

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised October 10, 2003

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company <b>Burlington Resources, a wholly owned subsidiary of ConocoPhillips Company</b>	Contact <b>Gwen R. Frost</b>
Address <b>3401 E. 30<sup>th</sup> St., Farmington, NM 87402</b>	Telephone No. <b>505-326-9549</b>
Facility Name <b>San Juan 30-6 #92M</b>	Facility Type <b>Gas Well</b>
Surface Owner <b>Federal</b>	Mineral Owner <b>Federal</b>
Lease No. <b>NM-02151-B</b>	

**LOCATION OF RELEASE**

Unit Letter <b>G</b>	Section <b>33</b>	Township <b>T30N</b>	Range <b>R07W</b>	Feet from the <b>2313'</b>	North/South Line <b>North</b>	Feet from the <b>1500'</b>	East/West Line <b>East</b>	County <b>Rio Arriba</b>
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Latitude 36.76993° N Longitude 107.57196° W

**NATURE OF RELEASE**

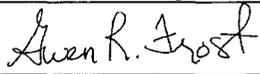
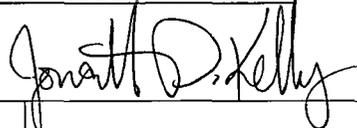
Type of Release – <b>15% Hydrochloric Acid</b>	Volume of Release – <b>24 BBL</b>	Volume Recovered – <b>0 BBL</b>
Source of Release: <b>Acid Transporter valve leak</b>	Date and Hour of Occurrence <b>11/17/09</b>	Date and Hour of Discovery <b>11/17/09 – 7:30 a.m.</b>
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? <b>OCD - Brandon Powell via phone</b> <b>BLM – Kevin Schneider via phone</b>	<b>RCVD FEB 12 '10</b> <b>OIL CONS. DIV.</b>
By Whom? <b>Gwen R. Frost</b>	Date and Hour – <b>11/17/09 – 4:00 p.m.</b>	<b>DIST. 3</b>
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.\* **At the start of frac operations on location, fluid was noted in the area of the frac pump & blender. A Schlumberger crew discovered it was 15% hydrochloric acid from the acid transfer pump valve that had leaked. Upon discovery the job was shut down & Envirotech was mobbed to location for spill clean up. The spill volume was approximately 24 BBL of 15% HCl. The spill was contained on location.**

Describe Area Affected and Cleanup Action Taken.\* **All of the spilled fluids remained on location. All impacted soil was recovered & removed for proper disposal by Envirotech.**

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: <b>Gwen R. Frost</b>	Approved by District Supervisor: 	
Title: <b>Environmental Engineer</b>	Approval Date: <b>11/19/2012</b>	Expiration Date:
E-mail Address: <b>gwendolynne.frost@conocophillips.com</b>	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <b>2/11/10</b>	Phone: <b>505-326-9549</b>	

\* Attach Additional Sheets If Necessary

*NSK 1232453598*

# SPILL CLEANUP REPORT

LOCATED AT:  
BURLINGTON RESOURCES  
SAN JUAN 30-6 #92N WELL SITE  
SECTION 33, TOWNSHIP 30N, RANGE 7W  
RIO ARRIBA COUNTY, NEW MEXICO

PREPARED FOR:  
SCHLUMBERGER WELL SERVICE  
MR. WAYNE ALLEN  
3106 BLOOMFIELD HIGHWAY  
FARMINGTON, NEW MEXICO 87401



PROJECT No. 97033-0019  
DECEMBER 2009



January 18, 2010

Project No. 97033-0019

Mr. Wayne Allen  
Schlumberger Well Service  
3106 Bloomfield Highway  
Farmington, NM 87401

Cell (505) 325-5096  
Fax (505) 327-0317

**RE: SPILL CLEANUP REPORT FOR BURLINGTON RESOURCES SAN JUAN 30-6 #92N  
WELL SITE, RIO ARRIBA COUNTY, NEW MEXICO**

Dear Mr. Allen,

Enclosed please find the *Spill Cleanup Report* detailing cleanup activities at the Burlington Resources San Juan 30-6 #92N well site located in Section 33, Township 30N, Range 7W, Rio Arriba County, New Mexico.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**

  
Sherry Auckland  
Staff Scientist  
[sauckland@envirotech-inc.com](mailto:sauckland@envirotech-inc.com)

