



# AE Order Number Banner

## Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



**App Number: pJXK1620956796**

**1RP - 4368**

**JAY MANAGEMENT COMPANY, LLC**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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

OCT 07 2011

Form C-141  
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

**Release Notification and Corrective Action**

**OPERATOR**  Initial Report  Final Report

Name of Company JAY MANAGEMENT CO., LLC	Contact RON GILBREATH
Address 2425 WEST LOOP SOUTH - STE 810; HOUSTON, TX	Telephone No. 713 / 456 7892 Ext 309
Facility Name NEW MEXICO STATE B	Facility Type TANK BATTERY
Surface Owner	Mineral Owner STATE
API No. 30-025-00035	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	27	10S	32E	660'	NORTH	1980'	EAST	LEA

Latitude 33.4227089939 Longitude -103.658311479

**NATURE OF RELEASE**

Type of Release OIL SPILL	Volume of Release 159	Volume Recovered 143
Source of Release OIL TANK	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? OCD DISTRICT 1 - MAXEY BROWN	
By Whom? DC BEDEL	Date and Hour 04-OCT-2011 APPROX 13:00 hrs	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\*

The tank battery consists of 3 oil tanks. The working tank developed a hole in the bottom and 159 bbls of oil leaked out into the firewall. A vacuum truck was used to recover 143 bbls. No oil was outside the firewall. 16 bbls of oil was not recovered.

Describe Area Affected and Cleanup Action Taken.\*

It is proposed to work the soil inside the firewall, haul additional soil if necessary, spread oil adsorbent material similar to "OIL GATOR" and work it into soil. After 90 days of natural bioremediation soil will be visually checked and tested if required. The battery will be re-worked and excess tanks will be removed.

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.

OIL CONSERVATION DIVISION

Signature: <i>Ron Gilbreath</i>	Approved by Environmental Specialist:	
Printed Name: RON GILBREATH	Approval Date:	Expiration Date:
Title: SENIOR STAFF ENGINEER	Conditions of Approval:	
E-mail Address: rgilbreath@isramco-jay.com	Attached <input type="checkbox"/>	
Date: 06-oct-2011	Phone: 713 / 456 - 7892 Ext 309	

\* Attach Additional Sheets If Necessary

HOBBS OCD



JAN 20 2012

RECEIVED

January 11, 2012

WATER < 50

Mr. Geoffrey R. Leking  
New Mexico Oil Conservation Division  
1625 N. French Drive  
Hobbs, New Mexico 88240

Re: Assessment Report and Remedial Action Plan  
Jay Management, LLC  
New Mexico State B Lease Tank Battery  
Mescalero Field - Lea County, New Mexico  
NW1/4 NE1/4, Sec. 27, T10S R32E

Dear Mr. Leking:

At the request of Jay Management, LLC (Jay Management), Carr Environmental Group, Inc. (CEG) has prepared this letter to document the assessment activities following a crude oil release at the New Mexico State B Lease Tank Battery in Lea County, New Mexico ('Site').

The Site consists of two 1,000 barrel (bbl) condensate storage tanks, three 400 bbl condensate storage tanks, two 300 bbl produced water storage tanks, one 400 bbl produced water storage tank, one inactive storage tank, three separators, and two transfer pumps.

Condensate storage tank bottom failure resulted in the release of an estimated 159 bbl of condensate. Released fluids impacted an area measuring approximately 4,225 square feet (ft<sup>2</sup>).

The Site is located approximately 3.9 miles northeast of Caprock, New Mexico (Figures 1 & 2). The surrounding area is characterized as flat to slightly sloping rural land used for cattle grazing and oil/gas production. Soils at the Site consist of gravelly loam, underlain by cemented petrocalcic soils. Surface flow is to the southeast.

#### **Release Discovery/Response**

The release was discovered and reported by Jay Management personnel on 10/04/2011. Upon release discovery, Jay Management personnel immediately vacuumed the released crude, recovering approximately 143 bbl.

On 11/01/2011, CEG inspected the Site and noted the released fluids were contained within tank battery's secondary containment. A site plat illustrating the spill trajectory is shown on Figure 3. Site photographs are included in the Photographic Log (attached).

**Collection of Soil Samples**

On 11/01/2011 and 11/02/2011, soil samples were collected at the Site to determine the degree and extent of impacts to Site soils. CEG advanced 11 soil borings and collected 9 soil samples using either a geotechnical hadauger or an air-rotary drilling rig to vertically and horizontally delineate impacted soils. A single, five-point composite sample (Comp No. 1 0-6") was collected at the Site to obtain a representative sample of the most heavily impacted soils at the Site. Sampling equipment was decontaminated between samples using Alconox and deionized water to eliminate cross contamination. Sample locations are shown in Figure 3.

All samples were placed in laboratory-provided sample containers, stored on ice, and transported under proper chain-of-custody protocol to Accutest® Laboratories in Houston, Texas. Laboratory reports containing analytical methods, results and chain-of-custody documents are attached.

**Sample Analysis**

Soil samples were analyzed for one or more of the following constituents of concern (COC): total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX), and chlorides. Analytical results are summarized in Table 1.

**Table 1. Soil Analytical Results**

Sample ID	Petroleum Hydrocarbons (mg/kg)						Chloride (mg/kg)
	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	TPH	
SB1 11-12'	0.079J	0.405	2.12	9.44	11.965	466	--
SB1 21-22'	0.0095	0.0567	0.185J	0.226	0.4772	17.6J	--
SB2 1-2'	0.914	3.32	3.76	2.15	10.1	3,970	--
SB2 3-4'	< 0.0051	< 0.0068	0.0028	< 0.0018	0.0165	< 4.5	--
SB3 0-0.5'	0.0029	0.0029	0.0024	0.0025	0.0107	< 4.2	--
SB4 0-0.5'	0.00075	0.0013	0.00068	<0.0016	0.00433	< 4.1	--
SB5 0-0.5'	0.00068	0.00098	0.00077	< 0.0017	0.00413	< 4.2	--
SB6 0-0.5'	0.0028	0.0014	< 0.00067	< 0.0017	0.00657	< 4.2	--
Comp No. 1 0-6"	110	689	992	565	2,356	39,500	311
<b>Remediation Action Levels</b>	<b>10</b>	--	--	--	<b>50</b>	<b>1,000</b>	<b>500</b>

 - exceeds regulatory limit  
 mg/kg - milligrams per kilogram  
 BTEX - benzene, toluene, ethylbenzene, and xylenes  
 TPH - total petroleum hydrocarbons  
 J - estimated value

**Remediation Action Levels**

The New Mexico Oil Conservation Division (OCD) has established remediation action levels for soils impacted by oilfield products or wastes, which are documented in the *Guidelines for Remediation of Leaks, Spills and Releases*.

The OCD has established a ranking system that determines a site's potential to contaminate based upon its distance to water resources. The cleanup criteria are dependent upon a sites total ranking score. The ranking system and cleanup criteria are summarized in Tables 2 and 3, respectively.

**Table 2. OCD Ranking System**

Category	Distance to Resource (ft)	Score
Depth to groundwater	< 50	20
	50 to 99	10
	> 100	0
Water Wellhead protection	< 200	20
	> 200	0
Surface water protection	< 200	20
	200 to 1,000	10
	> 1,000	0

Sites receive a score from each category. The three scores are summed to reach a total ranking score. The score provides site-specific remediation action levels for individual sites. Based on information obtained from the United States Geological Survey's (USGS) *National Water Information System: Web Interface*, the static water level in water wells drilled in the area of the Site range from 52 to 61 feet below ground surface (ft bgs). These are static water levels and the depth to the top of the water bearing sands are likely even deeper. The depth to groundwater results in a score of 10. No surface water or water wellheads are located within 1,000 feet of the Site, which results in a score of 0 for both categories. Therefore, the total ranking score at the Site is 10.

