Mercury	106	(80 - 120)	SW846 7470A	10/10-10/11/06	JF5ME1AC
		Dilution Factor: 1	Analysis Time..: 00:00		

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: I6J110000-112 **Prep Batch #...:** 6284112							
Mercury	0.00500	0.00529	mg/L	106	SW846 7470A	10/10-10/11/06	JF5ME1AC
		Dilution Factor: 1			Analysis Time..: 00:00		

NOTE(S):

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		Work Order #: JFV4G1AC	LCS Lot-Sample#: I6J060000-315		
	98	(90 - 110)	SW846 9056	10/05/06	6279315
		Dilution Factor: 1	Analysis Time..: 10:34		
Fluoride		Work Order #: JFPCT1AC	LCS Lot-Sample#: I6J050000-066		
	98	(90 - 110)	SW846 9056	09/30/06	6278066
		Dilution Factor: 1	Analysis Time..: 09:40		
Nitrate as N		Work Order #: JFPCV1AC	LCS Lot-Sample#: I6J050000-068		
	96	(90 - 110)	SW846 9056	09/30/06	6278068
		Dilution Factor: 1	Analysis Time..: 09:40		
Sulfate		Work Order #: JFV4X1AC	LCS Lot-Sample#: I6J060000-320		
	94	(90 - 110)	SW846 9056	10/05/06	6279320
		Dilution Factor: 1	Analysis Time..: 10:34		
Total Dissolved Solids		Work Order #: JFJGW1AC	LCS Lot-Sample#: I6J030000-243		
	99	(87 - 113)	MCAWW 160.1	10/03/06	6276243
		Dilution Factor: 1	Analysis Time..: 10:47		

NOTE(S):

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: I6I300123 Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			Work Order #: JFV4G1AC LCS Lot-Sample#: I6J060000-315				
	4.00	3.93	mg/L	98	SW846 9056	10/05/06	6279315
			Dilution Factor: 1		Analysis Time..: 10:34		
Fluoride			Work Order #: JFPCT1AC LCS Lot-Sample#: I6J050000-066				
	4.00	3.90	mg/L	98	SW846 9056	09/30/06	6278066
			Dilution Factor: 1		Analysis Time..: 09:40		
Nitrate as N			Work Order #: JFPCV1AC LCS Lot-Sample#: I6J050000-068				
	4.00	3.85	mg/L	96	SW846 9056	09/30/06	6278068
			Dilution Factor: 1		Analysis Time..: 09:40		
Sulfate			Work Order #: JFV4X1AC LCS Lot-Sample#: I6J060000-320				
	4.00	3.77	mg/L	94	SW846 9056	10/05/06	6279320
			Dilution Factor: 1		Analysis Time..: 10:34		
Total Dissolved Solids			Work Order #: JFJGW1AC LCS Lot-Sample#: I6J030000-243				
	2010	2000	mg/L	99	MCAWW 160.1	10/03/06	6276243
			Dilution Factor: 1		Analysis Time..: 10:47		

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AJ-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6279233
Prep Date.....:	10/04/06	**Analysis Date..:**	10/05/06		
Prep Batch #...:	6279367	**Analysis Time..:**	12:27		
Dilution Factor:	1.01	**% Moisture.....:**	1.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	90	(68 - 128)			SW846 8260B
	82	(68 - 128)	9.0	(0-30)	SW846 8260B
Ethylbenzene	92	(65 - 125)			SW846 8260B
	83	(65 - 125)	11	(0-30)	SW846 8260B
Toluene	86	(64 - 124)			SW846 8260B
	78	(64 - 124)	10	(0-30)	SW846 8260B
m-Xylene & p-Xylene	90	(64 - 124)			SW846 8260B
	82	(64 - 124)	10	(0-30)	SW846 8260B
o-Xylene	94	(65 - 125)			SW846 8260B
	85	(65 - 125)	11	(0-30)	SW846 8260B
Methyl tert-butyl ether (MTBE)	107	(58 - 118)			SW846 8260B
	95	(58 - 118)	12	(0-30)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	106	(59 - 119)
Toluene-d8	113	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
	95	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)
	99	(67 - 127)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AH-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AJ-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6279233
Prep Date.....:	10/04/06	**Analysis Date..:**	10/05/06		
Prep Batch #...:	6279367	**Analysis Time..:**	12:27		
Dilution Factor:	1.01	**% Moisture.....:**	1.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	ND	50.9	45.6	ug/kg	90		SW846 8260B
	ND	50.7	41.6	ug/kg	82	9.0	SW846 8260B
Ethylbenzene	ND	50.9	46.9	ug/kg	92		SW846 8260B
	ND	50.7	42.1	ug/kg	83	11	SW846 8260B
Toluene	ND	50.9	43.6	ug/kg	86		SW846 8260B
	ND	50.7	39.3	ug/kg	78	10	SW846 8260B
m-Xylene & p-Xylene	ND	102	91.9	ug/kg	90		SW846 8260B
	ND	101	83.1	ug/kg	82	10	SW846 8260B
o-Xylene	ND	50.9	48.0	ug/kg	94		SW846 8260B
	ND	50.7	43.2	ug/kg	85	11	SW846 8260B
Methyl tert-butyl ether (MTBE)	ND	50.9	54.3	ug/kg	107		SW846 8260B
	ND	50.7	48.4	ug/kg	95	12	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	103	(59 - 119)
	106	(59 - 119)
Toluene-d8	113	(76 - 136)
	114	(76 - 136)
Dibromofluoromethane	93	(69 - 129)
	95	(69 - 129)
1,2-Dichloroethane-d4	94	(67 - 127)
	99	(67 - 127)

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFPWH1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6J050150-004		JFPWH1AD-MSD		
Date Sampled...:	10/04/06 09:55	**Date Received..:**	10/05/06	**MS Run #.....:**	6284080
Prep Date.....:	10/06/06	**Analysis Date..:**	10/06/06		
Prep Batch #...:	6284128	**Analysis Time..:**	10:22		
Dilution Factor:	200				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	109	(70 - 118)			SW846 8260B
	108	(70 - 118)	0.37	(0-20)	SW846 8260B
Toluene	114	(76 - 120)			SW846 8260B
	108	(76 - 120)	1.9	(0-20)	SW846 8260B
Ethylbenzene	102	(72 - 121)			SW846 8260B
	100	(72 - 121)	1.7	(0-20)	SW846 8260B
Xylenes (total)	101	(72 - 121)			SW846 8260B
	100	(72 - 121)	1.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
	95	(67 - 130)
Toluene-d8	96	(83 - 115)
	97	(83 - 115)
4-Bromofluorobenzene	93	(79 - 119)
	94	(79 - 119)
Dibromofluoromethane	98	(88 - 119)
	98	(88 - 119)

NOTE(S):

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFPWH1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6J050150-004		JFPWH1AD-MSD		
Date Sampled...:	10/04/06 09:55	**Date Received..:**	10/05/06	**MS Run #.....:**	6284080
Prep Date.....:	10/06/06	**Analysis Date..:**	10/06/06		
Prep Batch #...:	6284128	**Analysis Time..:**	10:22		
Dilution Factor:	200				

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	7200	4000	11600	ug/L	109		SW846 8260B
	7200	4000	11500	ug/L	108	0.37	SW846 8260B
Toluene	7500	4000	12000	ug/L	114		SW846 8260B
	7500	4000	11800	ug/L	108	1.9	SW846 8260B
Ethylbenzene	540	4000	4600	ug/L	102		SW846 8260B
	540	4000	4530	ug/L	100	1.7	SW846 8260B
Xylenes (total)	3400	12000	15500	ug/L	101		SW846 8260B
	3400	12000	15300	ug/L	100	1.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1,2-Dichloroethane-d4	92	(67 - 130)
	95	(67 - 130)
Toluene-d8	96	(83 - 115)
	97	(83 - 115)
4-Bromofluorobenzene	93	(79 - 119)
	94	(79 - 119)
Dibromofluoromethane	98	(88 - 119)
	98	(88 - 119)

NOTE(S):

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JE78L1AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	**Date Received..:**	09/28/06	**MS Run #.....:**	6276185
Prep Date.....:	10/02/06	**Analysis Date..:**	10/02/06		
Prep Batch #...:	6276318	**Analysis Time..:**	14:08		
Dilution Factor:	0.99	**% Moisture.....:**	18		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**85**	**(66 - 129)**			**SW846 8015B**
	81	**(66 - 129)**	**3.3**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

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Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I300123	Work Order #...:	JE78L1AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I280173-002		JE78L1AG-MSD		
Date Sampled...:	09/25/06 17:15	Date Received..:	09/28/06	MS Run #.....:	6276185
Prep Date.....:	10/02/06	Analysis Date..:	10/02/06		
Prep Batch #...:	6276318	Analysis Time..:	14:08		
Dilution Factor:	0.99	% Moisture.....:	18		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2410**	**2050**	**ug/kg**	**85**		**SW846 8015B**
	ND	**2440**	**1990**	**ug/kg**	**81**	**3.3**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	90	(37 - 153)
	95	(37 - 153)

NOTE(S):

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Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFFC1A9-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6I300123-007		JFFFC1CA-MSD		
Date Sampled...:	09/29/06 08:05	**Date Received..:**	09/30/06	**MS Run #.....:**	6278106
Prep Date.....:	10/04/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6278167	**Analysis Time..:**	16:20		
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Gasoline Range Organics	**102**	**(79 - 124)**			**SW846 8015B**
	93	**(79 - 124)**	**9.3**	**(0-20)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(75 - 122)
	99	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFFC1A9-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	I6I300123-007		JFFFC1CA-MSD		
Date Sampled...:	09/29/06 08:05	**Date Received..:**	09/30/06	**MS Run #.....:**	6278106
Prep Date.....:	10/04/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6278167	**Analysis Time..:**	16:20		
Dilution Factor:	1				

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Gasoline Range Organics	**ND**	**2500**	**2560**	**ug/L**	**102**		**SW846 8015B**
	ND	**2500**	**2330**	**ug/L**	**93**	**9.3**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene (GRO	99	(75 - 122)
	99	(75 - 122)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #...:	I6I300123	Work Order #...:	JFFA11AF-MS	Matrix.....:	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AG-MSD		
Date Sampled...:	09/27/06 16:15	Date Received..:	09/30/06	MS Run #.....:	6275271
Prep Date.....:	10/02/06	Analysis Date..:	10/04/06		
Prep Batch #...:	6275401	Analysis Time..:	14:40		
Dilution Factor:	1	% Moisture.....:	1.2		

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Diesel Range Organics	**87**	**(32 - 132)**			**SW846 8015B**
	97	**(32 - 132)**	**10**	**(0-30)**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	104	(37 - 131)
	121	(37 - 131)
Dotriacontane	107	(10 - 151)
	121	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...:	I6I300123	**Work Order #...:**	JFFA11AF-MS	**Matrix.....:**	SOLID
MS Lot-Sample #:	I6I300123-001		JFFA11AG-MSD		
Date Sampled...:	09/27/06 16:15	**Date Received..:**	09/30/06	**MS Run #.....:**	6275271
Prep Date.....:	10/02/06	**Analysis Date..:**	10/04/06		
Prep Batch #...:	6275401	**Analysis Time..:**	14:40		
Dilution Factor:	1	**% Moisture.....:**	1.2		

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Diesel Range Organics	**0.96**	**33.7**	**30.2**	**mg/kg**	**87**		**SW846 8015B**
	0.96	**33.6**	**33.4**	**mg/kg**	**97**	**10**	**SW846 8015B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
o-Terphenyl	104	(37 - 131)
	121	(37 - 131)
Dotriacontane	107	(10 - 151)
	121	(10 - 151)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/26/06 09:17 **Date Received..:** 09/27/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I270143-001 **Prep Batch #...:** 6276369							
Calcium	NC	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C0
	NC	(75 - 125)		(0-20)	SW846 6010B	10/03-10/04/06	JE4311C1
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Magnesium	98	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C6
	100	(75 - 125)	0.54	(0-20)	SW846 6010B	10/03-10/04/06	JE4311C7
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Potassium	118	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C3
	118	(75 - 125)	0.14	(0-20)	SW846 6010B	10/03-10/04/06	JE4311C4
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					
Sodium	NC	(75 - 125)			SW846 6010B	10/03-10/04/06	JE4311C9
	NC	(75 - 125)		(0-20)	SW846 6010B	10/03-10/04/06	JE4311DA
		Dilution Factor: 1					
		Analysis Time..: 12:23					
		MS Run #.....: 6276227					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/26/06 09:17 **Date Received..:** 09/27/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I270143-001 **Prep Batch #...:** 6276369									
Calcium									
	255	50.0	298 NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C0
	255	50.0	302 NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C1
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Magnesium									
	128	50.0	177	mg/L	98		SW846 6010B	10/03-10/04/06	JE4311C6
	128	50.0	178	mg/L	100	0.54	SW846 6010B	10/03-10/04/06	JE4311C7
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Potassium									
	17.2	50.0	76.4	mg/L	118		SW846 6010B	10/03-10/04/06	JE4311C3
	17.2	50.0	76.3	mg/L	118	0.14	SW846 6010B	10/03-10/04/06	JE4311C4
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						
Sodium									
	374	50.0	NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311C9
	374	50.0	NC	mg/L			SW846 6010B	10/03-10/04/06	JE4311DA
			Dilution Factor: 1						
			Analysis Time..: 12:23						
			MS Run #.....: 6276227						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/28/06 15:50 **Date Received..:** 09/30/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I300123-006 **Prep Batch #...:** 6284112							
Mercury	105	(75 - 125)			SW846 7470A	10/10-10/11/06	JFFED1CE
	103	(75 - 125)	2.3	(0-20)	SW846 7470A	10/10-10/11/06	JFFED1CF

Dilution Factor: 1
Analysis Time..: 00:00
MS Run #.....: 6284074

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/28/06 15:50 **Date Received..:** 09/30/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: I6I300123-006 **Prep Batch #...:** 6284112									
Mercury									
	ND	0.00200	0.00210	mg/L	105		SW846 7470A	10/10-10/11/06	JFFED1CE
	ND	0.00200	0.00206	mg/L	103	2.3	SW846 7470A	10/10-10/11/06	JFFED1CF

Dilution Factor: 1
Analysis Time..: 00:00
MS Run #.....: 6284074

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10 **Date Received..:** 09/30/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride		WO#: JFFFN1A9-MS/JFFFN1CA-MSD				MS Lot-Sample #:	I6I300123-010
	96	(90 - 110)			SW846 9056	10/05/06	6279315
	96	(90 - 110)	0.25	(0-20)	SW846 9056	10/05/06	6279315
		Dilution Factor: 10					
		Analysis Time..: 12:04					
		MS Run #.....: 6279200					
Fluoride		WO#: JFFED1A9-MS/JFFED1CA-MSD				MS Lot-Sample #:	I6I300123-006
	91	(90 - 110)			SW846 9056	09/30/06	6278066
	90	(90 - 110)	1.4	(0-20)	SW846 9056	09/30/06	6278066
		Dilution Factor: 1					
		Analysis Time..: 12:25					
		MS Run #.....: 6278048					
Nitrate as N		WO#: JFFED1CC-MS/JFFED1CD-MSD				MS Lot-Sample #:	I6I300123-006
	92	(90 - 110)			SW846 9056	09/30/06	6278068
	91	(90 - 110)	0.53	(0-20)	SW846 9056	09/30/06	6278068
		Dilution Factor: 1					
		Analysis Time..: 12:25					
		MS Run #.....: 6278049					
Sulfate		WO#: JFFFN1CC-MS/JFFFN1CD-MSD				MS Lot-Sample #:	I6I300123-010
	95	(90 - 110)			SW846 9056	10/05/06	6279320
	97	(90 - 110)	1.1	(0-20)	SW846 9056	10/05/06	6279320
		Dilution Factor: 10					
		Analysis Time..: 12:04					
		MS Run #.....: 6279202					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: I6I300123 **Matrix.....:** WATER
Date Sampled...: 09/29/06 12:10 **Date Received..:** 09/30/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride			WO#: JFFFN1A9-MS/JFFFN1CA-MSD		MS Lot-Sample #: I6I300123-010				
	25.8	40.0	64.3	mg/L	96		SW846 9056	10/05/06	6279315
	25.8	40.0	64.1	mg/L	96	0.25	SW846 9056	10/05/06	6279315
			Dilution Factor: 10						
			Analysis Time..: 12:04						
			MS Run #.....: 6279200						
Fluoride			WO#: JFFED1A9-MS/JFFED1CA-MSD		MS Lot-Sample #: I6I300123-006				
	0.60	4.00	4.26	mg/L	91		SW846 9056	09/30/06	6278066
	0.60	4.00	4.20	mg/L	90	1.4	SW846 9056	09/30/06	6278066
			Dilution Factor: 1						
			Analysis Time..: 12:25						
			MS Run #.....: 6278048						
Nitrate as N			WO#: JFFED1CC-MS/JFFED1CD-MSD		MS Lot-Sample #: I6I300123-006				
	2.8	4.00	6.49	mg/L	92		SW846 9056	09/30/06	6278068
	2.8	4.00	6.46	mg/L	91	0.53	SW846 9056	09/30/06	6278068
			Dilution Factor: 1						
			Analysis Time..: 12:25						
			MS Run #.....: 6278049						
Sulfate			WO#: JFFFN1CC-MS/JFFFN1CD-MSD		MS Lot-Sample #: I6I300123-010				
	32.7	40.0	70.5	mg/L	95		SW846 9056	10/05/06	6279320
	32.7	40.0	71.3	mg/L	97	1.1	SW846 9056	10/05/06	6279320
			Dilution Factor: 10						
			Analysis Time..: 12:04						
			MS Run #.....: 6279202						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Work Order #...:** JE6AA-SMP JE6AA-DUP **Matrix.....:** WATER

Date Sampled...: 09/26/06 09:25 **Date Received..:** 09/27/06

% Moisture.....: 0.0

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: I6I270267-002		
	708	703	mg/L	0.71	(0-20)	MCAWW 160.1	10/03/06	6276243

Dilution Factor: 1 Analysis Time..: 10:51 MS Run Number..: 6276146

Received by OCD: 3/25/2021 2:14:32 PM

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SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: I6I300123 **Work Order #...:** JFCN7-SMP JFCN7-DUP **Matrix.....:** SOLID

Date Sampled...: 09/28/06 10:15 **Date Received..:** 09/29/06

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Moisture						SD Lot-Sample #: I6I290153-004		
	19.9	20.9	%	4.9	(0-20)	ASTM D 2216-90	10/03/06	6276446

Dilution Factor: 1 Analysis Time..: 15:00 MS Run Number..: 6276282

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Report Attachment

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of the NELAC standards. All data have been found to be compliant with laboratory protocol except as otherwise noted.

Note that if this report contains tests performed for the following methods, the associated method deviations are applicable.

EPA 410.4, COD: Laboratory uses different analytical wavelength as specified by instrument manufacturer.
EPA 340.2, Fluoride: Preliminary Bellack distillation not performed.
EPA 624: The laboratory uses a different desorb time and purge volume than stated in the method.
EPA 8151A: Laboratory utilizes alternate extraction solvent.
Iowa OA1: Benzene, toluene, ethylbenzene and xylenes (BTEX) are not analyzed along with the Gasoline Range Organics if client does not require BTEX.
EPA TO-12: Samples not analyzed in duplicate.
EPA TO-14A and TO-15: Zero humidified nitrogen is used in place of air for method blanks.

TRRP Reporting Requirements

If this package contains reports requiring TRRP (Texas Risk Reduction Program) reporting criteria, the following information applies.

The REPORTING LIMIT is equivalent to the TRRP acronym MQL (method quantitation limit).
The MDL is equivalent to the TRRP acronym SQL (sample quantitation limit).

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SEVERN TRENT STL

CHAIN–OF–CUSTODY ADDENDUM

Lot No: _____

RECEIVED BY: WA

COC NUMBER: _____

DATE/TIME RECEIVED: 9/30/04 0845

QUOTE/PROFILE: 72371

UNPACKED DATE/TIME: 9/30/04 0850

CLIENT/PROJECT: URS

SAMPLES LOGGED IN: _____ LOG-IN REVIEWED: _____

Number of Shipping Containers Received with Chain of Custody 4

VOC AIR / FILTER SAMPLES ☐ YES **SEE SECTIONS 1.0, 2.0, & 6.0**

1.0 CONTAINERS EXAMINED UPON RECEIPT: WA

Container Sealed: ☑ YES ☐ NO

Custody Seal Signed/Dated: ☑ YES ☐ NO

Custody Seal Present: ☑ YES ☐ NO

Containers checked for radioactivity: ☐ YES ☐ NO ☑ N/A

If seal not intact or Geiger counter reading >0.5 mR/hr, list air bill number of that container(s): _____

2.0 VOC CANISTERS EXAMINED UPON RECEIPT: _____

Canister Valves Closed: ☐ YES ☐ NO

Samples Received Match Chain: ☐ YES ☐ NO

Canister Valves Capped: ☐ YES ☐ NO

Other Equipment Received: ☐ YES ☐ NO

Valve Cap Tightened Properly: ☐ YES ☐ NO

See Additional Comments (Section 5.0 and / or 7.0) ☐ YES ☐ NO

Packing Material Used: (circle)

Chain-of-Custody form properly maintained: ☐ YES ☐ NO

None / Absorbent / Paper / Bubble Wrap

Can Size: ☐ 6L ☐ 15L Other _____

3.0 SAMPLE TEMPERATURE UPON RECEIPT BY: WA **IR THERMOMETER #:** 9-4

Temperature of the container(s):

Circle selection: TB = Temp. Blank and/or SC = Sample Container *[acceptable tolerance 4°C ± 2°; (NC, WI: 1-4.4°C)]*

~~TB~~ SC 2.7	~~TB~~ SC 2.5	~~TB~~ SC 3.1	~~TB~~ SC 3.6	TB SC	TB SC	TB SC	TB SC	TB SC	TB SC

If temperature is outside acceptable tolerance, Project Manager was notified (_____PM). Date: _____ Time: _____

Samples received do not require cooling _____

OK to analyze samples: ☑ ~~YES~~ ☐ NO

PRESERVATION OF SAMPLES REQUIRED: ☐ NA ☑ ~~YES~~ ☑ VOA Samples **VERIFIED BY:** WA

NOTE: pH CHECK OF VOLATILE SAMPLES PERFORMED AFTER ANALYSIS BY THE BENCH ANALYST.

Base samples are>pH 12: ☐ YES ☐ NO

Acid preserved are<pH 2: ☑ YES ☐ NO

Cyanide samples checked for sulfides: ☐ YES

Sulfide samples appear to be preserved with zinc acetate: ☐ YES ☐ NO

Samples checked for chlorine per specification (N.C.) ☐ YES

Free chlorine present: ☐ YES ☐ NO

If sample preservation is outside acceptable tolerance, Project Manager was notified (_____PM)

Date: _____ Time: _____ ☐ see pH adjustment form

VOLATILE SAMPLES FILLED COMPLETELY, IF NOT, LIST ID AND HEADSPACE OF VOA's CONTAINING BUBBLES EXCEEDING 6MM IN DIAMETER:

Sample ID	mm Headspace

Sample ID	mm Headspace

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4.0 CONDITION OF BOTTLES/CONTAINERS VERIFIED BY: MA

Samples received match COC:	☐ YES	☑ NO	Bottles received intact:	☑ YES	☐ NO
See additional discrepancies/comments section:	☑ YES	☐ NO	Samples received from USDA restricted area:	☐ YES	☑ NO
Chain-of-Custody form properly maintained:	☑ YES	☐ NO	VOA trip blanks included:	☐ YES ☐ NO	☑ N/A

5.0 ADDITIONAL DISCREPANCIES

Appears on COC		Appears on Label		
Sample ID	Date/Time	Sample ID	Date/Time	Comments
CW Dup-1	9/28/06 0800	Dup-1	9/28/06 0800	logged out

6.0 SHIPPING DOCUMENTATION:

Air/freight bill is available and attached to COC: ☑ YES ☐ NO Air bill #: _____

Hand-delivered Carrier: _____ Date: _____ Time: _____

7.0 OTHER COMMENTS:

MW-2 / labels on bottles show tests that do not match bottle type.
MW-4

All bottles that have HNO_3 preserved stickers are not preserved - HNO_3 washed out of bottle.

Dup 1 - Received: 1x40mL HCl, 2x50mL UP, 2x50mL UP, 3L-UP.

** Prepare 1x125 ml split ~~for~~ total cations ; preserve w/ HNO_3 *DO NOT FILTER*

CORRECTIVE ACTION:

Client's Name: _____ Informed verbally on: _____ By: _____

Client's Name: Shannon Hoover Informed verbally on: 9/28/06 By: Steve

Sample(s) processed "as is" comments: Will be shipping for Sat. Deliv. Notified that NO_3 analysis will have limited holding time remaining. Narrate any problems w/ H.T.

@ 9/28 ~~Dissolved~~ metals containers' preservative was rinsed out. Make a split to preserve for Total cations, and filter and preserve for dissolved metals upon rec't.

Samples(s) on hold until: _____ If released, notify: _____

REVIEW:

Project Management: _____ Date: 10/16/06

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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Chain of Custody Record

I6I300123

SEVERN TRENT STL
Severn Trent Laboratories, Inc.

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 27 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512.419.6552	Lab Location: Austin	
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260	TPH 8015 GRO+DRO	TPH 8015 GRO
B-4 (25-26.5)	27Sep06	1615	soil	4oz	glass	2	ice	3.1 kt 9/30/06	X	X	
B-4 (50-51.5)	27Sep06	1650	soil	4oz	glass	2	ice	[illegible]	X	X	
B-4 (75-76.5)	27Sep06	1735	soil	4oz	glass	2	ice		X	X	
B-4 (95-96.5)	28Sep06	0905	soil	4oz	glass	2	ice		X	X	
B-4 (120-121.5)	28Sep06	1045	soil	4oz	glass	2	ice		X	X	
MW-1	28Sep06	1550	gw	40 ml	glass	6	HCl, ice		X		X
MW-3	29Sep06 ~~28Sep06~~	~~1740~~	gw	40 ml	glass	6	HCl, ice		X		X
GWDUP-1	28Sep06	0800	gw	40 ml	glass	6	HCl, ice		X		X
MW-2	29Sep06	1020	gw	40 ml	glass	6	HCl ice		X		X
MW-4	29Sep06	1210	gw	40 ml	glass	6	HCl ice		X		X

Special Instructions: Hold for PAHs

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [X] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-29-06	700	1. Received By: [signature]	9/30/06	0845 ~~0850~~
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

119/120

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DISTRIBUTION: [illegible] - Returned to Client with Report: PINK - Field Copy

52973

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 28 Sep 2006
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6552 / 512 454 8807	Lab Location: Austin
City: Austin / State: TX / Zip Code: 78729	Site Contact: Rita Krebs	
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number:	
Contract/Purchase Order/Quote Number:		

Page 1 of 1

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments	Analysis: TPH-DRO 8015	Analysis: PAHs 8270	Analysis: Metals	Analysis: TDS 160.1 / Cations/Anions
MW-1	28Sep06	1550	GW	1Lamber	glass	3	ice	2.7 9/30/06 See COC Add	X	X		
MW-3 SLH	29Sep06	~~1440~~ SLH	GW	1Lamber	glass	3	ice		X	X		
MW-3	29Sep06	0805	GW	250ml	pl	2	ice	unfiltered SLH		X	X	X
MW-1	28Sep06	1550	GW	250 ml	pl	2	ice	unfiltered		X	X	X
MW-2	29Sep06	1020	GW	1Lamber	glass	3	ice		X			
MW-2	29Sep06	1020	GW	250 ml	pl	2	ice	unfiltered		X	X	X
MW-4	29Sep06	1210	GW	1Lamber	glass	3	ice		X			
MW-4	29Sep06	1210	GW	250ml	pl	2	ice	unfiltered		X	X	X

0805

Special Instructions: samples NOT field filtered for metals, HNO3 rinsed out of containers ⇒ must filter in lab / 3 coolers on this COC

Possible Hazard Identification: [X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown

Sample Disposal: [ ] Return To Client [ ] Disposal By Lab [ ] Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: [X] Normal [ ] Rush [ ] Other ____

QC Level: [ ] I. [ ] II. [ ] III.

Project Specific Requirements (Specify):

	Relinquished By	Date	Time	Received By	Date	Time
1	Rita Krebs	9-29-06	700		9/30/06	0845
2						
3						

Comments:

120/120

WHITE - Returned to Client with Report: PINK - Field Copy

[redacted]

Chain of Custody Record

I6I300123

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

53073

STL4149 (1202)

Client: URS Corporation	Project Manager: Shannon Hoover	Date: 27 Sept 2006	Page 1 of 1
Address: 9400 Amberglen Blvd	Telephone Number (Area Code)/Fax Number: 512 419 6552	Lab Location: Austin	Analysis
City: Austin; State: TX; Zip Code: 78729	Site Contact: Rita Krebs		
Project Number/Name: 41008243 / BP Maljamar	Carrier/Waybill Number:		
Contract/Purchase Order/Quote Number:			

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers Volume	Containers Type	Containers No.	Preservative	Condition on Receipt/Comments	BTEX 8260	TPH 8015 GRO+DRO	TPH 8015 GRO
B-4 (25-26.5)	27 Sep 06	1615	soil	4oz	glass	2	ice	3.1 [illegible]	X	X	
B-4 (50-51.5)	27 Sep 06	1050	soil	4oz	glass	2	ice	[illegible]	X	X	
B-4 (75-76.5)	27 Sep 06	1735	soil	4oz	glass	2	ice		X	X	
B-4 (95-96.5)	28 Sep 06	0905	soil	4oz	glass	2	ice		X	X	
B-4 (120-121.5)	28 Sep 06	1045	soil	4oz	glass	2	ice		X	X	
MW-1	28 Sep 06	1550	gw	40 ml	glass	6	HCl, ice		X		X
MW-3 * 29 Sep 06	~~28 Sep 06~~	~~1740~~	gw	40 ml	glass	6	HCl, ice		X		X
GWDUP-1	28 Sep 06	0800	gw	40 ml	glass	6	HCl, ice		X		X
MW-2	29 Sep 06	1020	gw	40 ml	glass	6	HCl, ice		X		X
MW-4	29 Sep 06	1210	gw	40 ml	glass	6	HCl, ice		X		X

Special Instructions: Hold for PAHs

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☒ Normal ☐ Rush ☐ Other _____

QC Level: ☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: Rita Krebs	9-29-06	700	1. Received By: [signature]	9/30/06	0850
2. Relinquished By:			2. Received By:		
3. Relinquished By:			3. Received By:		

Comments:

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

52973

Chain of Custody Record

SEVERN TRENT STL

Severn Trent Laboratories, Inc.

STL4149 (1202)

Client	Project Manager	Date	Page / of /
URS Corporation	Shannon Hoover	28 Sep 2006	
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Location**	**Analysis**
9400 Amberglen Blvd	512 419 6552 / 512 454 8807	Austin	
City / State / Zip Code	**Site Contact**		
Austin / TX / 78729	Rita Kreus		
Project Number/Name	**Carrier/Waybill Number**		
41082843 / BP Malgamar			
Contract/Purchase Order/Quote Number			

0805

Sample I.D. Number and Description	Date	Time	Sample Type	Containers: Volume	Containers: Type	Containers: No.	Preservative	Condition on Receipt/Comments
MW-1	28 Sep 06	1550	GW	1 Liter	glass	3	Ice	
MW-3	29 Sep 06	[illegible]	GW	1 Liter	glass	3	Ice	
MW-3	29 Sep 06	0805	GW	250 ml	pl	2	Ice	unfiltered
MW-1	28 Sep 06	1550	GW	250 ml	pl	2	Ice	unfiltered
MW-2	29 Sep 06	1020	GW	1 Liter	glass	3	Ice	
MW-2	29 Sep 06	1020	GW	250 ml	pl	2	Ice	unfiltered
MW-4	29 Sep 06	1210	GW	1 Liter	glass	3	Ice	
MW-4	29 Sep 06	1210	GW	250 ml	pl	2	Ice	unfiltered

Special Instructions

Sample - NOT field filtered for metals, HNO3 rinsed out of containers - must filter in lab / 3 coolers on this COC

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required

☒ Normal ☐ Rush ☐ Other _____

QC Level

☐ I. ☐ II. ☐ III.

Project Specific Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	9-28-06	1700	1. Received By	9/28/06	1700
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

WHITE - Returned to Client with Report. YELLOW - Laboratory Copy. PINK - Field Copy

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ted Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: Mal Jamar #2

Project Number: 043918

Location: Lea County, NM

Lab Order Number: 6A11003

Report Date: 01/12/06

Conestoga-Rovers & Associates
2135 S. Loop 250 West
Midland TX, 79703

Project: Mal Jamar #2
Project Number: 043918
Project Manager: Ted Philley

Fax: (432) 686-0186

Reported:
01/12/06 11:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release Point 27'	6A11003-01	Soil	01/10/06 14:30	01/11/06 10:55

Released to Imaging: 4/26/2023 2:01:09 PM

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point 27' (6A11003-01) Soil									
Gasoline Range Organics C6-C12	**19700**	20.0	mg/kg dry	2	EA61120	01/11/06	01/12/06	EPA 8015M	
Diesel Range Organics >C12-C35	**17600**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**37300**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*188 %*	*70-130*		*"*	*"*	*"*	*"*	*S-04*
Surrogate: 1-Chlorooctadecane		*99.6 %*	*70-130*		*"*	*"*	*"*	*"*	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release Point 27' (6A11003-01) Soil									
% Moisture	**4.5**	0.1	%	1	EA61202	01/11/06	01/12/06	% calculation	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA61120 - Solvent Extraction (GC)										
Blank (EA61120-BLK1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*53.3*		*mg/kg*	*50.0*		*107*	*70-130*			
Surrogate: 1-Chlorooctadecane	*45.8*		*"*	*50.0*		*91.6*	*70-130*			
LCS (EA61120-BS1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	479	10.0	mg/kg wet	500		95.8	75-125			
Diesel Range Organics >C12-C35	530	10.0	"	500		106	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*59.0*		*mg/kg*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.0*		*"*	*50.0*		*100*	*70-130*			
Calibration Check (EA61120-CCV1)				Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	479		mg/kg	500		95.8	80-120			
Diesel Range Organics >C12-C35	524		"	500		105	80-120			
Total Hydrocarbon C6-C35	1000		"	1000		100	80-120			
Surrogate: 1-Chlorooctane	*59.1*		*"*	*50.0*		*118*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.4*		*"*	*50.0*		*98.8*	*70-130*			
Matrix Spike (EA61120-MS1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	521	10.0	mg/kg dry	553	8.36	92.7	75-125			
Diesel Range Organics >C12-C35	608	10.0	"	553	138	85.0	75-125			
Total Hydrocarbon C6-C35	1130	10.0	"	1110	138	89.4	75-125			
Surrogate: 1-Chlorooctane	*60.0*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.7*		*"*	*50.0*		*103*	*70-130*			
Matrix Spike Dup (EA61120-MSD1)	**Source: 6A10012-01**			Prepared: 01/11/06 Analyzed: 01/12/06						
Gasoline Range Organics C6-C12	524	10.0	mg/kg dry	553	8.36	93.2	75-125	0.574	20	
Diesel Range Organics >C12-C35	620	10.0	"	553	138	87.2	75-125	1.95	20	
Total Hydrocarbon C6-C35	1140	10.0	"	1110	138	90.3	75-125	0.881	20	
Surrogate: 1-Chlorooctane	*60.2*		*mg/kg*	*50.0*		*120*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.8*		*"*	*50.0*		*104*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA61202 - General Preparation (Prep)										
Blank (EA61202-BLK1)				Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	100		%							
Duplicate (EA61202-DUP1)		**Source: 6A10012-01**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	88.6		%		90.4			2.01	20	
Duplicate (EA61202-DUP2)		**Source: 6A10016-04**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	93.3		%		93.6			0.321	20	
Duplicate (EA61202-DUP3)		**Source: 6A11007-01**		Prepared: 01/11/06 Analyzed: 01/12/06						
% Solids	96.6		%		97.0			0.413	20	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar #2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918	**Reported:**
Midland TX, 79703	Project Manager: Ted Philley	01/12/06 11:53

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1/12/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79763
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward Phillips (Ted)
Company Name: CRA Conestoga-Rovers & Assoc.
Company Address: 2135 S Loop 250 W
City/State/Zip: Midland, TX
Telephone No: 432-686-0086 Fax No: 432-686-0186
Sampler Signature:

Project Name: Maddox #2
Project #: 043918
Project Loc: Lea County, NM
PO #:

6A11003

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 / 8015M / 1005 / 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Total Gamma	RUSH TAT (Pre-Schedule)	Standard TAT
-01	Release Point 27'	1/10/06	14:30	1	✓									✓		✓											✓	

TCLP:
TOTAL:
DRO / GRO

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt: 4.0
Laboratory Comments: 4oz jar

Relinquished by:	Date	Time	Received by:	Date	Time
	1/11/06	10:55			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Carrie Keep	1/11/06	10:55

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 1/11/06 10:55

Order #: 6A11003

Initials: CK

Sample Receipt Checklist

	Yes	No	
Temperature of container/cooler?			4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	ID on it'd
Container labels legible and intact?	Yes	No	n/a
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - Date/Time: Contacted by:

Regarding:

Corrective Action Taken:

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Edward Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: BP Mal Jamar Ph2

Project Number: 043995

Location: Lea County, NM

Lab Order Number: 6A25009

Report Date: 01/26/06

Conestoga-Rovers & Associates
2135 S. Loop 250 West
Midland TX, 79703

Project: BP Mal Jamar Ph2
Project Number: 043995
Project Manager: Edward Philley

Fax: (432) 686-0186

Reported:
01/26/06 20:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ph 2 S. Bottom 30'	6A25009-01	Soil	01/24/06 15:00	01/25/06 10:20
Ph 2 S. Wall 17'	6A25009-02	Soil	01/24/06 15:15	01/25/06 10:20
Ph 2 N. Bottom 30'	6A25009-03	Soil	01/24/06 15:19	01/25/06 10:20
Ph 2 N. Wall 15'	6A25009-04	Soil	01/24/06 15:27	01/25/06 10:20

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 S. Bottom 30' (6A25009-01) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*85.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*114 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*106 %*	*70-130*		"	"	"	"	
Ph 2 S. Wall 17' (6A25009-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*84.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.5 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*105 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*101 %*	*70-130*		"	"	"	"	
Ph 2 N. Bottom 30' (6A25009-03) Soil									
Benzene	**7.09**	0.500	mg/kg dry	500	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	**43.4**	0.500	"	"	"	"	"	"	
Ethylbenzene	**26.7**	0.500	"	"	"	"	"	"	
Xylene (p/m)	**38.9**	0.500	"	"	"	"	"	"	
Xylene (o)	**14.2**	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*129 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*113 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**2390**	20.0	mg/kg dry	2	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	**4150**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**6540**	20.0	"	"	"	"	"	"	

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 N. Bottom 30' (6A25009-03) Soil									
Surrogate: 1-Chlorooctane		*69.8 %*	*70-130*		*EA62412*	*01/25/06*	*01/25/06*	*EPA 8015M*	*S-06*
Surrogate: 1-Chlorooctadecane		*56.2 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*
Ph 2 N. Wall 15' (6A25009-04) Soil									
Benzene	**0.124**	0.100	mg/kg dry	100	EA62503	01/26/06	01/26/06	EPA 8021B	
Toluene	**7.83**	0.100	"	"	"	"	"	"	
Ethylbenzene	**8.72**	0.100	"	"	"	"	"	"	
Xylene (p/m)	**12.3**	0.100	"	"	"	"	"	"	
Xylene (o)	**5.24**	0.100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*120 %*	*80-120*		*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*130 %*	*80-120*		*"*	*"*	*"*	*"*	*S-04*
Gasoline Range Organics C6-C12	**572**	20.0	mg/kg dry	2	EA62412	01/25/06	01/25/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1490**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2060**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*57.2 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*
Surrogate: 1-Chlorooctadecane		*58.8 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Ph 2 S. Bottom 30' (6A25009-01) Soil									
% Moisture	**17.0**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 S. Wall 17' (6A25009-02) Soil									
% Moisture	**1.0**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 N. Bottom 30' (6A25009-03) Soil									
% Moisture	**1.7**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	
Ph 2 N. Wall 15' (6A25009-04) Soil									
% Moisture	**1.4**	0.1	%	1	EA62507	01/25/06	01/25/06	% calculation	

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62412 - Solvent Extraction (GC)										
Blank (EA62412-BLK1)				Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*51.1*		*mg/kg*	*50.0*		*102*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.2*		*"*	*50.0*		*96.4*	*70-130*			
LCS (EA62412-BS1)				Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	454	10.0	mg/kg wet	500		90.8	75-125			
Diesel Range Organics >C12-C35	559	10.0	"	500		112	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1000		101	75-125			
Surrogate: 1-Chlorooctane	*60.4*		*mg/kg*	*50.0*		*121*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.6*		*"*	*50.0*		*107*	*70-130*			
Calibration Check (EA62412-CCV1)				Prepared: 01/24/06 Analyzed: 01/25/06						
Gasoline Range Organics C6-C12	488		mg/kg	500		97.6	80-120			
Diesel Range Organics >C12-C35	590		"	500		118	80-120			
Total Hydrocarbon C6-C35	1080		"	1000		108	80-120			
Surrogate: 1-Chlorooctane	*63.7*		*"*	*50.0*		*127*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.1*		*"*	*50.0*		*104*	*70-130*			
Matrix Spike (EA62412-MS1)	**Source: 6A24002-01**			Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	453	10.0	mg/kg dry	525	ND	86.3	75-125			
Diesel Range Organics >C12-C35	563	10.0	"	525	ND	107	75-125			
Total Hydrocarbon C6-C35	1020	10.0	"	1050	ND	97.1	75-125			
Surrogate: 1-Chlorooctane	*58.6*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.8*		*"*	*50.0*		*97.6*	*70-130*			
Matrix Spike Dup (EA62412-MSD1)	**Source: 6A24002-01**			Prepared & Analyzed: 01/24/06						
Gasoline Range Organics C6-C12	477	10.0	mg/kg dry	525	ND	90.9	75-125	5.16	20	
Diesel Range Organics >C12-C35	583	10.0	"	525	ND	111	75-125	3.49	20	
Total Hydrocarbon C6-C35	1060	10.0	"	1050	ND	101	75-125	3.85	20	
Surrogate: 1-Chlorooctane	*61.5*		*mg/kg*	*50.0*		*123*	*70-130*			
Surrogate: 1-Chlorooctadecane	*51.2*		*"*	*50.0*		*102*	*70-130*			