Enclosures: Spill Cleanup Report

Cc: Client File No. 97033

**SCHLUMBERGER WELL SERVICE  
SPILL CLEANUP REPORT  
SAN JUAN 30-6 #92N WELL SITE  
SECTION 33, TOWNSHIP 30N, RANGE 7W  
RIO ARriba COUNTY, NEW MEXICO**

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              Appendix D, Special Waste Shipment Records

## INTRODUCTION

Envirotech, Inc. of Farmington, New Mexico, was contracted by Schlumberger to provide environmental response and cleanup services for a release of hydrochloric acid at the San Juan 30-6 #92N well site located in Section 33, Township 30N, Range 7W, Rio Arriba County, New Mexico; see *Figure 1, Vicinity Map*. Approximately 1,000 gallons of 15% hydrochloric acid was released onto the well pad during fracturing activities; see *Figure 2, Site Map* and *Appendix A, Site Photography*. Cleanup activities included the removal of contaminated soil, field screening, sampling, laboratory analysis, documentation, and reporting.

## ACTIVITIES PERFORMED

Envirotech was contacted on November 17, 2009, with an emergency request to respond to a spill that occurred at the above-referenced location. On November 17, 2009, an Envirotech Scientist arrived on-site to begin cleanup activities. Prior to Envirotech's arrival, Schlumberger had applied approximately 250 pounds of soda ash to the soil collected from the area of release, to neutralize the hydrochloric acid; see *Appendix C, MSDS*. Upon arrival, an Envirotech scientist collected a composite sample from the soil staged on-site, after application of the soda ash. The sample was screened in the field for pH and returned results of less than one (1). Schlumberger then applied approximately 250 additional pounds of soda ash. A second composite sample was collected from the sludge pile and analyzed in the field for pH and returned results of 7.7. This sample was transported under chain of custody to Envirotech's laboratory to be analyzed for total petroleum hydrocarbons (TPH) via USEPA Method 8015 and for reactivity, corrosivity, and ignitability (RCI). The sample returned results of 26.9 ppm TPH and negative for RCI.

Three (3) additional composite samples were then collected. Two (2) composite samples were collected from the area of release, and one (1) background sample was collected just west of the well-pad; see *Figure 2, Site Map*. The samples were screened in the field for pH and returned results ranging from 8.64 to 9.97. The three samples were transported under chain of custody to Envirotech's laboratory to be analyzed for pH. The laboratory samples returned results ranging from 6.57 to 7.95.

Schlumberger requested approval to dispose of the waste at the San Juan County Regional (SJCRL) Landfill from the New Mexico Oil Conservation Division (NMOCD) on December 3, 2009. Upon receipt of approval from the NMOCD, the SJCRL request additional analysis for benzene and BTEX. On December 4, 2009, Envirotech, Inc. returned to the site to collect a composite sample from the sludge pile. The sample was collected into a four (4)-ounce glass jar, capped headspace free, and transported on ice under chain of custody to Envirotech's laboratory to be analyzed for benzene and BTEX via USEPA Method 8021. The sample returned results of 1.12 ppm benzene and 108.0 ppm BTEX; see *Appendix B, Analytical Results*. Approximately 24 cubic yards of contaminated soil was then transported to SJCRL for disposal; see *Appendix D, Special Waste Shipment Records*.

**SUMMARY AND CONCLUSIONS**

Approximately 24 cubic yards of contaminated soil was transported to SJCR L for disposal; see *Appendix D, Special Waste Shipment Records*. Envirotech, Inc. recommends no further action regarding this incident.

**STATEMENT OF LIMITATIONS**

Envirotech, Inc. has completed the removal of soil impacted by a Schlumberger release of 15% hydrochloric acid located at Burlington Resources San Juan 30-6 #92N well site located in Section 33, Township 30N, Range 7W, Rio Arriba County, New Mexico. The work and services provided by Envirotech were in accordance with NMOCD regulatory standards. All observations and conclusions provided here are based on the information and current site conditions found at the site of the incident.