The remediation action levels established by the OCD are presented in Table 3.

**Table 3. OCD Soil Cleanup Criteria by Total Ranking Score**

Constituent	Total Ranking Score		
	> 19	10-19	0-9
	Cleanup Criteria (mg/kg)		
Benzene	10	10	10
Total BTEX	50	50	50
TPH	100	1,000	5,000
Chlorides	250	500	1,000

BTEX – benzene, toluene, ethylbenzene and xylenes  
 TPH – total petroleum hydrocarbons  
 mg/kg – milligrams per kilograms

## **Conclusions**

Based on OCD cleanup criteria and analytical results, the following is concluded:

- Soils at the Site are impacted by benzene, total BTEX and TPH,
- The heavily impacted soils (Comp No. 1 0-6") did not exhibit chloride levels exceeding the regulatory limits; therefore it is not a COC,
- The vertical and horizontal extents of all COC have been delineated,
- Impacts are confined to the upper 3 ft bgs within the secondary containment.

## **Remedial Action Plan**

In order to address petroleum hydrocarbon impacted soils at the Site, CEG proposes excavating the impacted soils to a depth of 3 ft bgs and placing it in a 0.5 acre lined treatment cell to be constructed onsite. Following excavation, confirmation samples will be collected from the excavation base and sidewalls to ensure all impacted soil are removed. Confirmation samples will be analyzed for BTEX and TPH.

### *Treatment Cell Construction*

The treatment cell will be constructed immediately north of the tank battery and lined with a 6-mil low density polyethylene (LDPE) liner. Lined earthen berms will be also erected around the perimeter of the treatment cell to prevent stormwater run-off and run-in. Any water accumulated within the treatment cell will be collected and disposed off into a permitted injection well. The proposed location of the treatment cell is shown in Figure 4.

### *Treatment Cell Management*

Impacted soil will be evenly spread across the treatment cell area to a thickness not to exceed 8-in. Once spread, impacted soils will be treated with the appropriate amount of fertilizer to promote the biodegradation of hydrocarbons. The treatment cell will then be disked to ensure soil/fertilizer homogenization. The treatment cell will be disked monthly until petroleum hydrocarbon concentrations are below the applicable remediation action levels.

### *Treatment Cell Monitoring and Closure*

Treatment cell soils will be sampled semi-annually to monitor treatment effectiveness. One composite sample and four discrete samples will be collected for laboratory analysis during each semi-annual monitoring event. Samples will be analyzed for BTEX and TPH.

Once semi-annual sampling results are below the applicable remediation action levels, the treatment cell will be closed. Remediated soils will be returned to the original excavation and the earthen berms will be removed. The area will then be returned to natural grade and re-vegetated in accordance with Paragraph (6) of Subsection A of 19.15.36.18 New Mexico Administrative Code (NMAC).

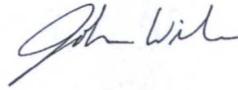
Mr. Leking  
January 11, 2012  
Page 5 of 5

If you have any questions regarding this letter or need further assistance, please call us at 281-872-9300.

Sincerely,  
CEG, INC.



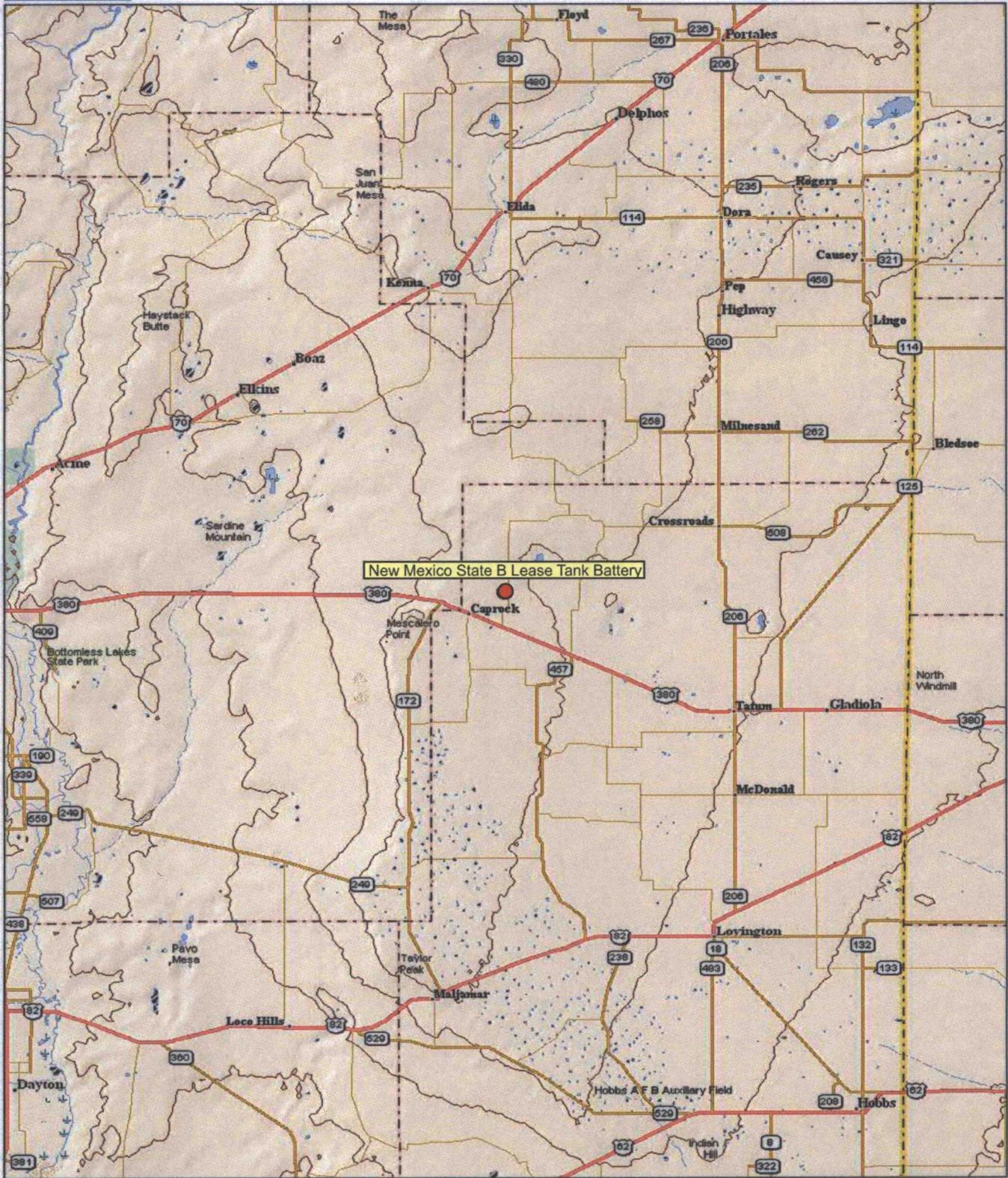
Gordon Banks  
Project Manager



John Wilson  
Senior Project Manager

Attachments – Figures  
    Photographic Log  
    Laboratory Analytical Reports and Chain-of-Custody Documents