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62503 - EPA 5030C (GC)										
Blank (EA62503-BLK1)				Prepared & Analyzed: 01/25/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*34.7*		*ug/kg*	*40.0*		*86.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*38.8*		*"*	*40.0*		*97.0*	*80-120*			
LCS (EA62503-BS1)				Prepared & Analyzed: 01/25/06						
Benzene	1.02	0.0250	mg/kg wet	1.25		81.6	80-120			
Toluene	1.05	0.0250	"	1.25		84.0	80-120			
Ethylbenzene	1.02	0.0250	"	1.25		81.6	80-120			
Xylene (p/m)	2.04	0.0250	"	2.50		81.6	80-120			
Xylene (o)	1.08	0.0250	"	1.25		86.4	80-120			
Surrogate: a,a,a-Trifluorotoluene	*33.6*		*ug/kg*	*40.0*		*84.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*43.6*		*"*	*40.0*		*109*	*80-120*			
Calibration Check (EA62503-CCV1)				Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	41.5		ug/kg	50.0		83.0	80-120			
Toluene	42.2		"	50.0		84.4	80-120			
Ethylbenzene	40.0		"	50.0		80.0	80-120			
Xylene (p/m)	80.2		"	100		80.2	80-120			
Xylene (o)	41.9		"	50.0		83.8	80-120			
Surrogate: a,a,a-Trifluorotoluene	*35.7*		*"*	*40.0*		*89.2*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*34.7*		*"*	*40.0*		*86.8*	*80-120*			
Matrix Spike (EA62503-MS1)	**Source: 6A20010-08**			Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	1.01	0.0250	mg/kg dry	1.26	ND	80.2	80-120			
Toluene	1.06	0.0250	"	1.26	0.0123	83.2	80-120			
Ethylbenzene	1.03	0.0250	"	1.26	ND	81.7	80-120			
Xylene (p/m)	2.06	0.0250	"	2.51	0.0307	80.8	80-120			
Xylene (o)	1.04	0.0250	"	1.26	ND	82.5	80-120			
Surrogate: a,a,a-Trifluorotoluene	*37.5*		*ug/kg*	*40.0*		*93.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*46.3*		*"*	*40.0*		*116*	*80-120*			

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62503 - EPA 5030C (GC)										
Matrix Spike Dup (EA62503-MSD1)	**Source: 6A20010-08**			Prepared: 01/25/06 Analyzed: 01/26/06						
Benzene	1.02	0.0250	mg/kg dry	1.26	ND	81.0	80-120	0.993	20	
Toluene	1.04	0.0250	"	1.26	0.0123	81.6	80-120	1.94	20	
Ethylbenzene	1.04	0.0250	"	1.26	ND	82.5	80-120	0.974	20	
Xylene (p/m)	2.05	0.0250	"	2.51	0.0307	80.5	80-120	0.372	20	
Xylene (o)	1.06	0.0250	"	1.26	ND	84.1	80-120	1.92	20	
Surrogate: a,a,a-Trifluorotoluene	*33.0*		*ug/kg*	*40.0*		*82.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.3*		*"*	*40.0*		*101*	*80-120*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62507 - General Preparation (Prep)										
Blank (EA62507-BLK1)				Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	100		%							
Duplicate (EA62507-DUP1)		**Source: 6A24001-01**		Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	96.8		%		96.9			0.103	20	
Duplicate (EA62507-DUP2)		**Source: 6A25009-03**		Prepared: 01/24/06 Analyzed: 01/25/06						
% Solids	98.4		%		98.3			0.102	20	

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Conestoga-Rovers & Associates	Project: BP Mal Jamar Ph2	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043995	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	01/26/06 20:04

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 1/26/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward (Ted) Philley
Company Name: CRA Conestoga Rovers & Assoc
Company Address: 2135 S Loop 250 West
City/State/Zip: Midland, TX 79703
Telephone No: (432)686-0086 Fax No: (432)686-0186
Sampler Signature: [signature]
Email: EPhilley@CRAWorld.com

Project Name: BP Maljamar Ph 2
Project #: 043995
Project Loc: Lea County NM
PO #:

Add as per Ted 01-25-06 @1455

6A25009

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	Preservative: HNO_3	Preservative: HCl	Preservative: NaOH	Preservative: H_2SO_4	Preservative: None	Preservative: Other (Specify)	Matrix: Water	Matrix: Sludge	Matrix: Soil	Matrix: Other (specify):	Analyze For: TCLP: TOTAL: TPH: 418.1 8015M 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.					RUSH TAT (Pre-Schedule) 24 hrs	Standard TAT
01	Ph 2 S. Bottom 30'	1/24/06	15:00	1	✓									✓		✓							✓							✓	
02	Ph 2 S. Wall 17'	1/24/06	15:15	1	✓									✓		✓							✓							✓	
03	Ph 2 N. Bottom 30'	1/24/06	15:19	1	✓									✓		✓							✓							✓	
04	Ph 2 N. Wall 15'	1/24/06	15:27	1	✓									✓		✓							✓							✓	

Special Instructions: print → wet & dry wt. results needed

Sample Containers Intact? Y N
Labels on container? Y N
Custody Seals: Containers / Cooler ____
Temperature Upon Receipt: 5.0

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	1/25/06	10:20			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			[signature]	1/25/06	10:20

Laboratory Comments: 402

Received by OCD: 3/25/2021 2:14:32 PM
Released to Imaging: 4/26/2023 2:01:09 PM

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 1/25/00 10:20

Order #: 10A25009

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	5.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

ENVIRONMENTAL LAB OF
12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Edward Philley

Conestoga-Rovers & Associates

2135 S. Loop 250 West

Midland, TX 79703

Project: Mal Jamar 6 inch

Project Number: 043918-02

Location: Lea County

Lab Order Number: 6C27001

Report Date: 03/28/06

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Release 50' Bottom	6C27001-01	Soil	03/24/06 14:30	03/27/06 08:12

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Released to Imaging: 4/26/2023 2:01:09 PM

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release 50' Bottom (6C27001-01) Soil									
Carbon Ranges C6-C12	**8320**	20.0	mg/kg wet	2	EC62707	03/27/06	03/27/06	EPA 8015M	
Carbon Ranges C12-C28	**10400**	20.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	**1140**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**19900**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*102 %*	*70-130*		*"*	*"*	*"*	*"*	*S-04*
Surrogate: 1-Chlorooctadecane		*55.6 %*	*70-130*		*"*	*"*	*"*	*"*	*S-06*

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Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Release 50' Bottom (6C27001-01) Soil									
Benzene	**106000**	5000	ug/kg wet	5000	EC62705	03/27/06	03/28/06	EPA 8260B	
Toluene	**416000**	5000	"	"	"	"	"	"	
Ethylbenzene	**195000**	5000	"	"	"	"	"	"	
Xylene (p/m)	**165000**	5000	"	"	"	"	"	"	
Xylene (o)	**74300**	5000	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*111 %*	*70-139*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85.6 %*	*52-149*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*76-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.2 %*	*66-145*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62707 - Solvent Extraction (GC)										
Blank (EC62707-BLK1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*41.8*		*mg/kg*	*50.0*		*83.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*43.8*		*"*	*50.0*		*87.6*	*70-130*			
LCS (EC62707-BS1)				Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	585	10.0	mg/kg wet	500		117	75-125			
Carbon Ranges C12-C28	561	10.0	"	500		112	75-125			
Total Hydrocarbon C6-C35	1150	10.0	"	1000		115	75-125			
Surrogate: 1-Chlorooctane	*62.3*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*61.7*		*"*	*50.0*		*123*	*70-130*			
Calibration Check (EC62707-CCV1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Carbon Ranges C6-C12	282		mg/kg	250		113	80-120			
Carbon Ranges C12-C28	291		"	250		116	80-120			
Total Hydrocarbon C6-C35	573		"	500		115	80-120			
Surrogate: 1-Chlorooctane	*64.2*		*"*	*50.0*		*128*	*70-130*			
Surrogate: 1-Chlorooctadecane	*63.2*		*"*	*50.0*		*126*	*70-130*			
Matrix Spike (EC62707-MS1)	**Source: 6C24004-01**			Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	516	10.0	mg/kg dry	535	ND	96.4	75-125			
Carbon Ranges C12-C28	494	10.0	"	535	ND	92.3	75-125			
Total Hydrocarbon C6-C35	1010	10.0	"	1070	ND	94.4	75-125			
Surrogate: 1-Chlorooctane	*59.5*		*mg/kg*	*50.0*		*119*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.7*		*"*	*50.0*		*111*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62707 - Solvent Extraction (GC)										
Matrix Spike Dup (EC62707-MSD1)	**Source: 6C24004-01**			Prepared & Analyzed: 03/27/06						
Carbon Ranges C6-C12	508	10.0	mg/kg dry	535	ND	95.0	75-125	1.56	20	
Carbon Ranges C12-C28	484	10.0	"	535	ND	90.5	75-125	2.04	20	
Total Hydrocarbon C6-C35	992	10.0	"	1070	ND	92.7	75-125	1.80	20	
Surrogate: 1-Chlorooctane	*58.6*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*55.1*		*"*	*50.0*		*110*	*70-130*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62705 - EPA 5030C (GCMS)										
Blank (EC62705-BLK1)				Prepared & Analyzed: 03/27/06						
Benzene	ND	25.0	ug/kg wet							
Toluene	ND	25.0	"							
Ethylbenzene	ND	25.0	"							
Xylene (p/m)	ND	25.0	"							
Xylene (o)	ND	25.0	"							
Surrogate: Dibromofluoromethane	*56.2*		*ug/kg*	*50.0*		*112*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*49.3*		*"*	*50.0*		*98.6*	*52-149*			
Surrogate: Toluene-d8	*53.8*		*"*	*50.0*		*108*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*48.6*		*"*	*50.0*		*97.2*	*66-145*			
LCS (EC62705-BS1)				Prepared: 03/27/06 Analyzed: 03/28/06						
Benzene	1140	25.0	ug/kg wet	1250		91.2	70-130			
Toluene	1370	25.0	"	1250		110	70-130			
Ethylbenzene	1120	25.0	"	1250		89.6	70-130			
Xylene (p/m)	2100	25.0	"	2500		84.0	70-130			
Xylene (o)	1090	25.0	"	1250		87.2	70-130			
Surrogate: Dibromofluoromethane	*52.3*		*ug/kg*	*50.0*		*105*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*46.4*		*"*	*50.0*		*92.8*	*52-149*			
Surrogate: Toluene-d8	*51.1*		*"*	*50.0*		*102*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*46.9*		*"*	*50.0*		*93.8*	*66-145*			
Calibration Check (EC62705-CCV1)				Prepared & Analyzed: 03/27/06						
Toluene	53.2		ug/kg	50.0		106	70-130			
Ethylbenzene	44.0		"	50.0		88.0	70-130			
Surrogate: Dibromofluoromethane	*51.7*		*"*	*50.0*		*103*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*48.2*		*"*	*50.0*		*96.4*	*52-149*			
Surrogate: Toluene-d8	*50.8*		*"*	*50.0*		*102*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*46.6*		*"*	*50.0*		*93.2*	*66-145*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC62705 - EPA 5030C (GCMS)										
Matrix Spike (EC62705-MS1)	**Source: 6C27007-01**			Prepared: 03/27/06 Analyzed: 03/28/06						
Benzene	1270	25.0	ug/kg dry	1360	ND	93.4	70-130			
Toluene	1570	25.0	"	1360	ND	115	70-130			
Ethylbenzene	1330	25.0	"	1360	ND	97.8	70-130			
Xylene (p/m)	2470	25.0	"	2730	ND	90.5	70-130			
Xylene (o)	1270	25.0	"	1360	ND	93.4	70-130			
Surrogate: Dibromofluoromethane	*44.9*		*ug/kg*	*50.0*		*89.8*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*44.7*		*"*	*50.0*		*89.4*	*52-149*			
Surrogate: Toluene-d8	*53.0*		*"*	*50.0*		*106*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*47.7*		*"*	*50.0*		*95.4*	*66-145*			
Matrix Spike Dup (EC62705-MSD1)	**Source: 6C27007-01**			Prepared & Analyzed: 03/27/06						
Benzene	1350	25.0	ug/kg dry	1360	ND	99.3	70-130	6.12	20	
Toluene	1620	25.0	"	1360	ND	119	70-130	3.42	20	
Ethylbenzene	1310	25.0	"	1360	ND	96.3	70-130	1.55	20	
Xylene (p/m)	2520	25.0	"	2730	ND	92.3	70-130	1.97	20	
Xylene (o)	1280	25.0	"	1360	ND	94.1	70-130	0.747	20	
Surrogate: Dibromofluoromethane	*49.2*		*ug/kg*	*50.0*		*98.4*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*49.6*		*"*	*50.0*		*99.2*	*52-149*			
Surrogate: Toluene-d8	*52.9*		*"*	*50.0*		*106*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*48.0*		*"*	*50.0*		*96.0*	*66-145*			

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Conestoga-Rovers & Associates	Project: Mal Jamar 6 inch	Fax: (432) 686-0186
2135 S. Loop 250 West	Project Number: 043918-02	**Reported:**
Midland TX, 79703	Project Manager: Edward Philley	03/28/06 13:09

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 3/28/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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Environmental Lab of Texas

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Edward Phillips
Company Name: CRA Conestoga Rovers & Assoc
Company Address: 2135 S Loop 250 West
City/State/Zip: Midland, TX 79703
Telephone No: (432)686-0086 Fax No: (432)686-0186
Sampler Signature: Ed Phillips
Email: EPhillips@CRAWorld.com

Project Name: Midland 6"
Project #: 043918-~~04~~ 02
Project Loc: Lea County
PO #: 043918-2

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO3	HCl	NaOH	H2SO4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	RUSH TAT (Pre-Schedule)	Standard TAT
627001				4/25/06												TCLP:											
																TOTAL:							X				
-01	Release 50' bottom	3/24/06	14:30	1	✓									✓												✓	

Special Instructions: Results ASAP, Wet Wt.

Sample Containers Intact? (Y) N
Labels on container? (Y) N
Custody Seals: Containers / Cooler None
Temperature Upon Receipt: -4.5

Laboratory Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
Ed Phillips	3/27	8:12			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jaime McMurrey	03-27-06	0812

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: CRA

Date/Time: 03-27-06 @ 0812

Order #: 6C 270001

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	-4.5 C
Shipping container/cooler in good condition?	(Yes)	No	N/A
Custody Seals intact on shipping container/cooler?	Yes	No	Not present N/A
Custody Seals intact on sample bottles?	Yes	No	(Not present)
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

hand delivered by sampler

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

CARDINAL LABORATORIES

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CONESTOGA-ROVERS & ASSOCIATES
ATTN: EDWARD PHILLEY
2135 S. LOOP 250 WEST
MIDLAND, TX 79703
FAX TO: (432) 686-0186

Receiving Date: 03/17/06
Reporting Date: 03/23/06
Project Number: 043918-04
Project Name: MALJAMAR 6"
Project Location: LEA CO., NM

Sampling Date: 03/17/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)
ANALYSIS DATE:		03/21/06	03/21/06
H10908-1*	10' S @ 30'	-	-
H10908-2	10' S @ 32'	2770	4980
H10908-3*	15' N @ 30'	-	-
H10908-4	15' N @ 33'	5350	7910
Quality Control		761	796
True Value QC		800	800
% Recovery		95.1	99.5
Relative Percent Difference		4.3	3.3

*Sample held at client's request.

METHOD: SW-846 8015 M

Chemist

3/23/06
Date

H10908

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(325) 673-7001 Fax (325) 673-7020 (505) 393-2328 Fax (505) 393-2476

Page ____ of ____

Company Name:	CRA
Project Manager:	Edward Philley
Address:	2135 S. Loop 250 West
City:	Midland State: TX Zip: 79703
Phone #:	432-686-0086 Fax #: 432-686-0186
Project #:	043918-04 Project Owner: BP
Project Name:	Maljamar 6"
Project Location:	Lea County
Sampler Name:	Ed Philley

BILL TO

P.O. #:	043918-04
Company:	
Attn:	
Address:	Same
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	TPH 8015 DRO/GRO	Hold
H10908-1	10'S @ 30'	G	1			✓					✓		3/17/06	9:15		✓
-2	10'S @ 32'		1			✓					✓			9:21	✓	
-3	15'N @ 30'		1			✓					✓			9:54		✓
-4	15'N @ 33'		1			✓					✓			9:57	✓	

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Sampler Relinquished: Ed Philley	Date: 3/17/06 Time: 4:25	Received By:
Relinquished By:	Date: 03-17-06 Time: 4:25	Received By: (Lab Staff) Hope S. Marrone
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Temp, °C: Cool Intact? ☑ Yes ☐ No	Checked By: (Initials)

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No

REMARKS:

2 × 8015 × 90 = 180

W TAX ___

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ANALYTICAL RESULTS FOR
CONESTOGA-ROVERS & ASSOCIATES
ATTN: EDWARD PHILLEY
2135 S. LOOP 250 WEST
MIDLAND, TX 79703
FAX TO: (432) 686-0186

Receiving Date: 03/21/06
Reporting Date: 03/22/06
Project Number: 04398-02
Project Name: MALJAMAR 6"
Project Location: LEA COUNTY, NM

Sampling Date: 03/21/06
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: NF
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		03/21/06	03/21/06	03/21/06	03/21/06	03/21/06	03/21/06
H10912-1	02 BOTTOM 44' 30'S	1710	1780	22.7	159	95.7	154
H10912-2	02 BOTTOM 44' 15'S	3020	4780	81.2	267	158	194
H10912-3	02 BOTTOM 44' 10'N	161	652	0.068	3.10	3.92	6.45
H10912-4	02 WALL 39', 25'S&10"W	1260	2780	17.1	129	91.8	120
H10912-5	02 WALL 39', 38'S	<10.0	72.0	<0.005	0.006	<0.005	<0.015
H10912-6	02 WALL 39', 25'S&9'E	<10.0	22.7	<0.005	<0.005	<0.005	<0.015
Quality Control		810	791	0.091	0.090	0.090	0.282
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		101	98.9	90.6	90.1	90.3	94.0
Relative Percent Difference		3.5	3.1	3.9	3.1	0.7	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; BTEX: SW-846 8260.

Burgess J. A. Cooke, Ph. D.

3/22/06
Date

H10912

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101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

Company Name:	CRA	BILL TO	
Project Manager:	Edward "Ted" Phillips	P.O. #:	043918-02
Address:	2135 S Loop 250 West	Company:	
City:	Midland	Attn:	Same
State:	TX	Zip:	79703
Phone #:	432-686-0086	Address:	
Fax #:	432-686-0186	City:	
Project #:	043918-02	State:	Zip:
Project Owner:	BP	Phone #:	
Project Name:	Mallard 6"	Fax #:	
Project Location:	Lea County		
Sampler Name:	Edward Phillips		

ANALYSIS REQUEST: TPH 8015 M DRO/GRO; BTEX 8021B; Chlorides

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME
H10912-1	02 Bottom 49', 30'S	G	1			✓					✓		3/21/06	9:23
-2	02 Bottom 44', 15'S					✓					✓			9:29
-3	02 Bottom 44', 10'N					✓					✓			9:38
-4	02 Wall 39', 25'S +10'W					✓					✓			9:44
-5	02 Wall 39' 38'S					✓					✓			9:53
-6	02 Wall 39', 25'S +9'E					✓					✓			9:59

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Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: Edward Phillips	Date: 3/21/06 Time: 12:30	Received By:	
Relinquished By:	Date: Time:	Received By: (Lab Staff) Neil Fullerton	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Temp, °C; Intact? ☒ Yes ☐ No	Checked By: (Initials) MA	

Phone Result: ☐ Yes ☐ No
Fax Result: ☐ Yes ☐ No
REMARKS: RUSH Cl⁻ cancelled 3/21/06

6 × 8015 × 90 = 540
6 × BTEX × 60 = 360
900

SAMPY please indicate here that a rush charge was not assessed. 1 × RUSH × 0 = 0
900
w TAX 960.19

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2.5 The POINT Menu

2.5.1 Point Move

This provides the easiest way to modify an existing geometry. To move a point on a material surface, first choose Point On a Material or verify that there is a check mark next to the On a Material menu item. Then select Point Move and use the mouse to click on the point you wish to move. When a point is chosen, it is highlighted by a small black square. If no point is close to your click, no highlight appears. If this happens, move the cursor closer to the desired point, and click again.

Once a point has been selected, you can indicate the desired new position by clicking on the desired new position of the point and/or by using the cursor keys to adjust its position. The incremental movement produced by pressing a cursor key is controlled by the snap values for the X and Y directions. These values can be changed by using Set/Snaps. Note that the current coordinates of the selected point, together with the gradients of the lines to the neighboring points are shown in the box which appears in the upper part of the screen. Press ESC or the right mouse button when you have finished adjusting the position.

2.5.1.1 Using Ctrl to Increase the Step Size

Pressing Ctrl-Up, Ctrl-Down, Ctrl-Left and Ctrl-Right cause the selected point to move in increments of five times the values currently set for the snaps in the X and Y directions.

2.5.1.2 Using Shift to Switch to a different Point

You do not need to use the mouse to select every point you move. Once a point has been highlighted for moving, you can shift the focus to other points as follows:

Shift-Left	Preceding point on the same material
Shift-Right	Following point on the same material
Shift-Up	Nearest point on the material above
Shift-Down	Nearest point on the material below

Note that both of these methods (mouse or cursor keys) allow you to move the point anywhere, including locations which are above the top of the overlying material, or below the underlying material. If this happens, you may later receive a message regarding coordinate errors when you attempt to run an analysis or use Edit/Check Data. Minor bounds errors which might be associated with rounding are corrected automatically by the data check which occurs before each

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analysis. Large bounds errors can be rationalized by selecting Edit/Resolve Crossovers. If any material is found to protrude above an overlying material, the lower material is trimmed to fit.

2.5.1.3 Using Alt when Materials Share a Common Point

Often the point you select has identical coordinates in more than one material surface. If you select such a point directly with the mouse, the actual point selected is the one on the uppermost of the materials which share a common point at that same location. If you then move the point either with cursor keys or a mouse click, all materials sharing that common point will be affected. The rule is that points on later numbered materials normally follow the movement of points on earlier materials. If there were three materials (1, 2 and 3) present at a point, and you wanted to move down materials 2 and 3, leaving material 1 undisturbed, you would first select the triple point with a mouse-click, then press Shift-Down to shift the focus to material 2, then press Down or Ctrl-Down to move materials 2 and 3.

If you want to raise the uppermost material only, you can leave the later numbered materials behind by pressing the Alt key along with the Up key.

Note that once you have started shifting a particular point using the cursor keys, you can "sweep up" points on higher-numbered materials (but not lower-numbered materials). This means that if you want to move both a point on material 1 and a point on material 2 to a different but common point, you should start by using cursor keys to move the point on material 1 to pass over the location of the desired point on material 2. This "sweeping up" works only if the two points at some stage share exactly the same coordinates, so if the second point has some decimal places in its coordinates, it may refuse to pick up. You can remedy this simply by moving the second point slightly with the cursor keys, as this will round its coordinates off in accordance with the current snap settings.

In summary, when moving points:

Set Snaps	Controls how quickly points move per keystroke
Ctrl-cursor	Makes points move in 5x larger increments
Shift-cursor	Shifts the focus from one point or material to another
Alt-cursor	Decouples currently selected point, so it moves alone
Shift-Delete	Deletes the current point

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2.5.2 Point Insert

To insert an additional point, choose Point Insert and click on the upper surface of the material where the point is to be inserted. A new point is created, highlighted by a small black square. The new point is located on the line you selected, except that its coordinates are rounded off if necessary to reflect the X and Y snap values.

If no black square appears, your click was probably not close enough to an existing line, so try clicking again.

If several materials are coincident along the selected line, the new point is inserted only on the uppermost of these materials. When a point is inserted in this way, the new point is treated as if it had just been selected using Point/Move. Use the cursor keys or the mouse to move the point if desired. Then press ESC or the right mouse button when finished.

2.5.3 Point Delete

To delete a point, choose Point Delete and click on the point you wish to delete. If several materials share the same point, only the point on the uppermost material is deleted. The remaining points can of course be deleted by repeating the procedure.

If you have more than one point to delete, a better way to delete points is to first select the point using Point Move, and then delete the point using Shift-Delete. You can then continue to delete points by pressing Shift-Delete repeatedly. Remember to press ESC or the right mouse button when finished.

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2.6 The EDIT Menu

2.6.1 Edit Header

The first six fields show header information about the analysis - job number, date, and title of the run. This window also defines the main features of the analysis. Note that in the fifth and sixth fields you can insert a code to show the value of an external force using the format F#xx, where xx is the number of the external force. This is useful if you are varying forces as is sometimes done to estimate the force on a retaining structure, for example. This is an alternative to displaying the values of all forces by checking the option "Force Magnitudes" under Set/Preferences.

Of the remaining items in this window, the most important is the Unit Weight of Water, which is normally either 9.81 or 62.4. This entry determines the system of units used by GSLOPE:

Unit wt. of water	Units required in analysis
9.81 kN/m3	Distances in meters Cohesion in kPa Unit weights in kN/m^3 Allowable reinforcement tension in kN/m
62.4 lb/ft3	Distances in feet Cohesion in psf Unit weights in pcf Allowable reinforcement tension in lb/ft
1000 kp/m3	Distances in meters Cohesion in kp/m2 Unit weights in kp/m3 Allowable reinforcement tension in kp/m

Max Slice Width can be used to influence the number of slices used in the analysis - the greater the maximum width, the fewer the number of slices. The technique by which slice boundaries are chosen is explained in Section 3.

No. of Soil Layers shows the number of materials present in the geometry. If the slope is partially submerged, water should be the first material defined, with exactly the same unit weight as defined on the header, and zero cohesion and friction. Forces due to water pressure in a body of free water are applied automatically. If free water is not present, it should not be included as a separate material. The presence of artesian water conditions is modeled using piezometric

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surfaces which may extend above the ground surface, and does not require water as a separate material.

Earthquake Acceleration refers to the seismic acceleration, as a decimal of gravity, (eg 0.05g) to be used in pseudo-static analysis of the slope. Seismic forces are applied horizontally, through the center of gravity of each slice, in a direction which will reduce the factor of safety for the slip surface being considered and taking into account any applied loads.

Piezometric Surfaces defines the number of piezometric surfaces to be considered. This does not need to be the same as the number of materials in the analysis. Each material may have its own piezometric surface, one piezometric surface may be shared by any or all materials, or piezometric surfaces may be omitted from the analysis altogether. Further information on supplying pore pressure information is given in section 3.4.

Unit Wt. of Water is the unit weight to be used in the computation of forces due to fluid-filled tension cracks and forces due to submergence of the slope, and effectively defines the system of units to be used in the analysis. It is also used in conjunction with the conditions of zero cohesion and zero friction to identify submerged conditions which require a hydrostatic horizontal force to be allowed for in the analysis. For this reason it is important to use exactly the same unit weight for pore fluid as for water submerging the toe of a slope.

Reinforcement Layers indicates how many layers of reinforcement are present in the analysis. This is irrespective of whether the reinforcement has any effect on the result.

FoS against Pullout is the factor used in determining the available bond between the soil and the reinforcement, as discussed in Section 3.6. It does not directly affect the maximum force in the reinforcement. It does affect the length required for the maximum force to be developed.

2.6.2 Edit Material Properties

This window lists the names of the various materials (free water, surcharge, and soil layers) which form the slope geometry. It also shows for each material the total unit weight, friction angle, cohesion, the number of the piezometric surface that applies to it, its Ru value, and the soil-reinforcement interaction coefficient. Note that Material 1 (at the top of the list) must be the uppermost material in the geometry. If a free water surface is present, water should be the uppermost material specified. If no free water surface is present, water should not be specified as a material.

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If the uppermost material is to be treated as a liquid, but its unit weight is not exactly the same as that shown for water in the Main Header (e.g. mine tailings slimes, etc.), you can still have the material treated as a liquid by including the string "liquid" (not case-sensitive) in the name of the material. The cohesion and friction angle of the material must also be zero for the liquid condition to be applied. Note that slip surfaces pass vertically through liquids.

If a material has its unit weight entered as -1, this flags it as a hard layer or "hard bottom" material, below which slip surfaces cannot pass. A "hard bottom" material can also be used to simulate a weak layer, if a thin weak layer is placed just above it.

No part of material 1 may dip below of material 2, no part of material 2 may dip below material 3, and so on. A check for these conditions is made every time a new analysis is carried out.

If the piezometric surface number is zero or blank, the program assumes there is no piezometric surface for this material. It is assumed that the pore pressure due to any piezometric surface cannot be negative.

Ru is the ratio of pore pressure to the total vertical overburden stress at any point. Pore pressure contributions from the appropriate piezometric surface and Ru are added together for the analysis, though it would be unusual to use the two methods in combination for the same material. In the case of a material having zero friction and zero cohesion, the Ru field is used to denote the extent to which cracks are filled with water (see also Section 3.2). The chief use of Ru is in theoretical studies of slope stability. For analysis of real slopes, Ru is often not very useful, mainly because the equivalent piezometric surface varies with the location of the slip plane.

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2.6.3 Edit Geometry

The Geometry window shows a tabulation of the coordinates of the upper surface profile of each material and piezometric surface, along with the specified surface and the construction surface. Soil surfaces may not cross over each other, but they may be coincident. Surfaces may not double back, ie X-coordinates must always increase. Slopes may fail to either left or right. All surfaces must start at the same X-coordinate and end at the same X-coordinate.

There is no computational penalty if the geometry is made extremely wide; but the automatic scaling used for plotting will give too small a picture of the slope if unduly wide coordinates are chosen. By the same token, if the X-coordinate range used is very small, and the slope comes out as too large on the plots, the X-coordinates can be extended to make the geometry better suit the page. All materials and all piezometric surfaces should be extended to the same minimum and maximum X-coordinates. A good rule is to make the width of the geometry 5 to 10 times the height of the slope.

The program assumes that the geometry continues horizontally beyond the limits of the given range of X-coordinates. This means than overly large circles whose ground surface intersections lie outside the given range of X-coordinates can still be analyzed.

2.6.4 Edit External Forces

This shows the point of action of each external force, along with its horizontal (+ve downwards) and vertical (+ve to the right) components. Because the analysis is two-dimensional, external forces are expressed in force per unit width. This corresponds to lb/ft width if the unit weight of water has been entered as 62.4, and kN/m width if the unit weight of water has been entered as 9.81. If the unit weight of water has been entered as 1000, external forces are expressed in kilograms force per meter width, or kp/m.

2.6.5 Edit Reinforcement Layers

GSLOPE allows you to enter up to 100 layers of geosynthetic reinforcement by defining the horizontal extents, elevation, and allowable tension (force/unit width) in each reinforcement layer.

It is assumed that all reinforcement layers are horizontal. X1 and X2 are the X-coordinates of the left and right ends of the reinforcement. $T_{allowable}$ reflects the allowable tension in the reinforcement and is normally assigned based on minimum average roll values of tensile strength with reduction factors allowing for

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creep, installation damage, and the effects of chemical and biological attack over the life of the structure.

In order to facilitate the input of multiple layers of reinforcement, the editor includes an interpolation facility. For example, assume you want to place geosynthetic reinforcement at 1.2 m vertical spacing between 94 m and 100 m elevation. First, fill in full details of the first reinforcement layer, showing its elevation as 100. Then move the cursor down to the sixth line and fill in 94 for the value of Y. A single press of the F8 key will interpolate all the intervening data fields. In this example, any non-zero parameters filled in for the sixth reinforcement will be used as a basis for interpolation. If you leave any of the data fields for the sixth reinforcement as zero or blank, the interpolation function will simply copy the values from the first layer.

The reinforcement editing window is also equipped with functions like Trim, which adjusts the horizontal position of the reinforcement so that it ends at the slope face, and Add, which adds a layer of reinforcement, extrapolating its parameters from the two preceding layers. In each case, the display is immediately updated with the new information, so you can see exactly what is going on.

The soil/geosynthetic interaction coefficient for each soil is entered on the material properties screen. If the analysis does not include reinforcement, this column is not used, and can simply be left blank.

Further information on how reinforcement is incorporated into the analysis can be found in sections 3.6 and 3.7.

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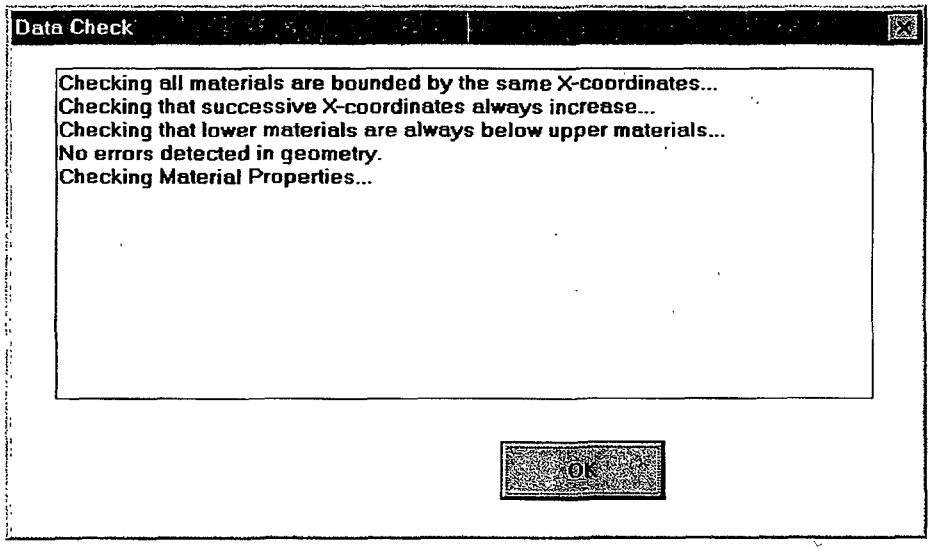
2.6.6 Edit Check

This option has three stages; first it checks that all material and piezometric surfaces have the same first and last X-coordinates as Material 1, and that for all surfaces the X-coordinates increase with each succeeding point, so there is no doubling back. If no errors are found in the X-coordinates, the next stage is to check the Y-coordinates for crossovers, as each succeeding material must lie completely beneath the previous one. Any errors detected in the coordinates are listed. If the coordinate check is successful, the material properties are checked to see that they are within a reasonable range, and any very unusual conditions are listed on the screen. The program can be run without this data check, but its use is definitely recommended. If no errors are found in the data file, the screen shows the following note:-



If the program detects geometrical errors such as surfaces which cross over or have X-coordinates which decrease, it will refuse to run an analysis until the problem is rectified. If the check routine detects material parameters which are outside the normal ranges, it will display a warning, but will still allow an analysis to proceed. Small geometrical errors likely due to rounding are corrected automatically. When this occurs, the message "No uncorrectable errors detected in geometry" appears.

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2.6.7 Edit Resolve Crossovers

For a valid analysis, a lower material must never rise above the top of an upper material, i.e. material 2 must not have any points which lie above material 1. Minor infractions of this rule frequently occur due to rounding errors caused when points are inserted or deleted. Such minor infractions are corrected by the check routine which runs before each analysis. Major infractions can occur when points are moved up beyond the area occupied by the immediately overlying material.

If you are happy with the way the geometry appears on the screen but are faced with one of these errors when trying to run an analysis or Data Check, you can use Resolve Crossovers to get rid of the infractions automatically. The routine assumes that material 1 has priority over material 2, which in turn has priority over material 3, and so on.

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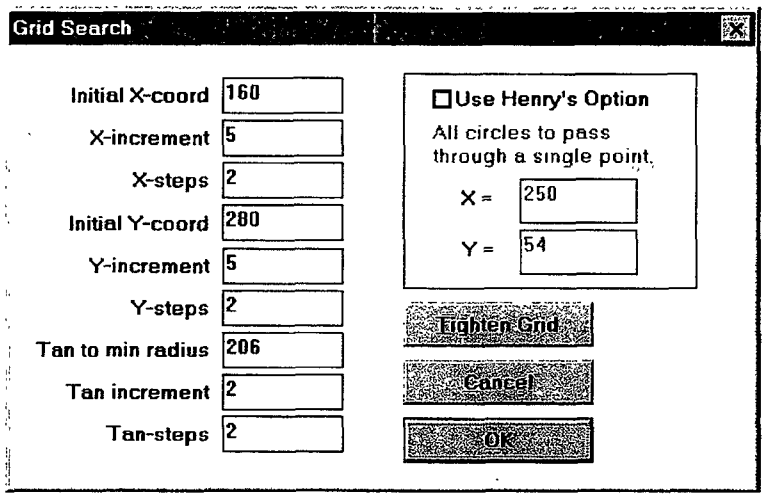
2.7 The ANALYSE Menu

2.7.1 Analyse Calculate

The Calculate option or pressing Shift-F9 brings up the grid selection screen for circular or composite surfaces:-



The example shown here sets up a 3 x 3 grid of centers whose lower left corner is at X=160, Y=280. The first circle to be analyzed will be tangent to Y=206, i.e. it will have a radius of 74. Subsequent circles about the same center will be tangent to 204 and 202.

A click on OK initiates the analysis. If the input file has been edited since the last run, a data check is carried out on the problem geometry only. This is similar to the check done under the EDIT menu, except that no review of material properties is included. If no errors are detected, the analysis proceeds.

Tighten Grid works as follows: first, the size of the grid spacing increments for X, Y, and the tangent locations are halved from their previous values. Then the origin point of the grid is adjusted such that it lies one increment below and to the left of the latest surface of minimum FOS. The tangent is also adjusted to suit this surface. This works best with a 3 x 3 grid, i.e. with Xsteps=2 and Ysteps=2

2.7.2 Analyse Recalculate

Recalculate is the same as Calculate, except that it skips the display of the grid selection window, and proceeds straight to the calculation.

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2.8 The SLIP SURFACE Menu

2.8.1 Slip Surface Regular Grid Search

This option is set as the default when GSLOPE is started. The grid of centers as defined in the grid selection window is used exactly as specified. GSLOPE attempts to use every grid point as a center in combination with every tangent in the specified range. Advantages of this approach are:

It generates a rectangular plot of contours of factor of safety.
It is not distracted by local minima.
Because the range of radii is constrained, there is more control over the range of surfaces analyzed. For example, this approach makes it possible to avoid analyzing very shallow surface slides in granular materials that constitute correct answers but are not really of interest.

2.8.2 Slip Surface Grid/Radial Search

This is the same as Regular Grid Search, except that the range of radii searched about each center continues beyond the specified range until a minimum factor of safety is found for the current center.

2.8.3 Slip Surface Stepwise Search

This starts off with a radial search, using a 3 x 3 grid of centers. If the lowest factor of safety does not correspond to a circle centered at the center of the grid, the grid is displaced by one increment in X, Y or both. The process continues until the minimum factor of safety corresponds to a circle whose center is at the center of the grid.

For simple slopes, this approach tends to find the minimum factor of safety very rapidly, but its disadvantages include the following:

Be aware that the result may vary depending on the starting point. This is because the method focuses on local gradients in the contours of factor of safety and may completely overlook minima not immediately adjacent to the starting point.

Be especially cautious if using this with reinforced slopes. The reinforcement is of course placed with the express intention of "filling in" low areas in the contours of factor of safety. This leads to "flat" contour plots with many local minima, which this method will probably miss. The Regular Grid Search or the Radial Search method is usually a better choice for such situations.

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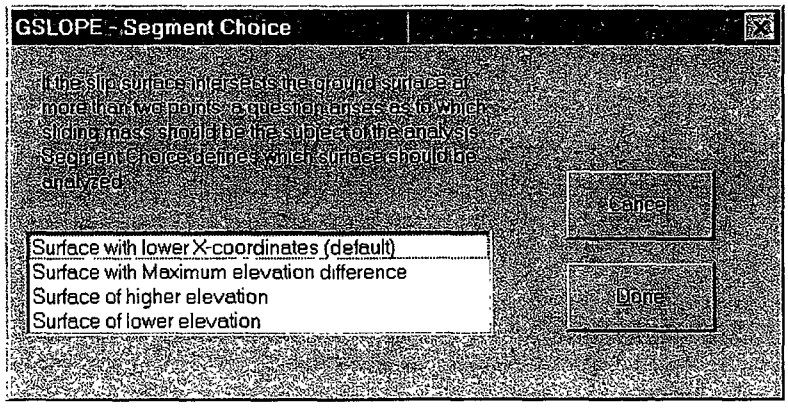
2.8.4 Slip Surface Specified Surface

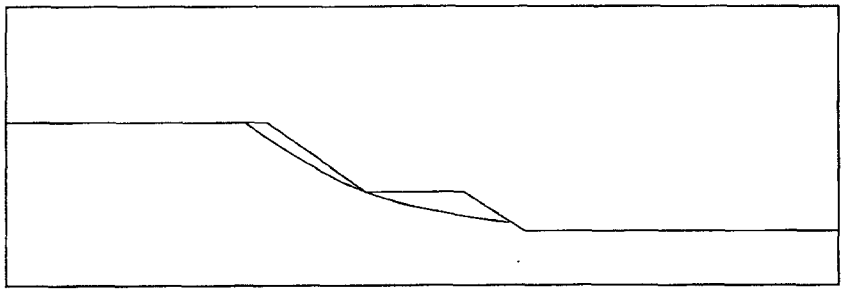
This selection corresponds to the use of a slip surface of general shape, not based on any particular center. It is activated if you use Draw Specified Surface to draw a potential failure surface of general shape, so it is rarely necessary to select this menu item directly.

2.8.5 Slip Surface Segment Choice

For every circular or composite surface to be analyzed, the program must choose the limits of the potential sliding mass. Normally the intersection points with the first or top material give the limits of the analysis. If the failure surface intersects the ground surface at more than two points, a question arises as to which surface (i.e. which segment of the circle) should be analyzed.



The default is to use the leftmost two points as the limits of the analysis. If your slope fails from right to left, you will likely need to use a different segment choice.



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2.9 The OTHER Menu

2.9.1 Other Construct As

This lets you select a material whose coordinates are to be made the same as those of the construction surface. Use this with care, as overlying and underlying materials are also modified to conform to the newly constructed surface.

2.9.2 Other Excavate

Like Fill, this option is valid only if a construction surface has been defined. The existing stratigraphy is "excavated" down to the level of the construction surface. It can be used in a wide variety of situations to minimize the amount of work involved in defining a complex geometry, as it avoids any need to calculate intersection points.

The coordinates of new points generated by this operation are rounded off corresponding to the current X and Y snap values.

2.9.3 Other Fill

This option is valid only if a construction surface has been defined. The existing stratigraphy is "filled" up to the level of the construction surface, usually using the uppermost material. It is useful for adding berms to a cross-section or for adding free water at the toe of a slope. It avoids any need to calculate intersection points.
The coordinates of new points generated by this operation are rounded off corresponding to the current X and Y snap values.

