

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

REC'D 4/22/09
NMOCD

Form C-144
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Modification to an existing permit
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: MEWBOURNE OIL COMPANY _____ OGRID #: 14744 _____
Address: PO BOX 5270 HOBBS NEW MEXICO 88241 _____
Facility or well name: Quick Draw 15 G #1 _____
API Number: 30-015-36752 _____ OCD Permit Number: _____
U/L or Qtr/Qtr G _____ Section 15 _____ Township 20S _____ Range 25E _____ County: Eddy _____
Center of Proposed Design: Latitude 32° 34' 33" N _____ Longitude 104° 28' 16" W _____ NAD: X 1927 ☐ 1983
Surface Owner: Federal ☐ State X Private ☐ Tribal Trust or Indian Allotment

2.
X Pit: Subsection F or G of 19.15.17.11 NMAC
Temporary: X Drilling Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
X Lined ☐ Unlined Liner type: Thickness _____ mil X LLDPE ☐ HDPE ☐ PVC ☐ Other _____
X String-Reinforced
Liner Seams: X Welded X Factory ☐ Other _____ Volume: 3000 _____ bbl Dimensions: L 70 _____ x W 30 _____ x D 10 _____

3.
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4.
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: _____ bbl Type of fluid: _____
Tank Construction material: _____
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness _____ mil ☐ HDPE ☐ PVC ☐ Other _____

5.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Form C-144
Final Closure date: 2/26/09
Oil Conservation Division

6.

Fencing: Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☐ Alternate. Please specify _____

7.

Netting: Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other _____
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.

Signs: Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☐ Signed in compliance with 19.15.3.103 NMAC

9.

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

- ☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

11.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12.

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: _____

☐ Previously Approved Operating and Maintenance Plan API Number: _____ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

Proposed Closure: 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System

☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal

☐ Waste Removal (Closed-loop systems only)

☐ On-site Closure Method (Only for temporary pits and closed-loop systems)

☐ In-place Burial ☐ On-site Trench Burial

☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

Required for impacted areas which will not be used for future service and operations

☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC

Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No
☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No
☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No
☐ NA

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC

☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC

☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

20.

OCD Approval: ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: _____ Approval Date: _____

Title: _____ OCD Permit Number: _____

21.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

X Closure Completion Date: 2/26/09

22.

Closure Method:

X Waste Excavation and Removal On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

X If different from approved plan, please explain. **Due to breach in liner the drill cuttings were excavated and hauled.**

23.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

24.

Closure Report Attachment Checklist: *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

Proof of Closure Notice (surface owner and division)

Proof of Deed Notice (required for on-site closure)

Plot Plan (for on-site closures and temporary pits)

X Confirmation Sampling Analytical Results (if applicable)

Waste Material Sampling Analytical Results (required for on-site closure)

X Disposal Facility Name and Permit Number

X Soil Backfilling and Cover Installation

Re-vegetation Application Rates and Seeding Technique

Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: 1927 ☐ 1983

25.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Charles Martin Title: Engineer

Signature: Charles F. Martin Date: 4-20-09

e-mail address: CMartin@Mewbourne.com Telephone: (575) 393-5905

Accepted for record
NMOCD

APR 27 2009



March 4, 2009

APR 22 2009

AMARILLO
912 North Bivins
Amarillo, Texas 79107
Phone 800.467.0807
Fax 800.467.0622

Mike Bratcher
New Mexico Oil Conservation Division
District 2 office
1301 W. Grand Avenue
Artesia, New Mexico 88210

RE: Request for closure of the QUICK DRAW 15 G #1.

AUSTIN
3003 East Gary Cove
Building C-100
Grand Prairie, Texas 75064
Phone 529.888.3423
Fax 529.888.3437

In February 2009, Talon/LPE was contracted by the Mewbourne Oil Company to perform the pit closure activities at the QUICK DRAW 15 G #1, API# 30-015-36752, Unit G Sec 15-T20S-R25E, in Eddy county New Mexico. The C-144 for this pit closure was submitted to Mike Bratcher and approved on January 26, 2009.