Cc: Amir Sanker, Jay Management  
    Ron Gilbreath, Jay Management



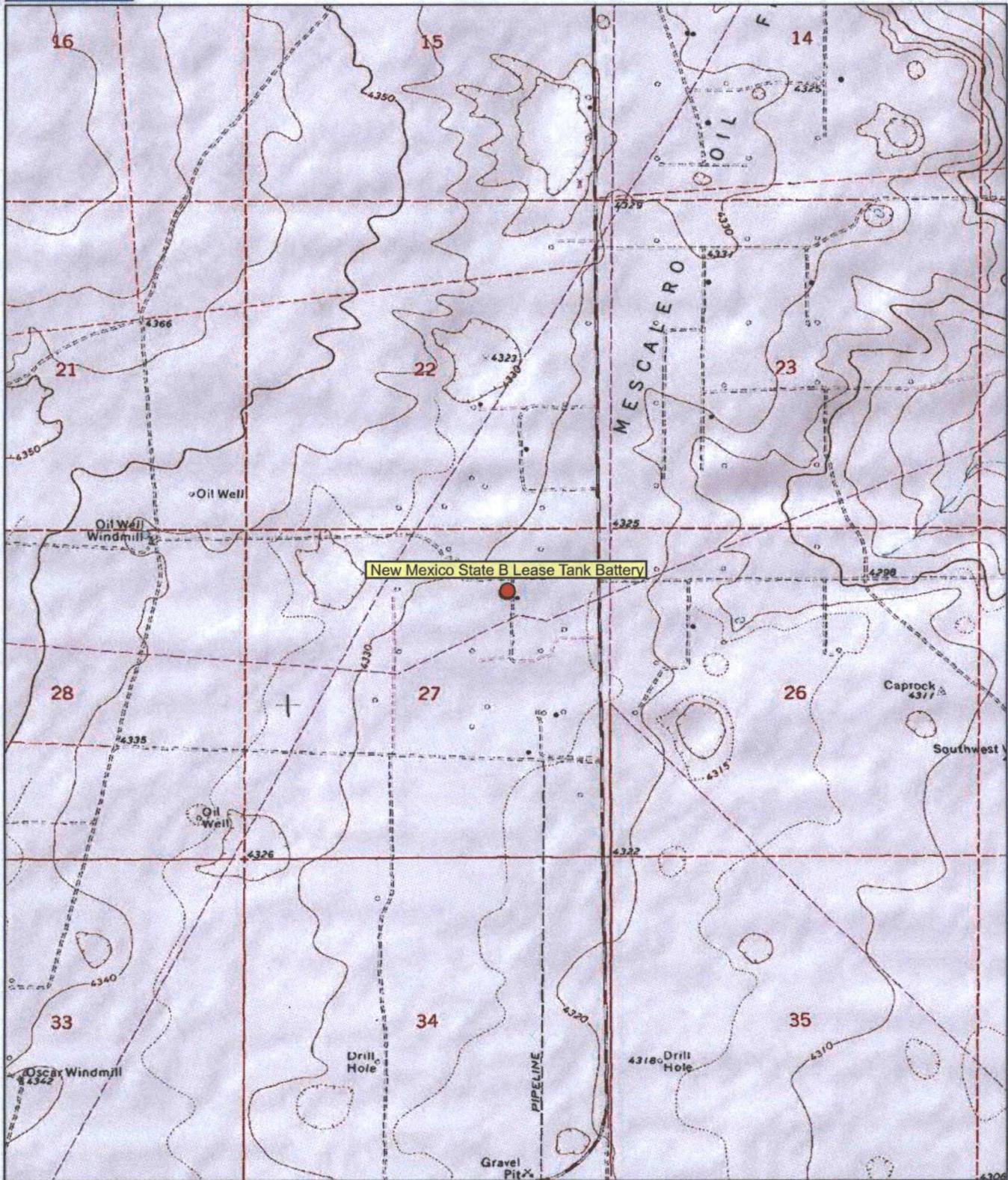
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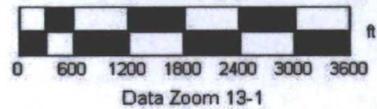
Prepared by:  
  
 Date:  
 12/07/2011

**ASSESSMENT REPORT AND REMEDIAL ACTION PLAN**  
 Jay Management, LLC  
 New Mexico State B Lease Tank Battery  
 Mescalero Field - Lea County, New Mexico  
 NW1/4 NE1/4, Sec. 27, T10S R32E

Fig.  
**SITE LOCATION MAP**  
**1**



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 www.delorme.com



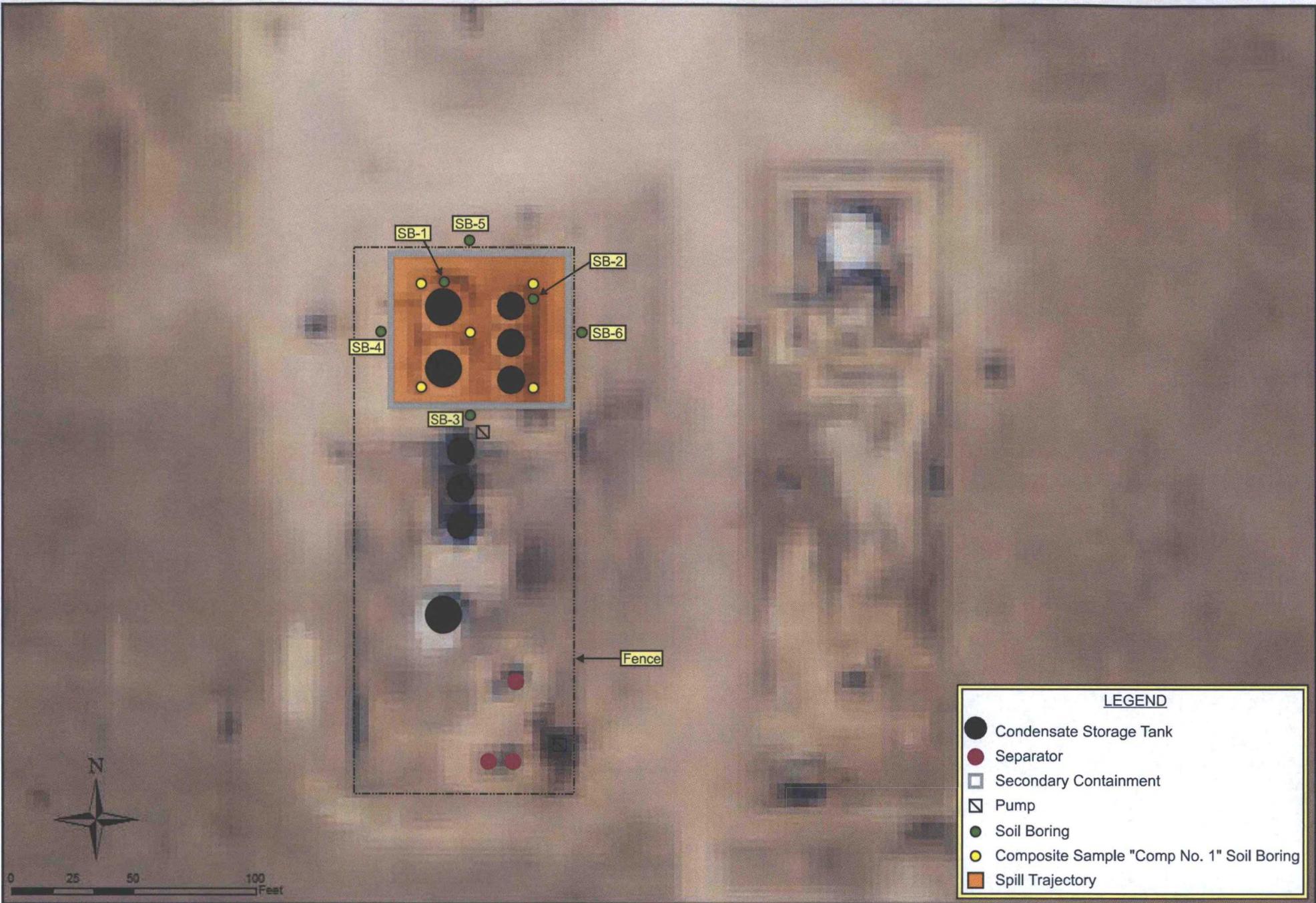
Prepared by:  
  
 Date:  
 12/07/2011

**ASSESSMENT REPORT AND REMEDIAL ACTION PLAN**

Jay Management, LLC  
 New Mexico State B Lease Tank Battery  
 Mescalero Field - Lea County, New Mexico  
 NW1/4 NE1/4, Sec. 27, T10S R32E

AREA  
 MAP

Fig.  
**2**



Prepared by:  
  
 CARR ENVIRONMENTAL GROUP, INC.