2.9.4 Other Choose Colors

This allows you to compose and save your own custom sets of colors to be used to display stratigraphy. As shipped, GSLOPE uses a set of colors defined in a file called PASTEL.COL. Pastel colors are recommended because saturated colors look rather overpowering on the screen. On color printers, they use up excessive amounts of toner, and they can obscure some features of the plot.

To change the color of a material, click Other Choose Colors to bring up the Color Selection window, then in the column on the right side of the window, click on the color you want to change. Pick the color from the color selection dialog box. Any changes you make will be lost when you exit GSLOPE, unless you save them using the Save Color Scheme button. You can name your own set of colors and leave PASTEL.COL intact. When you exit GSLOPE, the name of your set of

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colors will then be saved as the default. To reset the default to PASTEL.COL, use Load Color Scheme to load PASTEL.COL and then exit GSLOPE.

2.10 The HELP Menu

2.10.1 Help About GSLOPE

This brings up a box showing the copyright message and the version number of the program, along with contact information for Mitre Software Corporation. Contact information is also shown in section 1.0 of this manual.

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3. HOW THE ANALYSIS WORKS

This section gives an overview of the steps involved in calculating the Factor of Safety using Bishop's Modified Method.

3.1 Dividing the Sliding Mass Into Slices

The various steps involved in the analysis for the factor of safety are as follows:-

For the postulated slip surface (circular, composite or fully-specified), a calculation is done to find the intersection points of the slip surface with the material surfaces.

Normally the intersection points of the slip surface with the first or top material give the limits of the analysis. If the failure surface intersects the ground surface at more than two points, the segment bounded by the two leftmost points is used for the analysis. If your slope fails from right to left, you may need to choose a different segment, see section 2.8.5.

The slice boundaries are assigned at the X-coordinates of every material intersection point and also at the X-coordinates of every point where the material surfaces are defined. This means that no slice can ever have more than one material at its base, and no slice ever contains a break in slope, either at the ground surface, or at a material interface. If any of the resulting slices have a width greater than the maximum slice width specified, they are subdivided until the maximum slice width is not exceeded. If this procedure results in more than fifty slices, the specified maximum slice width is increased to allow a reduction in the total number of slices. For typical situations, a total of twenty slices is usually considered ample. The maximum number of slices can be adjusted using Set Advanced. If you are seeing a message at the base of the screen saying "Slice width doubled to limit No. of slices", it is best to manually increase the maximum slice width shown in the Main Header. Controlling the slice width rather than the total number of slices leads to more precise consistency from one analysis to the next and thus helps the search routines work better. It also speeds up calculation.

The mid-points of the slice bases are then calculated. The X-coordinates are taken as the average of the left and right X-coordinates for every slice and in the case of the composite slices, the Y-coordinate is the average of the Y-coordinates of the bases of the left and right boundaries.

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3.2 Tension Cracks

The materials at the base of each slice are then determined by reference to the intersection point of the material surface with the X-coordinate at each slice center. The first slice is checked to see if the material at its base has zero strength, i.e. is a liquid or a tension crack zone. If this is the case, the slice is removed from the computation, and the check proceeds to the next slice until a material with a finite strength is found at the slice base.

The slices removed are substituted for by a hydrostatic force, which is always calculated on the basis of the given unit weight of water from the Header screen. For materials having zero strength, it has been found convenient to use the field labeled Ru value to control the hydrostatic pressure forces for the end slices. A value of 1.0 in this field is taken to mean that hydrostatic pressure exists over the full height of the end slice boundary, and could therefore be used to simulate the effect of a water-filled tension crack. (A half-filled crack would correspond to 0.5). A value of zero in the Ru field for this material would simulate the effect of a dry tension crack, with the material acting as a surcharge.

3.3 Partial Submergence

Since it is always appropriate to apply the full hydrostatic force when water is present at the end slice boundary, a special case has been made. That is, if the last slice removed had a base material with the same unit weight as water, and zero strength properties, the full hydrostatic force is applied to the end slice boundary, regardless of the value in the Ru field. If you are not interested in tension cracks, and you have no materials in your stratigraphy having zero strength, you can ignore these effects. Further information on partial submergence can be found in section 2.6.2.

The same slice removal and water force substitution process takes place at the other end of the failure surface also.

3.4 Pore Pressure Conditions

Pore pressures are normally defined using piezometric surfaces. Each material can have its own piezometric surface, or a given piezometric surface may apply to more than one material. The pore pressure at the base of any slice is assumed to be equivalent to the head of water represented by the height difference between the mid-point of the base of the slice and the elevation of the corresponding piezometric surface vertically above. If no piezometric surface is defined for a particular material, it is assumed to have zero pore pressure throughout, unless it has a nonzero Ru value.

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Pore pressures are not adjusted by the program in response to cut and fill operations. If pore pressure response to construction or rapid drawdown is to be included in the analysis, the corresponding changes to the piezometric surfaces must be supplied by the user.

Artesian conditions can be represented by piezometric surfaces which extend above the ground surface. In case of rapid drawdown, consider that removal of water can give rise to a pore pressure response due to unloading.

3.5 Calculation of the Factor of Safety

In Bishop's Modified Method, the factor of safety is defined as the factor by which the soil strength can be divided before the slope reaches a state of limiting equilibrium. The factor of safety is assumed to be the same for all slices. The method also assumes that there are no shear forces on the vertical boundaries between slices. This means that if we assume an initial value of the Factor of Safety, we can make use of a vertical equilibrium equation for each slice which involves only the following:

weight of the slice, including any surcharge or free water, and the vertical component of any external force applied to the slice
pore pressure at the slice base
normal force on the slice base
shear force on the slice base

The first two items in the list are already known. Because the shear force on the slice base is related to the normal force through the known values of friction, and cohesion, reduced appropriately by the assumed value of the Factor of Safety, the last two items amount to only one unknown. Thus the normal and shear forces on the base of each slice can be calculated, based on the assumed value of the Factor of Safety. Note that the forces due to reinforcement do not enter the calculation yet, because they are assumed to be horizontal.

We can then sum all the moments acting on the entire sliding mass. These include moments due to the following:

Weight of each slice, including surcharge and free water
Normal force on the base of each slice
Shear force on the base of each slice
Pseudo-static seismic forces
Hydrostatic forces due to water in tension cracks
Hydrostatic forces due to free water against a vertical slice face
Tensile forces in reinforcement layers
External forces

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If the moments on the slide mass do not sum to zero, an adjustment is made to the Factor of Safety until equilibrium is reached. Convergence to three decimal places is usually reached in three or four iterations.

It will be noted from the above that the tensile force in the reinforcement layer enters the equation of overall moment equilibrium on the same basis as the soil weight, along with any surcharges and seismic forces. This means that, in general, no additional factor of safety is being applied to the tension in the reinforcement, beyond the factors for long-term creep, installation damage, and chemical degradation etc. already included in the allowable tension value. At the same time, the calculation assumes that the stabilizing effect of the reinforcement is limited to the tensile force it exerts on the potential sliding mass, and takes no credit for any possible soil strength increase due to confining action occurring in the backfill.

3.6 Interaction between Soil and Reinforcement

For each reinforcement layer, the program first finds the location of the point where the slip surface intersects the reinforcement. It then uses the total vertical stress and the pore pressure at that point to arrive at a value for the shear strength of the soil at the intersection point using the relationship:

$$\text{Soil shear strength} = \text{cohesion} + (\text{vertical stress} - \text{pore pressure})\text{Tan}\,\varphi$$

The program then determines the distance from the intersection point to the nearer end of the reinforcement. This represents the available bond length between the reinforcement layer and the soil.

The available pullout force is then calculated as:

$$\frac{2 \times \text{interaction coefficient} \times \text{soil strength} \times \text{bond length}}{\text{Factor of Safety against reinforcement pullout}}$$

For the overall moment calculation as described above, the force in the reinforcement layer is taken as the lesser of the 'Max Tension per unit width' specified for the reinforcement and the available pullout force as calculated above.

The force for each reinforcement layer is calculated in turn. All of the reinforcement forces are then incorporated into the stability calculation as if they were horizontal external forces applied to the sliding mass. The program automatically selects which reinforcement layers are active, and in which direction the forces apply. A fresh set of reinforcement calculations is carried out for every slip surface analysed, since the contribution of each layer varies with the location of the slip surface.

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The Factor of Safety Against Pullout is entered at the bottom of the Header screen, which is reached via Edit Header. It should be noted that this factor is applied only to the force required for pullout, and does not directly affect the maximum force that can be generated in a reinforcement layer.

3.7 The M-alpha Parameter

From vertical equilibrium, the normal force on the base of a slice can be shown (Fredlund, 1978) to be:

$$P = \frac{W - \frac{j\,c \sin\alpha + j\,u \sin\alpha \tan\varphi}{F}}{m_\alpha}$$

where:

W	=	Total weight of slice
c	=	Cohesion of slice base material
φ	=	Friction angle of slice base material
P	=	Total normal force on base of slice
b	=	Slice width
α	=	The angle the slice base makes with the horizontal. This is taken as positive for a slice that is tending to slide downhill to the right.
j	=	The length of the base of a slice, so that j Sin α = b

M-alpha (or m_α) is defined as:

$$m_\alpha = \cos\alpha + \frac{\sin\alpha \tan\varphi}{F}$$

If the failure surface is very deep, it is possible for the slice base angle to attain a large negative value. This can lead to M-alpha values which approach zero, giving an unrealistically large value for the normal force. If an M-alpha value of less than a limiting value (default limit = 0.3) is encountered in the final iteration of overall moment equilibrium, an M-alpha warning is noted. Values above 0.2 are usually of little significance. The M-alpha warning limiting value can be changed using Set/Advanced...

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3.8 Contribution of Reinforcement

As described in section 3.5 above, GSLOPE incorporates the moments or forces due to reinforcement into the overall equilibrium equation. Remember that the definition of factor of safety is the factor by which the soil strength must be reduced in order to bring the mass of soil into a state of limit equilibrium along a given slip surface, and that the factor of safety is assumed to be the same for all slices. In applying Bishop's method, for example, GSLOPE assumes an initial value of the Factor of Safety, F and then adjusts it until equilibrium is just achieved with 1/F times the available soil strength mobilized at the base of every slice.

This means that beyond the various safety factors already built into the value of $T_{allowable}$ (see section 3.6), GSLOPE does not apply any further factor of safety to the force in the reinforcement, but assumes that $T_{allowable}$ is actually available to be mobilized. The value of $T_{allowable}$ is thus treated in the same way as other input parameters such as soil unit weights, pore pressure conditions, seismic acceleration, and the values of any surcharges or other external loads which may be present.

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GROUNDWATER MONITORING REPORT

MALJAMAR RELEASE SITES – NORTH AND SOUTH
SW/4 SEC 20 AND NW/4 SEC 29, T17S, R33E
MALJAMAR, LEA COUNTY, NEW MEXICO
NMOCD ID. 1RP-956
DELTA PROJECT NO. CPNM2

Prepared for:

Centurion Pipeline L.P.
5 Greenway Plaza
Houston, Texas

June 15, 2009

Prepared by:

Delta Consultants
704 Central Parkway East, #1220
Plano, Texas 75074

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APPENDICES

Appendix A	Laboratory Analytical Report

GROUNDWATER MONITORING REPORT

MALJAMAR RELEASE SITES – NORTH AND SOUTH
SW/4 SEC 20 AND NW/4 SEC 29, T17S, R33E
MALJAMAR, LEA COUNTY, NEW MEXICO
NMOCD ID. 1RP-956
DELTA PROJECT NO. CPNM2

1.0 REPORT SUMMARY

On behalf of Centurion Pipeline L.P. (Centurion), Delta Consultants (Delta) has prepared this summary report to present the results of the groundwater gauging and sampling activities that took place on December 10, 2008 and January 14, 2009, at the North and South Maljamar Release Sites, which are located approximately five miles southeast of Maljamar, New Mexico.

2.0 SITE HISTORY

Releases along a 6-inch crude oil gathering line, currently operated by Centurion, were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The two project sites (identified as the North and South sites) are located within approximately 1,000 feet of each other, in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.). The North site is located on State of New Mexico land (Southwest Quarter of Section 20, Township 17 South, Range 33 East), and the South site is located on private property (Northwest Quarter of Section 29, Township 17 South, Range 33 East) (refer to Figure 1).

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line at the two release locations and retained Conestoga-Rovers and Associates to perform initial response activities. These activities included the excavation of impacted soils at each site to remove source area material and investigate the extent of the impacts (refer to Figures 2 and 3 for excavation boundaries at each site). An approximate total of 3,330 cubic yards of impacted soils were removed and disposed off-site.

BP then retained the services of URS to conduct further response activities at the sites to comply with New Mexico Oil Conservation District (NMOCD) requirements. These activities included an exploratory boring program, a geophysical study of the area surrounding the sites, installation and monitoring of groundwater monitor wells (five (5) at each site), and backfilling the excavations at each site.

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3.0 FIELD ACTIVITIES

On December 10, 2008 and January 14, 2009, Delta conducted groundwater monitoring and sampling activities at the North and South sites. The field data and laboratory analytical results from the monitoring and sampling events were used to produce this report.

3.1 Groundwater Elevations

Groundwater elevation data was collected using a product/water interface probe that was properly decontaminated prior to use and between each measurement. In December 2008, depth to groundwater at the North site ranged from 3,907.35 feet above mean sea level (amsl) at MW-1 to 3,908.95 feet amsl at MW-3; and, at the South site, depth to groundwater ranged from 3,904.94 feet amsl at MW-9 to 3,905.76 feet amsl at MW-6. In January 2009, depth to groundwater at the North site ranged from 3,907.18 feet amsl at MW-1 to 3,908.85 feet amsl at MW-3; and, at the South site, depth to groundwater ranged from 3,904.55 feet amsl at MW-9 to 3,905.39 feet amsl at MW-6. Between December 2008 and January 2009, the largest groundwater elevation fluctuations at the North and South sites were observed in MW-2 (0.94 feet) and MW-9 (0.39 feet), respectively. Groundwater underlying the North and South sites is located at approximately 119 feet bgs and 109 feet bgs, respectively, and generally flows towards the south-southwest. Historical groundwater elevation data is presented in Tables 1A and 1B, and data for the gauging events that took place in 2008 and 2009 are depicted on Figures 4A, 4B, 5A and 5B.

3.2 Groundwater Chemistry

In December 2008, subsequent to gauging each of the on-site monitor wells, samples were collected from MW-1 and MW-5 at the North site, and MW-7 and MW-9 at the South site. The samples were collected utilizing low-flow purging and sampling methods, with a 200 foot stainless steel Proactive SS mega monsoon pump and a YSI 556 multi-meter and flow-thru cell. These sampling points represent the wells located nearest the release points and the most downgradient wells. Each sample was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX) by Method SW8021B, total petroleum hydrocarbons (TPH) by Texas Method TX1005, total dissolved solids (TDS) by Method E160.1 and total chloride by Method E325.2.

In January 2009, subsequent to gauging, each monitor well at the North and South sites were sampled. Each sample was analyzed for BTEX by Method SW8021B, TPH-GRO and TPH-DRO by Method SW8015B and total chloride by Method E325.2.

Based on the laboratory analytical results from the December 2008 sampling event, no petroleum hydrocarbon constituent concentrations (BTEX and TPH) above the New Mexico Human Health MCLs were identified.

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The sample collected from MW-1 exhibited elevated concentrations of TDS (1,820 mg/L) and total chloride (857 mg/L), which are above the appropriate New Mexico Human Health MCLs (1,000 mg/L and 250 mg/L, respectively). The sample collected from MW-9 also exhibited an elevated concentration of TDS (60,300 mg/L).

The laboratory analytical results from the January 2009 sampling event indicate no BTEX or TPH concentrations above the appropriate laboratory reporting limits were identified in the samples collected from MW-1 through MW-5 at the North site or MW-6 through MW-10 at the South site.

In January 2009, the samples collected from MW-1 and MW-2 exhibited elevated concentrations of TDS (1,360 mg/L and 6,390 mg/L, respectively) and total chloride (446 mg/L and 3,000 mg/L, respectively). It should be noted the sample collected from MW-9 exhibited a TDS concentration of 281 mg/L.

Although, the TDS and total chloride concentrations in the vicinity of MW-1 and MW-2 are above the appropriate New Mexico Human Health MCLs, shallow groundwater in this region of New Mexico consistently exhibits relatively higher concentrations of TDS and total chloride. Additionally, the groundwater in the vicinity of the North and South sites is not known to be utilized for any 'beneficial' uses.

The above-referenced data confirms historical data collected by URS, which indicates no BTEX or TPH concentrations above New Mexico Human Health MCLs were identified in groundwater samples collected from the monitor wells located at the North and South sites.

The analytical results are summarized in Tables 2A and 2B. Copies of the laboratory analytical reports and chain-of-custody documentation are presented in Appendix A.

4.0 FINDINGS

Based on the current groundwater data, as well as historic data (refer to previous reports submitted by URS), no petroleum hydrocarbon impacts above New Mexico Human Health MCLs exist in the groundwater underlying the North and South sites. Based on the data, no further study appears warranted.

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5.0 QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

Groundwater samples were collected utilizing low-flow purging and sampling methods, which are in general accordance with guidance contained in EPA publication EPA/540/S-95/504. The groundwater samples were collected utilizing industry standards and by personnel wearing appropriate personal protective equipment (PPE). The groundwater samples were transferred to laboratory-prepared containers (i.e., 40 ml, clear glass vials preserved with hydrochloric acid), immediately placed in an ice-filled cooler and chilled to less than four degrees Celsius. Each cooler was then transferred to the analytical laboratory (Southern Petroleum Laboratories, Inc. in Houston, TX) under chain-of-custody protocol. Blind duplicate samples (MW-11) and trip blanks were prepared during the December 2008 and January 2009 sampling events, and each was analyzed for various constituents of concern (COCs). No errors or anomalies were identified.

6.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

7.0 SIGNATURES

This report was prepared by **DELTA CONSULTANTS**

Date: 6-15-09

Michael Henn
Senior Project Manager

Reviewed by:

Date: 6-15-09

for Chieu Mai, P.G.
Project Geologist

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TABLES

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TABLE 1A
GROUNDWATER ELEVATION DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (NORTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

LOCATION	DATE	TOP OF CASING (TOC) ELEVATION ft amsl	GRADE ELEVATION based on assumed casing stick up elevation of 3 feet ft amsl	TOP OF SCREEN ELEVATION (from TOC) ft amsl	TOTAL DEPTH ELEVATION (from TOC) ft bgs amsl	DEPTH TO WATER (from TOC) ft amsl	CORRECTED GROUNDWATER ELEVATION ft amsl
MW-1	9/29/2006	4027.26	4024.26	3912.76	3897.26	119.73	3907.53
	2/14/2007					119.75	3907.51
	4/18/2007					119.78	3907.48
	12/10/2008					119.91	3907.35
	1/13/2009					120.08	3907.18
MW-2	9/29/2006	4026.71	4023.71	3913.21	3898.21	118.45	3908.26
	2/14/2007					118.44	3908.27
	4/18/2007					118.47	3908.24
	12/10/2008					118.64	3908.07
	1/13/2009					118.98	3907.73
MW-3	9/29/2006	4031.86	4028.86	3914.36	3899.36	122.71	3909.15
	2/14/2007					122.71	3909.15
	4/18/2007					122.72	3909.14
	12/10/2008					122.91	3908.95
	1/13/2009					123.01	3908.85
MW-4	9/29/2006	4032.8	4029.80	3915.30	3900.30	124.76	3908.04
	2/14/2007					124.74	3908.06
	4/18/2007					124.74	3908.06
	12/10/2008					124.95	3907.85
	1/13/2009					124.91	3907.89
MW-5	9/29/2006	4030.66	4027.66	3912.78	3897.78	-	-
	2/14/2007					-	-
	4/18/2007					122.27	3908.39
	12/10/2008					122.42	3908.24
	1/13/2009					122.56	3908.10

Casing and other elevations based on survey data provided in GW Gradient Table prepared by URS Corp.
Bottom of screen - 0.5 feet above Total Depth Elevation
TOC = Top of Casing
amsl = above mean sea level
Blue type represents data collected by URS Corp.

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TABLE 1B
GROUNDWATER ELEVATION DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (SOUTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

LOCATION	DATE	TOP OF CASING (TOC) ELEVATION ft amsl	GRADE ELEVATION based on assumed casing stick up elevation of 3 feet ft amsl	TOP OF SCREEN ELEVATION (from TOC) ft amsl	TOTAL DEPTH ELEVATION (from TOC) ft bgs amsl	DEPTH TO WATER (from TOC) ft amsl	CORRECTED GROUNDWATER ELEVATION ft amsl
MW-6	9/29/2006	4018.34	4015.34	3910.88	3890.88	-	-
	2/14/2007					-	-
	4/18/2007					112.60	3905.74
	12/10/2008					112.58	3905.76
	1/14/2009					112.95	3905.39
MW-7	9/29/2006	4017.28	4014.28	3909.61	3894.61	-	-
	2/14/2007					-	-
	4/18/2007					111.73	3905.55
	12/10/2008					111.82	3905.46
	1/14/2009					112.04	3905.24
MW-8	9/29/2006	4016.34	4013.34	3908.92	3893.92	-	-
	2/14/2007					-	-
	4/18/2007					110.82	3905.52
	12/10/2008					110.88	3905.46
	1/14/2009					111.09	3905.25
MW-9	9/29/2006	4015.97	4012.97	3908.52	3893.52	-	-
	2/14/2007					-	-
	4/18/2007					110.88	3905.09
	12/10/2008					111.03	3904.94
	1/14/2009					111.42	3904.55
MW-10	9/29/2006	4018.67	4015.67	3911.34	3896.34	-	-
	2/14/2007					-	-
	4/18/2007					113.28	3905.39
	12/10/2008					113.32	3905.35
	1/14/2009					113.59	3905.08

Casing and other elevations based on survey data provided in GW Gradient Table prepared by URS Corp.
Bottom of screen - 0.5 feet above Total Depth Elevation
TOC = Top of Casing
amsl = above mean sea level
Blue type represents data collected by URS Corp.

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TABLE 2A
GROUNDWATER ANALYTICAL DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (NORTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

MONITORING WELL	DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	XYLENES (mg/L)	TPH C_6-C_{12} (mg/L)	TPH C_{12}-C_{28} (mg/L)	TPH C_{28}-C_{35} (mg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TDS (mg/L)	CHLORIDE (mg/L)	LABORATORY	CONSULTANT
New Mexico Human Health MCLs		0.01	0.75	0.75	0.62	Not Listed for crude oil (waste oil)					1,000	250		
MW-1	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.63	<0.64	<0.64	NA	NA	**1,820**	**857**	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	**1,360**	**446**	SPL	Delta
MW-2	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	**6,390**	**3,000**	SPL	Delta
MW-3	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	552	149	**SPL**	Delta
MW-4	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	297	25.8	SPL	Delta
MW-5	12/10/08	0.0056	0.0015	0.00046-J	<0.001	<0.63	<0.64	<0.64	NA	NA	580	135	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	479	121	SPL	Delta
MW-11	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.65	<0.66	<0.66	NA	NA	NA	NA	SPL	Delta
(Blind Duplicate of MW-1)														
MW-11	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	478	119	**SPL**	Delta
(Blind Duplicate of MW-5)														
Trip Blank	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	NA	NA	NA	NA	NA	NA	NA	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	NA	NA	NA	SPL	Delta

mg/L = milligrams per liter

BTEX - EPA 8021B

TPH - (C_6 - C_{35}) - TNRCC TX1005

TPH-GRO - EPA 8015B

TPH-DRO - EPA 8015B

MCLs = Maximum Concentration Levels.

< 0.001 mg/L = not detected above the laboratory analytical method reporting limit

NA = Not Analyzed

Bold = Indicates concentrations above New Mexico Human Health MCLs.

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TABLE 2B
GROUNDWATER ANALYTICAL DATA
CENTURION PIPELINE L.P. - MALJAMAR RELEASE SITE (SOUTH)
MALJAMAR, NEW MEXICO

Delta Project No. CPNM2

MONITORING WELL	DATE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	XYLENES (mg/L)	TPH C_6-C_{12} (mg/L)	TPH C_{12}-C_{28} (mg/L)	TPH C_{28}-C_{35} (mg/L)	TPH GRO (mg/L)	TPH DRO (mg/L)	TDS (mg/L)	CHLORIDE (mg/L)	LABORATORY	CONSULTANT
New Mexico Human Health MCLs		0.01	0.75	0.75	0.62	Not Listed for crude oil (waste oil)					1,000	250		
MW-6	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	611	26.8	SPL	Delta
MW-7	12/10/08	0.0053	0.0062	0.00072-J	<0.001	<0.63	<0.64	<0.64	NA	NA	333	33.4	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	308	27.7	SPL	Delta
MW-8	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	297	25.7	SPL	Delta
MW-9	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	<0.63	<0.63	<0.63	NA	NA	**60,300**	30.3	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	281	25.5	SPL	Delta
MW-10	12/10/08	Not sampled												
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	<0.01	289	26.3	SPL	Delta
Trip Blank	12/10/08	<0.00035	<0.00036	<0.00030	<0.001	NA	NA	NA	NA	NA	NA	NA	SPL	Delta
	01/13/09	<0.001	<0.001	<0.001	<0.001	NA	NA	NA	<0.01	NA	NA	NA	SPL	Delta

mg/L = milligrams per liter

BTEX - EPA 8021B

TPH - (C_8 - C_8) - TNRCC TX1005

TPH-GRO - EPA 8015B

TPH-DRO - EPA 8015B

MCLs = Maximum Concentration Levels.

< 0.001 mg/L = not detected above the laboratory analytical method reporting limit

NA = Not Analyzed

Bold = Indicates concentrations above New Mexico Human Health MCLs.

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FIGURES

NORTH SITE COORDINATES

LATITUDE: N 32° 48' 48"
LONGITUDE: W 103° 41' 33"

UTM COORDINATES: ZONE 13 622402 E 3631350 N

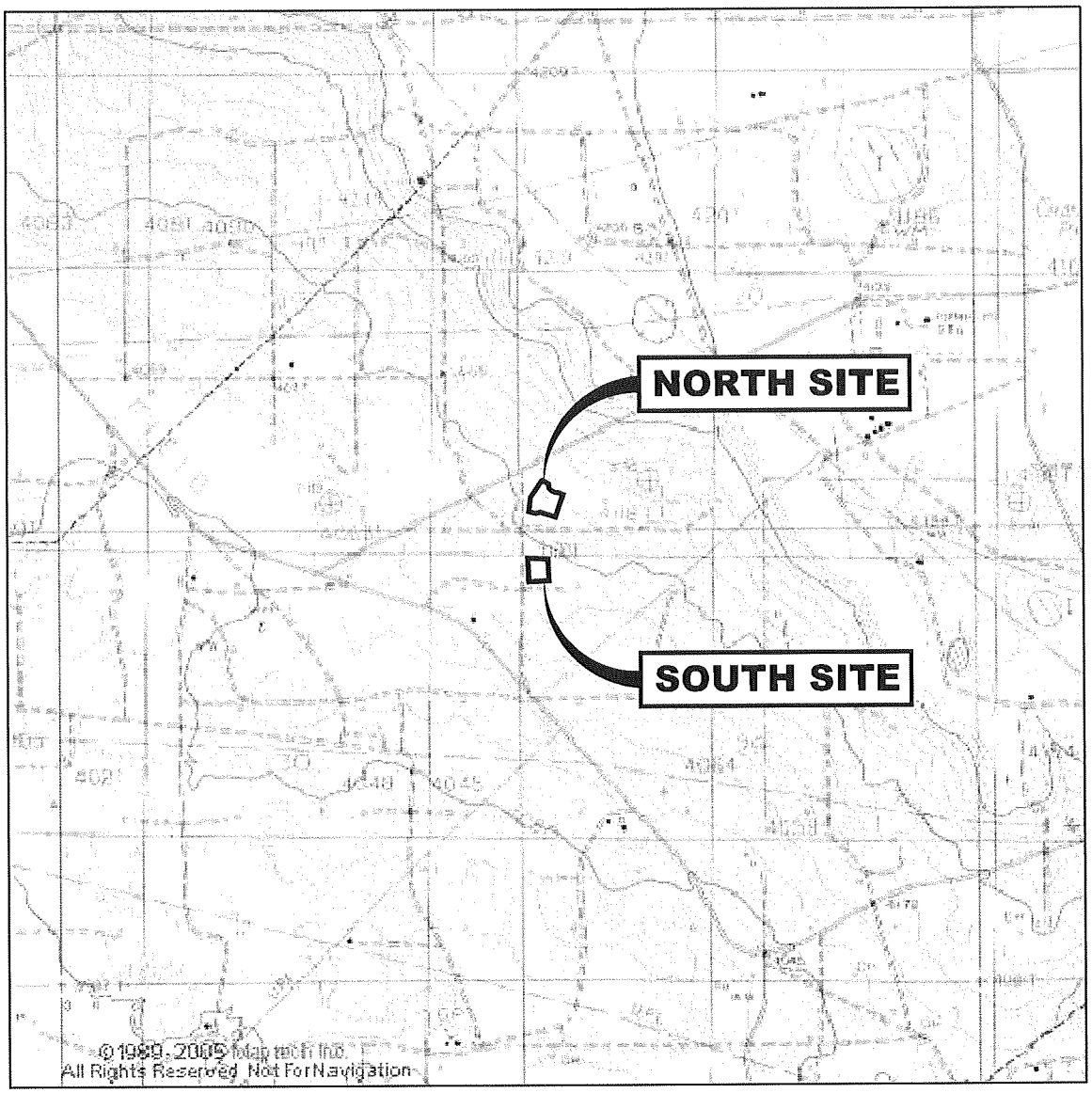
TOWNSHIP 17S
RANGE 33E
SECTION 20

SOUTH SITE COORDINATES

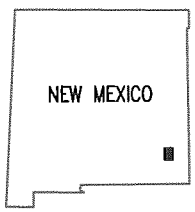
LATITUDE: N 32° 48' 40"
LONGITUDE: W 103° 41' 34"

UTM COORDINATES: ZONE 13 622379 E 3631104 N

TOWNSHIP 17S
RANGE 33E
SECTION 29



DOG LAKE QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE LOCATION

North

0 2000

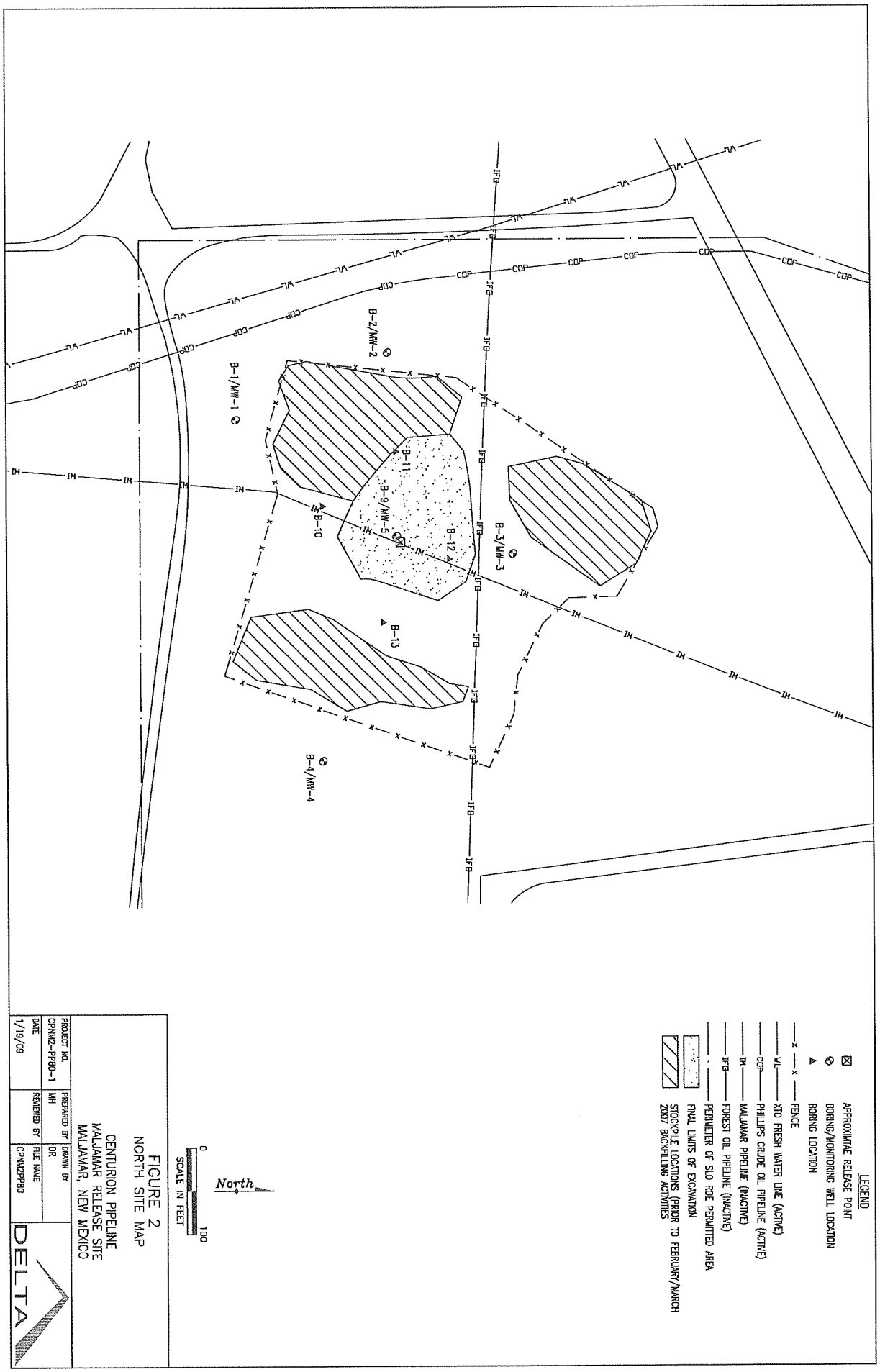
SCALE IN FEET

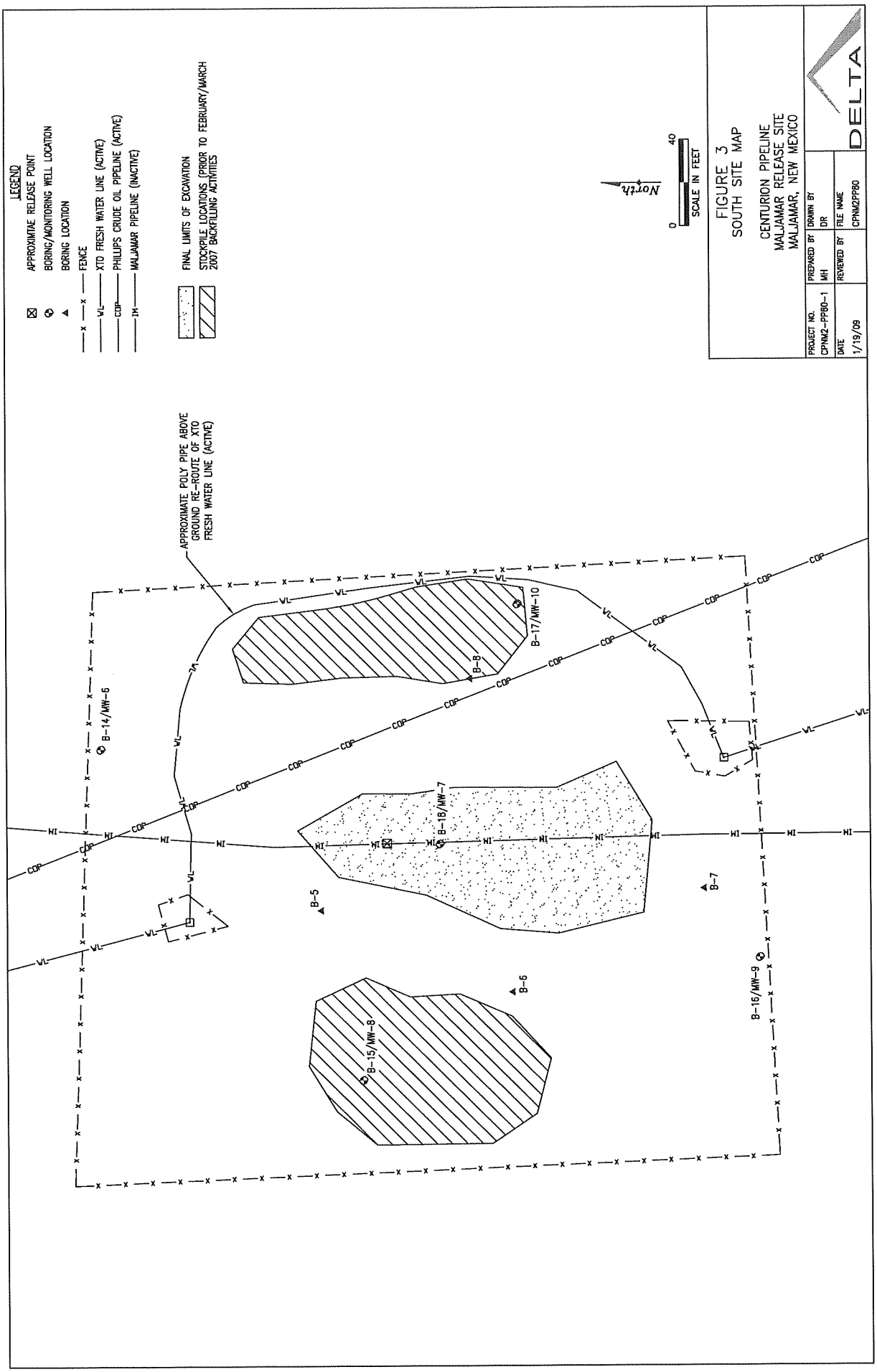
FIGURE 1
SITE LOCATION MAP

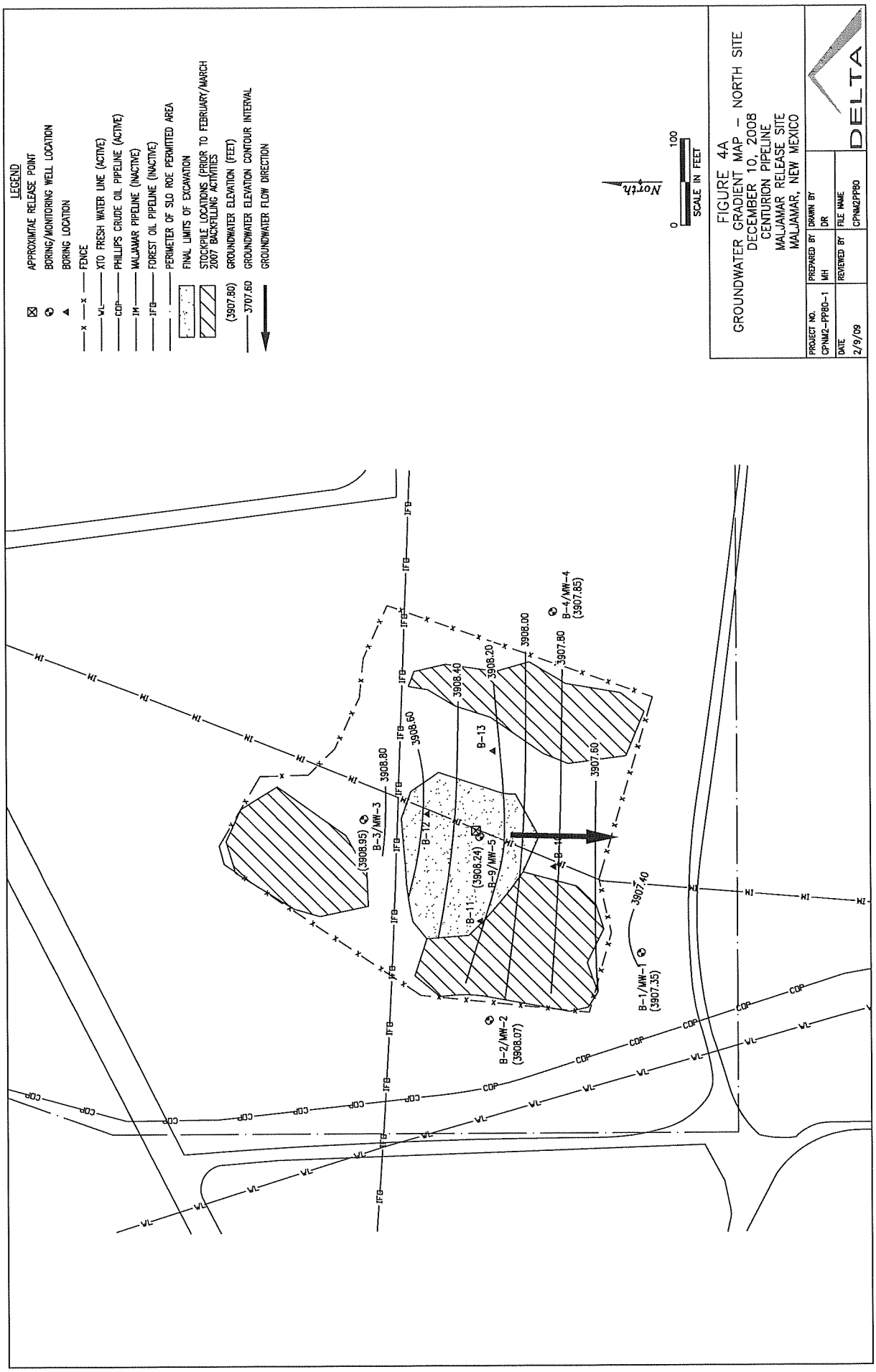
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO

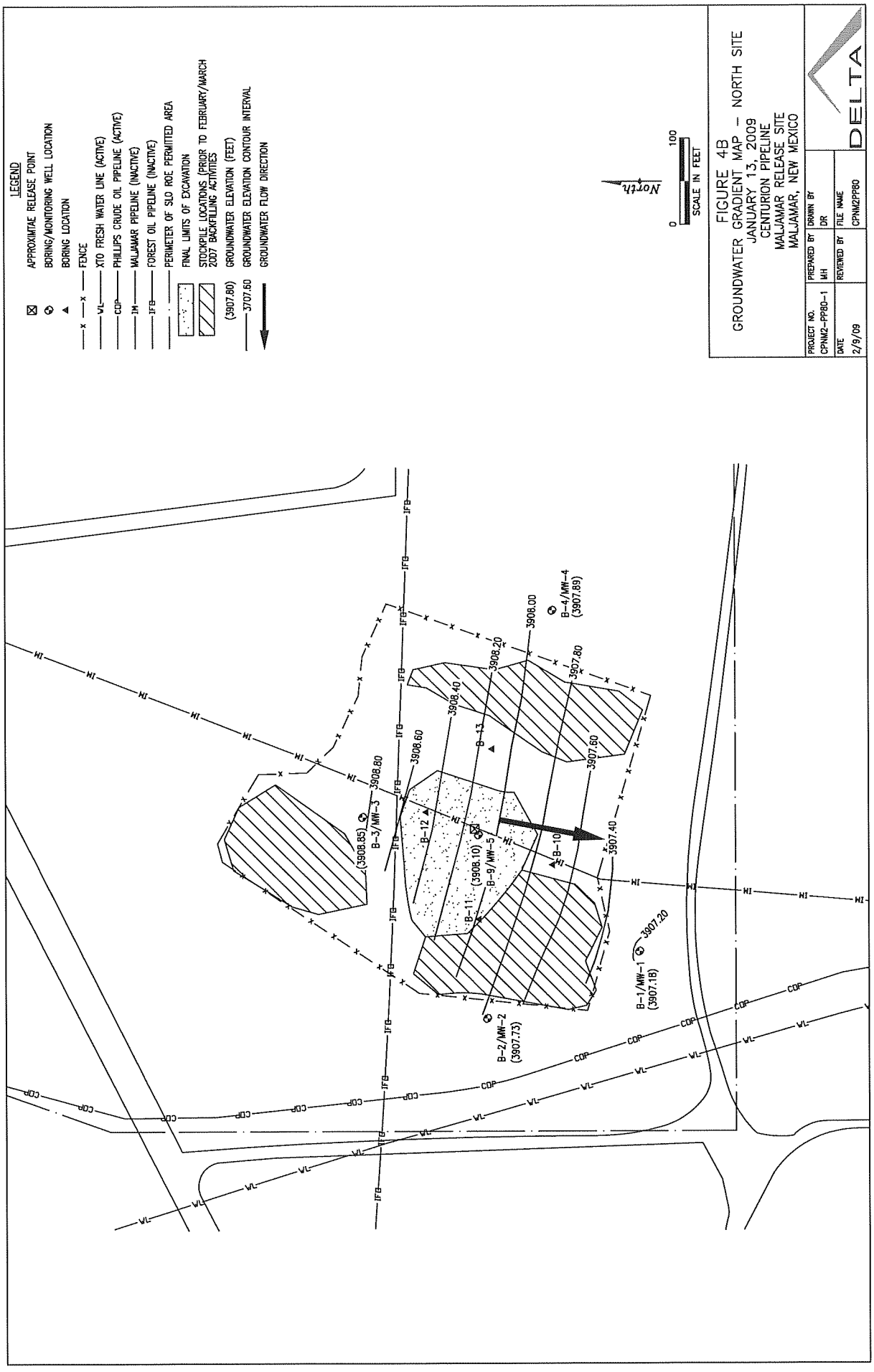
PROJECT NO.	PREPARED BY	DRAWN BY
CPNM2-PP80-1	MH	DR
DATE	REVIEWED BY	FILE NAME
2/20/09		CPNM2PP80

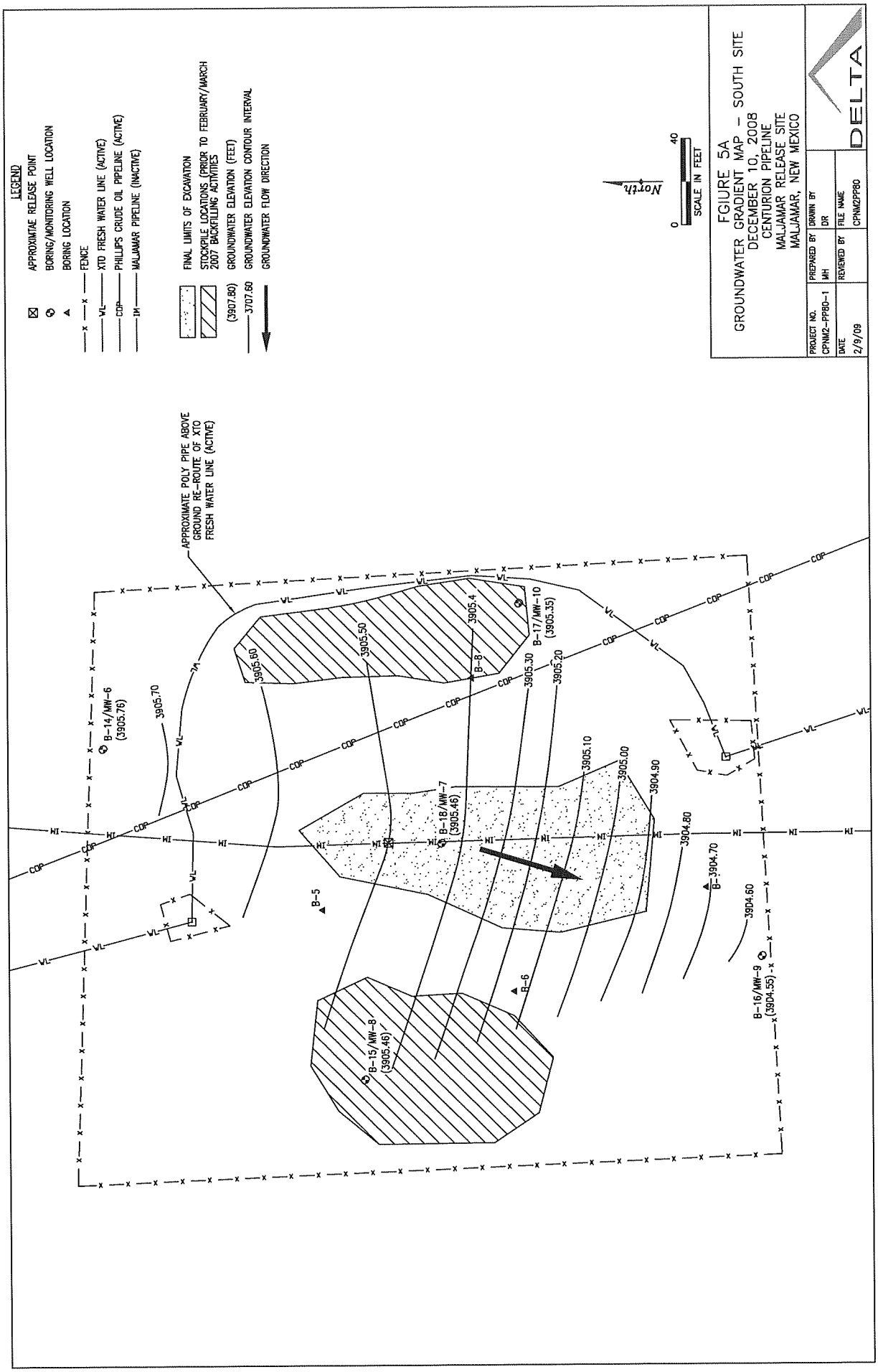
DELTA

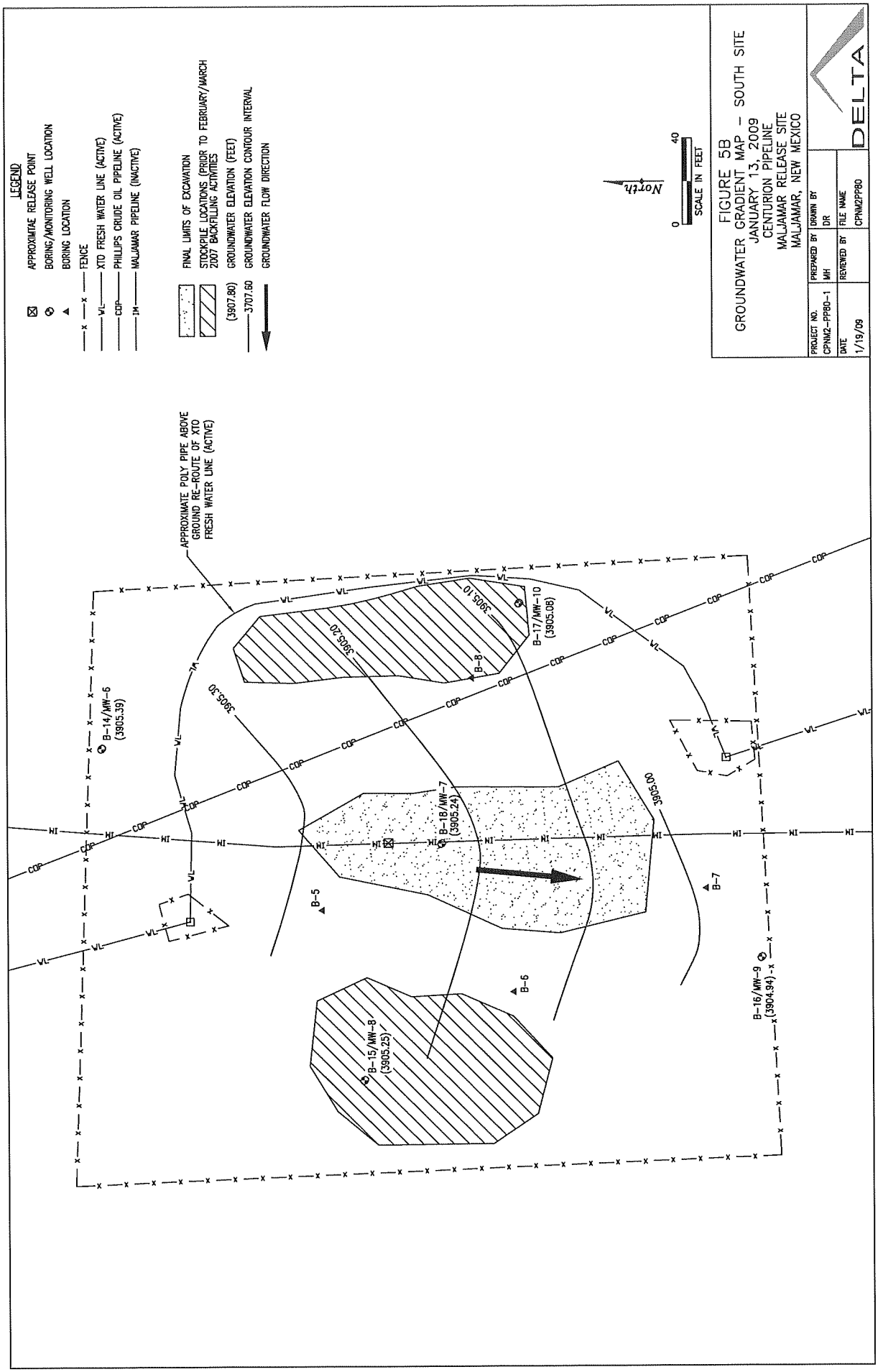

LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
B-1/MW-1
B-2/MW-2
B-3/MW-3
B-4/MW-4
B-9/MW-5
B-10
B-11
B-12
B-13
North
0
100
SCALE IN FEET
FIGURE 2
NORTH SITE MAP
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO.
CPNM2-PPBO-1
PREPARED BY
MH
DRAWN BY
DR
DATE
1/19/09
REVIEWED BY
FILE NAME
CPNM2PPBO
DELTA


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
North
0
40
SCALE IN FEET
FIGURE 3
SOUTH SITE MAP
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2--PPBO-1
PREPARED BY MH
DRAWN BY DR
DATE 1/19/09
REVIEWED BY
FILE NAME CPNM2PPBO
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6
B-17/MW-10
B-8
B-18/MW-7
B-5
B-7
B-6
B-15/MW-8
B-16/MW-9


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
100
SCALE IN FEET
FIGURE 4A
GROUNDWATER GRADIENT MAP – NORTH SITE
DECEMBER 10, 2008
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
B-1/MW-1 (3907.35)
B-2/MW-2 (3908.07)
B-3/MW-3 (3908.95)
B-4/MW-4 (3907.85)
B-9/MW-5 (3908.24)
B-11
B-12
B-13
3908.80
3908.60
3908.40
3908.20
3908.00
3907.80
3907.60
3907.40
IFB
WL
CDP
IM


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FOREST OIL PIPELINE (INACTIVE)
PERIMETER OF SLO ROE PERMITTED AREA
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
100
SCALE IN FEET
FIGURE 4B
GROUNDWATER GRADIENT MAP – NORTH SITE
JANUARY 13, 2009
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
B-1/MW-1 (3907.18)
3907.20
B-2/MW-2 (3907.73)
B-3/MW-3 (3908.85)
3908.80
B-4/MW-4 (3907.89)
3908.00
B-5/MW-5 (3908.10)
B-9/MW-5
B-10
B-11
B-12
B-13
3908.40
3908.20
3908.60
3907.80
3907.60
3907.40
IFB
IM
WL
COP


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
40
SCALE IN FEET
FGIURE 5A
GROUNDWATER GRADIENT MAP - SOUTH SITE
DECEMBER 10, 2008
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPBD-1
PREPARED BY MH
DRAWN BY DR
DATE 2/9/09
REVIEWED BY
FILE NAME CPNM2PPBD
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6 (3905.76)
B-17/MW-10 (3905.35)
B-18/MW-7 (3905.46)
B-15/MW-8 (3905.46)
B-16/MW-9 (3904.55)
B-5
B-6
B-8
B-3904.70
3905.70
3905.60
3905.50
3905.4
3905.30
3905.20
3905.10
3905.00
3904.90
3904.80
3904.60


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
(3907.80) GROUNDWATER ELEVATION (FEET)
3707.60 GROUNDWATER ELEVATION CONTOUR INTERVAL
GROUNDWATER FLOW DIRECTION
North
0
40
SCALE IN FEET
FIGURE 5B
GROUNDWATER GRADIENT MAP - SOUTH SITE
JANUARY 13, 2009
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPB0-1
PREPARED BY MH
DRAWN BY DR
DATE 1/19/09
REVIEWED BY
FILE NAME CPNM2PPB0
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6 (3905.39)
B-17/MW-10 (3905.08)
B-18/MW-7 (3905.24)
B-15/MW-8 (3905.25)
B-16/MW-9 (3904.94)
B-5
B-6
B-7
B-8
3905.10
3905.20
3905.30
3905.00

APPENDICES

APPENDIX A

LABORATORY ANALYTICAL REPORT

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To:		Project Name:	Maljamar, NM.
Delta Environmental Consultants, Inc. Michael Henn 704 Central Parkway East, Suite 1220 Plano TX 75074- ph (972) 665-0528 fax:		Site:	Maljamar, NM.
		Site Address:	
		PO Number:	
		State:	New Mexico
		State Cert. No.:	
		Date Reported:	12/29/2008

This Report Contains A Total Of 17 Pages

Excluding This Page, Chain Of Custody

And

Attachments

1/5/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To:		Project Name:	Maljamar, NM.
Delta Environmental Consultants, Inc.		Site:	Maljamar, NM.
Michael Henn		Site Address:	
704 Central Parkway East, Suite 1220			
		PO Number:	
Plano		State:	New Mexico
TX		State Cert. No.:	
75074-			
ph (972) 665-0528	fax:	Date Reported:	12/29/2008

This report has been revised per your request to correct sample ID: MW-04 to MW-09.

This report is presented in a format to meet the Texas Risk Reduction Program Rule (TRRP). The reports include a list of the Method Quantitation Limits (MQL's) for each target compound. The MQL represents the lowest non-zero standard concentration in the initial calibration curve. The Practical Quantitation Limit (PQL) represents the MQL adjusted for dilutions and moisture, if applicable. Results that are reported as ND (not detected) indicate that the compound was not identified at a concentration that is at or above the Sample Detection Limit (SDL). The SDL represents the Method Detection Limit (MDL) or the Detectability Check Standard (DCS) concentration with any adjustments for dilutions and moisture, if applicable. The SDL's are rounded based on the number of significant figures in the MDL. This accounts for any slight inconsistencies in the SDL's on the report. Any compound that was detected at a concentration that was above the SDL, but for which the concentration was less than the MQL (after adjustment for dilutions and/ or moisture), is reported as estimated (with a J qualifier). The J flags were applied to meet TRRP requirements.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

SPL Sample ID 08120600-04B (which corresponds to your sample MW-07) was selected as the matrix spik and matrix spike duplicate sample for TPH Texas 1005.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any data flags or quality control exceptions associated with this report will be footnoted in the analytical result pages or the quality control summary pages.

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Georgia Jones

Georgia Jones
Senior Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

08120600

Report To: Delta Environmental Consultants, Inc.
Michael Henn
704 Central Parkway East, Suite 1220

Plano
TX
75074-
ph (972) 665-0528 fax: (972) 665-9989

Fax To:

Project Name: Maljamar, NM.
Site: Maljamar, NM.
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 12/29/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-11	08120600-01	Water	12/10/2008 9:01:00 AM	12/12/2008 9:30:00 AM	313090	☐
MW-05	08120600-02	Water	12/10/2008 12:18:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-01	08120600-03	Water	12/10/2008 1:39:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-07	08120600-04	Water	12/10/2008 3:45:00 PM	12/12/2008 9:30:00 AM	313090	☐
MW-09	08120600-05	Water	12/10/2008 4:55:00 PM	12/12/2008 9:30:00 AM	313090	☐
TRIP BLANK	08120600-06	Water	12/10/2008	12/12/2008 9:30:00 AM	313090	☐

Georgia Jones 1/5/2009

Georgia Jones
Senior Project Manager

Date

Richard R. Reed
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-11 **Collected:** 12/10/2008 9:01 **SPL Sample ID:** 08120600-01

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 20:11	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 20:11	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 20:11	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 20:11	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 20:11	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 20:11	JSP
Surr: 1,4-Difluorobenzene	95.4		%	39-163				1	12/16/08 20:11	JSP
Surr: 4-Bromofluorobenzene	96.1		%	57-157				1	12/16/08 20:11	JSP
TPH TEXAS 1005						**TX1005**		**Units: mg/L**		
C6-C12	ND		0.65	0.64		5	5	1	12/17/08 10:33	E_S1
>C12-C28	ND		0.66	0.65		5	5	1	12/17/08 10:33	E_S1
>C28-C35	ND		0.66	0.65		5	5	1	12/17/08 10:33	E_S1
Total TPH (C6-C35)	ND		0.65	0.64		5	5	1	12/17/08 10:33	E_S1
Surr: 1-Chlorooctane	81.7		%	70-130				1	12/17/08 10:33	E_S1
Surr: o-Terphenyl	87.5		%	70-130				1	12/17/08 10:33	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	1.01

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-05 **Collected:** 12/10/2008 12:18 **SPL Sample ID:** 08120600-02

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						**E325.2**		**Units: mg/L**		
Chloride	135		1.24	0.248		1	5	5	12/17/08 16:19	ESK
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	5.6		0.35	0.35		1	1	1	12/16/08 20:39	JSP
Toluene	1.5		0.36	0.36		1	1	1	12/16/08 20:39	JSP
Ethylbenzene	0.46	J	0.30	0.30		1	1	1	12/16/08 20:39	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 20:39	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 20:39	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 20:39	JSP
Surr: 1,4-Difluorobenzene	95.5		% 39-163					1	12/16/08 20:39	JSP
Surr: 4-Bromofluorobenzene	95.2		% 57-157					1	12/16/08 20:39	JSP
TOTAL DISSOLVED SOLIDS						**E160.1**		**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	580		5.66	2.83		10	20	2	12/13/08 7:50	CFS
TPH TEXAS 1005						**TX1005**		**Units: mg/L**		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 10:41	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 10:41	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 10:41	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 10:41	E_S1
Surr: 1-Chlorooctane	83.6		% 70-130					1	12/17/08 10:41	E_S1
Surr: o-Terphenyl	88.0		% 70-130					1	12/17/08 10:41	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-01 **Collected:** 12/10/2008 13:39 **SPL Sample ID:** 08120600-03

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						E325.2		Units: mg/L		
Chloride	857		6.20	0.248		1	25	25	12/17/08 16:24	ESK
PURGEABLE AROMATICS						SW8021B		Units: ug/L		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 21:07	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 21:07	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 21:07	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 21:07	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 21:07	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 21:07	JSP
Surr: 1,4-Difluorobenzene	96.0		% 39-163					1	12/16/08 21:07	JSP
Surr: 4-Bromofluorobenzene	95.8		% 57-157					1	12/16/08 21:07	JSP
TOTAL DISSOLVED SOLIDS						E160.1		Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	1820		2.83	2.83		10	10	1	12/13/08 7:50	CFS
TPH TEXAS 1005						TX1005		Units: mg/L		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 10:51	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 10:51	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 10:51	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 10:51	E_S1
Surr: 1-Chlorooctane	83.9		% 70-130					1	12/17/08 10:51	E_S1
Surr: o-Terphenyl	88.5		% 70-130					1	12/17/08 10:51	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.99

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-07 **Collected:** 12/10/2008 15:45 **SPL Sample ID:** 08120600-04

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						E325.2		Units: mg/L		
Chloride	33.4		0.248	0.248		1	1	1	12/17/08 16:09	ESK
PURGEABLE AROMATICS						SW8021B		Units: ug/L		
Benzene	5.3		0.35	0.35		1	1	1	12/16/08 21:35	JSP
Toluene	6.2		0.36	0.36		1	1	1	12/16/08 21:35	JSP
Ethylbenzene	0.72	J	0.30	0.30		1	1	1	12/16/08 21:35	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 21:35	JSP
o-Xylene	0.41	J	0.38	0.38		1	1	1	12/16/08 21:35	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 21:35	JSP
Surr: 1,4-Difluorobenzene	97.3		% 39-163					1	12/16/08 21:35	JSP
Surr: 4-Bromofluorobenzene	97.2		% 57-157					1	12/16/08 21:35	JSP
TOTAL DISSOLVED SOLIDS						E160.1		Units: mg/L		
Total Dissolved Solids (Residue,Filterable)	333		2.83	2.83		10	10	1	12/13/08 7:50	CFS
TPH TEXAS 1005						TX1005		Units: mg/L		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 11:00	E_S1
>C12-C28	ND		0.64	0.65		5	4.9	1	12/17/08 11:00	E_S1
>C28-C35	ND		0.64	0.65		5	4.9	1	12/17/08 11:00	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 11:00	E_S1
Surr: 1-Chlorooctane	81.2		% 70-130					1	12/17/08 11:00	E_S1
Surr: o-Terphenyl	87.0		% 70-130					1	12/17/08 11:00	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: MW-09 **Collected:** 12/10/2008 16:55 **SPL Sample ID:** 08120600-05

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
CHLORIDE, TOTAL						**E325.2**		**Units: mg/L**		
Chloride	30.3		0.248	0.248		1	1	1	12/17/08 16:09	ESK
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 22:03	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 22:03	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 22:03	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 22:03	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 22:03	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 22:03	JSP
Surr: 1,4-Difluorobenzene	96.1		% 39-163					1	12/16/08 22:03	JSP
Surr: 4-Bromofluorobenzene	96.8		% 57-157					1	12/16/08 22:03	JSP
TOTAL DISSOLVED SOLIDS						**E160.1**		**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	60300		142	2.83		10	500	50	12/13/08 7:50	CFS
TPH TEXAS 1005						**TX1005**		**Units: mg/L**		
C6-C12	ND		0.63	0.64		5	4.9	1	12/17/08 11:27	E_S1
>C12-C28	ND		0.63	0.65		5	4.9	1	12/17/08 11:27	E_S1
>C28-C35	ND		0.63	0.65		5	4.9	1	12/17/08 11:27	E_S1
Total TPH (C6-C35)	ND		0.63	0.64		5	4.9	1	12/17/08 11:27	E_S1
Surr: 1-Chlorooctane	76.9		% 70-130					1	12/17/08 11:27	E_S1
Surr: o-Terphenyl	82.2		% 70-130					1	12/17/08 11:27	E_S1

Prep Method	Prep Date	Prep Initials	Prep Factor
TX1005	12/16/2008 16:49	JDM	0.98

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

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Client Sample ID: TRIP BLANK **Collected:** 12/10/2008 0:00 **SPL Sample ID:** 08120600-06

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	SDL	MDL/DCS		MQL	PQL	DF	Date Analyzed	Analyst
PURGEABLE AROMATICS						**SW8021B**		**Units: ug/L**		
Benzene	ND		0.35	0.35		1	1	1	12/16/08 18:47	JSP
Toluene	ND		0.36	0.36		1	1	1	12/16/08 18:47	JSP
Ethylbenzene	ND		0.30	0.30		1	1	1	12/16/08 18:47	JSP
m,p-Xylene	ND		1.0	1.0	+	1	1	1	12/16/08 18:47	JSP
o-Xylene	ND		0.38	0.38		1	1	1	12/16/08 18:47	JSP
Xylenes,Total	ND		1.0	1.0	+	1	1	1	12/16/08 18:47	JSP
Surr: 1,4-Difluorobenzene	94.3		%	39-163				1	12/16/08 18:47	JSP
Surr: 4-Bromofluorobenzene	95.5		%	57-157				1	12/16/08 18:47	JSP

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:
ND/U - Not Detected Above Sample Detection Limit (SDL)
B - Analyte detected in associated Method Blank above MQL
* - Surrogate Recovery Outside QC Limits
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>PCL - Result exceeds Protective Concentration Limit
D - Surrogate Recovery not reportable due to dilution
MI - Matrix Interference
+ - DCS Concentration
PQL - Adjusted MQL

Quality Control Documentation

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: TPH Texas 1005 **WorkOrder:** 08120600
Method: TX1005 **Lab Batch ID:** 86402

Method Blank

RunID: HP_B_081217C-4826112 Units: mg/L
Analysis Date: 12/17/2008 10:24 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: Method TX1005

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
>C12-C28	ND		5.0	0.65	0.65
>C28-C35	ND		5.0	0.65	0.65
C6-C12	ND		5.0	0.64	0.64
Total TPH (C6-C35)	ND		5.0	0.64	0.64
Surr: 1-Chlorooctane	85.5		70-130	0	0
Surr: o-Terphenyl	90.2		70-130	0	0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-01B	MW-11
08120600-02B	MW-05
08120600-03B	MW-01
08120600-04B	MW-07
08120600-05B	MW-09

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_B_081217C-4826110 Units: mg/L
Analysis Date: 12/17/2008 10:06 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: JDM Method TX1005

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCS Qual	LCSD Spike Added	LCSD Result	LCSD Qual	LCSD Percent Recovery	RPD	RPD Qual	RPD Limit	Lower Limit	Upper Limit
>C12-C28	100	108	108		100	108		108	0.3		20	75	125
C6-C12	100	92.4	92		100	92.4		92	0.0		20	75	125
Total TPH (C6-C35)	200	200.4	100		200	200.4		100	0.1		20	75	125
Surr: 1-Chlorooctane	5	4.84	97		5	4.81		96	0.5		30	70	130
Surr: o-Terphenyl	5	4.66	93		5	4.65		93	0.3		30	70	130

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120600-04
RunID: HP_B_081217C-4826117 Units: mg/L
Analysis Date: 12/17/2008 11:08 Analyst: E_S1
Preparation Date: 12/16/2008 16:49 Prep By: JDM Method TX1005

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
>C12-C28	ND		99.3	107	107		99.2	103	104		3.12		20	75	125
C6-C12	ND		99.3	91.8	92.4		99.2	88.4	89.2		3.76		20	75	125
Total TPH (C6-C35)	ND		198.7	198.8	99.88		198.3	191.4	96.69		3.413		20	75	125
Surr: 1-Chlorooctane	ND		4.97	4.77	96.0		4.96	4.59	92.5		3.90		20	70	130
Surr: o-Terphenyl	ND		4.97	4.57	92.0		4.96	4.43	89.3		3.08		20	70	130

Qualifiers:
ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 08120600
Lab Batch ID: R260025

Method Blank

RunID: HP_N_081216A-4821899 Units: ug/L
Analysis Date: 12/16/2008 13:36 Analyst: JSP
Preparation Date: 12/16/2008 13:36 Prep By: Method SW5030B

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS	
Benzene	ND		1.0	0.35	0.35	
Ethylbenzene	ND		1.0	0.30	0.30	
Toluene	ND		1.0	0.36	0.36	
m,p-Xylene	ND		1.0	1.0	1.0	+
o-Xylene	ND		1.0	0.38	0.38	
Xylenes,Total	ND		1.0	1.0	1.0	+
Surr: 1,4-Difluorobenzene	94.2		39-163	0	0	
Surr: 4-Bromofluorobenzene	95.1		57-157	0	0	

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-01A	MW-11
08120600-02A	MW-05
08120600-03A	MW-01
08120600-04A	MW-07
08120600-05A	MW-09
08120600-06A	TRIP BLANK

Laboratory Control Sample (LCS)

RunID: HP_N_081216A-4821897 Units: ug/L
Analysis Date: 12/16/2008 12:40 Analyst: JSP
Preparation Date: 12/16/2008 12:40 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Benzene	20.0	18.4	91.9		70	130
Ethylbenzene	20.0	18.5	92.5		66	132
Toluene	20.0	18.4	92.2		69	133
m,p-Xylene	40.0	37	92.5		67	136
o-Xylene	20.0	18	90.2		67	133
Xylenes,Total	60.0	55	91.7		67	136
Surr: 1,4-Difluorobenzene	100	95.9	95.9		39	163
Surr: 4-Bromofluorobenzene	100	96.1	96.1		57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120563-04
RunID: HP_N_081216A-4821902 Units: ug/L
Analysis Date: 12/16/2008 15:56 Analyst: JSP

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Benzene	ND		20	18.2	91.0		20	18.4	92.0		1.14		26	40	165
Ethylbenzene	ND		20	18.1	90.4		20	18.3	91.6		1.29		34	51	156
Toluene	ND		20	18.3	91.3		20	18.2	90.9		0.413		25	58	153

Qualifiers:
ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis:	**Purgeable Aromatics**	**WorkOrder:**	**08120600**
Method:	**SW8021B**	**Lab Batch ID:**	**R260025**

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked:	08120563-04		
RunID:	HP_N_081216A-4821902	Units:	ug/L
Analysis Date:	12/16/2008 15:56	Analyst:	JSP

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
m,p-Xylene	ND		40	36.1	90.3		40	36.4	91.1		0.942		27	51	155
o-Xylene	ND		20	17.6	88.2		20	17.8	89.0		0.898		25	58	151
Xylenes,Total	ND		60	53.7	89.6		60	54.2	90.4		0.927		27	51	155
Surr: 1,4-Difluorobenzene	ND		100	95.3	95.3		100	94.7	94.7		0.655		30	39	163
Surr: 4-Bromofluorobenzene	ND		100	95.3	95.3		100	95.8	95.8		0.455		30	57	157

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Total Dissolved Solids **WorkOrder:** 08120600
Method: E160.1 **Lab Batch ID:** R259841

Method Blank

RunID: WET_081213Q-4818872 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Total Dissolved Solids (Residue,Filterable)	ND		10	2.83	2.83

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-02C	MW-05
08120600-03C	MW-01
08120600-04C	MW-07
08120600-05C	MW-09

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_081213Q-4818874 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCS Qual	LCSD Spike Added	LCSD Result	LCSD Qual	LCSD Percent Recovery	RPD	RPD Qual	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200	199	100		200	200		100	0.5		10	95	107

Sample Duplicate

Original Sample: 08120563-04
RunID: WET_081213Q-4818879 Units: mg/L
Analysis Date: 12/13/2008 7:50 Analyst: CFS

Analyte	Sample Result	DUP Result	Qual	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	546	548		0.366	20

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Chloride, Total **WorkOrder:** 08120600
Method: E325.2 **Lab Batch ID:** R260127

Method Blank

RunID: KONELAB_081217A-4823608 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-02C	MW-05
08120600-03C	MW-01

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Chloride	0.783	J	1.0	0.248	0.248

Laboratory Control Sample (LCS)

RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Chloride	50.00	52.25	104.5		80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120708-01
RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 16:58 Analyst: ESK

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Chloride	4389	B	50	4161	N/C		50	4156	N/C		N/C		20	76	131

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar, NM.

Analysis: Chloride, Total **WorkOrder:** 08120600
Method: E325.2 **Lab Batch ID:** R260127A

Method Blank

RunID: KONELAB_081217A-4823608 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08120600-04C	MW-07
08120600-05C	MW-09

Analyte	Result	Qual	Rep Limit	SDL	MDL/DCS
Chloride	0.783	J	1.0	0.248	0.248

Laboratory Control Sample (LCS)

RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Qual	Lower Limit	Upper Limit
Chloride	50.00	52.25	104.5		80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 08120512-01
RunID: KONELAB_081217A-48236 Units: mg/L
Analysis Date: 12/17/2008 14:24 Analyst: ESK

Analyte	Sample Result	Smp Qual	MS Spike Added	MS Result	MS % Rcvry	MS Qual	MSD Spike Added	MSD Result	MSD % Rcvry	MSD Qual	RPD	RPD Qual	RPD Limit	Low Limit	High Limit
Chloride	7.026	B	50	64.12	114.2		50	64.89	115.7		1.188		20	76	131

Qualifiers:

ND/U - Not Detected at the SDL
B - Analyte detected in the associated Method Blank
J - Estimated Value between SDL and MQL (PQL)
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
+ - DCS Concentration
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist
And
Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	08120600	Received By:	L_C
Date and Time Received:	12/12/2008 9:30:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	1.5°C	Chilled by:	Water Ice

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
2. Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐	
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑	
4. Chain of custody present?	Yes ☑	No ☐		
5. Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
6. Chain of custody agrees with sample labels?	Yes ☑	No ☐		
7. Samples in proper container/bottle?	Yes ☑	No ☐		
8. Sample containers intact?	Yes ☑	No ☐		
9. Sufficient sample volume for indicated test?	Yes ☑	No ☐		
10. All samples received within holding time?	Yes ☑	No ☐		
11. Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		
12. Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐	
13. Water - Preservation checked upon receipt (except VOA*)?	Yes ☐	No ☐	Not Applicable ☑	

*VOA Preservation Checked After Sample Analysis

SPL Representative: Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 313090

08120600

page 1 of 1

Client Name: Michael Henn - Delta Consultants
Address: Plano, TX
Phone/Fax:
Client Contact: Michael Henn Email: mhenn@deltaenv.com
Project Name/No.:
Site Name:
Site Location: Maljamar, NM
Invoice To: Ph:

SAMPLE ID	DATE	TIME	comp	grab	matrix (W=water S=soil SL=sludge O=oil X=other)	bottle (P=plastic A=amber glass G=glass V=vial X=other)	size (1=1 liter 4=4oz 8=8oz 40=vial 16=16oz X=other)	pres. (1=HCl 2=HNO3 3=H2SO4 X=other)	Number of Containers	Requested Analysis: BTEX - 8021B	TPH - TX1005	TDS - 160.1	Chloride - E300					
MW-11	12/10/08	901		X	W	G	4	1	6	X	X							
MW-05		1218					4,8	1, X	8	X	X	X	X					
MW-01		1339								X	X	X	X					
MW-07		1545								X	X	X	X					
MW-04		1655								X	X	X	X					
Trip Blank		—					4	1	2	X								

Client/Consultant Remarks:

Laboratory remarks:

Intact? Y N
Ice? Y N
Temp: 1.5°C

Requested TAT

Contract ☐ 72hr ☐
24hr ☐ Standard ☒
48hr ☐
Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☒ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial): DF

	date	time	
1. Relinquished by Sampler:	12/11/08	900	2. Received by:
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	12/12/08	9:55	6. Received by Laboratory:

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☐ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777

Page 1239 of 1388

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To:		Project Name:	Maljamar Release Site
Delta Environmental Consultants, Inc. Michael Henn 704 Central Parkway East, Suite 1220 Plano TX 75074- ph: (972) 665-0528 fax:		Site:	Maljamar, NM.
		Site Address:	
		PO Number:	
		State:	New Mexico
		State Cert. No.:	
		Date Reported:	1/28/2009

This Report Contains A Total Of 28 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

1/28/2009

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To:		Project Name:	Maljamar Release Site
Delta Environmental Consultants, Inc.		Site:	Maljamar, NM.
Michael Henn		Site Address:	
704 Central Parkway East, Suite 1220			
		PO Number:	
Plano		State:	New Mexico
TX		State Cert. No.:	
75074-		Date Reported:	1/28/2009
ph: (972) 665-0528	fax:		

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:87217 for the Diesel Range Organics analysis by Method 8015B. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Georgia Jones

Georgia Jones
Senior Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Delta Environmental Consultants, Inc.

Certificate of Analysis Number:

09010585

Report To: Delta Environmental Consultants, Inc.
Michael Henn
704 Central Parkway East, Suite 1220

Plano
TX
75074-
ph: (972) 665-0528 fax: (972) 665-9989

Fax To:

Project Name: Maljamar Release Site
Site: Maljamar, NM.
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 1/28/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	09010585-01	Water	1/13/2009 5:24:00 PM	1/15/2009 10:00:00 AM		☐
MW-2	09010585-02	Water	1/13/2009 4:28:00 PM	1/15/2009 10:00:00 AM		☐
MW-3	09010585-03	Water	1/13/2009 11:47:00 AM	1/15/2009 10:00:00 AM		☐
MW-4	09010585-04	Water	1/13/2009 1:40:00 PM	1/15/2009 10:00:00 AM		☐
MW-5	09010585-05	Water	1/13/2009 3:10:00 PM	1/15/2009 10:00:00 AM		☐
MW-6	09010585-06	Water	1/14/2009 2:25:00 PM	1/15/2009 10:00:00 AM		☐
MW-7	09010585-07	Water	1/14/2009 11:57:00 AM	1/15/2009 10:00:00 AM		☐
MW-8	09010585-08	Water	1/14/2009 1:22:00 PM	1/15/2009 10:00:00 AM		☐
MW-9	09010585-09	Water	1/14/2009 9:38:00 AM	1/15/2009 10:00:00 AM		☐
MW-10	09010585-10	Water	1/14/2009 10:50:00 AM	1/15/2009 10:00:00 AM		☐
MW-11	09010585-11	Water	1/13/2009 10:00:00 AM	1/15/2009 10:00:00 AM		☐
Trip Blank	09010585-12	Water	1/14/2009	1/15/2009 10:00:00 AM		☐

Georgia Jones

1/28/2009

Georgia Jones
Senior Project Manager

Date

Richard R. Reed
Laboratory Director

Ted Yen
Quality Assurance Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-1 **Collected:** 01/13/2009 17:24 **SPL Sample ID:** 09010585-01

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	446		50	50	01/16/09 18:38	ESK	4863612
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:03	NW	4877705
Surr: n-Pentacosane	42.2	%	20-150	1	01/24/09 0:03	NW	4877705

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 20:47	WLV	4872828
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 20:47	WLV	4872828
Surr: 4-Bromofluorobenzene	108	%	50-158	1	01/22/09 20:47	WLV	4872828
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 20:47	WLV	4872732
Toluene	ND		1	1	01/22/09 20:47	WLV	4872732
Ethylbenzene	ND		1	1	01/22/09 20:47	WLV	4872732
m,p-Xylene	ND		1	1	01/22/09 20:47	WLV	4872732
o-Xylene	ND		1	1	01/22/09 20:47	WLV	4872732
Xylenes,Total	ND		1	1	01/22/09 20:47	WLV	4872732
Surr: 1,4-Difluorobenzene	96.1	%	39-163	1	01/22/09 20:47	WLV	4872732
Surr: 4-Bromofluorobenzene	100	%	57-157	1	01/22/09 20:47	WLV	4872732
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	1360		10	1	01/17/09 10:45	CFS	4865100

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-2 **Collected:** 01/13/2009 16:28 **SPL Sample ID:** 09010585-02

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	3000		50	50	01/16/09 18:38	ESK	4863615
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:23	NW	4877706
Surr: n-Pentacosane	38.6	%	20-150	1	01/24/09 0:23	NW	4877706

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 21:18	WLV	4872829
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 21:18	WLV	4872829
Surr: 4-Bromofluorobenzene	110	%	50-158	1	01/22/09 21:18	WLV	4872829
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 21:18	WLV	4872733
Toluene	ND		1	1	01/22/09 21:18	WLV	4872733
Ethylbenzene	ND		1	1	01/22/09 21:18	WLV	4872733
m,p-Xylene	ND		1	1	01/22/09 21:18	WLV	4872733
o-Xylene	ND		1	1	01/22/09 21:18	WLV	4872733
Xylenes,Total	ND		1	1	01/22/09 21:18	WLV	4872733
Surr: 1,4-Difluorobenzene	95.8	%	39-163	1	01/22/09 21:18	WLV	4872733
Surr: 4-Bromofluorobenzene	99.7	%	57-157	1	01/22/09 21:18	WLV	4872733
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	6390		40	4	01/17/09 10:45	CFS	4865102

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-3 **Collected:** 01/13/2009 11:47 **SPL Sample ID:** 09010585-03

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	149		5	5	01/16/09 18:24	ESK	4863610
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 0:43	NW	4877707
Surr: n-Pentacosane	73.2	%	20-150	1	01/24/09 0:43	NW	4877707

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/22/09 21:50	WLV	4872830
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/22/09 21:50	WLV	4872830
Surr: 4-Bromofluorobenzene	111	%	50-158	1	01/22/09 21:50	WLV	4872830
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/22/09 21:50	WLV	4872734
Toluene	ND		1	1	01/22/09 21:50	WLV	4872734
Ethylbenzene	ND		1	1	01/22/09 21:50	WLV	4872734
m,p-Xylene	ND		1	1	01/22/09 21:50	WLV	4872734
o-Xylene	ND		1	1	01/22/09 21:50	WLV	4872734
Xylenes,Total	ND		1	1	01/22/09 21:50	WLV	4872734
Surr: 1,4-Difluorobenzene	96.2	%	39-163	1	01/22/09 21:50	WLV	4872734
Surr: 4-Bromofluorobenzene	100	%	57-157	1	01/22/09 21:50	WLV	4872734
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	552		10	1	01/17/09 10:45	CFS	4865103

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-4 **Collected:** 01/13/2009 13:40 **SPL Sample ID:** 09010585-04

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL					**MCL**	**E325.2**	**Units: mg/L**	
Chloride	25.8			1	1	01/16/09 18:13	ESK	4863606
DIESEL RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 1:04	NW	4877708
Surr: n-Pentacosane	34.6		%	20-150	1	01/24/09 1:04	NW	4877708