LEA LAND
49 East Industrial Loop
Midland, Texas 79701
Phone 432.622.7433
Fax 432.622.2180

On February 11, 2009 Mewbourne oil contacted Talon/LPE to close the reserve pit at the QUICK DRAW 15 G #1. The pit was originally permitted to be closed in place, but due to a breach in the liner the cuttings were excavated and transported to Lea Land Disposal Facility (WM-01-035). Mike Bratcher with the New Mexico Oil Conservation was advised of the breach and met Charles Martin with Mewbourne Oil Company and Eb Taylor with Talon/LPE on site. Talon/LPE was asked to collect three samples from the reserve pit area after the completion of excavation. One sample was to be collected from the wall of the reserve pit where the breach occurred, one sample from the reserve pit floor where the breach occurred and one five point composite sample from the remainder of the reserve pit floor. When the excavation of the drill cuttings was completed Mike Bratcher was notified of the planned sampling of the reserve pit on February 16, 2009. On February 16, 2009 three samples were collected from the reserve pit area as instructed by Mike Bratcher. The samples were delivered to Trace Laboratory and analyzed in compliance with 19.15.17.13 NMAC for official analytical results. After review of the analytical results it was determined that the reserve pit area could be backfilled. The area where the reserve pit had been constructed was on the production location so seeding will be conducted at the cessation of production during the reclamation process.

NEW BRASS FIELD
217 N. Walnut Ave.
Suite 200
New Brassfield, Texas 79080
Phone 409.577.0735
Fax 409.577.2191

FULSA
8900 East 43rd Street, Ste. G
Fulshear, TX 77446
Phone 281.742.0371
Fax 281.742.0376

HOBBBS
318 East Taylor Street
Hobbs, New Mexico 88241
Phone 505.326.4261
Fax 505.326.4658

After review of attached documents and analysis by the NMOCD, Talon/LPE, and Mewbourne Oil Company we are requesting that this pit be considered properly closed.

Sincerely,

Eb Taylor
New Mexico Division Manager
Talon/LPE

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
EMERGENCY RESPONSE

Toll Free: 888.742.0742
www.talonlpe.com

TRACE ANALYSIS, INC.

6701 American Avenue, Suite 100 Lubbock, Texas 79424 806•574•1701 806•794•1296 FAX 806•794•1296
 200 East Sunset Street, Suite 100 El Paso, Texas 79901 915•541•3443 915•541•4944 FAX 915•541•4944
 13025 East Street, Suite A Midland, Texas 79701 432•684•6001 432•684•6001 FAX 432•684•6001
 1015 Harris Parkway, Suite 100 Fort Worth, Texas 76134 817•201•3230 817•201•3230 FAX 817•201•3230

Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX **El Paso:** T104704221-08-TX **Midland:** T104704392-08-TX
 LELAP-02003 LELAP-02002
 Kansas E-10317

Analytical and Quality Control Report

Eb Taylor
 Talon LPE-Hobbs
 318 E Taylor
 Hobbs, NM, 88240

Report Date: February 25, 2009

Work Order: 9022324



Project Location: Eddy Co., NM
 Project Name: Quick Draw ISG #1
 Project Number: MEWB0UO39PIT

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

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
188226	Side Wall	soil	2009-02-16	11:00	2009-02-23
188227	Floor Composite	soil	2009-02-16	11:10	2009-02-23
188228	Rip at Floor	soil	2009-02-16	11:30	2009-02-23

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Quick Draw ISG #1 were received by TraceAnalysis, Inc. on 2009-02-23 and assigned to work order 9022324. Samples for work order 9022324 were received intact at a temperature of 4.8 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
BTEX	S 8021B	48771	2009-02-23 at 17:00	57089	2009-02-23 at 17:00
Chloride (Titration)	SM 4500-Cl B	48774	2009-02-23 at 16:00	57094	2009-02-24 at 09:20
TPH 418.1	E 418.1	48787	2009-02-24 at 12:00	57110	2009-02-24 at 14:39
TPH DRO	Mod. 8015B	48752	2009-02-23 at 08:30	57095	2009-02-23 at 16:30
TPH GRO	S 8015B	48771	2009-02-23 at 17:00	57090	2009-02-23 at 17:00