Date:  
 12/07/2011

**ASSESSMENT REPORT AND REMEDIAL ACTION PLAN**

Jay Management, LLC  
 New Mexico State B Lease Tank Battery  
 Mescalero Field - Lea County, New Mexico  
 NW1/4 NE1/4, Sec. 27, T10S R32E

**SAMPLE  
 LOCATION  
 MAP**

Fig.

**3**



Prepared by:  
  
Date:  
12/07/2011

**ASSESSMENT REPORT AND REMEDIAL ACTION PLAN**  
Jay Management, LLC  
New Mexico State B Lease Tank Battery  
Mescalero Field - Lea County, New Mexico  
NW1/4 NE1/4, Sec. 27, T10S R32E

**EXCAVATION AND  
TREATMENT CELL  
LOCATION  
MAP**

Fig.  
**4**

CARR ENVIRONMENTAL GROUP, INC.  
Photographic Log



Client: Jay Management, LLC

Project No.: ISR\_SAMP\_1100779

Project Name: Assessment Report and Remedial Action Plan

Site Location: Lea County, New Mexico

Photograph No.  
1

Photographer:  
G. Banks

Date:  
11/02/11

Direction:  
NORTHWEST

Comments:

View of tank battery.



Photograph No.  
2

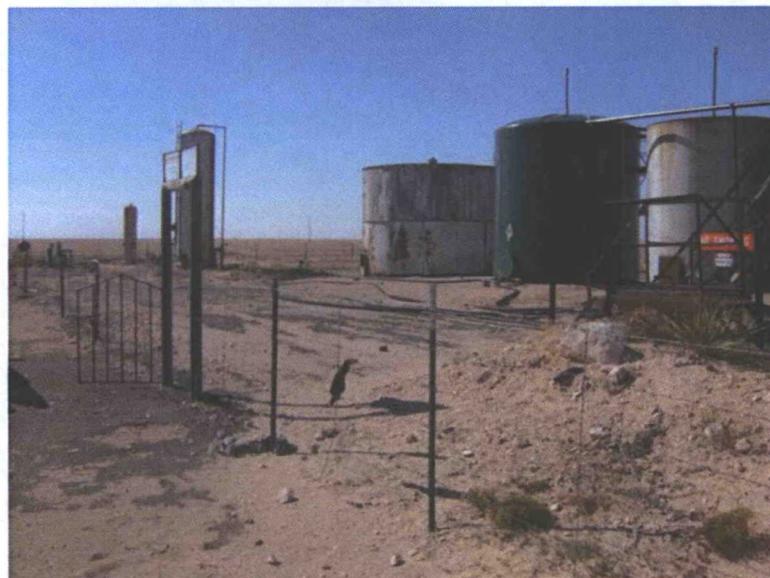
Photographer:  
G. Banks

Date:  
11/02/11

Direction:  
SOUTHWEST

Comments:

View of storage tanks  
and production  
equipment.



CARR ENVIRONMENTAL GROUP, INC.  
Photographic Log



Client: Jay Management, LLC

Project No.: ISR\_SAMP\_1100779

Project Name: Assessment Report and Remedial Action Plan

Site Location: Lea County, New Mexico

Photograph No.  
3

Photographer:  
G. Banks

Date:  
11/02/11

Direction:  
WEST

Comments:

View of impact at  
tank battery.



Photograph No.  
4

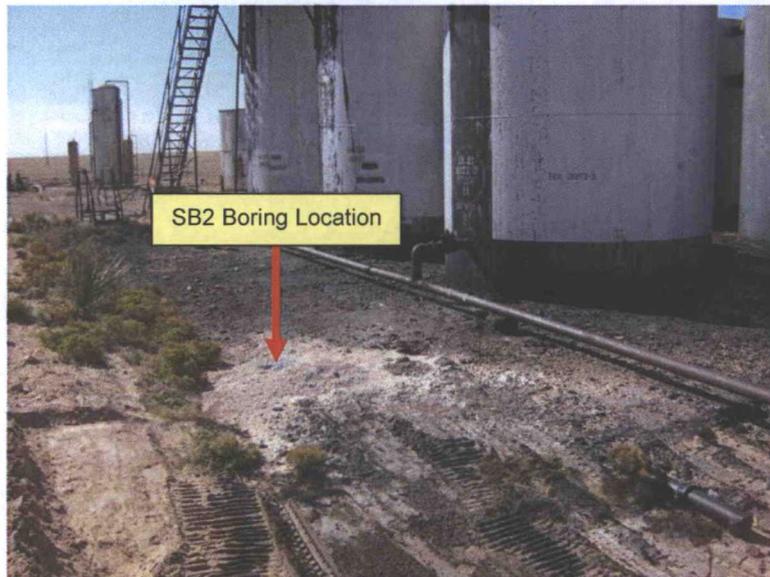
Photographer:  
G. Banks

Date:  
11/02/11

Direction:  
SOUTH

Comments:

Another view of  
impact at tank  
battery.



CARR ENVIRONMENTAL GROUP, INC.  
Photographic Log



Client: Jay Management, LLC

Project No.: ISR\_SAMP\_1100779

Project Name: Assessment Report and Remedial Action Plan

Site Location: Lea County, New Mexico

Photograph No.  
5

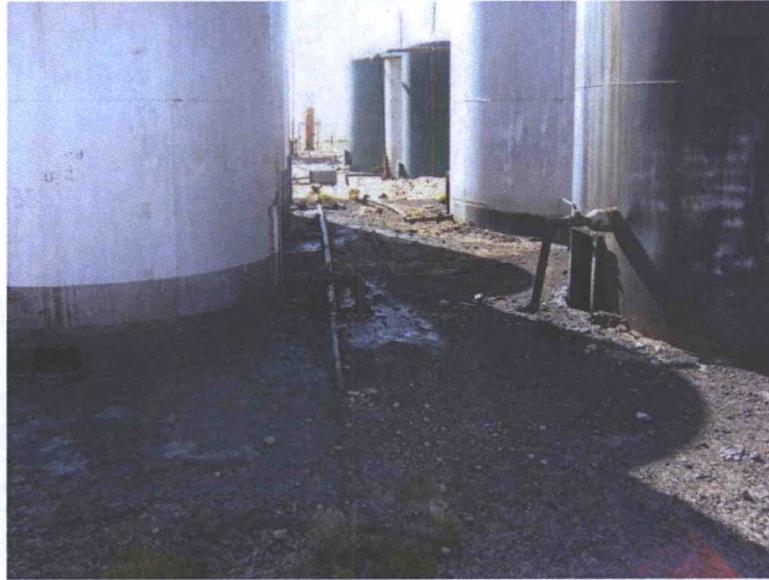
Photographer:  
G. Banks

Date:  
11/02/11

Direction:  
SOUTH

Comments:

Another view of  
impact at tank  
battery.



**Technical Report for**

**Carr Environmental Group**

ISR-11-779

ISR-11-779

Accutest Job Number: T91820

Sampling Dates: 11/01/11 - 11/02/11

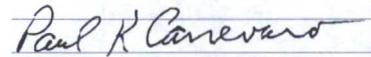
**Report to:**

Carr Environmental Group  
504 Spring Hill Drive, Suite 300  
Spring, TX 77386  
jwilson@ceg-group.com; gbanks@ceg-group.com;  
eborden@ceg-group.com; dcarr@ceg-group.com;  
ATTN: Gordon Banks

Total number of pages in report: **46**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.