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS					**MCL**	**SW8015B**	**Units: mg/L**	
Gasoline Range Organics	ND			0.1	1	01/22/09 23:56	WLV	4872833
Surr: 1,4-Difluorobenzene	104		%	60-155	1	01/22/09 23:56	WLV	4872833
Surr: 4-Bromofluorobenzene	111		%	50-158	1	01/22/09 23:56	WLV	4872833
PURGEABLE AROMATICS					**MCL**	**SW8021B**	**Units: ug/L**	
Benzene	ND			1	1	01/22/09 23:56	WLV	4872737
Toluene	ND			1	1	01/22/09 23:56	WLV	4872737
Ethylbenzene	ND			1	1	01/22/09 23:56	WLV	4872737
m,p-Xylene	ND			1	1	01/22/09 23:56	WLV	4872737
o-Xylene	ND			1	1	01/22/09 23:56	WLV	4872737
Xylenes,Total	ND			1	1	01/22/09 23:56	WLV	4872737
Surr: 1,4-Difluorobenzene	95.8		%	39-163	1	01/22/09 23:56	WLV	4872737
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/22/09 23:56	WLV	4872737
TOTAL DISSOLVED SOLIDS					**MCL**	**E160.1**	**Units: mg/L**	
Total Dissolved Solids (Residue,Filterable)	297			10	1	01/17/09 10:45	CFS	4865104

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-5 **Collected:** 01/13/2009 15:10 **SPL Sample ID:** 09010585-05

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	121		5	5	01/16/09 18:24	ESK	4863611
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 1:24	NW	4877709
Surr: n-Pentacosane	71.6	%	20-150	1	01/24/09 1:24	NW	4877709

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/23/09 0:27	WLV	4872834
Surr: 1,4-Difluorobenzene	104	%	60-155	1	01/23/09 0:27	WLV	4872834
Surr: 4-Bromofluorobenzene	109	%	50-158	1	01/23/09 0:27	WLV	4872834
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/23/09 0:27	WLV	4872738
Toluene	ND		1	1	01/23/09 0:27	WLV	4872738
Ethylbenzene	ND		1	1	01/23/09 0:27	WLV	4872738
m,p-Xylene	ND		1	1	01/23/09 0:27	WLV	4872738
o-Xylene	ND		1	1	01/23/09 0:27	WLV	4872738
Xylenes,Total	ND		1	1	01/23/09 0:27	WLV	4872738
Surr: 1,4-Difluorobenzene	96.6	%	39-163	1	01/23/09 0:27	WLV	4872738
Surr: 4-Bromofluorobenzene	102	%	57-157	1	01/23/09 0:27	WLV	4872738
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	479		10	1	01/17/09 10:45	CFS	4865105

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-6 **Collected:** 01/14/2009 14:25 **SPL Sample ID:** 09010585-06

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				**MCL**	**E325.2**	**Units: mg/L**		
Chloride	28.6			1	1	01/16/09 18:13	ESK	4863607
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 1:44	NW	4877710
Surr: n-Pentacosane	38.6		%	20-150	1	01/24/09 1:44	NW	4877710

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND			0.1	1	01/23/09 0:58	WLV	4872835
Surr: 1,4-Difluorobenzene	102		%	60-155	1	01/23/09 0:58	WLV	4872835
Surr: 4-Bromofluorobenzene	111		%	50-158	1	01/23/09 0:58	WLV	4872835
PURGEABLE AROMATICS				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND			1	1	01/23/09 0:58	WLV	4872739
Toluene	ND			1	1	01/23/09 0:58	WLV	4872739
Ethylbenzene	ND			1	1	01/23/09 0:58	WLV	4872739
m,p-Xylene	ND			1	1	01/23/09 0:58	WLV	4872739
o-Xylene	ND			1	1	01/23/09 0:58	WLV	4872739
Xylenes,Total	ND			1	1	01/23/09 0:58	WLV	4872739
Surr: 1,4-Difluorobenzene	96.5		%	39-163	1	01/23/09 0:58	WLV	4872739
Surr: 4-Bromofluorobenzene	102		%	57-157	1	01/23/09 0:58	WLV	4872739
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	611			10	1	01/17/09 10:45	CFS	4865106

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-7 **Collected:** 01/14/2009 11:57 **SPL Sample ID:** 09010585-07

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				**MCL**	**E325.2**	**Units: mg/L**		
Chloride	27.7			1	1	01/16/09 18:13	ESK	4863608
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 2:44	NW	4877712
Surr: n-Pentacosane	63.4		%	20-150	1	01/24/09 2:44	NW	4877712

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND			0.1	1	01/23/09 1:30	WLV	4872836
Surr: 1,4-Difluorobenzene	103		%	60-155	1	01/23/09 1:30	WLV	4872836
Surr: 4-Bromofluorobenzene	111		%	50-158	1	01/23/09 1:30	WLV	4872836
PURGEABLE AROMATICS				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND			1	1	01/23/09 1:30	WLV	4872740
Toluene	ND			1	1	01/23/09 1:30	WLV	4872740
Ethylbenzene	ND			1	1	01/23/09 1:30	WLV	4872740
m,p-Xylene	ND			1	1	01/23/09 1:30	WLV	4872740
o-Xylene	ND			1	1	01/23/09 1:30	WLV	4872740
Xylenes,Total	ND			1	1	01/23/09 1:30	WLV	4872740
Surr: 1,4-Difluorobenzene	96.3		%	39-163	1	01/23/09 1:30	WLV	4872740
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/23/09 1:30	WLV	4872740
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	308			10	1	01/17/09 10:45	CFS	4865107

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-8 **Collected:** 01/14/2009 13:22 **SPL Sample ID:** 09010585-08

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				**MCL**	**E325.2**	**Units: mg/L**		
Chloride	25.7			1	1	01/16/09 18:13	ESK	4863609
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 3:05	NW	4877713
Surr: n-Pentacosane	50.2		%	20-150	1	01/24/09 3:05	NW	4877713

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND			0.1	1	01/23/09 2:01	WLV	4872837
Surr: 1,4-Difluorobenzene	102		%	60-155	1	01/23/09 2:01	WLV	4872837
Surr: 4-Bromofluorobenzene	110		%	50-158	1	01/23/09 2:01	WLV	4872837
PURGEABLE AROMATICS				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND			1	1	01/23/09 2:01	WLV	4872741
Toluene	ND			1	1	01/23/09 2:01	WLV	4872741
Ethylbenzene	ND			1	1	01/23/09 2:01	WLV	4872741
m,p-Xylene	ND			1	1	01/23/09 2:01	WLV	4872741
o-Xylene	ND			1	1	01/23/09 2:01	WLV	4872741
Xylenes,Total	ND			1	1	01/23/09 2:01	WLV	4872741
Surr: 1,4-Difluorobenzene	96.3		%	39-163	1	01/23/09 2:01	WLV	4872741
Surr: 4-Bromofluorobenzene	101		%	57-157	1	01/23/09 2:01	WLV	4872741
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	297			10	1	01/17/09 10:45	CFS	4865108

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-9 **Collected:** 01/14/2009 9:38 **SPL Sample ID:** 09010585-09

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	25.5		1	1	01/16/09 18:53	ESK	4863618
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 3:25	NW	4877714
Surr: n-Pentacosane	42.8	%	20-150	1	01/24/09 3:25	NW	4877714

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/23/09 2:33	WLV	4872838
Surr: 1,4-Difluorobenzene	103	%	60-155	1	01/23/09 2:33	WLV	4872838
Surr: 4-Bromofluorobenzene	110	%	50-158	1	01/23/09 2:33	WLV	4872838
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/23/09 2:33	WLV	4872742
Toluene	ND		1	1	01/23/09 2:33	WLV	4872742
Ethylbenzene	ND		1	1	01/23/09 2:33	WLV	4872742
m,p-Xylene	ND		1	1	01/23/09 2:33	WLV	4872742
o-Xylene	ND		1	1	01/23/09 2:33	WLV	4872742
Xylenes,Total	ND		1	1	01/23/09 2:33	WLV	4872742
Surr: 1,4-Difluorobenzene	96.3	%	39-163	1	01/23/09 2:33	WLV	4872742
Surr: 4-Bromofluorobenzene	101	%	57-157	1	01/23/09 2:33	WLV	4872742
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	281		10	1	01/17/09 10:45	CFS	4865109

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-10 **Collected:** 01/14/2009 10:50 **SPL Sample ID:** 09010585-10

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL				**MCL**	**E325.2**	**Units: mg/L**		
Chloride	26.3			1	1	01/16/09 18:54	ESK	4863619
DIESEL RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND			0.1	1	01/24/09 3:45	NW	4877715
Surr: n-Pentacosane	41.0		%	20-150	1	01/24/09 3:45	NW	4877715

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS				**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND			0.1	1	01/21/09 18:34	CLJ	4870362
Surr: 1,4-Difluorobenzene	98.8		%	60-155	1	01/21/09 18:34	CLJ	4870362
Surr: 4-Bromofluorobenzene	93.4		%	50-158	1	01/21/09 18:34	CLJ	4870362
PURGEABLE AROMATICS				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND			1	1	01/21/09 18:34	CLJ	4870461
Toluene	ND			1	1	01/21/09 18:34	CLJ	4870461
Ethylbenzene	ND			1	1	01/21/09 18:34	CLJ	4870461
m,p-Xylene	ND			1	1	01/21/09 18:34	CLJ	4870461
o-Xylene	ND			1	1	01/21/09 18:34	CLJ	4870461
Xylenes,Total	ND			1	1	01/21/09 18:34	CLJ	4870461
Surr: 1,4-Difluorobenzene	99.9		%	39-163	1	01/21/09 18:34	CLJ	4870461
Surr: 4-Bromofluorobenzene	89.8		%	57-157	1	01/21/09 18:34	CLJ	4870461
TOTAL DISSOLVED SOLIDS				**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	289			10	1	01/17/09 10:45	CFS	4865111

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: MW-11 **Collected:** 01/13/2009 10:00 **SPL Sample ID:** 09010585-11

Site: Maljamar, NM.

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
CHLORIDE, TOTAL			**MCL**	**E325.2**	**Units: mg/L**		
Chloride	119		5	5	01/16/09 19:04	ESK	4863620
DIESEL RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.1	1	01/24/09 4:05	NW	4877716
Surr: n-Pentacosane	60.0	%	20-150	1	01/24/09 4:05	NW	4877716

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	01/20/2009 11:43	N_M	1.00

GASOLINE RANGE ORGANICS			**MCL**	**SW8015B**	**Units: mg/L**		
Gasoline Range Organics	ND		0.1	1	01/21/09 19:05	CLJ	4870363
Surr: 1,4-Difluorobenzene	98.1	%	60-155	1	01/21/09 19:05	CLJ	4870363
Surr: 4-Bromofluorobenzene	94.2	%	50-158	1	01/21/09 19:05	CLJ	4870363
PURGEABLE AROMATICS			**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		1	1	01/21/09 19:05	CLJ	4870462
Toluene	ND		1	1	01/21/09 19:05	CLJ	4870462
Ethylbenzene	ND		1	1	01/21/09 19:05	CLJ	4870462
m,p-Xylene	ND		1	1	01/21/09 19:05	CLJ	4870462
o-Xylene	ND		1	1	01/21/09 19:05	CLJ	4870462
Xylenes,Total	ND		1	1	01/21/09 19:05	CLJ	4870462
Surr: 1,4-Difluorobenzene	99.0	%	39-163	1	01/21/09 19:05	CLJ	4870462
Surr: 4-Bromofluorobenzene	89.6	%	57-157	1	01/21/09 19:05	CLJ	4870462
TOTAL DISSOLVED SOLIDS			**MCL**	**E160.1**	**Units: mg/L**		
Total Dissolved Solids (Residue,Filterable)	478		10	1	01/17/09 10:45	CFS	4865112

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Client Sample ID: Trip Blank **Collected:** 01/14/2009 0:00 **SPL Sample ID:** 09010585-12

Site: Maljamar, NM.

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/L		
Gasoline Range Organics	ND			0.1	1	01/21/09 17:32	CLJ	4870361
Surr: 1,4-Difluorobenzene	96.8		%	60-155	1	01/21/09 17:32	CLJ	4870361
Surr: 4-Bromofluorobenzene	93.0		%	50-158	1	01/21/09 17:32	CLJ	4870361
PURGEABLE AROMATICS				MCL	SW8021B	Units: ug/L		
Benzene	ND			1	1	01/21/09 17:32	CLJ	4870459
Toluene	ND			1	1	01/21/09 17:32	CLJ	4870459
Ethylbenzene	ND			1	1	01/21/09 17:32	CLJ	4870459
m,p-Xylene	ND			1	1	01/21/09 17:32	CLJ	4870459
o-Xylene	ND			1	1	01/21/09 17:32	CLJ	4870459
Xylenes,Total	ND			1	1	01/21/09 17:32	CLJ	4870459
Surr: 1,4-Difluorobenzene	99.5		%	39-163	1	01/21/09 17:32	CLJ	4870459
Surr: 4-Bromofluorobenzene	88.7		%	57-157	1	01/21/09 17:32	CLJ	4870459

Georgia Jones

Georgia Jones
Project Manager

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 09010585
Lab Batch ID: 87217

Method Blank

RunID: HP_V_090123D-4877703 Units: mg/L
Analysis Date: 01/23/2009 22:43 Analyst: NW
Preparation Date: 01/20/2009 11:43 Prep By: N_M Method SW3510C

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.10
Surr: n-Pentacosane	48.4	20-150

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01B	MW-1
09010585-02B	MW-2
09010585-03B	MW-3
09010585-04B	MW-4
09010585-05B	MW-5
09010585-06B	MW-6
09010585-07B	MW-7
09010585-08B	MW-8
09010585-09B	MW-9
09010585-10B	MW-10
09010585-11B	MW-11

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HP_V_090123D-4877719 Units: mg/L
Analysis Date: 01/26/2009 10:28 Analyst: NW
Preparation Date: 01/20/2009 11:43 Prep By: N_M Method SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	2.00	1.96	97.9	2.00	1.86	93.2	5.0	20	21	130
Surr: n-Pentacosane	0.0500	0.0198	39.6	0.0500	0.0181	36.2	9.0	30	20	150

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 09010585
Lab Batch ID: R263135

Method Blank

RunID: VARE_090121A-4870360 Units: mg/L
Analysis Date: 01/21/2009 14:24 Analyst: CLJ

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-10A	MW-10
09010585-11A	MW-11
09010585-12A	Trip Blank

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	97.1	60-155
Surr: 4-Bromofluorobenzene	91.9	50-158

Laboratory Control Sample (LCS)

RunID: VARE_090121A-4870358 Units: mg/L
Analysis Date: 01/21/2009 13:21 Analyst: CLJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	0.956	95.6	42	136
Surr: 1,4-Difluorobenzene	0.100	0.0997	99.7	60	155
Surr: 4-Bromofluorobenzene	0.100	0.0965	96.5	50	158

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-11
RunID: VARE_090121A-4870364 Units: mg/L
Analysis Date: 01/21/2009 20:07 Analyst: CLJ

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1	1.04	104	1	1.06	106	2.05	36	22	174
Surr: 1,4-Difluorobenzene	ND	0.1	0.101	101	0.1	0.100	100	0.695	30	60	155
Surr: 4-Bromofluorobenzene	ND	0.1	0.0993	99.3	0.1	0.0967	96.7	2.65	30	50	158

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 09010585
Lab Batch ID: R263141

Method Blank

RunID: VARE_090121B-4870458 Units: ug/L
Analysis Date: 01/21/2009 14:24 Analyst: CLJ

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	98.9	39-163
Surr: 4-Bromofluorobenzene	89.8	57-157

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-10A	MW-10
09010585-11A	MW-11
09010585-12A	Trip Blank

Laboratory Control Sample (LCS)

RunID: VARE_090121B-4870456 Units: ug/L
Analysis Date: 01/21/2009 12:50 Analyst: CLJ

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.3	96.7	70	130
Ethylbenzene	20.0	19.0	95.0	66	132
Toluene	20.0	18.6	93.0	69	133
m,p-Xylene	40.0	37.6	94.0	67	136
o-Xylene	20.0	18.8	94.2	67	133
Xylenes,Total	60.0	56.4	94.1	67	136
Surr: 1,4-Difluorobenzene	100	99.2	99.2	39	163
Surr: 4-Bromofluorobenzene	100	92	92.0	57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-10
RunID: VARE_090121B-4870465 Units: ug/L
Analysis Date: 01/21/2009 23:07 Analyst: CLJ

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics **WorkOrder:** 09010585
Method: SW8021B **Lab Batch ID:** R263141

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	22.8	114	20	22.4	112	2.01	26	40	165
Ethylbenzene	ND	20	21.5	108	20	21.1	106	1.90	34	51	156
Toluene	ND	20	21.9	109	20	21.4	107	2.20	25	58	153
m,p-Xylene	ND	40	42.2	106	40	41.4	104	1.87	27	51	155
o-Xylene	ND	20	22.4	112	20	22.0	110	1.39	25	58	151
Xylenes,Total	ND	60	64.6	108	60	63.4	106	1.71	27	51	155
Surr: 1,4-Difluorobenzene	ND	100	99	99.0	100	99.8	99.8	0.730	30	39	163
Surr: 4-Bromofluorobenzene	ND	100	92.2	92.2	100	92.0	92.0	0.249	30	57	157

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

1/28/2009 12:44:15 PM

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics **WorkOrder:** 09010585
Method: SW8021B **Lab Batch ID:** R263285

Method Blank

RunID: HP_N_090122A-4872723 Units: ug/L
Analysis Date: 01/22/2009 13:26 Analyst: WLV
Preparation Date: 01/22/2009 13:26 Prep By: Method SW5030B

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
Toluene	ND	1.0
m,p-Xylene	ND	1.0
o-Xylene	ND	1.0
Xylenes,Total	ND	1.0
Surr: 1,4-Difluorobenzene	96.8	39-163
Surr: 4-Bromofluorobenzene	99.9	57-157

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01A	MW-1
09010585-02A	MW-2
09010585-03A	MW-3
09010585-04A	MW-4
09010585-05A	MW-5
09010585-06A	MW-6
09010585-07A	MW-7
09010585-08A	MW-8
09010585-09A	MW-9

Laboratory Control Sample (LCS)

RunID: HP_N_090122A-4872722 Units: ug/L
Analysis Date: 01/22/2009 11:52 Analyst: WLV
Preparation Date: 01/22/2009 11:52 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.0	95.2	70	130
Ethylbenzene	20.0	18.9	94.5	66	132
Toluene	20.0	19.7	98.7	69	133
m,p-Xylene	40.0	38.3	95.9	67	136
o-Xylene	20.0	18.8	93.9	67	133
Xylenes,Total	60.0	57.1	95.2	67	136
Surr: 1,4-Difluorobenzene	100	96.8	96.8	39	163
Surr: 4-Bromofluorobenzene	100	101	101	57	157

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010588-08
RunID: HP_N_090122A-4872726 Units: ug/L
Analysis Date: 01/22/2009 15:01 Analyst: WLV

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Purgeable Aromatics
Method: SW8021B
WorkOrder: 09010585
Lab Batch ID: R263285

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20	20.0	100	20	20.1	100	0.373	26	40	165
Ethylbenzene	ND	20	19.4	97.2	20	19.6	98.0	0.774	34	51	156
Toluene	ND	20	20.2	101	20	20.0	100	0.837	25	58	153
m,p-Xylene	ND	40	39.3	98.3	40	39.6	98.9	0.655	27	51	155
o-Xylene	ND	20	19.3	96.5	20	19.5	97.5	1.03	25	58	151
Xylenes,Total	ND	60	58.6	97.7	60	59.1	98.4	0.777	27	51	155
Surr: 1,4-Difluorobenzene	ND	100	95.3	95.3	100	95.5	95.5	0.272	30	39	163
Surr: 4-Bromofluorobenzene	ND	100	100	100	100	101	101	0.996	30	57	157

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Gasoline Range Organics
Method: SW8015B
WorkOrder: 09010585
Lab Batch ID: R263292

Method Blank

RunID: HP_N_090122B-4872817 Units: mg/L
Analysis Date: 01/22/2009 13:26 Analyst: WLV
Preparation Date: 01/22/2009 13:26 Prep By: Method SW5030B

Analyte	Result	Rep Limit
Gasoline Range Organics	ND	0.10
Surr: 1,4-Difluorobenzene	101.0	60-155
Surr: 4-Bromofluorobenzene	107.5	50-158

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01A	MW-1
09010585-02A	MW-2
09010585-03A	MW-3
09010585-04A	MW-4
09010585-05A	MW-5
09010585-06A	MW-6
09010585-07A	MW-7
09010585-08A	MW-8
09010585-09A	MW-9

Laboratory Control Sample (LCS)

RunID: HP_N_090122B-4872816 Units: mg/L
Analysis Date: 01/22/2009 12:23 Analyst: WLV
Preparation Date: 01/22/2009 12:23 Prep By: Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	0.744	74.4	42	136
Surr: 1,4-Difluorobenzene	0.100	0.122	122	60	155
Surr: 4-Bromofluorobenzene	0.100	0.0998	99.8	50	158

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010588-06
RunID: HP_N_090122B-4872820 Units: mg/L
Analysis Date: 01/22/2009 16:04 Analyst: WLV

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	1	0.771	77.1	1	0.756	75.6	2.03	36	22	174
Surr: 1,4-Difluorobenzene	ND	0.1	0.12	120	0.1	0.120	120	0.0836	30	60	155
Surr: 4-Bromofluorobenzene	ND	0.1	0.0998	99.8	0.1	0.102	102	2.67	30	50	158

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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HOUSTON, TX 77054
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Chloride, Total **WorkOrder:** 09010585
Method: E325.2 **Lab Batch ID:** R262622

Method Blank

RunID: KONELAB_090116C-4863602 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Result	Rep Limit
Chloride	ND	1.0

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01C	MW-1
09010585-02C	MW-2
09010585-03C	MW-3
09010585-04C	MW-4
09010585-05C	MW-5
09010585-06C	MW-6
09010585-07C	MW-7
09010585-08C	MW-8
09010585-09C	MW-9
09010585-10C	MW-10

Laboratory Control Sample (LCS)

RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	50.00	52.31	104.6	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-01
RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 18:38 Analyst: ESK

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	445.9	50	472.6	N/C	50	473.1	N/C	N/C	20	76	131

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Chloride, Total
Method: E325.2
WorkOrder: 09010585
Lab Batch ID: R262622A

Method Blank

RunID: KONELAB_090116C-4863602 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-11C	MW-11

Analyte	Result	Rep Limit
Chloride	ND	1.0

Laboratory Control Sample (LCS)

RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 16:11 Analyst: ESK

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Chloride	50.00	52.31	104.6	80	120

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09010585-11
RunID: KONELAB_090116C-48636 Units: mg/L
Analysis Date: 01/16/2009 19:04 Analyst: ESK

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	119.5	50	158.0	77.00	50	160.0	81.01	1.260	20	76	131

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Total Dissolved Solids
Method: E160.1
WorkOrder: 09010585
Lab Batch ID: R262727

Method Blank

RunID: WET_090117L-4865096 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-01C	MW-1
09010585-02C	MW-2
09010585-03C	MW-3
09010585-04C	MW-4
09010585-05C	MW-5
09010585-06C	MW-6
09010585-07C	MW-7
09010585-08C	MW-8
09010585-09C	MW-9
09010585-10C	MW-10

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_090117L-4865098 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200.0	201.0	100.5	200.0	200.0	100.0	0.5	10	95	107

Sample Duplicate

Original Sample: 09010585-01
RunID: WET_090117L-4865100 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	1360	1353	0.148	10

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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HOUSTON, TX 77054
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Quality Control Report

Delta Environmental Consultants, Inc.

Maljamar Release Site

Analysis: Total Dissolved Solids
Method: E160.1
WorkOrder: 09010585
Lab Batch ID: R262727A

Method Blank

RunID: WET_090117L-4865096 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09010585-11C	MW-11

Analyte	Result	Rep Limit
Total Dissolved Solids (Residue,Filterable)	ND	10

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_090117L-4865098 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Total Dissolved Solids (Residue,Filterabl	200.0	201.0	100.5	200.0	200.0	100.0	0.5	10	95	107

Sample Duplicate

Original Sample: 09010585-11
RunID: WET_090117L-4865112 Units: mg/L
Analysis Date: 01/17/2009 10:45 Analyst: CFS

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Total Dissolved Solids (Residue,Filterabl	478	480	0.418	10

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
J - Estimated value between MDL and PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

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Sample Receipt Checklist
And
Chain of Custody

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

Sample Receipt Checklist

Workorder:	09010585	Received By:	RE
Date and Time Received:	1/15/2009 10:00:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	3.0°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
2.	Custody seals intact on shippping container/cooler?	Yes ☑	No ☐	Not Present ☐		
3.	Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑		
4.	Chain of custody present?	Yes ☑	No ☐			
5.	Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
6.	Chain of custody agrees with sample labels?	Yes ☑	No ☐			
7.	Samples in proper container/bottle?	Yes ☑	No ☐			
8.	Sample containers intact?	Yes ☑	No ☐			
9.	Sufficient sample volume for indicated test?	Yes ☑	No ☐			
10.	All samples received within holding time?	Yes ☑	No ☐			
11.	Container/Temp Blank temperature in compliance?	Yes ☑	No ☐			
12.	Water - VOA vials have zero headspace?	Yes ☑	No ☐	VOA Vials Not Present ☐		
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes ☑	No ☐	Not Applicable ☐		

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

Released to Imaging: 4/26/2023 2:01:09 PM
Received by OCD: 3/25/2021 2:14:32 PM

Delta Consultants	Sampling Event Description	SPL Workorder Number: 09010585	Page 1 of 1
Contact: Michael Henn	Quarterly ☐		
Address: 704 Central Parkway East, Suite 1220	WC-Waste Char. ☐		
Phone: 972-665-0528 Fax: 972-665-989	☐		
City: Plano State: TX 75074	Other (describe below) ☐		
PO No.:			
Project Name: Maljamar Release Site	QA/QC Level		
Project Location: Maljamar, NM	TRRP ☐ Lvl 3 ☐		
Site Address:	Std ☒ Other ☐		
Sampled By:	Matrix		

SAMPLE ID	DATE	TIME	Water	Soil	Sludge	Wipe	Number Containers	Container Type	Preservative	REQUESTED ANALYSIS: BTEX-8021B	GRO-8015	DRO-8015	TDS/CLD
MW-1	1/13/09	1724	W				6	40 ml/1L	HCL	X	X	X	X
MW-2	↓	1628	W				3	40 ml	HCL	↓	↓	↓	↓
MW-3		1147	W				3	40 ml	HCL				
MW-4		1340	W				3	40 ml	HCL				
MW-5		1510	W				3	40 ml	HCL				
MW-6	1/14/09	1425	W				3	40 ml	HCL				
MW-7		1157	W				3	40 ml	HCL				
MW-8		1322	W				3	40 ml	HCL				
MW-9		938	W				3	40 ml	HCL				
MW-10	↓	1050	W				3	40 ml	HCL				
MW-11	1/13/09	1000	W				3	40 ml	HCL	↓	↓	↓	↓
~~MW-12~~			~~W~~				~~3~~	~~40 ml~~	~~HCL~~				
Trip Blank	1/14/09	—	W				2	4mL	HCL	X			

TAT	Special Detection Limits (Specify):	Consultant Remarks:
24hr ☐ 72hr ☐		3.0c
48hr ☐ 10 day ☐	Special Reporting Requirements (Specify):	Laboratory Remarks:
Other ☐		PM review:

Relinquished by Sampler:	Date	Time	Received by:
(Blake Ford)	01/14/09	1600	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by SPL, Inc.:
	1/15/09	1000	

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Received by OCD: 3/25/2021 2:14:32 PM

June 23, 2009

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 S. St. Francis
Santa Fe, New Mexico 87505

RE: **Request for Closure**
Maljamar 6" Pipeline Release Site – South
NW/4 Sec 29, T17S, R33E
Maljamar, Lea County, New Mexico
NMOCD ID. 1RP-956
Delta Project No. CPNM2

DELTA

Dear Mr. Von Gonten:

On behalf of Centurion Pipeline L.P. (Centurion), Delta Consultants (Delta) has prepared this request for closure for the Maljamar Release - South Site, which is located on private property owned by Mr. Ross Caviness (Northwest Quarter of Section 29, Township 17 South, Range 33 East), approximately five miles southeast of Maljamar, New Mexico (refer to Figure 1 in Attachment 1).

Releases along a 6-inch crude oil gathering line, currently operated by Centurion, were discovered during aerial reconnaissance in December 2005. The releases are believed to have been the result of internal corrosion. The project sites (identified as the north and south sites) are located approximately 1,000 feet from each other in an area consisting of undeveloped native open range and oil field sites (e.g., well pads, pump jacks, storage areas, etc.).

The former operator, BP Pipelines N.A., Inc. (BP), oversaw repairs of the line and retained Conestoga-Rovers and Associates (CRA) to perform initial response activities. These activities included the excavation of impacted soils to remove source area material and investigate the extent of the impacts (refer to Figure 2 in Attachment 1 for excavation boundaries). During the limited exploratory excavation that was conducted at the south site in March 2006, no confirmation soil samples were collected; however, subsequent to removal of visually impacted soils, field samples exhibited elevated photoionization detection (PID) readings.

After receiving the New Mexico Oil Conservation Division's (NMOCD's) letter dated February 3, 2006, BP retained the services of URS to conduct further response activities at the sites to comply with the stated directive, "BP shall vertically and horizontally delineate the vadose zone at each location according to NMOCD guidelines...". URS's activities included an exploratory boring program, a geophysical study of the area surrounding the sites, installation and monitoring of groundwater monitor wells (five (5) at each site), and backfilling the excavations at each site.

As identified in previous submittals to the NMOCD by URS (e.g., *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007), subsequent to the remedial/assessment

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activities at the south site, only soil samples collected from one delineation/confirmation soil boring/monitor well exhibited concentrations of constituents of concern (COCs) above the NMOCD Recommended Remediation Action Levels (RRALs). Soil samples collected from boring B-18/MW-7, between the approximate depths of 12 feet to 68 feet below grade surface (bgs), exhibited elevated COC concentrations. Soil boring B-18 was installed to a depth of at least 120 feet bgs, approximately 20 feet downgradient of the approximate release point, along the former pipeline. The highest COC concentrations in soil (benzene – 110 milligrams per kilogram (mg/Kg); total benzene, toluene, ethylbenzene and total xylenes (total BTEX) – 1,163 mg/Kg; total petroleum hydrocarbons (TPH) – 20,900 mg/Kg (diesel range organics (DRO) - 13,000 mg/Kg and gasoline range organics (GRO) – 7,900 mg/Kg)) were identified in the sample collected at 47-47.5 feet bgs. No COC concentrations above NMOCD RRALs were identified in the samples collected below 68 feet bgs. Groundwater at the south site is located at least 108 feet bgs.

Although concentrations of COCs were identified in soil samples collected from borings installed in up- and crossgradient locations from the approximate release point (e.g., B-14/MW-6, B-15/MW-8 and B-17/MW-10), no concentrations were above NMOCD RRALs.

Regarding groundwater, no COC concentrations above the New Mexico Human Health Maximum Concentration Levels (MCLs – 20.6.2 NMAC) have been identified in the groundwater samples collected from the five (5) on-site monitor wells subsequent to installation in April 2007.

As reported in Delta's Groundwater Monitoring Report dated June 15, 2009, in December 2008, samples were collected from MW-7 and MW-9 at the south site and analyzed for BTEX by Method SW8021B, TPH by Texas Method TX1005, total dissolved solids (TDS) by Method E160.1 and total chloride by Method E325.2. In January 2009, monitor wells MW-6, MW-7, MW-8, MW-9 and MW-10 were sampled and analyzed for BTEX by Method SW8021B, TPH-GRO and TPH-DRO by Method SW8015B and total chloride by Method E325.2.

Based on the laboratory analytical results from both of the groundwater sampling events, no petroleum hydrocarbon constituent concentrations (BTEX and TPH) above the New Mexico Human Health MCLs were identified. In April 2007, manganese was identified in the groundwater samples collected from MW-6 and MW-7 at concentrations that are slightly above the New Mexico Human Health MCL of 0.2 milligram per liter (mg/L), at 0.22 mg/L and 0.24 mg/L, respectively; however, manganese is considered naturally occurring and is not typically indicative of a petroleum hydrocarbon release. None of the groundwater samples collected from the on-site monitor wells exhibited concentrations of total dissolved solids (TDS) and total chloride concentrations above the New Mexico Human Health MCLs. This statement needs to be clarified in that in December 2008, a TDS concentration of 60,300 mg/L was identified in the sample collected from MW-9. However, this concentration is anomalous, and likely the result of laboratory error, as the confirmation sample collected in January 2009 indicated a concentration of 281 mg/L, which is consistent with the concentrations identified in the samples collected from the other on-site wells, and the sample collected from MW-9 by URS in April 2007 (255 mg/L).

Delta completed the Screening-Level Ecological Risk Assessment, Scoping Assessment and Site Assessment Checklist (refer to Attachment 2). "This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways." Based on the results of the checklist, and using the associated Ecological Exclusion Criteria Decision Tree, no further ecological assessment is required.

Although designed to drive remediation associated with underground storage tanks (USTs), Delta completed also the New Mexico Environment Department (NMED) Risk-Based Decision Making Computational Software package for the site (refer to Attachment 3) to further evaluate potential risk of exposure via ingestion, inhalation (vapor emissions and particulates) and dermal contact. This tool is used to evaluate risk-based screening levels for various demographics (e.g., resident child/adult, commercial adult and construction worker). The results indicate that surface soil is the only complete exposure pathway, given the site specifics. Given that the site is located within an oil and gas production field, and as the residual soil impact is localized and at a depth of at least 12 feet bgs, it is likely that only construction workers would be potentially exposed to COCs. The results of

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the screening indicate that the risk-based screening level for benzene in soil within a construction zone is 167 mg/Kg. The maximum benzene concentration identified at this site was 110 mg/Kg at a depth of 47-47.5 feet bgs. Hence, there does not appear to be a risk to construction workers via the residual de Minimis impact.

Based on the above-referenced findings, the following conclusions can be drawn:

- The source has effectively been removed from the site via excavation;
- The laboratory analytical data shows that impact to soils at the south site have been delineated vertically and horizontally, and the identified residual contamination in the soil in the vicinity of soil boring B-18/MW-7 represents a de Minimis impact;
- No soil impacts, above NMOCD RRALs, exist outside of the immediate area of the approximate release point;
- The soils with COC concentrations above NMOCD RRALs are localized and located at least 12 feet bgs, and 40 feet above the groundwater-bearing zone; and,
- Laboratory analytical data indicates that no impacts above applicable New Mexico Human Health MCLs exist in the groundwater underlying the site.

Based on this information, the site appears to be in general compliance with 19.15.30 NMAC and 20.6.2 NMAC and does not warrant further study.

It is requested that a letter of 'No Further Action' at the south site be added to the project file associated with NMOCD ID. 1RP-956, and authorization to properly plug and abandon the five (5) on-site monitor wells be provided to Centurion.

The recommendations contained in this correspondence represents Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This document is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This document is intended only for the use of Delta's client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this document.

If you have any questions or comments, or if additional information is required, please contact Mr. Bill Von Drehle at 713-215-7379 or me at 972-665-0528.

Sincerely,

DELTA CONSULTANTS

Michael Henn
Senior Project Manager

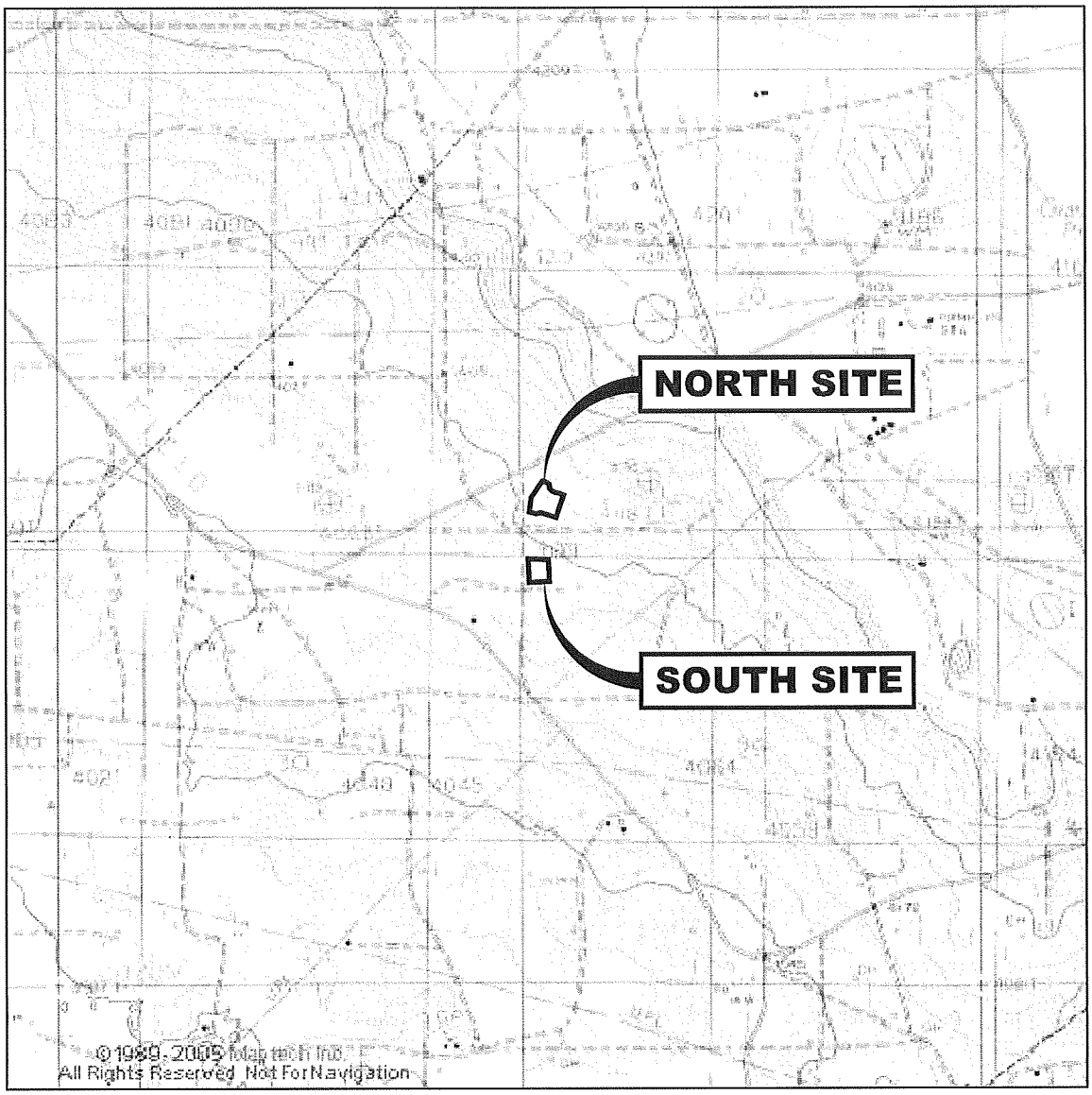
Cc via email: Bill Von Drehle - Centurion Pipeline L.P.
Darrel Lester - Centurion Pipeline L.P.
Rebecca Moore - Centurion Pipeline L.P.

CC: Larry Johnson - New Mexico Oil Conservation Division – Hobbs, New Mexico Office

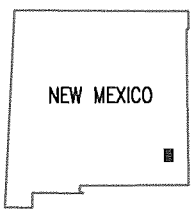
Attachment 1

NORTH SITE COORDINATES
LATITUDE: N 32° 48' 48"
LONGITUDE: W 103° 41' 33"
UTM COORDINATES: ZONE 13 622402 E 3631350 N
TOWNSHIP 17S
RANGE 33E
SECTION 20

SOUTH SITE COORDINATES
LATITUDE: N 32° 48' 40"
LONGITUDE: W 103° 41' 34"
UTM COORDINATES: ZONE 13 622379 E 3631104 N
TOWNSHIP 17S
RANGE 33E
SECTION 29



DOG LAKE QUADRANGLE
NEW MEXICO
7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE LOCATION

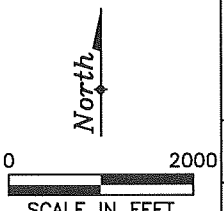
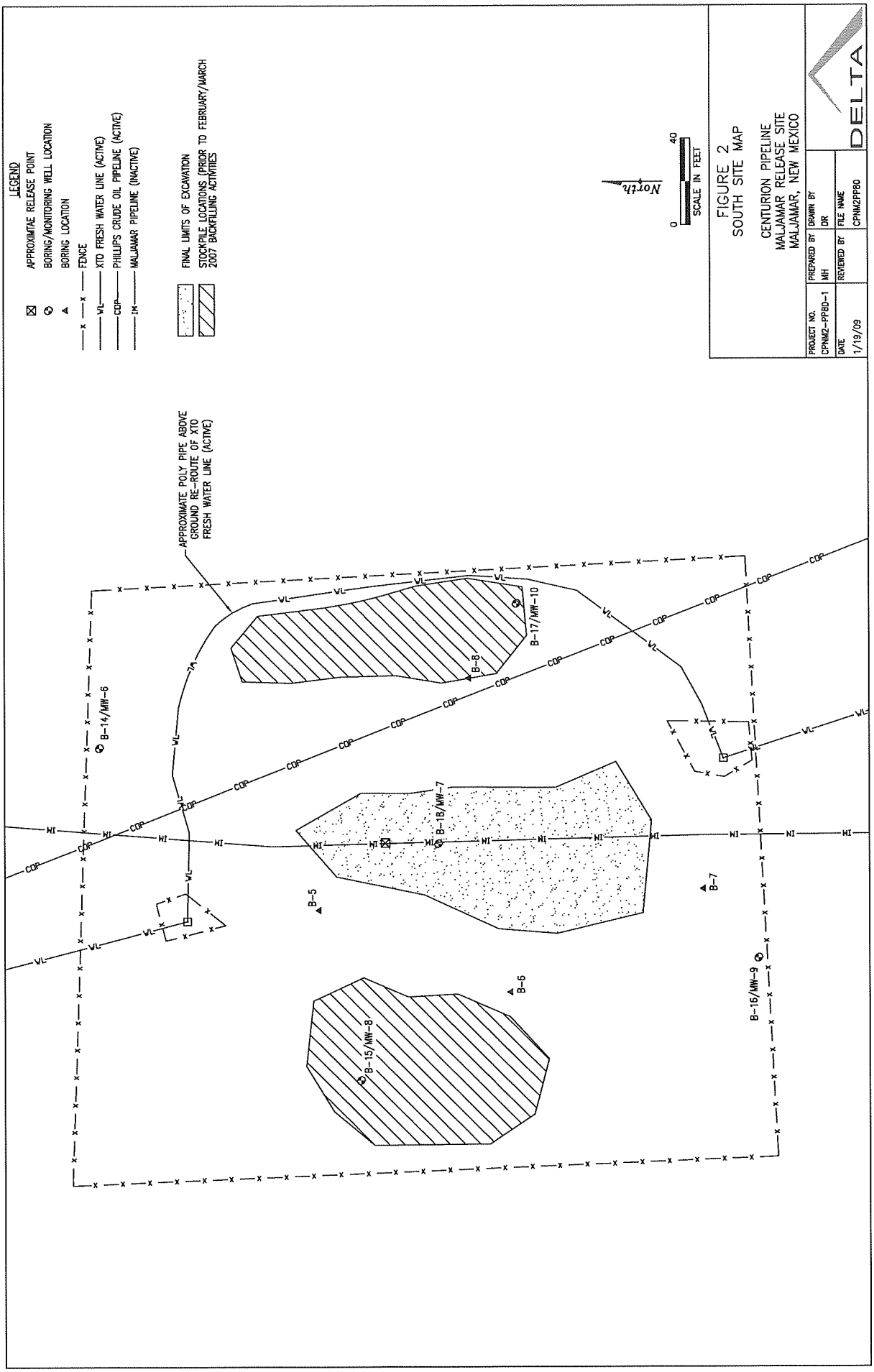


FIGURE 1
SITE LOCATION MAP

CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO

PROJECT NO.	PREPARED BY	DRAWN BY
CPNM2-PP80-1	MH	DR
DATE	REVIEWED BY	FILE NAME
2/20/09		CPNM2PP80

DELTA


LEGEND
APPROXIMATE RELEASE POINT
BORING/MONITORING WELL LOCATION
BORING LOCATION
FENCE
XTO FRESH WATER LINE (ACTIVE)
PHILLIPS CRUDE OIL PIPELINE (ACTIVE)
MALJAMAR PIPELINE (INACTIVE)
FINAL LIMITS OF EXCAVATION
STOCKPILE LOCATIONS (PRIOR TO FEBRUARY/MARCH 2007 BACKFILLING ACTIVITIES
North
0
40
SCALE IN FEET
FIGURE 2
SOUTH SITE MAP
CENTURION PIPELINE
MALJAMAR RELEASE SITE
MALJAMAR, NEW MEXICO
PROJECT NO. CPNM2-PPBD-1
PREPARED BY MH
DRAWN BY DR
DATE 1/19/09
REVIEWED BY
FILE NAME CPNM2PPBD
DELTA
APPROXIMATE POLY PIPE ABOVE GROUND RE-ROUTE OF XTO FRESH WATER LINE (ACTIVE)
B-14/MW-6
B-17/MW-10
B-8
B-18/MW-7
B-5
B-7
B-6
B-15/MW-8
B-16/MW-9

Attachment 2

ATTACHMENT A

SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT SCOPING ASSESSMENT SITE ASSESSMENT CHECKLIST

INTRODUCTION

This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways. The completed checklist can then be used to construct the preliminary conceptual site exposure model (PCSEM) for the site. In addition, the checklist and PCSEM will serve as the basis for the scoping assessment report. Section III of this document provides further information on using the completed checklist to develop the PCSEM.