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9022324 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: February 25, 2009
MEWBOUO39PIT

Work Order: 9022324
Quick Draw ISG #1

Page Number: 4 of 17
Eddy Co., NM

Analytical Report

Sample: 188226 - Side Wall

Laboratory: Midland
Analysis: BTEX
QC Batch: 57089
Prep Batch: 48771

Analytical Method: S 8021B
Date Analyzed: 2009-02-23
Sample Preparation: 2009-02-23

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.977	mg/Kg	1	1.00	98	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.865	mg/Kg	1	1.00	86	45.2 - 144.3

Sample: 188226 - Side Wall

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 57094
Prep Batch: 48774

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-02-24
Sample Preparation: 2009-02-23

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 188226 - Side Wall

Laboratory: Lubbock
Analysis: TPH 418.1
QC Batch: 57110
Prep Batch: 48787

Analytical Method: E 418.1
Date Analyzed: 2009-02-24
Sample Preparation: 2009-02-24

Prep Method: N/A
Analyzed By: CM
Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

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Sample: 188226 - Side Wall

Laboratory:	Midland		
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B
QC Batch:	57095	Date Analyzed:	2009-02-23
Prep Batch:	48752	Sample Preparation:	2009-02-23
		Prep Method:	N/A
		Analyzed By:	LD
		Prepared By:	LD

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		120	mg/Kg	1	100	120	10 - 250.4

Sample: 188226 - Side Wall

Laboratory:	Midland		
Analysis:	TPH GRO	Analytical Method:	S 8015B
QC Batch:	57090	Date Analyzed:	2009-02-23
Prep Batch:	48771	Sample Preparation:	2009-02-23
		Prep Method:	S 5035
		Analyzed By:	ME
		Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.870	mg/Kg	1	1.00	87	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.15	mg/Kg	1	1.00	115	52 - 117

Sample: 188227 - Floor Composite

Laboratory:	Midland		
Analysis:	BTEX	Analytical Method:	S 8021B
QC Batch:	57089	Date Analyzed:	2009-02-23
Prep Batch:	48771	Sample Preparation:	2009-02-23
		Prep Method:	S 5035
		Analyzed By:	ME
		Prepared By:	ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.964	mg/Kg	1	1.00	96	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.861	mg/Kg	1	1.00	86	45.2 - 144.3

Sample: 188227 - Floor Composite

Laboratory: Midland
Analysis: Chloride (Titration) Analytical Method: SM 4500-Cl B Prep Method: N/A
QC Batch: 57094 Date Analyzed: 2009-02-24 Analyzed By: AR
Prep Batch: 48774 Sample Preparation: 2009-02-23 Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

Sample: 188227 - Floor Composite

Laboratory: Lubbock
Analysis: TPH 418.1 Analytical Method: E 418.1 Prep Method: N/A
QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
Prep Batch: 48787 Sample Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188227 - Floor Composite

Laboratory: Midland
Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A
QC Batch: 57095 Date Analyzed: 2009-02-23 Analyzed By: LD
Prep Batch: 48752 Sample Preparation: 2009-02-23 Prepared By: LD

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		105	mg/Kg	1	100	105	10 - 250.4

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Sample: 188227 - Floor Composite

Laboratory: Midland
Analysis: TPH GRO
QC Batch: 57090
Prep Batch: 48771

Analytical Method: S 8015B
Date Analyzed: 2009-02-23
Sample Preparation: 2009-02-23

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.871	mg/Kg	1	1.00	87	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.15	mg/Kg	1	1.00	115	52 - 117

Sample: 188228 - Rip at Floor

Laboratory: Midland
Analysis: BTEX
QC Batch: 57089
Prep Batch: 48771

Analytical Method: S 8021B
Date Analyzed: 2009-02-23
Sample Preparation: 2009-02-23