**Paul Canevaro**  
Laboratory Director

**Client Service contact: Sonia West 713-271-4700**

Certifications: TX (T104704220-11-5) AR (11-028-0) AZ (AZ0769) FL (E87628) KS (E-10366)  
LA (85695/04004) OK (211-035)

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Test results relate only to samples analyzed.

# Table of Contents

Sections:



<b>Section 1: Sample Summary .....</b>	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary .....</b>	<b>4</b>
<b>Section 3: Sample Results .....</b>	<b>6</b>
3.1: T91820-1: SB1 11-12' .....	7
3.2: T91820-2: SB1 21-22' .....	9
3.3: T91820-4: SB2 1-2' .....	11
3.4: T91820-5: SB2 3-4' .....	13
3.5: T91820-7: COMP NO. 1 0-6" .....	15
3.6: T91820-8: SB3 0-0.5' .....	18
3.7: T91820-9: SB4 0-0.5' .....	20
3.8: T91820-10: SB5 0-0.5' .....	22
3.9: T91820-11: SB6 0-0.5' .....	24
<b>Section 4: Misc. Forms .....</b>	<b>26</b>
4.1: Chain of Custody .....	27
<b>Section 5: GC Volatiles - QC Data Summaries .....</b>	<b>32</b>
5.1: Method Blank Summary .....	33
5.2: Blank Spike Summary .....	35
5.3: Matrix Spike/Matrix Spike Duplicate Summary .....	37
<b>Section 6: GC Semi-volatiles - QC Data Summaries .....</b>	<b>39</b>
6.1: Method Blank Summary .....	40
6.2: Blank Spike/Blank Spike Duplicate Summary .....	41
6.3: Matrix Spike/Matrix Spike Duplicate Summary .....	42
<b>Section 7: General Chemistry - QC Data Summaries .....</b>	<b>43</b>
7.1: Method Blank and Spike Results Summary .....	44
7.2: Duplicate Results Summary .....	45
7.3: Matrix Spike Results Summary .....	46



### Sample Summary

Carr Environmental Group

Job No: T91820

ISR-11-779

Project No: ISR-11-779

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
T91820-1	11/01/11	17:10	11/04/11	SO	Soil	SB1 11-12'
T91820-2	11/01/11	17:32	11/04/11	SO	Soil	SB1 21-22'
T91820-3	11/01/11	17:45	11/04/11	SO	Soil	SB1 29-30'
T91820-4	11/01/11	18:05	11/04/11	SO	Soil	SB2 1-2'
T91820-5	11/01/11	18:15	11/04/11	SO	Soil	SB2 3-4'
T91820-6	11/01/11	18:35	11/04/11	SO	Soil	SB2 13-14'
T91820-7	11/02/11	10:13	11/04/11	SO	Soil	COMP NO. 1 0-6"
T91820-8	11/02/11	10:28	11/04/11	SO	Soil	SB3 0-0.5'
T91820-9	11/02/11	10:39	11/04/11	SO	Soil	SB4 0-0.5'
T91820-10	11/02/11	10:53	11/04/11	SO	Soil	SB5 0-0.5'
T91820-11	11/02/11	11:05	11/04/11	SO	Soil	SB6 0-0.5'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

**SAMPLE DELIVERY GROUP CASE NARRATIVE**

**Client:** Carr Environmental Group

**Job No** T91820

**Site:** ISR-11-779

**Report Date** 11/14/2011 8:16:48 AM

9 Sample(s), were collected on between 11/01/2011 and 11/02/2011 and were received at Accutest on 11/04/2011 properly preserved, at 1.3 Deg. C and intact. These Samples received an Accutest job number of T91820. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

**Volatiles by GC By Method SW846 8021B**

<b>Matrix</b> SO	<b>Batch ID:</b> GKK1994
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) T91448-3AMS, T91448-3AMSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- T91820-4: Sample was received unpreserved and outside the 48 hour preservation time.
- T91820-1: Sample was received unpreserved and outside the 48 hour preservation time.
- T91820-2: Sample was received unpreserved and outside the 48 hour preservation time.
- T91820-1 for Xylenes (total): More than 40% RPD for detected concentrations between two GC columns.

<b>Matrix</b> SO	<b>Batch ID:</b> GKK1995
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) T91871-10MS, T91871-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for MSD for Benzene, Ethylbenzene, Toluene, Xylenes (total) are outside control limits for sample T91871-10MSD. Probable cause due to sample non-homogeneity.
- T91820-5: Sample was received unpreserved and outside the 48 hour preservation time.
- T91820-2: Sample was received unpreserved and outside the 48 hour preservation time.
- T91820-10 for Ethylbenzene: More than 40% RPD for detected concentrations between two GC columns.
- T91820-9 for Ethylbenzene: More than 40% RPD for detected concentrations between two GC columns.

### Extractables by GC By Method TNRCC 1005

<b>Matrix</b> SO	<b>Batch ID:</b> OP21012
------------------	--------------------------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) T91824-10MS, T91824-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike Recovery(s) for TPH (>C12-C28), TPH (C6-C35) are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for TPH (>C12-C28) are outside control limits. Probable cause due to matrix interference.
- T91820-4 for aaa-Trifluorotoluene: Outside control limits due to dilution.
- T91820-4 for o-Terphenyl: Outside control limits due to dilution.
- T91820-7 for aaa-Trifluorotoluene: Outside control limits due to dilution.
- T91820-7 for o-Terphenyl: Outside control limits due to dilution.

### Wet Chemistry By Method EPA 300/SW846 9056 M

<b>Matrix</b> SO	<b>Batch ID:</b> GP15951
------------------	--------------------------

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T91677-1DUP, T91677-1MS were used as the QC samples for Chloride.
- Matrix Spike Recovery(s) for Chloride are outside control limits. Probable cause due to matrix interference.

### Wet Chemistry By Method SM 2540 G

<b>Matrix</b> SO	<b>Batch ID:</b> GN36571
------------------	--------------------------

- Sample(s) T91820-7DUP were used as the QC samples for Solids, Percent.

<b>Matrix</b> SO	<b>Batch ID:</b> GN36659
------------------	--------------------------

- Sample(s) T91969-16DUP were used as the QC samples for Solids, Percent.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Sample Results

---

Report of Analysis

---

## Report of Analysis

<b>Client Sample ID:</b> SBI 11-12'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-1	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 83.6
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	KK042547.D	1	11/07/11	JL	n/a	n/a	GKK1994
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.32 g	5.0 ml	100 ul
Run #2			

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	79.0	260	32	ug/kg	J
108-88-3	Toluene	405	260	43	ug/kg	
100-41-4	Ethylbenzene	2120	260	44	ug/kg	
1330-20-7	Xylenes (total) <sup>b</sup>	9440	790	110	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	149%		21-163%
98-08-8	aaa-Trifluorotoluene	129%		39-170%

(a) Sample was received unpreserved and outside the 48 hour preservation time.