In general, the checklist is designed for applicability to all sites, however, there may be unusual circumstances which require professional judgment in order to determine the need for further ecological evaluation (*e.g.,* cave-dwelling receptors). In addition, some of the questions in the checklist may not be relevant to all sites. Some facilities may have large amounts of data available regarding contaminant concentrations and hydrogeologic conditions at the site, while other may have only limited data. In either case, the questions on the checklist should be addressed as completely as possible with the information available.

Habitats and receptors, which may be present at the site, can be identified by direct or indirect[1] observations and by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing land use and land cover maps (LULC), which are available via the Internet at http://www.nationalatlas.gov/mapit.html. With regard to receptors, it should be noted that receptors are often present at a site even when they are not observed. Therefore, for the purposes of this checklist, it should be assumed that receptors are present if viable habitat is present. The presence of receptors should be confirmed by contacting one or several of the organizations listed below.

Sources of general information available for the identification of ecological receptors and habitats include:

- U.S. Fish and Wildlife Service (http://www.fws.gov)
- Biota Information System of New Mexico (BISON-M) maintained by the New Mexico Department of Game and Fish (NMGF) (http://151.199.74.229/states/nm.htm)
- U.S. Forest Service (USFS) (http://www.fs.fed.us/)
- New Mexico Forestry Division (NMFD) of the Energy, Minerals and Natural Resources Department (http://www.emnrd.state.nm.us/forestry/index.htm)

1 Examples of indirect observations that indicate the presence of receptors include: tracks, feathers, burrows, scat

- U.S. Bureau of Land Management (USBLM) (http://www.blm.gov/nhp/index.htm) or (http://www.nm.blm.gov/www/new_home_2.html)
- United States Geological Service (USGS) (http://www.usgs.gov)
- National Wetland Inventory Maps (http://wetlands.fws.gov)
- National Audubon Society (http://www.audobon.com)
- National Biological Information Infrastructure (http://biology.usgs.gov)
- Sierra Club (http://www.sierraclub.org)
- National Geographic Society (http://www.nationalgeographic.com)
- New Mexico Natural Heritage Program (http://nmnhp.unm.edu/)
- State and National Parks System
- Local universities
- Tribal organizations

INSTRUCTIONS FOR COMPLETING THE CHECKLIST

The checklist consists of four sections: Site Location, Site Characterization, Habitat Evaluation, and Exposure Pathway Evaluation. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site. Completion of the checklist should provide sufficient information for the preparation of a PCSEM and scoping report and allow for the identification of any data gaps.

Section I - Site Location, provides general site information, which identifies the facility being evaluated, and gives specific location information. Site maps and diagrams, which should be attached to the completed checklist, are an important part of this section. The following elements should be clearly illustrated: 1) the location and boundaries of the site relative to the surrounding area, 2) any buildings, structures or important features of the facility or site, and 3) all ecological areas or habitats identified during completion of the checklist. It is possible that several maps will be needed to clearly and adequately illustrate the required elements. Although topographical information should be illustrated on at least one map, it is not required for every map. Simplified diagrams (preferably to scale) of the site and surrounding areas will usually suffice.

Section II - Site Characterization, is intended to provide additional temporal and contextual information about the site, which may have an impact on determining whether a certain area should be characterized as ecologically viable habitat or contains receptors. Answers to the questions in Section II will help the reviewer develop a broader and more complete evaluation of the ecological aspects of a site.

Section III - Habitat Evaluation, provides information regarding the physical and biological characteristics of the different habitat types present at or in the locality of the site. Aquatic features such as lakes, ponds, streams, arroyos and ephemeral waters can be identified by reviewing aerial photographs, LULC and topographic maps and during site reconnaissance visits. In New Mexico, there are several well-defined terrestrial communities, which occur naturally. Typical communities include wetlands, forest (e.g., mixed conifer,

ponderosa pine and pinyon juniper), scrub/shrub, grassland, and desert. Specific types of vegetation characterize each of these communities and can be used to identify them. Field guides are often useful for identifying vegetation types. A number of sites may be in areas that have been disturbed by human activities and may no longer match any of the naturally occurring communities typical of the southwest. Particularly at heavily used areas at facilities, the two most common of these areas are usually described as "weed fields" and "lawn grass". Vegetation at "weed fields" should be examined to determine whether the weeds consist primarily of species native to the southwest or introduced species such as Kochia. Fields of native weeds and lawn grass are best evaluated using the short grass prairie habitat guides.

The applicable portions of Section III of the checklist should be completed for each individual habitat identified. For example, the questions in Section III.A of the checklist should be answered for each wetland area identified at or in the locality of the site and the individual areas must be identified on a map or maps.

Section IV- Exposure Pathway Evaluation, is used to determine if contaminants at the site have the potential to impact habitat identified in Section III. An exposure pathway is the course a chemical or physical agent takes from a source to an exposed organism. Each exposure pathway includes a source (or release from a source), an environmental transport mechanism, an exposure point, and an exposure route. A complete exposure pathway is one in which each of these components, as well as a receptor to be exposed, is present. Essentially, this section addresses the fate and transport of contaminants that are known or suspected to have been released at the site. In most cases, without a complete exposure pathway between contaminants and receptors, additional ecological evaluation is not warranted.

Potential transport pathways addressed in this checklist include migration of contaminants via air dispersion, leaching into groundwater, soil erosion/runoff, groundwater discharge to surface water, and irradiation. Due to New Mexico's semi-arid climate, vegetation is generally sparse. The sparse vegetation, combined with the intense nature of summer storms in New Mexico, results in soil erosion that occurs sporadically over a very brief time frame. Soil erosion may be of particular concern for sites located in steeply sloped areas. Several questions within Section IV of this checklist have been developed to aid in the identification of those sites where soil erosion/runoff would be an important transport mechanism.

USING THE CHECKLIST TO DEVELOP THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL

The completed Site Assessment Checklist can be used to construct the PCSEM. An example PCSEM diagram is presented in Figure 1. The CSM illustrates actual and potential contaminant migration and exposure pathways to associated receptors. The components of a complete exposure pathway are simplified and grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms may expand into primary, secondary, and tertiary levels. For example, Figure 1 illustrates releases from inactive

lagoons (primary sources) through spills (primary release mechanism), which migrate to surface and subsurface soils (secondary sources), which are then leached (secondary release mechanism) to groundwater (tertiary source). Similarly, exposures of various trophic levels to the contaminant(s) and consequent exposures via the food chain may lead to multiple groups of receptors. For example, Figure 1 illustrates groups of both aquatic and terrestrial receptors which may be exposed and subsequently serve as tertiary release mechanisms to receptors which prey on them.

Although completing the checklist will not provide the user with a readymade PCSEM, a majority of the components of the PCSEM can be found in the answers to the checklist. It is then up to the user to put the pieces together into a comprehensive whole. The answers from Section II of the checklist, Site Characterization, can be used to identify sources of releases. The answers to Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. Appendix B of the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* also contains sample food webs which may be used to develop the PCSEM.

Once all of the components have been identified, one can begin tracing the steps between the primary releases and the potential receptors. For each potential receptor, the user should consider all possible exposure points (e.g., prey items, direct contact with contaminated soil or water, etc.) then begin eliminating pathways, which are not expected to result in exposure to the contaminant at the site. Gradually, the links between the releases and receptors can be filled in, resulting in potential complete exposure pathways.

For further guidance on constructing a PCSEM, consult the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* (2000), and EPA's Office of Solid Waste and Emergency *Response's Soil Screening Guidance: User's Guide* (1996).

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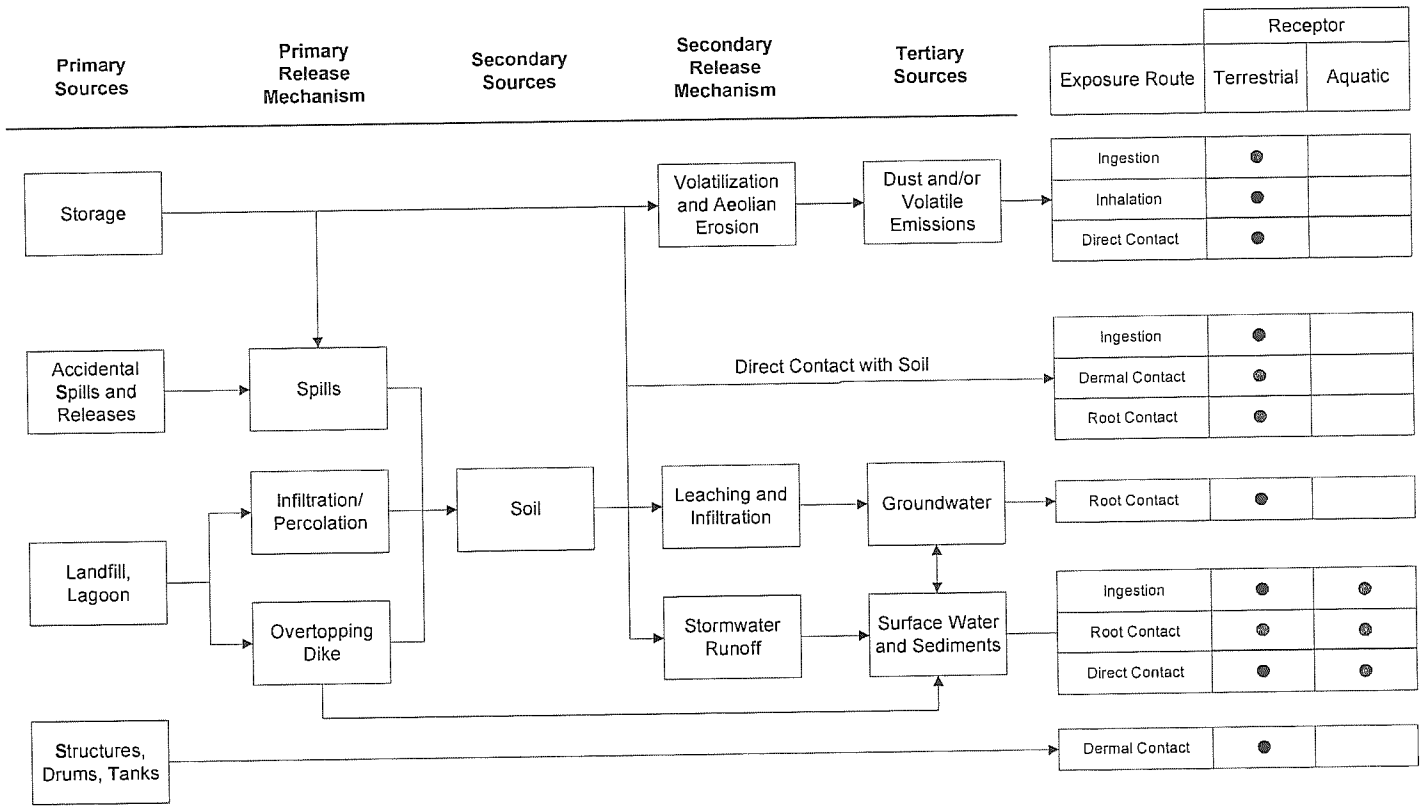

Figure 1. Example Preliminary Conceptual Site Exposure Model Diagram

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NEW MEXICO ENVIRONMENT DEPARTMENT
SITE ASSESSMENT CHECKLIST

I. SITE LOCATION

1. Site Name: Maljamar South
US EPA I.D. Number:
Location: 5 miles southeast of Maljamar
County: Lea
City: Maljamar State: NM

2. Latitude: 32.811387 Longitude: -103.693093

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known release areas, sampling locations, and any other important features, if available.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft) ~1.5 ac.
2. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other[c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, etc.):

[b]For agricultural areas, please list the crops and/or livestock which are present:

[c]For areas designated as "other", please describe the usage of the area:
Undeveloped land, generally utilized for oil/gas production; with numerous pipeline right-of-ways (ROWs) in site area

3. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other [c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, golf course, etc.):

_____

[b]For agricultural areas, please list the crops and/or livestock which are present:

_____

[c]For areas designated as "other", please describe the usage of the area:

See No. 2

_____

_____

4. Describe reasonable and likely future land and/or water use(s) at the site.

It is likely that land use will not change in this area. No current or future use of water is known.

_____

_____

_____

_____

_____

_____

5. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).

No previous land use other than that described above is known. No previous releases are known.

_____

6. If any movement of soil has taken place at the site, describe the degree of the disturbance. Indicate the likely source of any disturbances (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) and estimate when these events occurred.

_____

Limited excavation (~1,500 cy (disposed off-site)) occurred at the site, to remediate visibly contaminated soils.

Deleted: _____

Deleted: _____

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7. Describe the current uses of the site. Include information on recent (previous 5 years) disturbances or chemical releases that have occurred. For each chemical release, provide information on the form of the chemical released and the causes or mechanism of the release.

Pipeline ROW. Refer to Section 1.1 of URS's Excavation Backfilling and Source Area Characterization Technical Memorandum, dated June 28, 2007.

8. Identify the location or suspected location of chemical releases at the site. Provide an estimate of the distance between these locations and the areas identified in Section III.

Release, due to the result of internal corrosion, occurred along the 6-inch crude oil gathering line approximately 20 feet north of B-18/MW-7. No sensitive receptors known to exist in vicinity of release site.

9. Identify the suspected contaminants of concern (COCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc.).

Petroleum Hydrocarbons (BTEX, TPH)

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, for maximum contaminant levels.

10. Identify the media (e.g., soil (surface or subsurface), surface water, air, groundwater) which are known or suspected to contain COCs.

Subsurface

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].

at least 108 feet bgs

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)

south

Deleted:

Deleted:

Deleted:

III. HABITAT EVALUATION

III.A Wetland Habitats

Are any wetland[2] areas such as marshes or swamps on or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location), and clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination that wetland areas are or are not present.

_____

_____

_____

_____

If no wetland areas are present, proceed to Section III.B.

2Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

Wetland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the approximate area of the wetland (acres or ft^2)_____

2. Identify the type(s) of vegetation present in the wetland.

   - ❑ Submergent (i.e., underwater) vegetation
   - ❑ Emergent (i.e., rooted in the water, but rising above it) vegetation
   - ❑ Floating vegetation
   - ❑ Scrub/shrub
   - ❑ Wooded
   - ❑ Other (Please describe):_____

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3. Estimate the vegetation density of the wetland area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

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4. Is standing water present? ☐ Yes ☐ No

   If yes, is the water primarily: ☐ Fresh or ☐ Brackish
   Indicate the approximate area of the standing water (ft^2): _____
   Indicate the approximate depth of the standing water, if known (ft. or in.)_____

5. If known, indicate the source of the water in the wetland.

   - ❑ Stream/River/Creek/Lake/Pond
   - ❑ Flooding
   - ❑ Groundwater
   - ❑ Surface runoff

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6. Is there a discharge from the facility to the wetland? ☐ Yes ☐ No

   If yes, please describe:_____
   _____
   _____
   _____
   _____

Wetland Area Questions (Continued)

7. Is there a discharge from the wetland? ☐ Yes ☐ No
   If yes, indicate the type of aquatic feature the wetland discharges into:

   - ☐ Surface stream/River (Name:_____)
   - ☐ Lake/Pond (Name:_____)
   - ☐ Groundwater
   - ☐ Not sure

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8. Does the area show evidence of flooding? ☐ Yes ☐ No
   If yes, indicate which of the following are present (mark all that apply):

   - ☐ Standing water
   - ☐ Water-saturated soils
   - ☐ Water marks
   - ☐ Buttressing
   - ☐ Debris lines
   - ☐ Mud cracks
   - ☐ Other (Please describe):_____

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9. Animals observed in the wetland area or suspected to be present based on indirect evidence or file material:

   - ☐ Birds
   - ☐ Fish
   - ☐ Mammals
   - ☐ Reptiles (e.g., snakes, turtles)
   - ☐ Amphibians (e.g., frogs, salamanders)
   - ☐ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

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Specify species, if known:

_____
_____
_____
_____

III.B Aquatic Habitats
III.B.1 Non-Flowing Aquatic Features

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.B.2.

Non-Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of aquatic feature present:

   - ☐ Natural (e.g., pond or lake)
   - ☐ Man-made (e.g., impoundment, lagoon, canal, etc.)

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2. Estimate the approximate size of the water body (in acres or sq. ft.)_____
3. If known, indicate the depth of the water body (in ft. or in.)._____

Non-Flowing Aquatic Feature Questions (Continued)

4. Indicate the general composition of the bottom substrate. Mark all sources that apply from the following list.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

5. Indicate the source(s) of the water in the aquatic feature. Mark all sources that apply from the following list.

- ☐ River/Stream/Creek
- ☐ Groundwater
- ☐ Industrial Discharge
- ☐ Surface Runoff
- ☐ Other (please specify):_____

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6. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

7. Does the aquatic feature discharge to the surrounding environment? ☐ Yes ☐ No
If yes, indicate the features from the following list into which the aquatic feature discharges, and indicate whether the discharge occurs onsite or offsite:

☐ River/Stream/Creek	☐ onsite	☐ offsite
☐ Groundwater	☐ onsite	☐ offsite
☐ Wetland	☐ onsite	☐ offsite
☐ Impoundment	☐ onsite	☐ offsite

☐ Other (please describe)_____

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Non-Flowing Aquatic Feature Questions (Continued)

8. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

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Specify species, if known:

_____

_____

_____

_____

III.B.2 Flowing Aquatic Features

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

☐ Yes X No

Deleted: □

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the flowing aquatic features. If more than one flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map

If no, proceed to Section III.C.

Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of flowing aquatic feature present.

- ❑ River
- ❑ Stream
- ❑ Creek
- ❑ Brook
- ❑ Dry wash
- ❑ Arroyo
- ❑ Intermittent stream
- ❑ Artificially created (ditch, etc.)
- ❑ Other (specify)
- ❑

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2. Indicate the general composition of the bottom substrate.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

3. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover) of the aquatic feature.

_____
_____
_____
_____

4. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

5. Indicate the discharge point of the water body. Specify name, if known.

_____
_____
_____

Flowing Aquatic Feature Questions (Continued)

6. If the flowing aquatic feature is a dry wash or arroyo, answer the following questions.

   ❑ Check here if feature is not a dry wash or arroyo

   If known, specify the average number of days in a year in which flowing water is present in the feature: _____

   Is standing water or mud present? Check all that apply.

   ❑ Standing water
   ❑ Mud
   ❑ Neither standing water or mud

   Does the area show evidence of recent flow (e.g., flood debris clinging to vegetation)?

   ❑ Yes
   ❑ No
   ❑ Not sure

7. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

   ❑ Birds
   ❑ Fish
   ❑ Mammals
   ❑ Reptiles (e.g., snakes, turtles)
   ❑ Amphibians (e.g., frogs, salamanders)
   ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

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III.C Terrestrial Habitats
III.C.1 Wooded

Are any wooded areas on or adjacent to the site? ☐ Yes X No

Deleted: □

If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.2.

Wooded Area Questions – Not Applicable

☐ On-site ☐ Off-site

Name or Designation:_____

1. Estimate the approximate size of the wooded area (in acres or sq. ft.)_____

2. Indicate the dominant type of vegetation in the wooded area.

   - ❑ Evergreen
   - ❑ Deciduous
   - ❑ Mixed

   Dominant plant species, if known:_____

3. Estimate the vegetation density of the wooded area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at chest height.

   - ❑ 0-6 inches
   - ❑ 6-12 inches
   - ❑ >12 inches
   - ❑ No single size range is predominant

5. Animals observed in the wooded area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, lizards)
   - ❑ Amphibians (e.g., toads, salamanders)

   Specify species, if known:

   _____
   _____
   _____
   _____

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III.C.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? X Yes ☐ No

Deleted: ☐

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.3.

Shrub/Scrub Area Questions

X Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the shrub/scrub area (in acres or sq. ft.). ~1.5 ac.

2. Indicate the dominant type of shrub/scrub vegetation present, if known.
Unknown

3. Estimate the vegetation density of the shrub/scrub area.

- ☐ Dense (i.e., greater than 75% vegetation)
- ☐ Moderate (i.e., 25% to 75% vegetation)
- X Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the scrub/shrub vegetation.

- ☐ 0-2 feet
- X 2-5 feet
- ☐ >5 feet

5. Animals observed in the shrub/scrub area or suspected to be present based on indirect evidence or file material:

- X Birds
- X Mammals
- X Reptiles (e.g., snakes, lizards)
- ☐ Amphibians (e.g., toads, salamanders)

Specify species, if known:
Unknown

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III.C.3 Grassland

Are any grassland areas on or adjacent to the site? ☐ Yes X No

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If yes, indicate the grassland area on the attached site map and answer the following questions. If more than one grassland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual grassland area. Distinguish between grassland areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.4.

Grassland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the grassland area (in acres or sq. ft.)._____

2. Indicate the dominant plant type, if known.

_____
_____
_____
_____

3. Estimate the vegetation density of the grassland area.

- ❑ Dense (i.e., greater than 75% vegetation)
- ❑ Moderate (i.e., 25% to 75% vegetation)
- ❑ Sparse (i.e., less than 25% vegetation)

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4. Indicate the approximate average height of the dominant plant type (in ft. or in.)_

5. Animals observed in the grassland area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

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Specify species, if known:

III.C.4 Desert

Are any desert areas on or adjacent to the site? ☐ Yes X No

Deleted: ☐

If yes, indicate the desert area on the attached site map and answer the following questions. If more than one desert area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual desert area. Distinguish between desert areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.5.

Desert Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the desert area (in acres or sq. ft.)._____

2. Describe the desert area (e.g., presence or absence of vegetation, vegetation types, presence/size of rocks, sand, etc.)

_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Animals observed in the desert area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

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Specify species, if known:

_____

III.C.5 Other

1. Are there any other terrestrial communities or habitats on or adjacent to the site which were not previously described?

☐ Yes X No

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If yes, indicate the "other" area(s) on the attached site map and describe the area(s) below. Distinguish between onsite and offsite areas. If no, proceed to Section III.D.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[3] exist adjacent to or within 0.5 miles of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.* Have submitted a request, pending response

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3 Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to **Table 1** at the end of this document for examples of sensitive environments.

2. Are any areas on or near (i.e., within 0.5 miles) the site which are owned or used by local tribes? If yes, describe. *Contact the Tribal Liason in the Office of the Secretary (505)827-2855 to obtain this information.*

None identified, pending response from Mr. Milton Bluehouse.

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4. Does the site serve or potentially serve as a habitat, foraging area, or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

Unknown, awaiting response from the USFWS. However, according to the following website, http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats were identified.

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5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

Based on information obtained from http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats or migratory pathways were identified in the subject area.

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Is the site used by any ecologically[4], recreationally, or commercially important

Seasonal cattle grazing may take place in the general vicinity of the site; however, this commercial endeavor has not been observed during site access/activities.

4 Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or perform a critical ecological function (such as organic matter decomposition) and whose functions will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc.,)

species? If yes, explain.
NA

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate, and extent of contamination at the site?

X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, and Delta's Groundwater Monitoring Report dated June ?, 2009.

2. Do existing data provide sufficient information on the nature, rate, and extent of contamination in offsite affected areas?

☐ Yes
☐ No
☐ Uncertain
X No offsite contamination

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

3. Do existing data address potential migration pathways of contaminants at the site?

X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

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4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

- ❑ Yes
- ❑ No
- ❑ Uncertain
- X No offsite contamination

Please provide an explanation for your answer:

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within 0.5 miles) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 5 feet below ground surface (bgs). If yes, explain.

No

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

No

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8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

No. No groundwater impact above New Mexico Human Health Maximum Concentration Levels identified.

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9. Could chemicals reach receptors through runoff or erosion? Answer the following questions:

What is the approximate distance from the contaminated area to the nearest watercourse or arroyo?

- ☐ 0 feet (i.e., contamination has reached a watercourse or arroyo)
- ☐ 1-10 feet
- ☐ 11-20 feet
- ☐ 21-50 feet
- ☐ 51-100 feet
- ☐ 101-200 feet
- ☐ > 200 feet
- ☐ > 500 feet
- X > 1000 feet

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What is the slope of the ground in the contaminated area?

- X 0-10%
- ☐ 10-30%
- ☐ > 30%

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What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

- ☐ X < 25%
- ☐ 25-75%
- ☐ > 75%

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Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

- ☐ Yes
- ☐ X No
- ☐ Do not know

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Do any structures, pavement, or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

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10. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No. Residual de Minimis soil contamination located at least 25 feet bgs.

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11. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat? No. No NAPLs exist at the site.

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12. Could receptors be impacted by external irradiation at the site? Are gamma emitting radionuclides present at the site? Is the radionuclide contamination buried or at the surface?

No. No radionuclide contamination exists at the site.

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PHOTOGRAPHIC DOCUMENTATION

During the site visit(s), photographs should be taken to document the current conditions at the site and to support the information entered in the checklist. For example, photographs may be used to document the following:

- The nature, quality, and distribution of vegetation at the site
- Receptors or evidence of receptors
- Potentially important ecological features, such as ponds and drainage ditches
- Potential exposure pathways
- Any evidence of contamination or impact

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The following space may be used to record photo subjects.

Please refer to previous reports submitted by Conestoga-Rovers and Associates and URS, Inc.

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SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007.

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Checklist Completed by Michael Henn

Affiliation Project Manager for Delta Consultants

Author Assisted by

Date June 10, 2009

TABLE 1
EXAMPLES OF SENSITIVE ENVIRONMENTS

National Parks and National Monuments

Designated or Administratively Proposed Federal Wilderness Areas

National Preserves

National or State Wildlife Refuges

National Lakeshore Recreational Areas

Federal land designated for protection of natural ecosystems

State land designated for wildlife or game management

State designated Natural Areas

Federal or state designated Scenic or Wild River

All areas that provide or could potentially provide critical habitat[1] for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern

All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes

All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

---

1 Critical habitats are defined by the Endangered Species Act (50 CFR §424.02(d)) as:

> 1) Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (ii) that may require special management considerations or protection, and 2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary [of Interior] that such areas are essential for the conservation of the species.

All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)

All areas that provide or could potentially provide habitat for song birds as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)

All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)

All areas that provide or could potentially provide habitat for horned toads and Bullfrogs as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, resp.)

All perennial waters (e.g., rivers, lakes, playas, sloughs, ponds, etc)

All ephemeral drainage (e.g., arroyos, puddles/pools, intermittent streams, etc) that provide significant wildlife habitat or that could potentially transport contaminants off site to areas that provide wildlife habitat

All riparian habitats

All perennial and ephemeral wetlands (not limited to jurisdictional wetlands)

All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle.

ATTACHMENT B

ECOLOGICAL SITE EXCLUSION CRITERIA CHECKLIST AND DECISION TREE

1. New Mexico Ecological Exclusion Criteria Checklist

The following questions are designed to be used in conjunction with the Ecological Exclusion Criteria Decision Tree (Figure 1). After answering each question, refer to the Decision Tree to determine the appropriate next step. In some cases, questions will be omitted as the user is directed to another section as indicated by the flow diagram in the Decision Tree. For example, if the user answers "yes" to Question 1 of Section I, he or she is directed to proceed to Section II.

I. Habitat

In the following questions, "affected property" refers to all property on which a release has occurred or is believed to have occurred, including off-site areas where contamination may have occurred or migrated.

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1. Are any of the below-listed sensitive environments at, adjacent to, or in the locality1 of the affected property? None known.

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- National Park or National Monument
- Designated or administratively proposed Federal Wilderness Area
- National Preserve
- National or State Wildlife Refuge
- Federal or State land designated for wildlife or game management
- State designated Natural Areas
- All areas that are owned or used by local tribes
- All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle
- All areas that provide or could potentially provide habitat for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern
- All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes
- All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

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1 *Locality* of the site refers to any area where an ecological receptor is likely to contact site-related chemicals. The locality of the site considers the likelihood of contamination migrating over time and places the site in the context of its general surrounding. Therefore, the locality is typically larger than the site and the areas adjacent to the site.

- All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)
- All areas that provide or could potentially provide habitat for song birds as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)
- All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)
- All areas that provide or could potentially provide habitat for horned toads and bullfrogs as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, respectively)

2. Does the affected property contain land areas which were not listed in Question 1, but could be considered viable ecological habitat? The following are examples (but not a complete listing) of viable ecological habitats:

- Wooded areas
- Open fields (prairie)
- Other grassy areas
- Desert areas
- Any other areas which support wildlife and/or vegetation, excluding areas which support only opportunistic species (such as house mice, Norway rats, pigeons, etc.) that do not serve as prey to species in adjacent habitats.

The following features are not considered ecologically viable:

- Pavement
- Buildings
- Paved areas of roadways
- Paved/concrete equipment storage pads
- Paved manufacturing or process areas
- Other non-natural surface cover or structure

3. Does the affected property contain any perennial or ephemeral aquatic features which were not listed in Question 1? No

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II. Receptors

1. Is any part of the affected property used for habitat, foraging area, or refuge by any rare, threatened, or endangered species (plant *or* animal), or otherwise protected species (e.g., raptors, migratory birds)? None known.

2. Is any part of the affected property used for habitat, foraging area, or refuge by any species used as a recreational (e.g., game animals) and/or commercial resource? Potentially used for seasonal cattle grazing.

3. Is any part of the affected property used for habitat, foraging area, or refuge by any plant or animal species? This includes plants considered "weeds" and opportunistic insect and animal species (such as cockroaches and rats) if they are used as a food source for other species in the area. None known.

III. Exposure Pathways

1. Could receptors be impacted by contaminants via direct contact?

   Is a receptor located in or using an area where it could contact contaminated air, soil3, or surface water? No.

For Questions 2 and 3, note that one must answer "yes" to all three bullets in order to be directed to the "exclusion denied" box of the decision tree. This is because answering "no" to one of the questions in the bullet list indicates that a complete exposure pathway is not present. For example, in Question 2, if the chemical cannot leach or dissolve to groundwater (bullet 1), there is no chance of ecological receptors being exposed to the chemical through contact with contaminated groundwater. Similarly, the responses to the questions in Question 4 determine whether a complete pathway exists for exposure to NAPL.

2. Could receptors contact contaminants via groundwater? No.
   - Can the chemical leach or dissolve to groundwater4?
   - Can groundwater mobilize the chemical?
   - Could (does) contaminated groundwater discharge into known or potential receptor habitats?

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3 For soil, this means contamination less than 5 feet below ground surface (bgs).

4 Information on the environmental fate of specific chemicals can be found on the Internet at *http://www.epa.gov/opptintr/chemfact/* or at a local library in published copies of the *Hazardous Substances Data Bank*.

3. Could receptors contact contaminants via runoff (i.e., surface water and/or suspended sediment) or erosion by water or wind? No.
   - Are chemicals present in surface soils?
   - Can the chemical be leached from or eroded with surface soils?
   - Is there a receptor habitat located downgradient of the leached/eroded surface soil?

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4. Could receptors contact contaminants via migration of non-aqueous phase liquids (NAPL)? No
   - Is NAPL present at the site?
   - Is NAPL migrating toward potential receptors or habitats?
   - Could NAPL discharge impact receptors or habitats?

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Figure 1 -Ecological Exclusion Criteria Decision Tree

(Refer to corresponding checklist for the full text of each question)

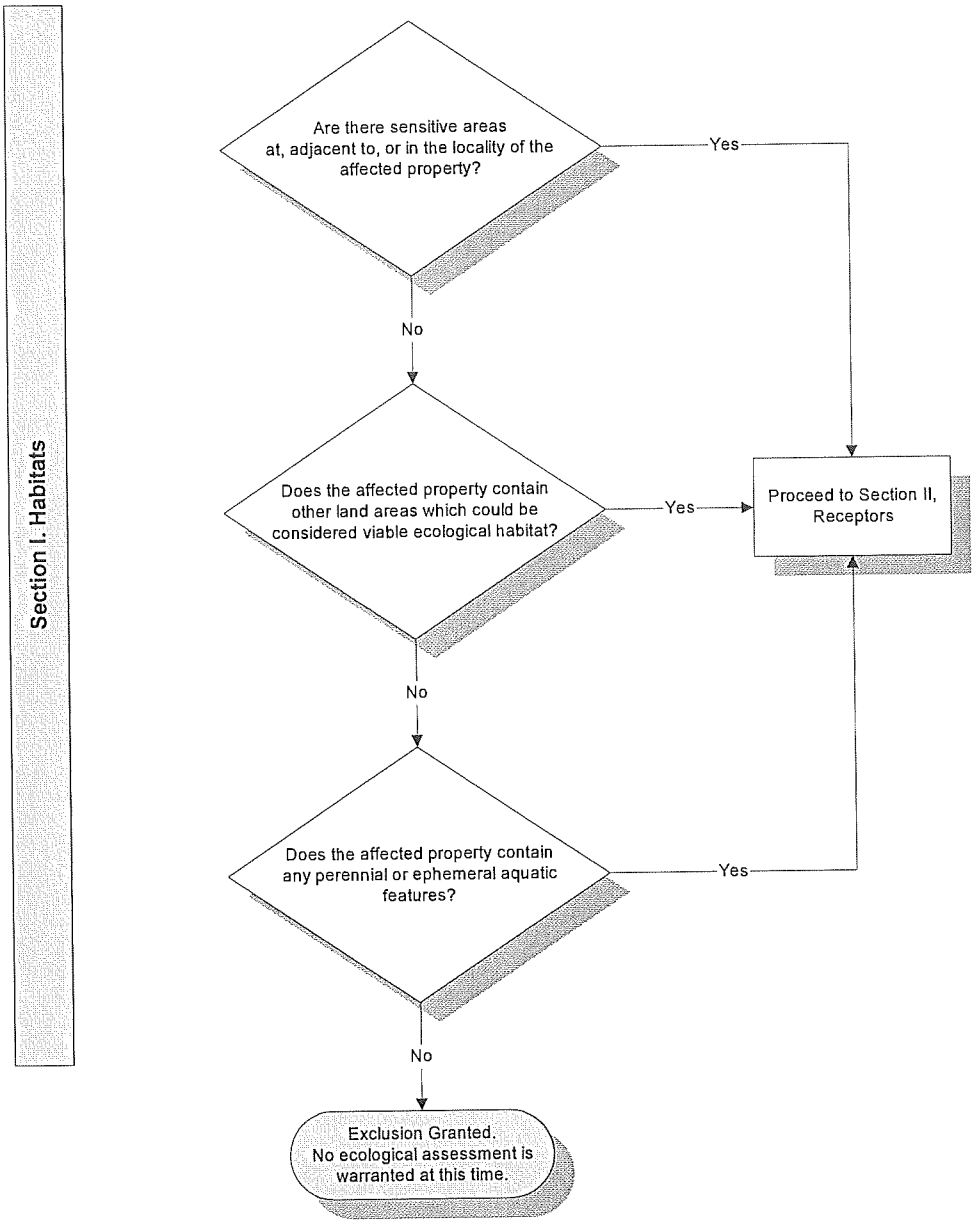


Figure 1 - Exclusion Criteria Decision Tree (continued)

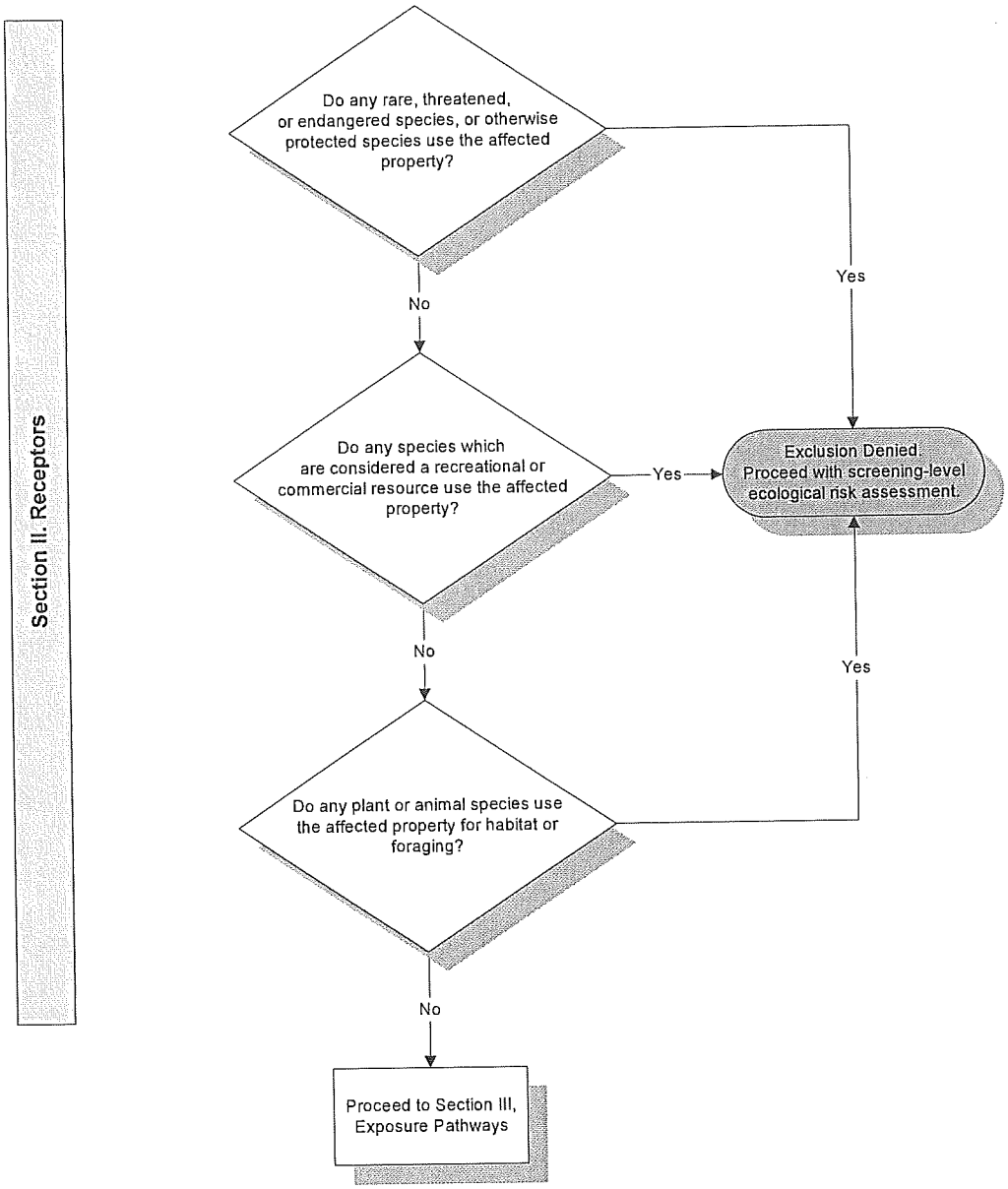
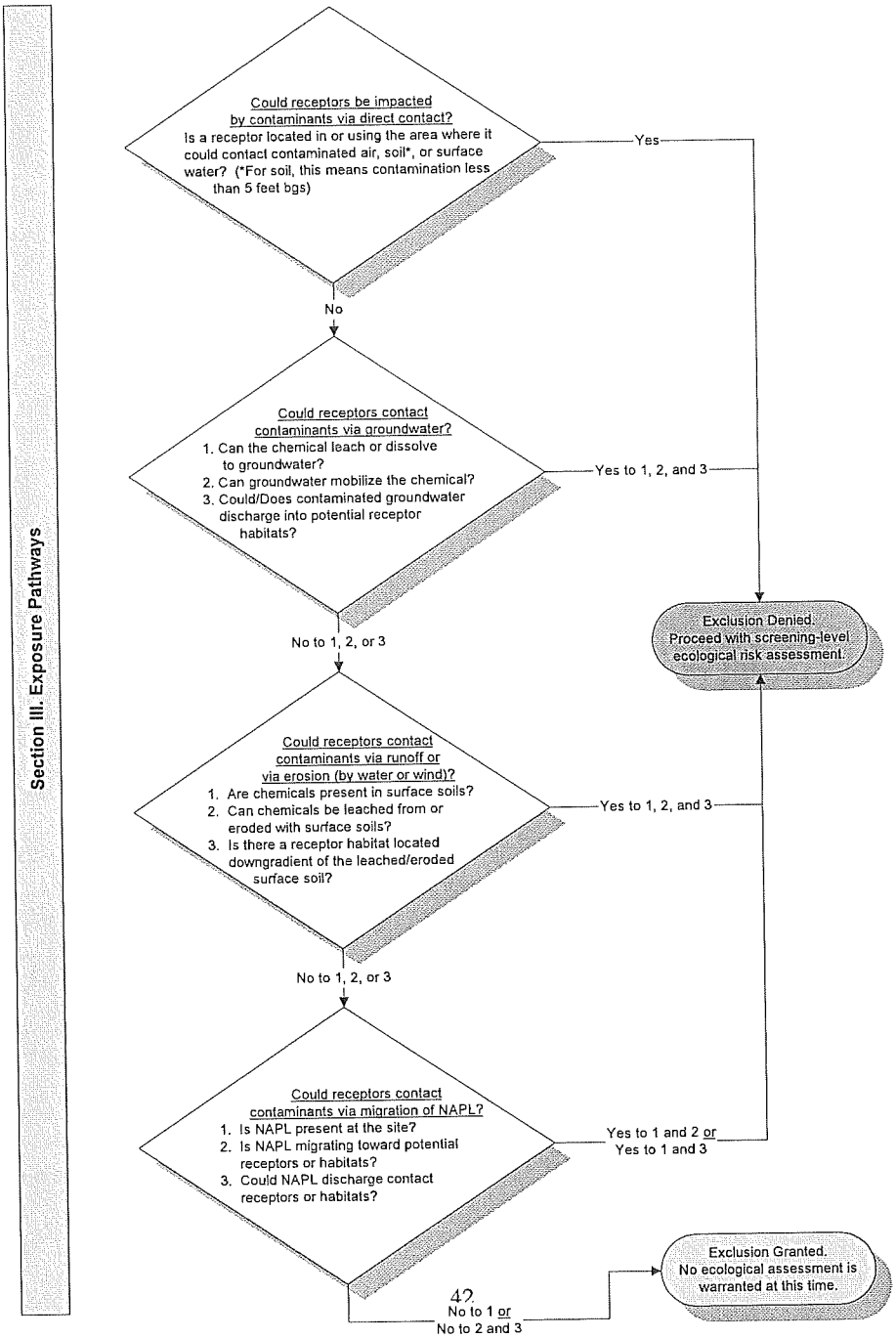


Figure 1 - Exclusion Criteria Decision Tree (continued)



Attachment 3

COMPLETE PATHWAY(S) AND ROUTE(S) OF EXPOSURE

Source and Route of Exposure	Resident		Commercial Worker	Construction Worker
	Child	Adult		
Surficial Soil Outdoor Inhalation (vapors and particulates), Ingestion, and Dermal Contact	☑	☑	☑	☑
Subsurface Soil Indoor Inhalation of Vapor Emission	☐	☐	☐	☐
Outdoor Inhalation of Vapor Emission	☑	☑	☑	☑
Groundwater Indoor Inhalation of Vapor Emission	☐	☐	☐	☐
Outdoor Inhalation of Vapor Emission	☑	☑	☑	☑

Groundwater Protection: Estimation of groundwater target levels at POC and source, and soil target levels protective of groundwater is based on one of the following two options:

Option 1: Target concentrations at POE are set equal to MCLs or equivalent	☐	If neither of the options is selected, groundwater protection standards will be calculated based on MCLs as default standards.
Option 2: Target concentrations at POE are set equal to WQCC Standards or equivalent	☑	

Equivalent target concentrations for COCs without MCLs and/or WQCC standards are estimated assuming adult water ingestion rate of 2L/day and a target risk of $1x10^{-5}$ or a target hazard quotient of 1.