Prep Method: S 5035
Analyzed By: ME
Prepared By: ME

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.971	mg/Kg	1	1.00	97	49 - 129.7
4-Bromofluorobenzene (4-BFB)		0.885	mg/Kg	1	1.00	88	45.2 - 144.3

Sample: 188228 - Rip at Floor

Laboratory: Midland
Analysis: Chloride (Titration)
QC Batch: 57094
Prep Batch: 48774

Analytical Method: SM 4500-Cl B
Date Analyzed: 2009-02-24
Sample Preparation: 2009-02-23

Prep Method: N/A
Analyzed By: AR
Prepared By: AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<200	mg/Kg	50	4.00

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Sample: 188228 - Rip at Floor

Laboratory:	Lubbock	Analytical Method:	E 418.1	Prep Method:	N/A
Analysis:	TPH 418.1	Date Analyzed:	2009-02-24	Analyzed By:	CM
QC Batch:	57110	Sample Preparation:	2009-02-24	Prepared By:	CM
Prep Batch:	48787				

Parameter	Flag	RL Result	Units	Dilution	RL
TRPHC		<10.0	mg/Kg	1	10.0

Sample: 188228 - Rip at Floor

Laboratory:	Midland	Analytical Method:	Mod. 8015B	Prep Method:	N/A
Analysis:	TPH DRO	Date Analyzed:	2009-02-23	Analyzed By:	LD
QC Batch:	57095	Sample Preparation:	2009-02-23	Prepared By:	LD
Prep Batch:	48752				

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		117	mg/Kg	1	100	117	10 - 250.4

Sample: 188228 - Rip at Floor

Laboratory:	Midland	Analytical Method:	S 8015B	Prep Method:	S 5035
Analysis:	TPH GRO	Date Analyzed:	2009-02-23	Analyzed By:	ME
QC Batch:	57090	Sample Preparation:	2009-02-23	Prepared By:	ME
Prep Batch:	48771				

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.926	mg/Kg	1	1.00	93	68.5 - 119.4
4-Bromofluorobenzene (4-BFB)		1.16	mg/Kg	1	1.00	116	52 - 117

Method Blank (1) QC Batch: 57089

QC Batch: 57089
Prep Batch: 48771

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00100	mg/Kg	0.01
Toluene		<0.00100	mg/Kg	0.01
Ethylbenzene		<0.00110	mg/Kg	0.01
Xylene		<0.00360	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.963	mg/Kg	1	1.00	96	65.6 - 130.6
4-Bromofluorobenzene (4-BFB)		0.802	mg/Kg	1	1.00	80	51.9 - 128.1

Method Blank (1) QC Batch: 57090

QC Batch: 57090
Prep Batch: 48771

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Parameter	Flag	MDL Result	Units	RL
GRO		<0.482	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.883	mg/Kg	1	1.00	88	75.8 - 98.5
4-Bromofluorobenzene (4-BFB)		1.08	mg/Kg	1	1.00	108	56.5 - 109.5

Method Blank (1) QC Batch: 57094

QC Batch: 57094
Prep Batch: 48774

Date Analyzed: 2009-02-24
QC Preparation: 2009-02-23

Analyzed By: AR
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<2.01	mg/Kg	4

Method Blank (1) QC Batch: 57095

QC Batch: 57095
Prep Batch: 48752

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: LD
Prepared By: LD

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		91.9	mg/Kg	1	100	92	30.9 - 146.4

Method Blank (1) QC Batch: 57110

QC Batch: 57110 Date Analyzed: 2009-02-24 Analyzed By: CM
Prep Batch: 48787 QC Preparation: 2009-02-24 Prepared By: CM

Parameter	Flag	MDL Result	Units	RL
TRPHC		<5.28	mg/Kg	10

Laboratory Control Spike (LCS-1)