(b) More than 40% RPD for detected concentrations between two GC columns.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.1  
3

<b>Client Sample ID:</b> SB1 11-12'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-1	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 83.6
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23399.D	1	11/07/11	GY	11/07/11	OP21012	GJB288
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	150	30	4.9	mg/kg	
	TPH (> C12-C28)	293	30	5.0	mg/kg	
	TPH (> C28-C35)	22.7	30	5.0	mg/kg	J
	TPH (C6-C35)	466	30	4.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		70-130%
98-08-8	aaa-Trifluorotoluene	80%		70-130%

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.2  
3

<b>Client Sample ID:</b> SB1 21-22'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-2	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.6
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	KK042577.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2 <sup>a</sup>	KK042555.D	1	11/07/11	JL	n/a	n/a	GKK1994

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.05 g	5.0 ml	
Run #2	5.76 g	5.0 ml	100 ul

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	9.5	4.1	0.50	ug/kg	
108-88-3	Toluene	56.7	4.1	0.67	ug/kg	
100-41-4	Ethylbenzene	185 <sup>b</sup>	190	32	ug/kg	J
1330-20-7	Xylenes (total)	226	12	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	75%	79%	21-163%
98-08-8	aaa-Trifluorotoluene	109%	103%	39-170%

- (a) Sample was received unpreserved and outside the 48 hour preservation time.
- (b) Result is from Run# 2

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> SB1 21-22'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-2	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.6
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23401.D	1	11/07/11	GY	11/07/11	OP21012	GJB288
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	26	4.3	mg/kg	
	TPH (> C12-C28)	17.6	26	4.3	mg/kg	J
	TPH (> C28-C35)	ND	26	4.3	mg/kg	
	TPH (C6-C35)	17.6	26	4.3	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	100%		70-130%
98-08-8	aaa-Trifluorotoluene	72%		70-130%

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.3  
3

<b>Client Sample ID:</b> SB2 1-2'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-4	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 90.5
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	KK042558.D	1	11/07/11	JL	n/a	n/a	GKK1994
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.08 g	5.0 ml	100 ul
Run #2			

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	914	240	29	ug/kg	
108-88-3	Toluene	3320	240	39	ug/kg	
100-41-4	Ethylbenzene	3760	240	40	ug/kg	
1330-20-7	Xylenes (total)	2150	720	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		21-163%
98-08-8	aaa-Trifluorotoluene	117%		39-170%

(a) Sample was received unpreserved and outside the 48 hour preservation time.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.3  
3

<b>Client Sample ID:</b> SB2 1-2'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-4	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 90.5
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23402.D	10	11/07/11	GY	11/07/11	OP21012	GJF288
Run #2							

	Initial Weight	Final Volume
Run #1	10.6 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	260	43	mg/kg	
	TPH (> C12-C28)	2720	260	43	mg/kg	
	TPH (> C28-C35)	1250	260	43	mg/kg	
	TPH (C6-C35)	3970	260	43	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% <sup>a</sup>		70-130%
98-08-8	aaa-Trifluorotoluene	0% <sup>a</sup>		70-130%

(a) Outside control limits due to dilution.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**Report of Analysis**

3.4  
3

<b>Client Sample ID:</b> SB2 3-4'	
<b>Lab Sample ID:</b> T91820-5	<b>Date Sampled:</b> 11/01/11
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 11/04/11
<b>Method:</b> SW846 8021B	<b>Percent Solids:</b> 86.9
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	KK042578.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume
Run #1	5.47 g	5.0 ml
Run #2		

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.2	0.51	ug/kg	
108-88-3	Toluene	ND	4.2	0.68	ug/kg	
100-41-4	Ethylbenzene	2.8	4.2	0.70	ug/kg	J
1330-20-7	Xylenes (total)	ND	13	1.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	67%		21-163%
98-08-8	aaa-Trifluorotoluene	112%		39-170%

(a) Sample was received unpreserved and outside the 48 hour preservation time.

ND = Not detected      MDL - Method Detection Limit      J = Indicates an estimated value  
 RL = Reporting Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

### Report of Analysis

3.4  
3

<b>Client Sample ID:</b> SB2 3-4'	<b>Date Sampled:</b> 11/01/11
<b>Lab Sample ID:</b> T91820-5	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 86.9
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23403.D	1	11/07/11	GY	11/07/11	OP21012	GJB288
Run #2							

	Initial Weight	Final Volume
Run #1	10.7 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	27	4.5	mg/kg	
	TPH (> C12-C28)	ND	27	4.5	mg/kg	
	TPH (> C28-C35)	ND	27	4.5	mg/kg	
	TPH (C6-C35)	ND	27	4.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	98%		70-130%
98-08-8	aaa-Trifluorotoluene	75%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> COMP NO. 1 0-6"	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-7	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 91.3
<b>Method:</b> SW846 8021B SW846 5030A	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK042579.D	100	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.26 g	5.0 ml	100 ul
Run #2			

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	110000	23000	2800	ug/kg	
108-88-3	Toluene	689000	23000	3700	ug/kg	
100-41-4	Ethylbenzene	992000	23000	3800	ug/kg	
1330-20-7	Xylenes (total)	565000	68000	9700	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	68%		21-163%
98-08-8	aaa-Trifluorotoluene	99%		39-170%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**Report of Analysis**

3.5  
3

<b>Client Sample ID:</b> COMP NO. 1 0-6"	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-7	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 91.3
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23404.D	100	11/07/11	GY	11/07/11	OP21012	GJF288
Run #2							

	Initial Weight	Final Volume
Run #1	10.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	7490	2600	430	mg/kg	
	TPH (> C12-C28)	26900	2600	440	mg/kg	
	TPH (> C28-C35)	5080	2600	440	mg/kg	
	TPH (C6-C35)	39500	2600	430	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	0% <sup>a</sup>		70-130%
98-08-8	aaa-Trifluorotoluene	0% <sup>a</sup>		70-130%

(a) Outside control limits due to dilution.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.5  
3

<b>Client Sample ID:</b> COMP NO. 1 0-6"	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-7	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 91.3
<b>Project:</b> ISR-11-779	

**General Chemistry**

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Chloride	311	27	11	mg/kg	10	11/08/11 16:49	ES	EPA 300/SW846 9056 M
Solids, Percent	91.3			%	1	11/07/11	KA	SM 2540 G

RL = Reporting Limit  
MDL = Method Detection Limit

U = Indicates a result < MDL  
J = Indicates a result > = MDL but < RL

## Report of Analysis

<b>Client Sample ID:</b> SB3 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-8	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.3
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK042582.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume
Run #1	5.40 g	5.0 ml
Run #2		

## Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.9	3.9	0.47	ug/kg	J
108-88-3	Toluene	2.9	3.9	0.63	ug/kg	J
100-41-4	Ethylbenzene	2.4	3.9	0.65	ug/kg	J
1330-20-7	Xylenes (total)	2.5	12	1.7	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	77%		21-163%
98-08-8	aaa-Trifluorotoluene	129%		39-170%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.6  
3

<b>Client Sample ID:</b> SB3 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-8	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.3
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23405.D	1	11/07/11	GY	11/07/11	OP21012	GJB288
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	26	4.2	mg/kg	
	TPH (> C12-C28)	ND	26	4.3	mg/kg	
	TPH (> C28-C35)	ND	26	4.3	mg/kg	
	TPH (C6-C35)	ND	26	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	97%		70-130%
98-08-8	aaa-Trifluorotoluene	74%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> SB4 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-9	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.3
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK042584.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume
Run #1	5.41 g	5.0 ml
Run #2		

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.75	3.8	0.47	ug/kg	J
108-88-3	Toluene	1.3	3.8	0.62	ug/kg	J
100-41-4	Ethylbenzene <sup>a</sup>	0.68	3.8	0.64	ug/kg	J
1330-20-7	Xylenes (total)	ND	12	1.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	73%		21-163%
98-08-8	aaa-Trifluorotoluene	123%		39-170%

(a) More than 40% RPD for detected concentrations between two GC columns.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

<b>Client Sample ID:</b> SB4 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-9	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 96.3
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23406.D	1	11/07/11	GY	11/07/11	OP21012	GJF288
Run #2							

	Initial Weight	Final Volume
Run #1	10.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	25	4.1	mg/kg	
	TPH (> C12-C28)	ND	25	4.2	mg/kg	
	TPH (> C28-C35)	ND	25	4.2	mg/kg	
	TPH (C6-C35)	ND	25	4.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	101%		70-130%
98-08-8	aaa-Trifluorotoluene	90%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

3.8  
3

<b>Client Sample ID:</b> SB5 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-10	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.1
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK042586.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume
Run #1	5.23 g	5.0 ml
Run #2		