CONTAMINANTS OF CONCERN, HALF-LIFE AND UNSATURATED ZONE DAF

CONTAMINANTS OF CONCERN	Half-Life [days]	Unsaturated Zone DAF [--]
ORGANICS		
☑ Benzene	1825	1
☑ Toluene	1825	1
☑ Ethylbenzene	1825	1
☑ Xylenes (mixed)	1825	1
☐ 1,2-Dibromoethane (EDB)	1825	1
☐ 1,2-Dichloroethane (EDC)	1825	1
☐ Methyl-tert-butyl-ether (MTBE)	10000000	1
☐ Acenaphthene	1825	1
☐ Anthracene	1825	1
☐ Benzo(a)anthracene	1825	1
☐ Benzo(a)pyrene	1825	1
☐ Benzo(b)fluoranthene	1825	1
☐ Benzo(k)fluoranthene	1825	1
☐ Chrysene	1825	1
☐ Dibenz(a,h)anthracene	1825	1
☐ Fluoranthene	1825	1
☐ Fluorene	1825	1
☐ Naphthalene	1825	1
☐ Phenanthrene	1825	1
☐ Pyrene	1825	1
METALS		
☐ Lead	1	1

PHYSICAL AND CHEMICAL PROPERTIES OF CONTAMINANTS OF CONCERN

CONTAMINANTS OF CONCERN	Water Solubility (µg/L)	Henry's Law Constant (L-water/L-air)	Org. Carbon Ads. Coef. Koc (mL/g)	Soil-Water Partition Coeff. Kd (mL-water /g-soil)		Diffusion Coefficient	
				Vadose zone	Saturated zone	in air (cm^2/s)	in water (cm^2/s)
ORGANICS							
Benzene	1.75E+06	2.20E-01	8.30E+01	1.66E-01	1.66E-01	9.30E-02	1.10E-05
Toluene	5.35E+05	2.60E-01	1.35E+02	2.70E-01	2.70E-01	8.50E-02	9.40E-06
Ethylbenzene	1.52E+05	3.20E-01	1.29E+03	2.58E+00	2.58E+00	7.60E-02	8.50E-06
Xylenes (mixed)	1.98E+05	2.90E-01	2.40E+02	4.80E-01	4.80E-01	7.20E-02	8.50E-06
1,2-Dibromoethane (EDB)	3.40E+06	1.33E-02	2.80E+01	5.60E-02	5.60E-02	7.30E-02	6.35E-06
1,2-Dichloroethane (EDC)	8.52E+06	4.01E-02	3.80E+01	7.60E-02	7.60E-02	1.04E-01	9.90E-06
Methyl-tert-butyl-ether (MTBE)	4.80E+07	4.16E-02	1.20E+01	2.40E-02	2.40E-02	1.02E-01	1.05E-05
Acenaphthene	4.24E+03	6.36E-03	4.90E+03	9.80E+00	9.80E+00	4.21E-02	7.69E-06
Anthracene	4.34E+01	2.67E-03	2.35E+04	4.70E+01	4.70E+01	3.24E-02	7.74E-06
Benzo(a)anthracene	9.40E+00	1.37E-04	3.58E+05	7.16E+02	7.16E+02	5.10E-02	9.00E-06
Benzo(a)pyrene	1.20E+00	5.80E-08	3.89E+05	7.78E+02	7.78E+02	5.00E-02	5.80E-06
Benzo(b)fluoranthene	1.50E+00	4.55E-03	1.23E+06	2.46E+03	2.46E+03	2.26E-02	5.56E-06
Benzo(k)fluoranthene	8.00E-01	3.40E-05	1.23E+06	2.46E+03	2.46E+03	2.26E-02	5.56E-06
Chrysene	1.60E+00	3.88E-03	3.98E+05	7.96E+02	7.96E+02	2.48E-02	6.21E-06
Dibenz(a,h)anthracene	2.49E+00	6.03E-07	1.79E+06	3.58E+03	3.58E+03	2.02E-02	5.18E-06
Fluoranthene	2.06E+02	6.60E-04	4.91E+04	9.82E+01	9.82E+01	3.02E-02	6.35E-06
Fluorene	1.98E+03	2.61E-03	7.71E+03	1.54E+01	1.54E+01	3.63E-02	7.88E-06
Naphthalene	3.10E+04	4.90E-02	1.29E+03	2.58E+00	2.58E+00	7.20E-02	9.40E-06
Phenanthrene	1.00E+03	6.61E-03	1.41E+04	2.82E+01	2.82E+01	3.24E-02	7.74E-06
Pyrene	1.35E+02	4.51E-04	6.80E+04	1.36E+02	1.36E+02	2.72E-02	7.24E-06
METALS							
Lead	N/A	N/A	N/A	1.22E+02	1.22E+02	N/A	N/A

Note: N/A : Not applicable
Soil-water partition coefficient (Kd) is calculated from fractionl organic carbon (foc) and organic carbon adsorption coefficient (Koc).

TOXICOLOGICAL PROPERTIES OF CONTAMINANTS OF CONCERN

CONTAMINANTS OF CONCERN	Slope Factor		Reference Dose		Oral RA Factor	Dermal RA Factor
	Oral (SFo) [kg-day/mg]	Inh. (SFi) [kg-day/mg]	Oral (RfDo) (mg/kg-day)	Inh. (RfDi) (mg/kg-day)	(RAFo)	(RAFd)
ORGANICS						
Benzene	0.029	0.029	NA	0.0017	1	0.5
Toluene	NA	NA	0.2	0.11	1	0.5
Ethylbenzene	NA	NA	0.1	0.29	1	0.5
Xylenes (mixed)	NA	NA	2	0.086	1	0.5
1,2-Dibromoethane (EDB)	85	0.77	NA	NA	1	0.5
1,2-Dichloroethane (EDC)	0.091	0.091	0.03	0.0014	1	0.5
Methyl-tert-butyl-ether (MTBE)	NA	NA	0.005	0.86	1	0.5
Acenaphthene	NA	NA	0.06	0.06	1	0.05
Anthracene	NA	NA	0.3	0.3	1	0.05
Benzo(a)anthracene	0.73	0.61	NA	NA	1	0.05
Benzo(a)pyrene	7.3	6.1	NA	NA	1	0.05
Benzo(b)fluoranthene	0.73	0.61	NA	NA	1	0.05
Benzo(k)fluoranthene	0.73	0.61	NA	NA	1	0.05
Chrysene	0.0073	0.0061	NA	NA	1	0.05
Dibenz(a,h)anthracene	7.3	3.1	NA	NA	1	0.05
Fluoranthene	NA	NA	0.04	0.04	1	0.05
Fluorene	NA	NA	0.04	0.04	1	0.05
Naphthalene	NA	NA	0.04	0.04	1	0.05
Phenanthrene	NA	NA	0.03	0.03	1	0.05
Pyrene	NA	NA	0.03	0.03	1	0.05
METALS						
Lead	NA	NA	NA	NA	1	0.001

EXPOSURE FACTORS

(Page 1 of 2)

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Averaging time for carcinogen	ATc	year	70	70	Tier 1
Averaging time for non-carcinogen	ATnc	year	=ED	=ED	Tier 1
Body weight:					
Resident child	BW	kg	15	15	Tier 1
Resident adult	BW	kg	70	70	Tier 1
Commercial worker	BW	kg	70	70	Tier 1
Construction worker	BW	kg	70	70	Tier 1
Exposure duration:					
Resident child	ED	year	6	6	Tier 1
Resident adult	ED	year	30	30	Tier 1
Commercial worker	ED	year	25	25	Tier 1
Construction worker	ED	year	1	1	Tier 1
Exposure frequency:					
Resident child	EF	day/year	350	350	Tier 1
Resident adult	EF	day/year	350	350	Tier 1
Commercial worker	EF	day/year	250	250	Tier 1
Construction worker	EF	day/year	250	250	Tier 1
Soil ingestion rate:					
Resident child	IRs	mg/day	200	200	Tier 1
Resident adult	IRs	mg/day	100	100	Tier 1
Commercial worker	IRs	mg/day	50	50	Tier 1
Construction worker	IRs	mg/day	100	100	Tier 1
Groundwater ingestion rate:					
Resident adult	IRw	L/day	2	2	Tier 1
Indoor inhalation rate:					
Resident child	IRai	m^3/hr	0.417	0.417	Tier 1
Resident adult	IRai	m^3/hr	0.633	0.633	Tier 1
Commercial worker	IRai	m^3/hr	1.5	1.5	Tier 1
Exposure time for indoor inhalation:					
Resident child	ETin	hr/day	24	24	Tier 1
Resident adult	ETin	hr/day	24	24	Tier 1
Commercial worker	ETin	hr/day	10	10	Tier 1

EXPOSURE FACTORS

(Page 2 of 2)

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Outdoor inhalation rate:					
Resident child	IRao	m^3/hr	1	1	Tier 1
Resident adult	IRao	m^3/hr	1	1	Tier 1
Commercial worker	IRao	m^3/hr	2	2	Tier 1
Construction worker	IRao	m^3/hr	2	2	Tier 1
Exposure time for outdoor inhalation:					
Resident child	ETout	hr/day	10	10	Tier 1
Resident adult	ETout	hr/day	10	10	Tier 1
Commercial worker	ETout	hr/day	10	10	Tier 1
Construction worker	ETout	hr/day	10	10	Tier 1
Skin surface area:					
Resident child	SA	cm^2/day	2500	2500	Tier 1
Resident adult	SA	cm^2/day	5000	5000	Tier 1
Commercial worker	SA	cm^2/day	5000	5000	Tier 1
Construction worker	SA	cm^2/day	5000	5000	Tier 1
Soil to skin adherence factor:					
Resident child	M	mg/cm^2	0.5	0.5	Tier 1
Resident adult	M	mg/cm^2	0.5	0.5	Tier 1
Commercial worker	M	mg/cm^3	0.5	0.5	Tier 1
Construction worker	M	mg/cm^2	0.5	0.5	Tier 1
Target risk level	TR	--	1.00E-05	1.00E-05	Tier 1
Target hazard quotient	THQ	--	1	1	Tier 1

FATE AND TRANSPORT PARAMETERS

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
Soil parameters:					
Length of soil source area parallel to wind direction	W_a	cm	1524	1524	Tier 1
Depth to contaminants in subsurface soil	L_s	cm	30.48	30.48	Tier 1
Lower depth of surficial soil zone	d	cm	30.48	30.48	Tier 1
Dry soil bulk density	ρ_s	g/cm^3	1.58	1.58	Tier 1
Fractional organic carbon content in the vadose zone	foc	g-C/g-soil	0.002	0.002	Tier 1
Total soil porosity in the vadose zone	θ_T	cm^3/cm^3-soil	0.25	0.25	Tier 1
Volumetric water content in vadose zone	θ_{ws}	cm^3/cm^3	0.024	0.024	Tier 1
Volumetric air content in vadose zone	θ_{as}	cm^3/cm^3	0.226	0.226	Tier 1
Groundwater parameters:					
Depth to groundwater	Lgw	cm	300	300	Tier 1
Width of groundwater source perpendicular to GW flow direction	Y	cm	1524	1524	Tier 1
Length of groundwater source parallel to GW flow direction	W	cm	1524	1524	Tier 1
Fractional organic carbon content in the saturated zone	foc_s	g-C/g-soil	0.002	0.002	Tier 1
Total soil porosity in the saturated zone	θ_{TS}	cm^3/cm^3-soil	0.25	0.25	Tier 1
Hydraulic conductivity in the saturated zone	K	cm/year	315360	315360	Tier 1
Hydraulic gradient	i	--	0.005	0.005	Tier 1
Groundwater Darcy velocity	Ugw	cm/year	1577	1577	Tier 1
Groundwater mixing zone thickness	δ_{gw}	cm	305	305	Tier 1
Infiltration rate	I	cm/year	41	41	Tier 1
Ambieut air parameters:					
Breathing zone height	δ_a	cm	200	200	Tier 1
Wind speed within the breathing zone	Ua	cm/s	225	225	Tier 1
Euclosed space parameters:					
Enclosed space air exchange rate:					Tier 1
Residential	N	1/day	12	12	Tier 1
Commercial	N	1/day	20	20	Tier 1
Height of enclosed space:					
Residential	h	cm	200	200	Tier 1
Commercial	h	cm	300	300	Tier 1
Fraction of cracks in foundation/walls through which diffusion occurs					
Residential	f	cm^2/cm^2	0.01	0.01	Tier 1
Commercial	f	cm^2/cm^2	0.01	0.01	Tier 1
Particulate emission rate:					
Residential and commercial	Pe	g/cm^2sec	6.90E-14	6.90E-14	Tier 1
Construction worker	Pe	g/cm^2sec	6.90E-09	6.90E-09	Tier 1
Averaging time for vapor flux:					
Resident child	τ	sec	1.89E+08	1.89E+08	Tier 1
Resident adult	τ	sec	9.46E+08	9.46E+08	Tier 1
Commercial worker	τ	sec	7.88E+08	7.88E+08	Tier 1
Construction worker	τ	sec	3.15E+07	3.15E+07	Tier 1

GROUNDWATER RESOURCE PROTECTION

Parameter	Symbol	Unit	Tier 1 Values	Values Used	Source
SITE PARAMETERS:					
Distance to the point of exposure from the downgradient edge of the source	X_{poe}	ft	variable	2.9	
Longitudinal dispersivity	$\alpha_{x,poe}$	ft	variable	0.29	
Transverse dispersivity	$\alpha_{y,poe}$	ft	variable	0.1	
Vertical dispersivity	$\alpha_{z,poe}$	ft	variable	0.0145	
Distance to the point of compliance from the downgradient edge of the Source	X_{poc}	ft	variable	2.9	
Longitudinal dispersivity	$\alpha_{x,poc}$	ft	variable	0.29	
Transverse dispersivity	$\alpha_{y,poc}$	ft	variable	0.1	
Vertical dispersivity	$\alpha_{z,poc}$	ft	variable	0.0145	

Additional input parameters required to calculate the allowable soil concentrations protective of groundwater, whose values are input on other screens include:

Source dimensions

- Width of source area perpendicular to GW flow direction (Y)
- Length of source area parallel to GW flow direction (W)
- Groundwater mixing zone thickness (δ_{gw})

Soil and groundwater properties

- Dry soil bulk density (ρ_s)
- Total soil porosity in the vadose zone (θ_T) and saturated zone (θ_{TS})
- Hydraulic conductivity in the saturated zone (K)
- Hydraulic gradient (i)
- Fractional organic carbon contents in the vadose zone (foc) and saturated zone (foc_s)

Chemical specific properties

- Organic carbon adsorption co-efficient (Koc)

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RISK-BASED SCREENING LEVELS FOR A RESIDENT CHILD

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor	Outdoor	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact		Indoor inhalation of vapor emissions	Indoor inhalation of vapor emissions
	[µg/m^3-air]	[µg/m^3-air]	[mg/kg]		[mg/kg]	[µg/L]
ORGANICS						
Benzene	2.66E+00	2.66E+00	6.91E+01		NC	NC
Toluene	1.72E+02	1.72E+02	3.19E+03	>RES	NC	NC
Ethylbenzene	4.53E+02	4.54E+02	1.83E+03	>RES	NC	NC
Xylenes (mixed)	1.34E+02	1.35E+02	1.11E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not com
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A RESIDENT ADULT

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	3.87E+00	5.87E+00	4.30E+01		NC	NC
Toluene	5.29E+02	8.03E+02	1.06E+04	>RES	NC	NC
Ethylbenzene	1.39E+03	2.12E+03	5.38E+03	>RES	NC	NC
Xylenes (mixed)	4.13E+02	6.28E+02	8.34E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR RESIDENTIAL SCENARIO (LOWER OF THE TARGET LEVELS FOR CHILD AND ADULT)

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	2.66E+00	2.66E+00	4.30E+01		NC	NC
Toluene	1.72E+02	1.72E+02	3.19E+03	>RES	NC	NC
Ethylbenzene	4.53E+02	4.54E+02	1.83E+03	>RES	NC	NC
Xylenes (mixed)	1.34E+02	1.35E+02	1.11E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC
>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A COMMERCIAL WORKER

CONTAMINANTS OF CONCERN	AIR INHALATION		SURFICIAL SOIL		SUB-SURFACE SOIL	GROUNDWATER
	Indoor [µg/m^3-air]	Outdoor [µg/m^3-air]	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact [mg/kg]		Indoor inhalation of vapor emissions [mg/kg]	Indoor inhalation of vapor emissions [µg/L]
ORGANICS						
Benzene	6.58E+00	4.93E+00	7.33E+01		NC	NC
Toluene	7.49E+02	5.62E+02	1.48E+04	>RES	NC	NC
Ethylbenzene	1.98E+03	1.48E+03	7.77E+03	>RES	NC	NC
Xylenes (mixed)	5.86E+02	4.39E+02	8.62E+04	>RES	NC	NC
1,2-Dibromoethane (EDB)	--	--	--		NC	NC
1,2-Dichloroethane (EDC)	--	--	--		NC	NC
Methyl-tert-butyl-ether (MTBE)	--	--	--		NC	NC
Acenaphthene	--	--	--		NC	NC
Anthracene	--	--	--		NC	NC
Benzo(a)anthracene	--	--	--		NC	NC
Benzo(a)pyrene	--	--	--		NC	NC
Benzo(b)fluoranthene	--	--	--		NC	NC
Benzo(k)fluoranthene	--	--	--		NC	NC
Chrysene	--	--	--		NC	NC
Dibenz(a,h)anthracene	--	--	--		NC	NC
Fluoranthene	--	--	--		NC	NC
Fluorene	--	--	--		NC	NC
Naphthalene	--	--	--		NC	NC
Phenanthrene	--	--	--		NC	NC
Pyrene	--	--	--		NC	NC
METALS						
Lead	N/A	N/A	--		N/A	N/A

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC
>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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RISK-BASED SCREENING LEVELS FOR A CONSTRUCTION WORKER

CONTAMINANTS OF CONCERN	AIR INHALATION	SOIL WITHIN CONSTRUCTION ZONE		GROUNDWATER	
	Outdoor	Surficial soil: ingestion, inhalation (vapor emissions and particulates), and dermal contact		Outdoor inhalation of vapor emissions	
	[µg/m^3-air]	[mg/kg]		[µg/L]	
ORGANICS					
Benzene	8.69E+00	1.67E+02		3.33E+04	
Toluene	5.62E+02	6.31E+03	>RES	1.99E+06	>SOL
Ethylbenzene	1.48E+03	5.98E+03	>RES	4.77E+06	>SOL
Xylenes (mixed)	4.39E+02	8.00E+03	>RES	1.65E+06	>SOL
1,2-Dibromoethane (EDB)	--	--		--	
1,2-Dichloroethane (EDC)	--	--		--	
Methyl-tert-butyl-ether (MTBE)	--	--		--	
Acenaphthene	--	--		--	
Anthracene	--	--		--	
Benzo(a)anthracene	--	--		--	
Benzo(a)pyrene	--	--		--	
Benzo(b)fluoranthene	--	--		--	
Benzo(k)fluoranthene	--	--		--	
Chrysene	--	--		--	
Dibenz(a,h)anthracene	--	--		--	
Fluoranthene	--	--		--	
Fluorene	--	--		--	
Naphthalene	--	--		--	
Phenanthrene	--	--		--	
Pyrene	--	--		--	
METALS					
Lead	N/A	--		N/A	

N/A: Not Applicable
NC: Pathway is not complete
--: Not a COC

>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

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GROUNDWATER RESOURCE PROTECTION - WITHOUT DECAY

CONTAMINANTS OF CONCERN	Target Groundwater Conc.at POE [µg/L]	User Specified Unsaturated Zone DAF [--]	Saturated Zone DAF at POC [--]	Saturated Zone DAF at POE [--]	Soil Conc. Protective of Groundwater [mg/kg]	Allowable Groundwater Conc. at POC [µg/L]	Allowable Groundwater Conc. at Source [µg/L]
ORGANICS							
Benzene	1.00E+01	1	1.00E+00	1.00E+00	1.85E-02	1.00E+01	1.00E+01
Toluene	7.50E+02	1	1.00E+00	1.00E+00	2.10E+00	7.50E+02	7.50E+02
Ethylbenzene	7.50E+02	1	1.00E+00	1.00E+00	1.72E+01	7.50E+02	7.50E+02
Xylenes (mixed)	6.20E+02	1	1.00E+00	1.00E+00	2.89E+00	6.20E+02	6.20E+02
1,2-Dibromoethane (EDB)	--	1	1.00E+00	1.00E+00	--	--	--
1,2-Dichloroethane (EDC)	--	1	1.00E+00	1.00E+00	--	--	--
Methyl-tert-butyl-ether (MTBE)	--	1	1.00E+00	1.00E+00	--	--	--
Acenaphthene	--	1	1.00E+00	1.00E+00	--	--	--
Anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)pyrene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(b)fluoranthene	--	1	1.00E+00	1.00E+00	--	--	--
Benzo(k)fluoranthene	--	1	1	1.00E+00	--	--	--
Chrysene	--	1	1.00E+00	1.00E+00	--	--	--
Dibenz(a,h)anthracene	--	1	1.00E+00	1.00E+00	--	--	--
Fluoranthene	--	1	1.00E+00	1.00E+00	--	--	--
Fluorene	--	1	1.00E+00	1.00E+00	--	--	--
Naphthalene	--	1	1.00E+00	1.00E+00	--	--	--
Phenanthrene	--	1	1.00E+00	1.00E+00	--	--	--
Pyrene	--	1	1.00E+00	1.00E+00	--	--	--
METALS							
Lead	--	1	1.00E+00	1.00E+00	--	--	--

NC: Pathway is not complete
'--': Not a COC
>RES: Calculated target level is greater than saturated soil concentration
>SOL: Calculated target level is greater than pure component solubility

Soil concentrations are presented on a dry weight basis.

Half life and unsaturated zone DAF are user specified inputs. Enter the values in COC table (sheet tab "COC").

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GROUNDWATER RESOURCE PROTECTION - WITH DECAY

CONTAMINANTS OF CONCERN	Target Groundwater Conc.at POE [µg/L]	Half-Life [days]	Saturated Zone Retardation Factor [--]	Unsaturated Zone DAF [--]	Saturated Zone DAF		Soil Conc. Protective of Groundwater [mg/kg]	Allowable Groundwater Conc. at POC [µg/L]	Allowable Groundwater Conc. at Source [µg/L]
					at POC [--]	at POE [--]			
ORGANICS									
Benzene	1.00E+01	1.83E+03	2.05E+00	1	1.00E+00	1.00E+00	1.85E-02	1.00E+01	1.00E+01
Toluene	7.50E+02	1.83E+03	2.71E+00	1	1.00E+00	1.00E+00	2.10E+00	7.50E+02	7.50E+02
Ethylbenzene	7.50E+02	1.83E+03	1.73E+01	1	1.00E+00	1.00E+00	1.72E+01	7.50E+02	7.50E+02
Xylenes (mixed)	6.20E+02	1.83E+03	4.03E+00	1	1.00E+00	1.00E+00	2.89E+00	6.20E+02	6.20E+02
1,2-Dibromoethane (EDB)	--	1.83E+03	1.35E+00	1	1.00E+00	1.00E+00	--	--	--
1,2-Dichloroethane (EDC)	--	1.83E+03	1.48E+00	1	1.00E+00	1.00E+00	--	--	--
Methyl-tert-butyl-ether (MTBE)	--	1.00E+07	1.15E+00	1	1.00E+00	1.00E+00	--	--	--
Acenaphthene	--	1.83E+03	6.29E+01	1	1.00E+00	1.00E+00	--	--	--
Anthracene	--	1.83E+03	2.98E+02	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)anthracene	--	1.83E+03	4.53E+03	1	1.00E+00	1.00E+00	--	--	--
Benzo(a)pyrene	--	1.83E+03	4.92E+03	1	1.00E+00	1.00E+00	--	--	--
Benzo(b)fluoranthene	--	1.83E+03	1.55E+04	1	1.00E+00	1.00E+00	--	--	--
Benzo(k)fluoranthene	--	1.83E+03	1.55E+04	1	1.00E+00	1.00E+00	--	--	--
Chrysene	--	1.83E+03	5.03E+03	1	1.00E+00	1.00E+00	--	--	--
Dibenz(a,h)anthracene	--	1.83E+03	2.26E+04	1	1.00E+00	1.00E+00	--	--	--
Fluoranthene	--	1.83E+03	6.22E+02	1	1.00E+00	1.00E+00	--	--	--
Fluorene	--	1.83E+03	9.85E+01	1	1.00E+00	1.00E+00	--	--	--
Naphthalene	--	1.83E+03	1.73E+01	1	1.00E+00	1.00E+00	--	--	--
Phenanthrene	--	1.83E+03	1.79E+02	1	1.00E+00	1.00E+00	--	--	--
Pyrene	--	1.83E+03	8.61E+02	1	1.00E+00	1.00E+00	--	--	--
METALS									
Lead									

NC: Pathway is not complete

'--: Not a COC

Soil concentrations are presented on a dry weight basis.

Half life and unsaturated zone DAF are user specified inputs. Enter the values in COC table (sheet tab "COC").

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Atkins ENGINEERING ASSOCIATES INC.
2904 W 2nd St.
Roswell, NM 88201
voice: 575.624.2420
fax: 575.624.2421
www.atkinseng.com

10/12/2012

Michael Henn
Senior Project Manager
Antea Group

Re: Re-vegetation at Centurion Pipeline

Transmitted via email to Michael.Henn@anteagroup.com on 10/9/2012

Mr. Henn:

On 9/24/2012 Atkins Engineering Associate's staff supervised, with Jim Coburn P.E. (the Antea Group), the re-vegetation of Centurion Pipeline Site located near Maljamar, New Mexico in SW1/4 SW1/4 Section 20 Township 17S Range 33E N.M.P.M.

A safety meeting was conducted and all people present on the site signed the Antea Job Safety Analysis.

Re-vegetation Services provided the certified seed mix (see enclosed letter of certification) a tractor (Case DX48) a 3-point Marliss Drill Seeder drill and crew. Before re-seeding, AEA and Jim Coburn flagged the corners of the site from aerial photographs and the Google Earth Shape provided. The pipeline bisecting the site was flagged approximately 15 feet either side. Revegetation Services drilled the seed across the site bounded by the flags.

Sincerely,

Christopher R. Cortez
Project Manager

Enclosures: Revegetation Services Daily Report, Letter of Seed Certification

Revegetation Services Daily Report

Form is to be completed daily and submitted to the General Contractor and our office each day.

Project Name: Roswell / well Site Reveg. Job No.:

General Contractor: Atkinsen

Date: 9/24/12	Crew size: 1 sup 1 operator (3 laborers on site)

Daily Work Description

Provide a brief description of daily work performed:

4 acres Drill Seeded

Equipment and Notes:

Equipment	Notes
Case DX 48, 3-point Mahliss Drill Seeder, Pick-up & Gooseneck Trailer	

Completed By: _____ Signature

Jason Weitman Print Name

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

Sold To: Revegetation Services
PO Box 1480
Higley, AZ 85236

4 acres

Project No. 1705
Project Name: Roswell Drill site
Seed Mix #: SEPARATES

LETTER OF CERTIFICATION

This memo is written to certify that this seed mix is true to label and has been duly tested by a fully accredited seed testing laboratory using rules sanctioned by the Association of Official Seed Analysts. The material listed herein complies with ADOT Standard Specifications Section 805, the project Special Provisions, and the plans. The specifications of the seed used in the mix are as follows:

All seed is clearly Tagged showing the type of seed, purity, germination, test date and weed content.

Common Name	Variety	Origin	Lot #	Purity	Germ + Dorm	% PLS
Sand Dropseed	VNS	CO	17134	99.69	96	95.70
Sand Lovegrass	BEND	TX	27021A	97.99	88	86.23
Plains Bristlegrass	VNS	TX	SEMA -	70.94	74	52.50
Alkali Sacaton	VNS	UT	17111	99.69	98	97.70
Fourwing Saltbush	VNS	AZ	ATCA - 12	97.53	88	85.83

We further certify the quantities shipped as follows:

Common Name	Lot #	Specified rate PLS/AC	Total PLS Lbs	
Sand Dropseed	17134	1.00	4	5.22
Sand Lovegrass	27021A	1.00	4	5.80
Plains Bristlegrass	SEMA - INV84903	2.00	8	19.05
Alkali Sacaton	17111	1.00	4	5.12
Fourwing Saltbush	ATCA - 12	5.00	20	29.13

Sincerely,

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

Jake Anderson, Vice President
Anrac Farms

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Anrac Farms*
6671 E Baseline Rd #105 PMB263
Mesa, AZ 85206

CERTIFIED COPY OF SEED ANALYSIS

Common Name	Sand Dropseed	Sand Lovegrass	Plains Bristlegrass	Alkali Sacaton	Fourwing Saltbush	
Scientific Name	Sporobolus Cryptandrus	Eragrostis Triticoides	Setaria Macrostachya	Sporobolus Airoides	Atriplex Canescens	
Lot Name	17134	27021A	SEMA - INV84903	17111	ATCA - 12	
Kind and Variety	VNS	BEND	VNS	VNS	VNS	
Pure Seed %	99.69	97.99	70.94	99.69	97.53	
Inert %	0.31	1.38	12.78	0.24	2.47	
Date of Test	1/26/2012	9/10/2012	7/1/2012	01/26/12	1/26/2012	
Origin	CO	TX	TX	UT	AZ	
Germination %	96	88	62	98	88	
Hard Seed %	0		12	0	0	
Total Viable %	96	88	74	98	88	
Crop %	0	0.01	12.78	0.01	0	
Weed %	0	0.62	0.02	0.06	0	
Pure Live Seed %	95.70	86.23	52.50	97.70	85.83	
Name of Lab						
Noxious or Restricted Weeds	NONE/NONE	NONE	NONE	NONE	NONE	

Anrac Farms certifies that this analysis accurately represents the original copy of seed analysis and, where applicable, all testing has been conducted by a certified Seed Technologist using the sanctioned rules established by the Association of Official Seed Analysts.

Signature:
Jake Anderson, Vice President

Date: 9/24/2012

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ATTACHMENT A

SCREENING-LEVEL ECOLOGICAL RISK ASSESSMENT
SCOPING ASSESSMENT
SITE ASSESSMENT CHECKLIST

INTRODUCTION

This checklist has been developed as a tool for gathering information about the facility property and surrounding areas, as part of the scoping assessment. Specifically, the checklist assists in the compilation of information on the physical and biological aspects of the site including the site environmental setting, usage of the site, releases at the site, contaminant fate and transport mechanisms, and the area's habitats, receptors, and exposure pathways. The completed checklist can then be used to construct the preliminary conceptual site exposure model (PCSEM) for the site. In addition, the checklist and PCSEM will serve as the basis for the scoping assessment report. Section III of this document provides further information on using the completed checklist to develop the PCSEM.

In general, the checklist is designed for applicability to all sites, however, there may be unusual circumstances which require professional judgment in order to determine the need for further ecological evaluation (*e.g.,* cave-dwelling receptors). In addition, some of the questions in the checklist may not be relevant to all sites. Some facilities may have large amounts of data available regarding contaminant concentrations and hydrogeologic conditions at the site, while other may have only limited data. In either case, the questions on the checklist should be addressed as completely as possible with the information available.

Habitats and receptors, which may be present at the site, can be identified by direct or indirect[1] observations and by contacting local and regional natural resource agencies. Habitat types may be determined by reviewing land use and land cover maps (LULC), which are available via the Internet at http://www.nationalatlas.gov/mapit.html. With regard to receptors, it should be noted that receptors are often present at a site even when they are not observed. Therefore, for the purposes of this checklist, it should be assumed that receptors are present if viable habitat is present. The presence of receptors should be confirmed by contacting one or several of the organizations listed below.

Sources of general information available for the identification of ecological receptors and habitats include:

- U.S. Fish and Wildlife Service (http://www.fws.gov)
- Biota Information System of New Mexico (BISON-M) maintained by the New Mexico Department of Game and Fish (NMGF) (http://151.199.74.229/states/nm.htm)
- U.S. Forest Service (USFS) (http://www.fs.fed.us/)
- New Mexico Forestry Division (NMFD) of the Energy, Minerals and Natural Resources Department (http://www.emnrd.state.nm.us/forestry/index.htm)

1 Examples of indirect observations that indicate the presence of receptors include: tracks, feathers, burrows, scat

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- U.S. Bureau of Land Management (USBLM) (http://www.blm.gov/nhp/index.htm) or (http://www.nm.blm.gov/www/new_home_2.html)
- United States Geological Service (USGS) (http://www.usgs.gov)
- National Wetland Inventory Maps (http://wetlands.fws.gov)
- National Audubon Society (http://www.audobon.com)
- National Biological Information Infrastructure (http://biology.usgs.gov)
- Sierra Club (http://www.sierraclub.org)
- National Geographic Society (http://www.nationalgeographic.com)
- New Mexico Natural Heritage Program (http://nmnhp.unm.edu/)
- State and National Parks System
- Local universities
- Tribal organizations

INSTRUCTIONS FOR COMPLETING THE CHECKLIST

The checklist consists of four sections: Site Location, Site Characterization, Habitat Evaluation, and Exposure Pathway Evaluation. Answers to the checklist should reflect existing conditions and should not consider future remedial actions at the site. Completion of the checklist should provide sufficient information for the preparation of a PCSEM and scoping report and allow for the identification of any data gaps.

Section I - Site Location, provides general site information, which identifies the facility being evaluated, and gives specific location information. Site maps and diagrams, which should be attached to the completed checklist, are an important part of this section. The following elements should be clearly illustrated: 1) the location and boundaries of the site relative to the surrounding area, 2) any buildings, structures or important features of the facility or site, and 3) all ecological areas or habitats identified during completion of the checklist. It is possible that several maps will be needed to clearly and adequately illustrate the required elements. Although topographical information should be illustrated on at least one map, it is not required for every map. Simplified diagrams (preferably to scale) of the site and surrounding areas will usually suffice.

Section II - Site Characterization, is intended to provide additional temporal and contextual information about the site, which may have an impact on determining whether a certain area should be characterized as ecologically viable habitat or contains receptors. Answers to the questions in Section II will help the reviewer develop a broader and more complete evaluation of the ecological aspects of a site.

Section III - Habitat Evaluation, provides information regarding the physical and biological characteristics of the different habitat types present at or in the locality of the site. Aquatic features such as lakes, ponds, streams, arroyos and ephemeral waters can be identified by reviewing aerial photographs, LULC and topographic maps and during site reconnaissance visits. In New Mexico, there are several well-defined terrestrial communities, which occur naturally. Typical communities include wetlands, forest (e.g., mixed conifer,

ponderosa pine and pinyon juniper), scrub/shrub, grassland, and desert. Specific types of vegetation characterize each of these communities and can be used to identify them. Field guides are often useful for identifying vegetation types. A number of sites may be in areas that have been disturbed by human activities and may no longer match any of the naturally occurring communities typical of the southwest. Particularly at heavily used areas at facilities, the two most common of these areas are usually described as "weed fields" and "lawn grass". Vegetation at "weed fields" should be examined to determine whether the weeds consist primarily of species native to the southwest or introduced species such as Kochia. Fields of native weeds and lawn grass are best evaluated using the short grass prairie habitat guides.

The applicable portions of Section III of the checklist should be completed for each individual habitat identified. For example, the questions in Section III.A of the checklist should be answered for each wetland area identified at or in the locality of the site and the individual areas must be identified on a map or maps.

Section IV- Exposure Pathway Evaluation, is used to determine if contaminants at the site have the potential to impact habitat identified in Section III. An exposure pathway is the course a chemical or physical agent takes from a source to an exposed organism. Each exposure pathway includes a source (or release from a source), an environmental transport mechanism, an exposure point, and an exposure route. A complete exposure pathway is one in which each of these components, as well as a receptor to be exposed, is present. Essentially, this section addresses the fate and transport of contaminants that are known or suspected to have been released at the site. In most cases, without a complete exposure pathway between contaminants and receptors, additional ecological evaluation is not warranted.

Potential transport pathways addressed in this checklist include migration of contaminants via air dispersion, leaching into groundwater, soil erosion/runoff, groundwater discharge to surface water, and irradiation. Due to New Mexico's semi-arid climate, vegetation is generally sparse. The sparse vegetation, combined with the intense nature of summer storms in New Mexico, results in soil erosion that occurs sporadically over a very brief time frame. Soil erosion may be of particular concern for sites located in steeply sloped areas. Several questions within Section IV of this checklist have been developed to aid in the identification of those sites where soil erosion/runoff would be an important transport mechanism.

USING THE CHECKLIST TO DEVELOP THE PRELIMINARY CONCEPTUAL SITE EXPOSURE MODEL

The completed Site Assessment Checklist can be used to construct the PCSEM. An example PCSEM diagram is presented in Figure 1. The CSM illustrates actual and potential contaminant migration and exposure pathways to associated receptors. The components of a complete exposure pathway are simplified and grouped into three main categories: sources, release mechanisms, and potential receptors. As a contaminant migrates and/or is transformed in the environment, sources and release mechanisms may expand into primary, secondary, and tertiary levels. For example, Figure 1 illustrates releases from inactive

lagoons (primary sources) through spills (primary release mechanism), which migrate to surface and subsurface soils (secondary sources), which are then leached (secondary release mechanism) to groundwater (tertiary source). Similarly, exposures of various trophic levels to the contaminant(s) and consequent exposures via the food chain may lead to multiple groups of receptors. For example, Figure 1 illustrates groups of both aquatic and terrestrial receptors which may be exposed and subsequently serve as tertiary release mechanisms to receptors which prey on them.

Although completing the checklist will not provide the user with a readymade PCSEM, a majority of the components of the PCSEM can be found in the answers to the checklist. It is then up to the user to put the pieces together into a comprehensive whole. The answers from Section II of the checklist, Site Characterization, can be used to identify sources of releases. The answers to Section IV, Exposure Pathway Evaluation, will assist users in tracing the migration pathways of releases in the environment, thus helping to identify release mechanisms and sources. The results of Section III, Habitat Evaluation, can be used to both identify secondary and tertiary sources and to identify the types of receptors which may be exposed. Appendix B of the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* also contains sample food webs which may be used to develop the PCSEM.

Once all of the components have been identified, one can begin tracing the steps between the primary releases and the potential receptors. For each potential receptor, the user should consider all possible exposure points (e.g., prey items, direct contact with contaminated soil or water, etc.) then begin eliminating pathways, which are not expected to result in exposure to the contaminant at the site. Gradually, the links between the releases and receptors can be filled in, resulting in potential complete exposure pathways.

For further guidance on constructing a PCSEM, consult the NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Assessment* (2000), and EPA's Office of Solid Waste and Emergency *Response's Soil Screening Guidance: User's Guide* (1996).