The undersigned has conducted this service at the above referenced site. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

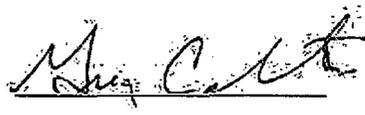
Respectfully Submitted,

Reviewed By:

**ENVIROTECH, INC.**



Sherry Auckland  
Staff Scientist  
[sauckland@envirotech-inc.com](mailto:sauckland@envirotech-inc.com)

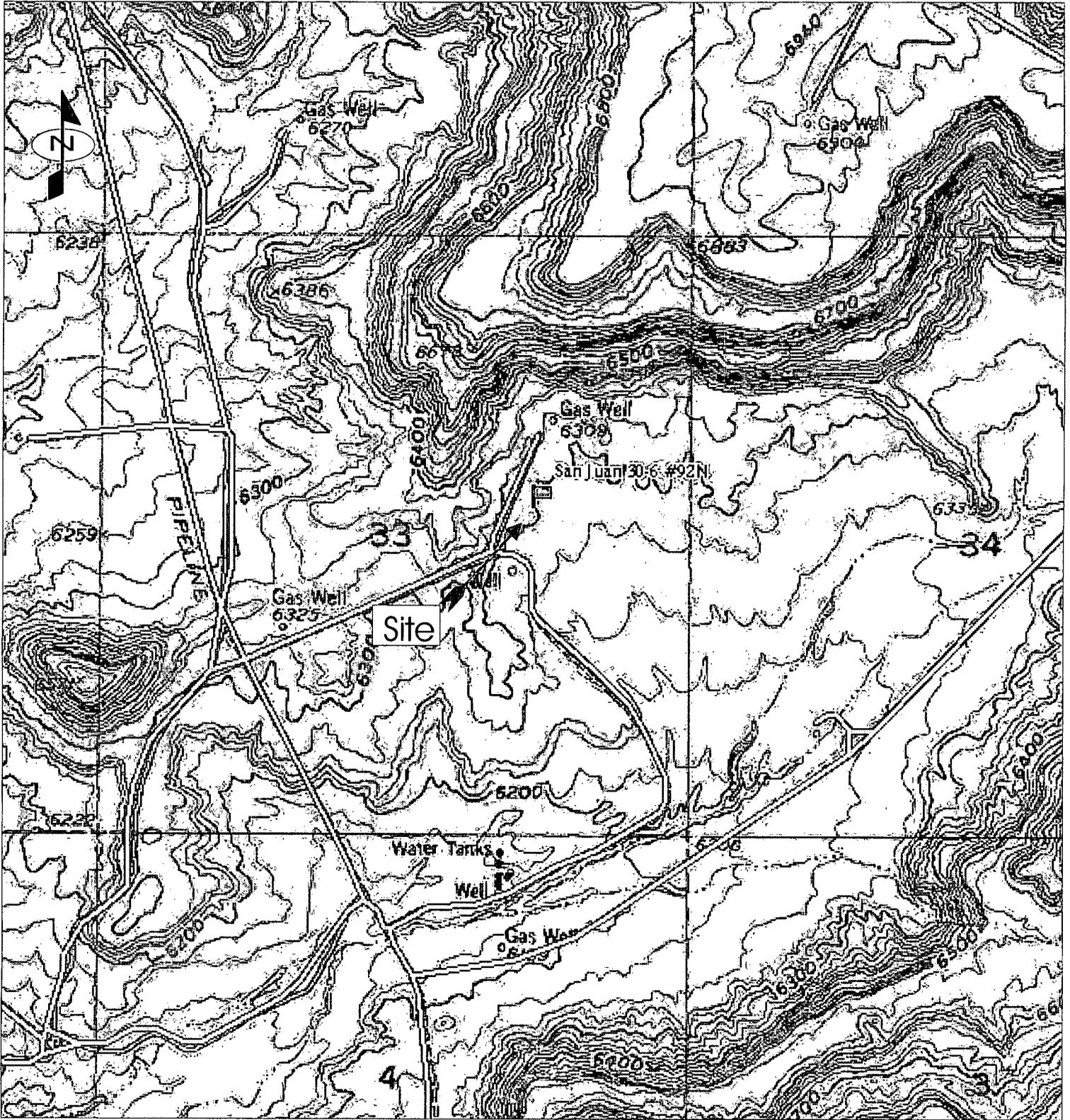


Greg Crabtree, EIT  
Project Engineer/Manager  
[gcrabtree@envirotech-inc.com](mailto:gcrabtree@envirotech-inc.com)