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.68	4.0	0.49	ug/kg	J
108-88-3	Toluene	0.98	4.0	0.65	ug/kg	J
100-41-4	Ethylbenzene <sup>a</sup>	0.77	4.0	0.67	ug/kg	J
1330-20-7	Xylenes (total)	ND	12	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	83%		21-163%
98-08-8	aaa-Trifluorotoluene	125%		39-170%

(a) More than 40% RPD for detected concentrations between two GC columns.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.8  
3

<b>Client Sample ID:</b> SB5 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-10	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 95.1
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23407.D	1	11/07/11	GY	11/07/11	OP21012	GJB288
Run #2							

	Initial Weight	Final Volume
Run #1	10.4 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	25	4.2	mg/kg	
	TPH (> C12-C28)	ND	25	4.2	mg/kg	
	TPH (> C28-C35)	ND	25	4.2	mg/kg	
	TPH (C6-C35)	ND	25	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	95%		70-130%
98-08-8	aaa-Trifluorotoluene	73%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.9  
3

<b>Client Sample ID:</b> SB6 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-11	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 93.9
<b>Method:</b> SW846 8021B	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK042588.D	1	11/08/11	JL	n/a	n/a	GKK1995
Run #2							

	Initial Weight	Final Volume
Run #1	5.31 g	5.0 ml
Run #2		

**Purgeable Aromatics**

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.8	4.0	0.49	ug/kg	J
108-88-3	Toluene	1.4	4.0	0.65	ug/kg	J
100-41-4	Ethylbenzene	ND	4.0	0.67	ug/kg	
1330-20-7	Xylenes (total)	ND	12	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	68%		21-163%
98-08-8	aaa-Trifluorotoluene	117%		39-170%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

### Report of Analysis

3.9  
3

<b>Client Sample ID:</b> SB6 0-0.5'	<b>Date Sampled:</b> 11/02/11
<b>Lab Sample ID:</b> T91820-11	<b>Date Received:</b> 11/04/11
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> 93.9
<b>Method:</b> TNRCC 1005 TX1005	
<b>Project:</b> ISR-11-779	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	JJ23408.D	1	11/07/11	GY	11/07/11	OP21012	GJF288
Run #2							

	Initial Weight	Final Volume
Run #1	10.5 g	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	25	4.2	mg/kg	
	TPH (> C12-C28)	ND	25	4.2	mg/kg	
	TPH (> C28-C35)	ND	25	4.2	mg/kg	
	TPH (C6-C35)	ND	25	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		70-130%
98-08-8	aaa-Trifluorotoluene	86%		70-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Misc. Forms

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Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody



# SPL, INC.

Analysis Request & Chain of Custody Record

SPL Workorder No:

T91820

Page No.

1 of 2

Client Name: **CEG**  
 Address: **504 Spring Hill Dr. Ste. 300**  
**Spring TX** Zip: **77386**  
 Phone/Fax: **281-872-9300 / 281-872-4521**  
 Client Contact: **Gordon Banks**  
 Email: **gbanks@ceg-group.com**  
 Project Name/No: **15R-11-779**  
 Site Name: **Ne. Mexico B state No 1 TB**  
 Site Location: **Lea County, NM**  
 Invoice To: **Debbie Carr**

MATRIX BOTTLE SIZE PRES.  
 W = Water S = Soil  
 SL = Sludge O = other  
 P = plastic A = Amber glass  
 G = glass V = vial  
 1 = 1 liter 4 = 4 oz 40 = vial  
 8 = 8 oz 16 = 16 oz  
 1 = HCL 2 = HNO3  
 3 = H2SO4 O = other  
 Number of Containers

REQUESTED ANALYSIS									
TPH 100s	BTEX	Chloride	Hold Chloride	Hold TPH 100s	Hold BTEX				
X	X		X						
X	X								
X	X			X	X				
X	X								
X	X	X		X	X				
			X						

SAMPLE ID	DATE	TIME	COMP	GRAB
1 SB 1 11-12'	11/12/01	1710	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2 SB 1 21-22'		1732	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 SB 1 29-30'		1745	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 SB 2 1-2'		1805	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5 SB 2 3-4'		1815	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6 SB 2 13-14'		1835	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7 Comp No. 1 0-6"	11/2/01	1013	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 SB 3 0-0.5'		1028	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9 SB 4 0-0.5'		1039	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10 SB 5 0-0.5'		1053	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Client/Consultant Remarks: Field pH: Laboratory Remarks: Intact?  Y  N  
 Ice?  Y  N  
 Temp:

Requested TAT:  Contract  24 hr  48 hr  72 hr  Standard  Other:

Special Reporting Requirements:  Standard QC  Level 3 QC  Level 4 QC  Fax  Email  PDF  TX TRRP  LA RECAP

Special Detection Limit: (Specify) Custody Seals:  Y  N  
 Cooler:  Y  N  
 Container:  Y  N

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
1. By Sampler: <i>[Signature]</i>	11-3-2011	1700	2. Received By: <i>FedEx</i>
3. By: <i>FedEx</i>	11/4/2011	930	4. Received By: <i>[Signature]</i>
5. By:			6. Received By: <i>[Signature]</i>

- 8880 Interchange Drive, Houston, TX 77054 Phone: 800-969-6775
- 500 Ambassador Caffery Pkwy., Scott, LA 70563 Phone: 800-304-5227
- 459 Hughes Drive, Traverse City, MI 49666 Phone: 888-775-6424

4.1  
4





Accutest Job Number: T91820 Client: CEG Project: ISR-11-779  
 Date / Time Received: 11/4/2011 Delivery Method: FedEx Airbill #'s: 5100 9001 9505, 5100 9001 9516  
 No. Coolers: 2 Therm ID: IRGUN4; Temp Adjustment Factor: -0.3;  
 Cooler Temps (Initial/Adjusted): #1: (1.6/1.3); #2: (5/4.7);

**Cooler Security**

	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smp'l Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

**Cooler Temperature**

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:	<u>IR Gun</u>		
3. Cooler media:	<u>Ice (Bag)</u>		

**Quality Control Preservation**

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>	<u>WTB</u>	<u>STB</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>		
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>			
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>		

**Sample Integrity - Documentation**

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

**Sample Integrity - Condition**

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	<u>Intact</u>		

**Sample Integrity - Instructions**

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments SAMPLES 1-6, ID'S "SB1" AND "SB2", WERE RECEIVED OUTSIDE THE 48HR PRESERVATION PERIOD. THERE WAS INSUFFICIENT TIME REMAINING TO PRESERVE SAMPLES "COMP NO 1", "SB3", "SB4", "SB5" AND "SB6" WITHIN 48 HOURS.

Accutest Job Number: T91820

CSR: Sonia West

Response Date: 11/10/2011

Response: The client was notified and the laboratory proceeded with the analyses.