QC Batch: 57089 Date Analyzed: 2009-02-23 Analyzed By: ME
Prep Batch: 48771 QC Preparation: 2009-02-23 Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.888	mg/Kg	1	1.00	<0.00100	89	72.7 - 129.8
Toluene	0.894	mg/Kg	1	1.00	<0.00100	89	71.6 - 129.6
Ethylbenzene	0.900	mg/Kg	1	1.00	<0.00110	90	70.8 - 129.7
Xylene	2.63	mg/Kg	1	3.00	<0.00360	88	70.9 - 129.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.879	mg/Kg	1	1.00	<0.00100	88	72.7 - 129.8	1	20
Toluene	0.884	mg/Kg	1	1.00	<0.00100	88	71.6 - 129.6	1	20
Ethylbenzene	0.901	mg/Kg	1	1.00	<0.00110	90	70.8 - 129.7	0	20
Xylene	2.64	mg/Kg	1	3.00	<0.00360	88	70.9 - 129.4	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.960	0.969	mg/Kg	1	1.00	96	97	65.9 - 132
4-Bromofluorobenzene (4-BFB)	0.824	0.834	mg/Kg	1	1.00	82	83	55.2 - 128.9

Laboratory Control Spike (LCS-1)

QC Batch: 57090
Prep Batch: 48771

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	7.26	mg/Kg	1	10.0	<0.482	73	60.5 - 100.1

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	6.80	mg/Kg	1	10.0	<0.482	68	60.5 - 100.1	6	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.882	0.842	mg/Kg	1	1.00	88	84	78.8 - 104.7
4-Bromofluorobenzene (4-BFB)	1.05	1.04	mg/Kg	1	1.00	105	104	66.1 - 107.3

Laboratory Control Spike (LCS-1)

QC Batch: 57094
Prep Batch: 48774

Date Analyzed: 2009-02-24
QC Preparation: 2009-02-23

Analyzed By: AR
Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<2.01	101	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	99.4	mg/Kg	1	100	<2.01	99	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 57095
Prep Batch: 48752

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: LD
Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	249	mg/Kg	1	250	<12.0	100	27.8 - 152.1

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	254	mg/Kg	1	250	<12.0	102	27.8 - 152.1	2	20

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

Surrogate	LCS Result	LCS Result	Units	Dil.	Spike Amount	LCS Rec.	LCS Rec.	Rec. Limit
n-Triacontane	120	120	mg/Kg	1	100	120	120	38 - 130.4

Laboratory Control Spike (LCS-1)

QC Batch: 57110
Prep Batch: 48787

Date Analyzed: 2009-02-24
QC Preparation: 2009-02-24

Analyzed By: CM
Prepared By: CM

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
TRPHC	260	mg/Kg	1	250	<5.28	104	75.5 - 136

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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
TRPHC	265	mg/Kg	1	250	<5.28	106	75.5 - 136	2	20

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

Matrix Spike (MS-1) Spiked Sample: 188234

QC Batch: 57089
Prep Batch: 48771

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.758	mg/Kg	1	1.00	<0.00100	76	58.6 - 165.2
Toluene	0.731	mg/Kg	1	1.00	<0.00100	73	64.2 - 153.8
Ethylbenzene	0.719	mg/Kg	1	1.00	<0.00110	72	61.6 - 159.4
Xylene	2.14	mg/Kg	1	3.00	<0.00360	71	64.4 - 155.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	¹ 0.961	mg/Kg	1	1.00	<0.00100	96	58.6 - 165.2	24	20
Toluene	² 0.952	mg/Kg	1	1.00	<0.00100	95	64.2 - 153.8	26	20

continued ...

¹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

²MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Ethylbenzene	³ 0.958	mg/Kg	1	1.00	<0.00110	96	61.6 - 159.4	28	20
Xylene	⁴ 2.86	mg/Kg	1	3.00	<0.00360	95	64.4 - 155.3	29	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.964	0.961	mg/Kg	1	1	96	96	76 - 127.9
4-Bromofluorobenzene (4-BFB)	1.00	1.01	mg/Kg	1	1	100	101	72 - 127.8

Matrix Spike (MS-1) Spiked Sample: 188228

QC Batch: 57090
Prep Batch: 48771

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: ME
Prepared By: ME

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	17.3	mg/Kg	1	10.0	<0.482	173	12.8 - 175.2