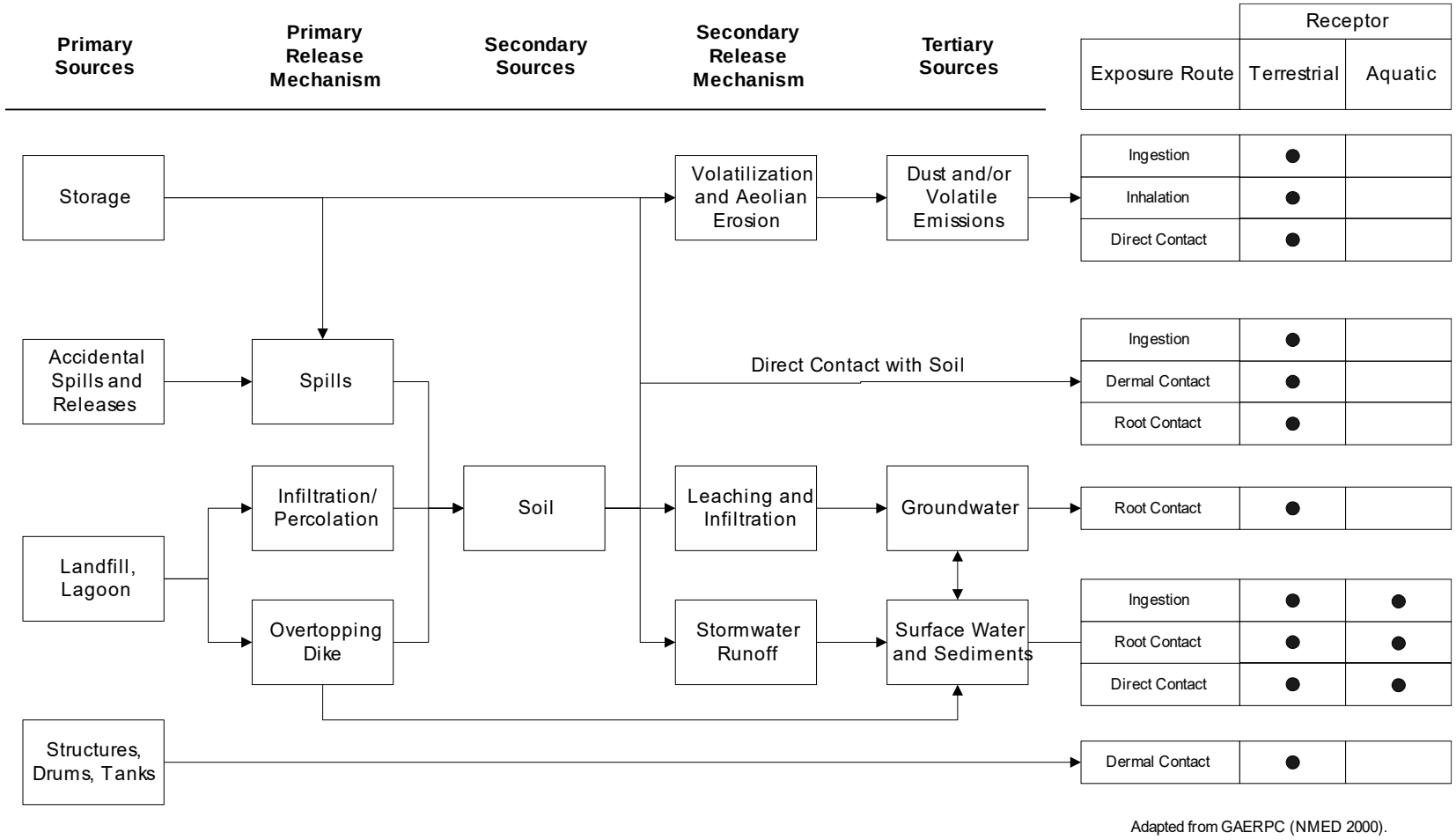

Figure 1. Example Preliminary Conceptual Site Exposure Model Diagram

NEW MEXICO ENVIRONMENT DEPARTMENT
SITE ASSESSMENT CHECKLIST

I. SITE LOCATION

1. Site Name: Maljamar South
US EPA I.D. Number:
Location: 5 miles southeast of Maljamar
County: Lea
City: Maljamar State: NM

2. Latitude: 32.811387 Longitude: -103.693093

3. Attach site maps, including a topographical map, a diagram which illustrates the layout of the facility (e.g., site boundaries, structures, etc.), and maps showing all habitat areas identified in Section III of the checklist. Also, include maps which illustrate known release areas, sampling locations, and any other important features, if available.

II. SITE CHARACTERIZATION

1. Indicate the approximate area of the site (i.e., acres or sq. ft) ~1.5 ac.
2. Provide an approximate breakdown of the land uses on the site:

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	90 % Undisturbed	5 % Other[c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, etc.):
_____

[b]For agricultural areas, please list the crops and/or livestock which are present:
_____

[c]For areas designated as "other", please describe the usage of the area:
Undeveloped land, generally utilized for oil/gas production; with numerous pipeline right-of-ways (ROWs) in site area

3. Provide an approximate breakdown of the land uses in the area surrounding the site. Indicate the radius (in miles) of the area described: _____

_____% Heavy Industrial	_____% Light Industrial	_____% Urban
_____% Residential	_____% Rural	_____% Agricultural[b]
_____% Recreational[a]	___90__% Undisturbed	_5____% Other [c]

[a]For recreational areas, please describe the usage of the area (e.g., park, playing field, golf course, etc.):
_____

[b]For agricultural areas, please list the crops and/or livestock which are present:
_____

[c]For areas designated as "other", please describe the usage of the area:
_____See No. 2
_____
_____

4. Describe reasonable and likely future land and/or water use(s) at the site.
_____It is likely that land use will not change in this area. No current or future use of water is known.
_____
_____
_____
_____
_____
_____

5. Describe the historical uses of the site. Include information on chemical releases that may have occurred as a result of previous land uses. For each chemical release, provide information on the form of the chemical released (i.e., solid, liquid, vapor) and the known or suspected causes or mechanism of the release (i.e., spills, leaks, material disposal, dumping, explosion, etc.).
___No previous land use other than that described above is known. No previous releases are known.
_____

6. If any movement of soil has taken place at the site, describe the degree of the disturbance. Indicate the likely source of any disturbances (e.g., erosion, agricultural, mining, industrial activities, removals, etc.) and estimate when these events occurred.
_____

Limited excavation (~1,500 cy (disposed off-site)) occurred at the site, to remediate visibly contaminated soils.

7. Describe the current uses of the site. Include information on recent (previous 5 years) disturbances or chemical releases that have occurred. For each chemical release, provide information on the form of the chemical released and the causes or mechanism of the release.

Pipeline ROW. Refer to Section 1.1 of URS's Excavation Backfilling and Source Area Characterization Technical Memorandum, dated June 28, 2007.

8. Identify the location or suspected location of chemical releases at the site. Provide an estimate of the distance between these locations and the areas identified in Section III.

Release, due to the result of internal corrosion, occurred along the 6-inch crude oil gathering line approximately 20 feet north of B-18/MW-7. No sensitive receptors known to exist in vicinity of release site.

9. Identify the suspected contaminants of concern (COCs) at the site. If known, include the maximum contaminant levels. Please indicate the source of data cited (e.g., RFI, confirmatory sampling, etc.).

Petroleum Hydrocarbons (BTEX, TPH)

Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, for maximum contaminant levels.

10. Identify the media (e.g., soil (surface or subsurface), surface water, air, groundwater) which are known or suspected to contain COCs.

Subsurface

11. Indicate the approximate depth to groundwater (in feet below ground surface [(bgs)].

____at least 108 feet bgs

12. Indicate the direction of groundwater flow (e.g., north, southeast, etc.)

____south

III. HABITAT EVALUATION

III.A Wetland Habitats

Are any wetland[2] areas such as marshes or swamps on or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the wetland area on the attached site map and answer the following questions regarding the wetland area. If more than one wetland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wetland area. Distinguish between wetland areas by using names or other designations (such as location), and clearly identify each area on the site map. Also, obtain and attach a National Wetlands Inventory Map (or maps) to illustrate each wetland area.

Identify the sources of the observations and information (e.g., National Wetland Inventory, Federal or State Agency, USGS topographic maps) used to make the determination that wetland areas are or are not present.

_____

_____

_____

_____

If no wetland areas are present, proceed to Section III.B.

2Wetlands are defined in 40 CFR §232.2 as " Areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Examples of typical wetlands plants include: cattails, cordgrass, willows and cypress trees. National wetland inventory maps may be available at http:\\nwi.fws.gov. Additional information on wetland delineation criteria is also available from the Army Corps of Engineers.

Wetland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the approximate area of the wetland (acres or ft^2)_____

2. Identify the type(s) of vegetation present in the wetland.

- ❑ Submergent (i.e., underwater) vegetation
- ❑ Emergent (i.e., rooted in the water, but rising above it) vegetation
- ❑ Floating vegetation
- ❑ Scrub/shrub
- ❑ Wooded
- ❑ Other (Please describe):_____

3. Estimate the vegetation density of the wetland area.

- ❑ Dense (i.e., greater than 75% vegetation)
- ❑ Moderate (i.e., 25% to 75% vegetation)
- ❑ Sparse (i.e., less than 25% vegetation)

4. Is standing water present? ☐ Yes ☐ No

If yes, is the water primarily: ☐ Fresh or ☐ Brackish
Indicate the approximate area of the standing water (ft^2): _____
Indicate the approximate depth of the standing water, if known (ft. or in.)_____

5. If known, indicate the source of the water in the wetland.

- ❑ Stream/River/Creek/Lake/Pond
- ❑ Flooding
- ❑ Groundwater
- ❑ Surface runoff

6. Is there a discharge from the facility to the wetland? ☐ Yes ☐ No

If yes, please describe:_____
_____
_____
_____
_____

Wetland Area Questions (Continued)

7. Is there a discharge from the wetland? ☐ Yes ☐ No
   If yes, indicate the type of aquatic feature the wetland discharges into:

   - ❑ Surface stream/River (Name:_____)
   - ❑ Lake/Pond (Name:_____)
   - ❑ Groundwater
   - ❑ Not sure

8. Does the area show evidence of flooding? ☐ Yes ☐ No
   If yes, indicate which of the following are present (mark all that apply):

   - ❑ Standing water
   - ❑ Water-saturated soils
   - ❑ Water marks
   - ❑ Buttressing
   - ❑ Debris lines
   - ❑ Mud cracks
   - ❑ Other (Please describe):_____

9. Animals observed in the wetland area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.B Aquatic Habitats
III.B.1 Non-Flowing Aquatic Features

Are any non-flowing aquatic features (such as ponds or lakes) located at or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the non-flowing aquatic features. If more than one non-flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.B.2.

Non-Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of aquatic feature present:

   - ❑ Natural (e.g., pond or lake)
   - ❑ Man-made (e.g., impoundment, lagoon, canal, etc.)

2. Estimate the approximate size of the water body (in acres or sq. ft.)_____

3. If known, indicate the depth of the water body (in ft. or in.)._____

Non-Flowing Aquatic Feature Questions (Continued)

4. Indicate the general composition of the bottom substrate. Mark all sources that apply from the following list.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

5. Indicate the source(s) of the water in the aquatic feature. Mark all sources that apply from the following list.

- ❑ River/Stream/Creek
- ❑ Groundwater
- ❑ Industrial Discharge
- ❑ Surface Runoff
- ❑ Other (please specify):_____

6. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:
   _____
   _____
   _____
   _____

7. Does the aquatic feature discharge to the surrounding environment? ☐ Yes ☐ No
   If yes, indicate the features from the following list into which the aquatic feature discharges, and indicate whether the discharge occurs onsite or offsite:

❑ River/Stream/Creek	☐ onsite	☐ offsite
❑ Groundwater	☐ onsite	☐ offsite
❑ Wetland	☐ onsite	☐ offsite
❑ Impoundment	☐ onsite	☐ offsite

❑ Other (please describe)_____

Non-Flowing Aquatic Feature Questions (Continued)

8. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Fish
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, turtles)
- ❑ Amphibians (e.g., frogs, salamanders)
- ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

Specify species, if known:

_____

_____

_____

_____

III.B.2 Flowing Aquatic Features

Are any flowing aquatic features (such as streams or rivers) located at or adjacent to the site?

☐ Yes ☒ No

If yes, indicate the aquatic feature on the attached site map and answer the following questions regarding the flowing aquatic features. If more than one flowing aquatic feature is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual aquatic feature. Distinguish between aquatic features by using names or other designations, and clearly identify each area on the site map

If no, proceed to Section III.C.

Flowing Aquatic Feature Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Indicate the type of flowing aquatic feature present.

- ❑ River
- ❑ Stream
- ❑ Creek
- ❑ Brook
- ❑ Dry wash
- ❑ Arroyo
- ❑ Intermittent stream
- ❑ Artificially created (ditch, etc.)
- ❑ Other (specify)
- ❑

2. Indicate the general composition of the bottom substrate.

☐ Bedrock	☐ Sand	☐ Concrete
☐ Boulder (>10 in.)	☐ Silt	☐ Debris
☐ Cobble (2.5 - 10 in.)	☐ Clay	☐ Detritus
☐ Gravel (0.1 - 2.5 in.)	☐ Muck (fine/black)	

☐ Other (please specify):_____

3. Describe the condition of the bank (e.g., height, slope, extent of vegetative cover) of the aquatic feature.

_____
_____
_____
_____

4. Is there a discharge from the facility to the aquatic feature? ☐ Yes ☐ No
   If yes, describe the origin of each discharge and its migration path:

_____
_____
_____
_____

5. Indicate the discharge point of the water body. Specify name, if known.

_____
_____
_____

Flowing Aquatic Feature Questions (Continued)

6. If the flowing aquatic feature is a dry wash or arroyo, answer the following questions.
   - ❑ Check here if feature is not a dry wash or arroyo

   If known, specify the average number of days in a year in which flowing water is present in the feature: _____

   Is standing water or mud present? Check all that apply.
   - ❑ Standing water
   - ❑ Mud
   - ❑ Neither standing water or mud

   Does the area show evidence of recent flow (e.g., flood debris clinging to vegetation)?
   - ❑ Yes
   - ❑ No
   - ❑ Not sure
7. Animals observed in the vicinity of the aquatic feature or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Fish
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, turtles)
   - ❑ Amphibians (e.g., frogs, salamanders)
   - ❑ Sediment-dwelling invertebrates (e.g., mussels, crayfish, insect nymphs)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.C Terrestrial Habitats
III.C.1 Wooded

Are any wooded areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the wooded area on the attached site map and answer the following questions. If more than one wooded area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual wooded area. Distinguish between wooded areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.2.

Wooded Area Questions – Not Applicable

☐ On-site ☐ Off-site

Name or Designation:_____

1. Estimate the approximate size of the wooded area (in acres or sq. ft.)_____

2. Indicate the dominant type of vegetation in the wooded area.

   - ❑ Evergreen
   - ❑ Deciduous
   - ❑ Mixed

   Dominant plant species, if known:_____

3. Estimate the vegetation density of the wooded area.

   - ❑ Dense (i.e., greater than 75% vegetation)
   - ❑ Moderate (i.e., 25% to 75% vegetation)
   - ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the predominant size of the trees at the site. Use diameter at chest height.

   - ❑ 0-6 inches
   - ❑ 6-12 inches
   - ❑ >12 inches
   - ❑ No single size range is predominant

5. Animals observed in the wooded area or suspected to be present based on indirect evidence or file material:

   - ❑ Birds
   - ❑ Mammals
   - ❑ Reptiles (e.g., snakes, lizards)
   - ❑ Amphibians (e.g., toads, salamanders)

   Specify species, if known:

   _____
   _____
   _____
   _____

III.C.2 Shrub/Scrub

Are any shrub/scrub areas on or adjacent to the site? X Yes ☐ No

If yes, indicate the shrub/scrub area on the attached site map and answer the following questions. If more than one shrub/scrub area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual shrub/scrub area. Distinguish between shrub/scrub areas, using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.3.

Shrub/Scrub Area Questions

~~☐~~ X Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the shrub/scrub area (in acres or sq. ft.~~).~~ _____~~.).~~ ~1.5 ac.

2. Indicate the dominant type of shrub/scrub vegetation present, if known.
Unknown

3. Estimate the vegetation density of the shrub/scrub area.

- ❑ Dense (i.e., greater than 75% vegetation)
- ❑ Moderate (i.e., 25% to 75% vegetation)
- ~~☐~~ X Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the scrub/shrub vegetation.

- ❑ 0-2 feet
- ~~☐~~ X 2-5 feet
- ❑ >5 feet

5. Animals observed in the shrub/scrub area or suspected to be present based on indirect evidence or file material:
- ~~☐~~ X Birds
- ~~☐~~ X Mammals
- ~~☐~~ X Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

Specify species, if known:
Unknown

III.C.3 Grassland

Are any grassland areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the grassland area on the attached site map and answer the following questions. If more than one grassland area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual grassland area. Distinguish between grassland areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.4.

Grassland Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the grassland area (in acres or sq. ft.)._____

2. Indicate the dominant plant type, if known.
_____
_____
_____
_____

3. Estimate the vegetation density of the grassland area.

- ❑ Dense (i.e., greater than 75% vegetation)
- ❑ Moderate (i.e., 25% to 75% vegetation)
- ❑ Sparse (i.e., less than 25% vegetation)

4. Indicate the approximate average height of the dominant plant type (in ft. or in.)_

5. Animals observed in the grassland area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

Specify species, if known:

III.C.4 Desert

Are any desert areas on or adjacent to the site? ☐ Yes ☒ No

If yes, indicate the desert area on the attached site map and answer the following questions. If more than one desert area is present on or adjacent to the site, make additional copies of the following questions and fill out for each individual desert area. Distinguish between desert areas by using names or other designations, and clearly identify each area on the site map.

If no, proceed to Section III.C.5.

Desert Area Questions – Not Applicable

☐ Onsite ☐ Offsite

Name or Designation:_____

1. Estimate the approximate size of the desert area (in acres or sq. ft.)._____

2. Describe the desert area (e.g., presence or absence of vegetation, vegetation types, presence/size of rocks, sand, etc.)

_____
_____
_____
_____
_____
_____
_____
_____
_____

3. Animals observed in the desert area or suspected to be present based on indirect evidence or file material:

- ❑ Birds
- ❑ Mammals
- ❑ Reptiles (e.g., snakes, lizards)
- ❑ Amphibians (e.g., toads, salamanders)

Specify species, if known:

_____

III.C.5 Other

1. Are there any other terrestrial communities or habitats on or adjacent to the site which were not previously described?

☐ Yes ☒ No

If yes, indicate the "other" area(s) on the attached site map and describe the area(s) below. Distinguish between onsite and offsite areas. If no, proceed to Section III.D.

III.D Sensitive Environments and Receptors

1. Do any other potentially sensitive environmental areas[3] exist adjacent to or within 0.5 miles of the site? If yes, list these areas and provide the source(s) of information used to identify sensitive areas. *Do not answer "no" without confirmation from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.* _____ Have submitted a request, pending response

3 Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young and overwintering. Refer to **Table 1** at the end of this document for examples of sensitive environments.

2. Are any areas on or near (i.e., within 0.5 miles) the site which are owned or used by local tribes? If yes, describe. *Contact the Tribal Liason in the Office of the Secretary (505)827-2855 to obtain this information.*

None identified, pending response from Mr. Milton Bluehouse.

4. Does the site serve or potentially serve as a habitat, foraging area, or refuge by rare, threatened, endangered, candidate and/or proposed species (plants or animals), or any otherwise protected species? If yes, identify species. *This information should be obtained from the U.S. Fish and Wildlife Service and appropriate State of New Mexico division.*

Unknown, awaiting response from the USFWS. However, according to the following website, http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats were identified.

5. Is the site potentially used as a breeding, roosting or feeding area by migratory bird species? If yes, identify which species.

Based on information obtained from http://criticalhabitat.fws.gov/, no threatened or endangered species critical habitats or migratory pathways were identified in the subject area

6. Is the site used by any ecologically[4], recreationally, or commercially important species? If

Seasonal cattle grazing may take place in the general vicinity of the site; however, this commercial endeavor has not been observed during site access/activities.

yes, explain.
NA

IV. EXPOSURE PATHWAY EVALUATION

1. Do existing data provide sufficient information on the nature, rate, and extent of contamination at the site?

☒ X Yes
☐ No
☐ Uncertain

Please provide an explanation for your answer:
Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007, and Delta's Groundwater Monitoring Report dated June ?, 2009

2. Do existing data provide sufficient information on the nature, rate, and extent of contamination in offsite affected areas?

☐ Yes
☐ No
☐ Uncertain
☒ X No offsite contamination

Please provide an explanation for your answer:

4 Ecologically important species include populations of species which provide a critical (i.e., not replaceable) food resource for higher organisms and whose function as such would not be replaced by more tolerant species; or perform a critical ecological function (such as organic matter decomposition) and whose functions will not be replaced by other species. Ecologically important species include pest and opportunistic species that populate an area if they serve as a food source for other species, but do not include domesticated animals (e.g., pets and livestock) or plants/animals whose existence is maintained by continuous human interventions (e.g., fish hatcheries, agricultural crops, etc.,)

_____ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

3. Do existing data address potential migration pathways of contaminants at the site?

☐ X Yes
❑ No
❑ Uncertain

Please provide an explanation for your answer:_____

_____ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

4. Do existing data address potential migration pathways of contaminants in offsite affected areas?

- ❑ Yes
- ❑ No
- ❑ Uncertain
- ☒ X No offsite contamination

Please provide an explanation for your answer:

5. Are there visible indications of stressed habitats or receptors on or near (i.e., within 0.5 miles) the site that may be the result of a chemical release? If yes, explain. Attach photographs if available.

No

6. Is the location of the contamination such that receptors might be reasonably expected to come into contact with it? For soil, this means contamination in the soil 0 to 5 feet below ground surface (bgs). If yes, explain.

No

7. Are receptors located in or using habitats where chemicals exist in air, soil, sediment or surface water? If yes, explain.

No

8. Could chemicals reach receptors via groundwater? Can chemicals leach or dissolve to groundwater? Are chemicals mobile in groundwater? Does groundwater discharge into receptor habitats? If yes, explain.

_No. No groundwater impact above New Mexico Human Health Maximum Concentration Levels identified.

9. Could chemicals reach receptors through runoff or erosion? Answer the following questions:

What is the approximate distance from the contaminated area to the nearest watercourse or arroyo?

- ❑ 0 feet (i.e., contamination has reached a watercourse or arroyo)
- ❑ 1-10 feet
- ❑ 11-20 feet
- ❑ 21-50 feet
- ❑ 51-100 feet
- ❑ 101-200 feet
- ❑ > 200 feet
- ❑ > 500 feet
- X > 1000 feet

What is the slope of the ground in the contaminated area?

- X 0-10%
- ❑ 10-30%
- ❑ > 30%

What is the approximate amount of ground and canopy vegetative cover in the contaminated area?

- ❑ X < 25%
- ❑ 25-75%
- ❑ > 75%

Is there visible evidence of erosion (e.g., a rill or gully) in or near the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

Do any structures, pavement, or natural drainage features direct run-on flow (i.e., surface flows originating upstream or uphill from the area of concern) into the contaminated area?

- ❑ Yes
- ❑ X No
- ❑ Do not know

10. Could chemicals reach receptors through the dispersion of contaminants in air (e.g., volatilization, vapors, fugitive dust)? If yes, explain.

No. Residual de Minimis soil contamination located at least 25 feet bgs.

11. Could chemicals reach receptors through migration of non-aqueous phase liquids (NAPLs)? Is a NAPL present at the site that might be migrating towards receptors or habitats? Could NAPL discharge contact receptors or their habitat? No. No NAPLs exist at the site.

12. Could receptors be impacted by external irradiation at the site? Are gamma emitting radionuclides present at the site? Is the radionuclide contamination buried or at the surface?

No. No radionuclide contamination exists at the site.

PHOTOGRAPHIC DOCUMENTATION

During the site visit(s), photographs should be taken to document the current conditions at the site and to support the information entered in the checklist. For example, photographs may be used to document the following:

- The nature, quality, and distribution of vegetation at the site
- Receptors or evidence of receptors
- Potentially important ecological features, such as ponds and drainage ditches
- Potential exposure pathways
- Any evidence of contamination or impact

The following space may be used to record photo subjects.

Please refer to previous reports submitted by Conestoga-Rovers and Associates and URS, Inc.

SUMMARY OF OBSERVATIONS AND SITE SETTING

Include information on significant source areas and migration pathways that are likely to constitute complete exposure pathways.

___ Refer to URS reports, *Technical Memorandum – Initial Exploratory Soil Boring Program*, dated December 6, 2006, and *Excavation Backfilling and Source Area Characterization Technical Memorandum*, dated June 28, 2007

Checklist Completed by_____Michael Henn

Affiliation____Project Manager for Delta Consultants

Author Assisted by_____

Date_____June 10, 2009

TABLE 1
EXAMPLES OF SENSITIVE ENVIRONMENTS

National Parks and National Monuments

Designated or Administratively Proposed Federal Wilderness Areas

National Preserves

National or State Wildlife Refuges

National Lakeshore Recreational Areas

Federal land designated for protection of natural ecosystems

State land designated for wildlife or game management

State designated Natural Areas

Federal or state designated Scenic or Wild River

All areas that provide or could potentially provide critical habitat[1] for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern

All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes

All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

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1 Critical habitats are defined by the Endangered Species Act (50 CFR §424.02(d)) as:

> 1) Specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (ii) that may require special management considerations or protection, and 2) Specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary [of Interior] that such areas are essential for the conservation of the species.

All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)

All areas that provide or could potentially provide habitat for song birds as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)

All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)

All areas that provide or could potentially provide habitat for horned toads and Bullfrogs as protected by the State of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, resp.)

All perennial waters (e.g., rivers, lakes, playas, sloughs, ponds, etc)

All ephemeral drainage (e.g., arroyos, puddles/pools, intermittent streams, etc) that provide significant wildlife habitat or that could potentially transport contaminants off site to areas that provide wildlife habitat

All riparian habitats

All perennial and ephemeral wetlands (not limited to jurisdictional wetlands)

All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle.

ATTACHMENT B

ECOLOGICAL SITE EXCLUSION CRITERIA CHECKLIST AND DECISION TREE

1. NEW MEXICO ECOLOGICAL EXCLUSION CRITERIA CHECKLIST

The following questions are designed to be used in conjunction with the Ecological Exclusion Criteria Decision Tree (Figure 1). After answering each question, refer to the Decision Tree to determine the appropriate next step. In some cases, questions will be omitted as the user is directed to another section as indicated by the flow diagram in the Decision Tree. For example, if the user answers "yes" to Question 1 of Section I, he or she is directed to proceed to Section II.

I. Habitat

In the following questions, "affected property" refers to all property on which a release has occurred or is believed to have occurred, including off-site areas where contamination may have occurred or migrated.

1. Are any of the below-listed sensitive environments at, adjacent to, or in the locality1 of the affected property? None known.

- National Park or National Monument
- Designated or administratively proposed Federal Wilderness Area
- National Preserve
- National or State Wildlife Refuge
- Federal or State land designated for wildlife or game management
- State designated Natural Areas
- All areas that are owned or used by local tribes
- All areas that are potentially important breeding, staging, and overwintering habitats as well as other habitats important for the survival of animals during critical periods of their life cycle
- All areas that provide or could potentially provide habitat for state and federally listed Threatened or Endangered Species, those species that are currently petitioned for listing, and species designated by other agencies as sensitive or species of concern
- All areas that provide or could potentially provide habitat for state protected species as defined in the Wildlife Code, Chapter 17 of the New Mexico Statutes
- All areas that provide or could potentially provide habitat for migratory birds as protected by the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

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1 *Locality* of the site refers to any area where an ecological receptor is likely to contact site-related chemicals. The locality of the site considers the likelihood of contamination migrating over time and places the site in the context of its general surrounding. Therefore, the locality is typically larger than the site and the areas adjacent to the site.

- All areas that provide or could potentially provide habitat for bald eagles and golden eagles as protected by the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d)
- All areas that provide or could potentially provide habitat for song birds as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-13)
- All areas that provide or could potentially provide habitat for hawks, vultures and owls as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-14)
- All areas that provide or could potentially provide habitat for horned toads and bullfrogs as protected by the state of New Mexico statute (New Mexico Statute, 1978, Chapter 17, Game and Fish, 17-2-15 and 16, respectively)

2. Does the affected property contain land areas which were not listed in Question 1, but could be considered viable ecological habitat? The following are examples (but not a complete listing) of viable ecological habitats:

- Wooded areas
- **Shrub/scrub vegetated areas**
- Open fields (prairie)
- Other grassy areas
- Desert areas
- Any other areas which support wildlife and/or vegetation, excluding areas which support only opportunistic species (such as house mice, Norway rats, pigeons, etc.) that do not serve as prey to species in adjacent habitats.

The following features are not considered ecologically viable:

- Pavement
- Buildings
- Paved areas of roadways
- Paved/concrete equipment storage pads
- Paved manufacturing or process areas
- Other non-natural surface cover or structure

3. Does the affected property contain any perennial or ephemeral aquatic features which were not listed in Question 1? No

II. Receptors

1. Is any part of the affected property used for habitat, foraging area, or refuge by any rare, threatened, or endangered species (plant *or* animal), or otherwise protected species (e.g., raptors, migratory birds)? None known.

2. Is any part of the affected property used for habitat, foraging area, or refuge by any species used as a recreational (e.g., game animals) and/or commercial resource? Potentially used for seasonal cattle grazing.

3. Is any part of the affected property used for habitat, foraging area, or refuge by any plant or animal species? This includes plants considered "weeds" and opportunistic insect and animal species (such as cockroaches and rats) if they are used as a food source for other species in the area. None known.

III. Exposure Pathways

1. Could receptors be impacted by contaminants via direct contact?

   Is a receptor located in or using an area where it could contact contaminated air, soil3, or surface water? No.

For Questions 2 and 3, note that one must answer "yes" to all three bullets in order to be directed to the "exclusion denied" box of the decision tree. This is because answering "no" to one of the questions in the bullet list indicates that a complete exposure pathway is not present. For example, in Question 2, if the chemical cannot leach or dissolve to groundwater (bullet 1), there is no chance of ecological receptors being exposed to the chemical through contact with contaminated groundwater. Similarly, the responses to the questions in Question 4 determine whether a complete pathway exists for exposure to NAPL.

2. Could receptors contact contaminants via groundwater? No.
   - Can the chemical leach or dissolve to groundwater4?
   - Can groundwater mobilize the chemical?
   - Could (does) contaminated groundwater discharge into known or potential receptor habitats?

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3 For soil, this means contamination less than 5 feet below ground surface (bgs).

4 Information on the environmental fate of specific chemicals can be found on the Internet at *http://www.epa.gov/opptintr/chemfact/* or at a local library in published copies of the *Hazardous Substances Data Bank*.

3. Could receptors contact contaminants via runoff (i.e., surface water and/or suspended sediment) or erosion by water or wind? No.
   - Are chemicals present in surface soils?
   - Can the chemical be leached from or eroded with surface soils?
   - Is there a receptor habitat located downgradient of the leached/eroded surface soil?

4. Could receptors contact contaminants via migration of non-aqueous phase liquids (NAPL)? No
   - Is NAPL present at the site?
   - Is NAPL migrating toward potential receptors or habitats?
   - Could NAPL discharge impact receptors or habitats?

Figure 1 -Ecological Exclusion Criteria Decision Tree

(Refer to corresponding checklist for the full text of each question)

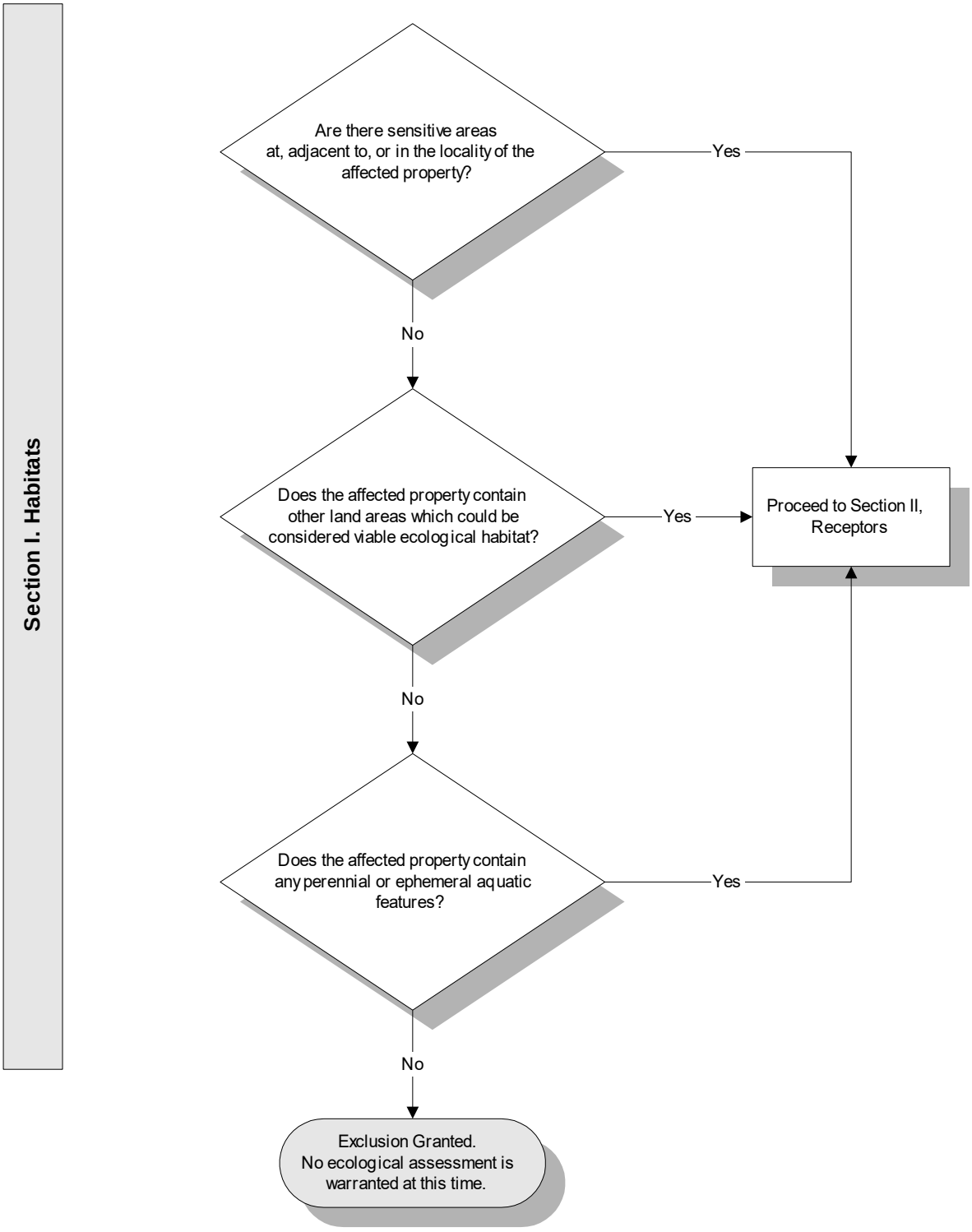


Figure 1 - Exclusion Criteria Decision Tree (continued)

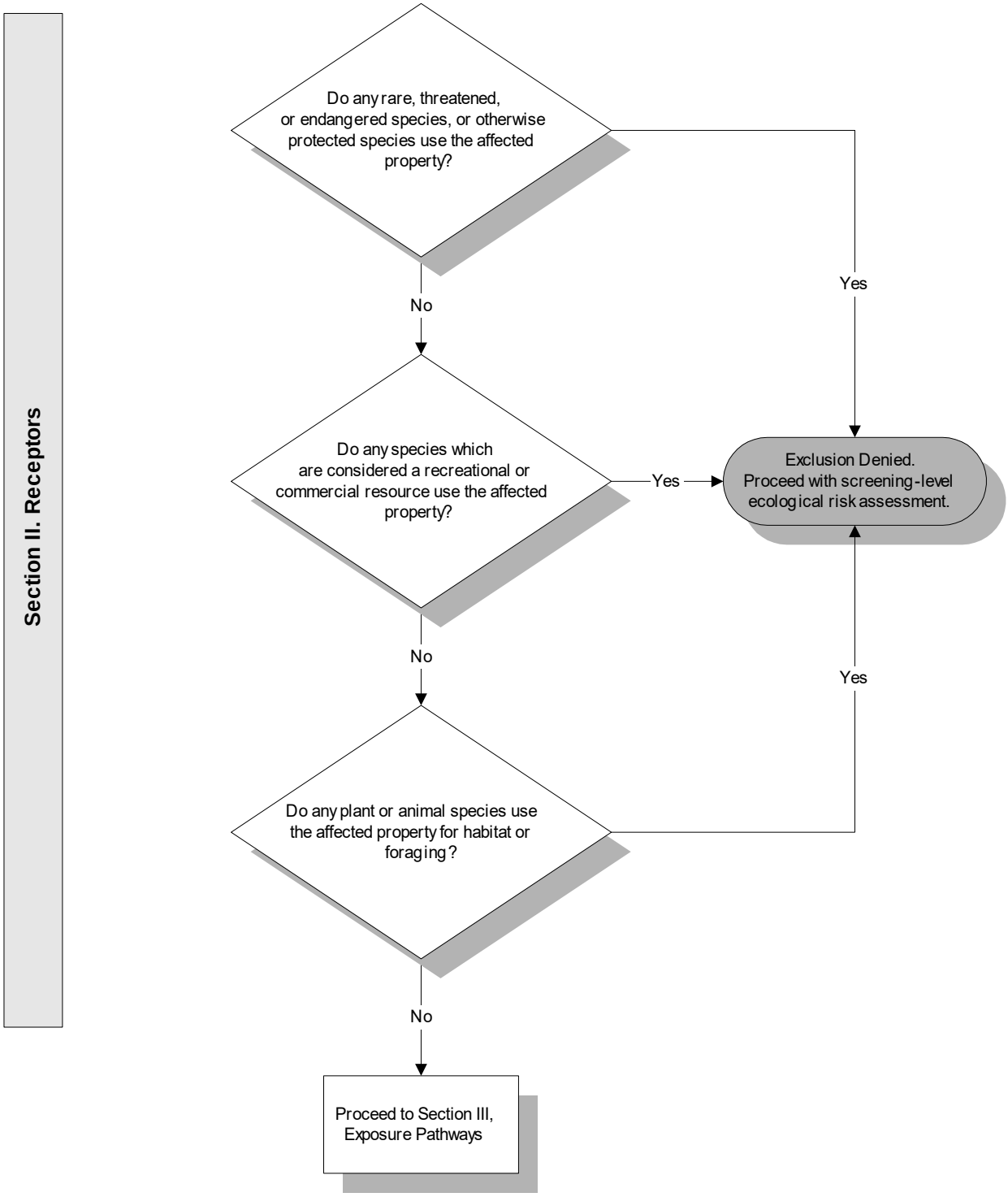
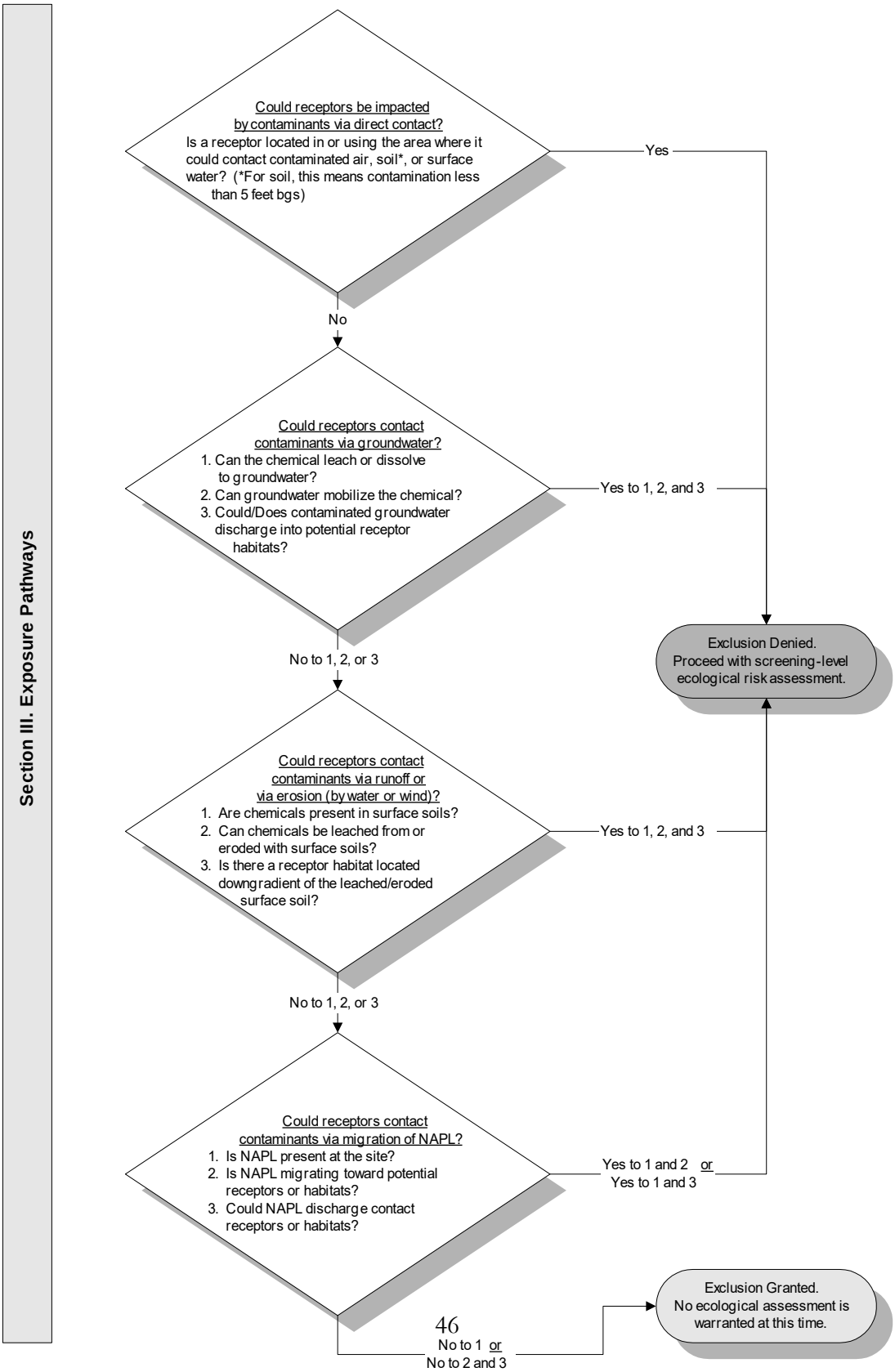


Figure 1 - Exclusion Criteria Decision Tree (continued)



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

CONDITIONS

Action 22003

CONDITIONS

Operator: CENTURION PIPELINE L.P. 516 Veterans Airpark Lane Midland, TX 79705	OGRID: 237722
	Action Number: 22003
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	None	4/26/2023