4.1  
4

**T91820: Chain of Custody**  
**Page 4 of 5**

Job #: T91820

Date / Time Received: 11/4/2011

Initials: TH

Client: CEG

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
2	T91820-1	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-1	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-2	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-2	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-3	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-3	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-4	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-4	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-5	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-5	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-6	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-6	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-7	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-7	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-8	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-8	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3
2	T91820-9	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-9	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-10	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-10	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
2	T91820-11	4oz	1	VR	N/P	Note #2 - Preservative check not applicable.	IRGUN4	5	-0.3	4.7
1	T91820-11	Bag	2	2-71	N/P	Note #2 - Preservative check not applicable.	IRGUN4	1.6	-0.3	1.3

4.1  
4

T91820: Chain of Custody  
Page 5 of 5

GC Volatiles

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5

QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

Page 1 of 1

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1994-MB	KK042538.D 1		11/07/11	JL	n/a	n/a	GKK1994

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-1, T91820-2, T91820-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.0	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	0.67	ug/kg	
108-88-3	Toluene	ND	4.0	0.65	ug/kg	
1330-20-7	Xylenes (total)	ND	12	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
460-00-4	4-Bromofluorobenzene	70%	21-163%
98-08-8	aaa-Trifluorotoluene	98%	39-170%

5.1.1  
5

## Method Blank Summary

Page 1 of 1

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1995-MB	KK042572.D 1		11/08/11	JL	n/a	n/a	GKK1995

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-2, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	4.0	0.49	ug/kg	
100-41-4	Ethylbenzene	ND	4.0	0.67	ug/kg	
108-88-3	Toluene	ND	4.0	0.65	ug/kg	
1330-20-7	Xylenes (total)	ND	12	1.7	ug/kg	

CAS No.	Surrogate Recoveries	Limits	
460-00-4	4-Bromofluorobenzene	73%	21-163%
98-08-8	aaa-Trifluorotoluene	105%	39-170%

5.1.2  
5

## Blank Spike Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1994-BS	KK042536.D 1		11/07/11	JL	n/a	n/a	GKK1994

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-1, T91820-2, T91820-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	20	16.1	81	73-132
100-41-4	Ethylbenzene	20	16.3	82	70-133
108-88-3	Toluene	20	16.5	83	74-133
1330-20-7	Xylenes (total)	60	49.8	83	73-134

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	82%	21-163%
98-08-8	aaa-Trifluorotoluene	118%	39-170%

# Blank Spike Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK1995-BS	KK042570.D 1		11/08/11	JL	n/a	n/a	GKK1995

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-2, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	1000	923	92	73-132
100-41-4	Ethylbenzene	1000	980	98	70-133
108-88-3	Toluene	1000	944	94	74-133
1330-20-7	Xylenes (total)	3000	2960	99	73-134

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	83%	21-163%
98-08-8	aaa-Trifluorotoluene	126%	39-170%

5.2.2  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T91448-3AMS	KK042550.D 1		11/07/11	JL	n/a	n/a	GKK1994
T91448-3AMSD	KK042551.D 1		11/07/11	JL	n/a	n/a	GKK1994
T91448-3A	KK042549.D 1		11/07/11	JL	n/a	n/a	GKK1994

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-1, T91820-2, T91820-4

CAS No.	Compound	T91448-3A ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	117	J	4630	3780	79	3950	83	4	41-129/33
100-41-4	Ethylbenzene	263	J	4630	3690	74	4170	84	12	15-139/36
108-88-3	Toluene	372	J	4630	4020	79	4090	80	2	26-141/38
1330-20-7	Xylenes (total)	1420	J	13900	12700	81	13500	87	6	22-132/33

CAS No.	Surrogate Recoveries	MS	MSD	T91448-3A	Limits
460-00-4	4-Bromofluorobenzene	80%	90%	83%	21-163%
98-08-8	aaa-Trifluorotoluene	112%	117%	105%	39-170%

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T91871-10MS	KK042575.D 1		11/08/11	JL	n/a	n/a	GKK1995
T91871-10MSD	KK042576.D 1		11/08/11	JL	n/a	n/a	GKK1995
T91871-10	KK042573.D 1		11/08/11	JL	n/a	n/a	GKK1995

The QC reported here applies to the following samples:

Method: SW846 8021B

T91820-2, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

CAS No.	Compound	T91871-10 ug/kg	Spike Q	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	22.4	9.7	43	19.5	89	67*	41-129/33
100-41-4	Ethylbenzene	ND	22.4	9.0	40	18.5	84	69*	15-139/36
108-88-3	Toluene	ND	22.4	10.5	47	20.9	95	66*	26-141/38
1330-20-7	Xylenes (total)	ND	67.1	25.9	39	54.5	83	71*	22-132/33

CAS No.	Surrogate Recoveries	MS	MSD	T91871-10	Limits
460-00-4	4-Bromofluorobenzene	28%	70%	71%	21-163%
98-08-8	aaa-Trifluorotoluene	46%	118%	109%	39-170%

5.3.2  
5

GC Semi-volatiles

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QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21012-MB	JJ23562.D	1	11/09/11	GY	11/07/11	OP21012	GJF291

The QC reported here applies to the following samples:

Method: TNRCC 1005

T91820-1, T91820-2, T91820-4, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

6.1.1 6

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C6-C12)	ND	24	4.0	mg/kg	
	TPH (> C12-C28)	ND	24	4.0	mg/kg	
	TPH (> C28-C35)	ND	24	4.0	mg/kg	
	TPH (C6-C35)	ND	24	4.0	mg/kg	

CAS No.	Surrogate Recoveries	Results	Limits
84-15-1	o-Terphenyl	95%	70-130%
98-08-8	aaa-Trifluorotoluene	107%	70-130%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21012-BS	JJ23561.D	1	11/09/11	GY	11/07/11	OP21012	GJB291
OP21012-BSD	JJ23563.D	1	11/09/11	GY	11/07/11	OP21012	GJB291

The QC reported here applies to the following samples:

Method: TNRCC 1005

T91820-1, T91820-2, T91820-4, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

6.2.1  
**6**

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	242	294	121	283	116	4	75-125/25
	TPH (> C12-C28)	242	299	123	295	121	1	75-125/25
	TPH (C6-C35)	484	593	122	577	119	3	75-125/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	116%	111%	70-130%
98-08-8	aaa-Trifluorotoluene	108%	102%	70-130%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** T91820  
**Account:** CARR Carr Environmental Group  
**Project:** ISR-11-779

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21012-MS	JJ23398.D	1	11/07/11	GY	11/07/11	OP21012	GJF288
OP21012-MSD	JJ23400.D	1	11/07/11	GY	11/07/11	OP21012	GJF288
T91824-10	JJ23420.D	1	11/08/11	GY	11/07/11	OP21012	GJF288

The QC reported here applies to the following samples:

Method: TNRCC 1005

T91820-1, T91820-2, T91820-4, T91820-5, T91820-7, T91820-8, T91820-9, T91820-10, T91820-11

CAS No.	Compound	T91824-10 mg/kg	Spike Q mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C6-C12)	61.8	254	356	116	361	114	1	75-125/25
	TPH (> C12-C28)	208	254	587	149*	580	141*	1	75-125/25
	TPH (C6-C35)	286	508	943	129*	941	124	0	75-125/25

CAS No.	Surrogate Recoveries	MS	MSD	T91824-10	Limits
84-15-1	o-Terphenyl	111%	107%	114%	70-130%
98-08-8	aaa-Trifluorotoluene	95%	94%	105%	70-130%

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## General Chemistry

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### QC Data Summaries

7

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: T91820  
Account: CARR - Carr Environmental Group  
Project: ISR-11-779

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP15951/GN36637	2.5	0.0	mg/kg	50	48.9	97.9	90-110%

Associated Samples:  
Batch GP15951: T91820-7  
(\* ) Outside of QC limits

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DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: T91820  
Account: CARR - Carr Environmental Group  
Project: ISR-11-779

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP15951/GN36637	T91677-1	mg/kg	62.7	66.2	5.4	0-20%
Solids, Percent	GN36571	T91820-7	%	91.3	90.4	1.0	0-5%
Solids, Percent	GN36659	T91969-16	%	94.7	93.6	1.2	0-5%

Associated Samples:

Batch GN36571: T91820-7

Batch GN36659: T91820-1, T91820-10, T91820-11, T91820-2, T91820-4, T91820-5, T91820-8, T91820-9

Batch GP15951: T91820-7

(\*) Outside of QC limits

7.2  
7

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: T91820  
Account: CARR - Carr Environmental Group  
Project: ISR-11-779

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP15951/GN36637	T91677-1	mg/kg	62.7	63.6	140	121.6N	80-120%

Associated Samples:  
Batch GP15951: T91820-7  
(\* ) Outside of QC limits  
(N) Matrix Spike Rec. outside of QC limits

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