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	17.3	mg/Kg	1	10.0	<0.482	173	12.8 - 175.2	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.904	0.990	mg/Kg	1	1	90	99	60.8 - 132.1
4-Bromofluorobenzene (4-BFB)	1.26	1.25	mg/Kg	1	1	126	125	31.3 - 161.7

Matrix Spike (MS-1) Spiked Sample: 188228

QC Batch: 57094
Prep Batch: 48774

Date Analyzed: 2009-02-24
QC Preparation: 2009-02-23

Analyzed By: AR
Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	5100	mg/Kg	50	5000	<100	101	85 - 115

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

³MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

⁴MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	5150	mg/Kg	50	5000	<100	102	85 - 115	1	20

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

Matrix Spike (MS-1) Spiked Sample: 188226

QC Batch: 57095
Prep Batch: 48752

Date Analyzed: 2009-02-23
QC Preparation: 2009-02-23

Analyzed By: LD
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	259	mg/Kg	1	250	<12.0	104	18 - 179.5

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	310	mg/Kg	1	250	<12.0	124	18 - 179.5	18	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	122	123	mg/Kg	1	100	122	123	34.1 - 158

Matrix Spike (MS-1) Spiked Sample: 187705

QC Batch: 57110
Prep Batch: 48787

Date Analyzed: 2009-02-24
QC Preparation: 2009-02-24

Analyzed By: CM
Prepared By: CM

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
TRPHC	224	mg/Kg	1	250	<5.28	90	10 - 354

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
TRPHC	235	mg/Kg	1	250	<5.28	94	10 - 354	5	20

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

Standard (ICV-1)

QC Batch: 57089

Date Analyzed: 2009-02-23

Analyzed By: ME

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Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0988	99	85 - 115	2009-02-23
Toluene		mg/Kg	0.100	0.0999	100	85 - 115	2009-02-23
Ethylbenzene		mg/Kg	0.100	0.101	101	85 - 115	2009-02-23
Xylene		mg/Kg	0.300	0.294	98	85 - 115	2009-02-23

Standard (CCV-1)

QC Batch: 57089

Date Analyzed: 2009-02-23

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0931	93	85 - 115	2009-02-23
Toluene		mg/Kg	0.100	0.0918	92	85 - 115	2009-02-23
Ethylbenzene		mg/Kg	0.100	0.0899	90	85 - 115	2009-02-23
Xylene		mg/Kg	0.300	0.266	89	85 - 115	2009-02-23

Standard (ICV-1)

QC Batch: 57090

Date Analyzed: 2009-02-23

Analyzed By: ME

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	0.909	91	85 - 115	2009-02-23

Standard (CCV-1)

QC Batch: 57090

Date Analyzed: 2009-02-23

Analyzed By: ME

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.06	106	85 - 115	2009-02-23

Standard (ICV-1)

QC Batch: 57094

Date Analyzed: 2009-02-24

Analyzed By: AR

Report Date: February 25, 2009
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Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	102	102	85 - 115	2009-02-24

Standard (CCV-1)

QC Batch: 57094

Date Analyzed: 2009-02-24

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	98.5	98	85 - 115	2009-02-24

Standard (ICV-1)

QC Batch: 57095

Date Analyzed: 2009-02-23

Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	282	113	85 - 115	2009-02-23

Standard (CCV-1)

QC Batch: 57095

Date Analyzed: 2009-02-23

Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	270	108	85 - 115	2009-02-23

Standard (ICV-1)

QC Batch: 57110

Date Analyzed: 2009-02-24

Analyzed By: CM

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	98.0	98	80 - 120	2009-02-24

Standard (CCV-1)

QC Batch: 57110

Date Analyzed: 2009-02-24

Analyzed By: CM

Report Date: February 25, 2009
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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	91.5	92	80 - 120	2009-02-24

Standard (CCV-2)

QC Batch: 57110

Date Analyzed: 2009-02-24

Analyzed By: CM

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
TRPHC		mg/Kg	100	87.5	88	80 - 120	2009-02-24