**FIGURES**

**Figure 1, Vicinity Map**

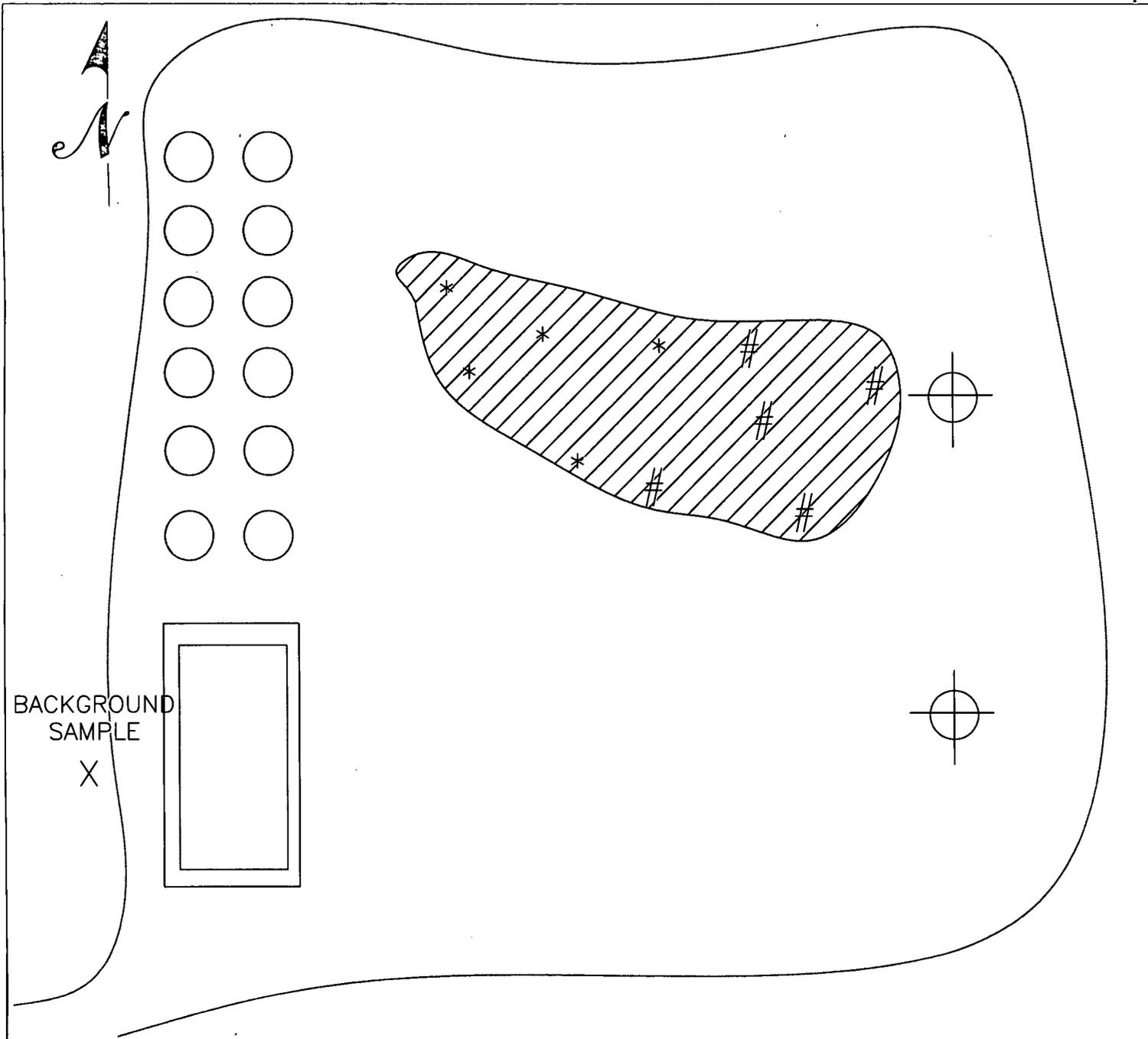
**Figure 2, Site Map**



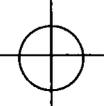
Source: Blanco, New Mexico 7.5 Minute U.S.G.S. Topographic Quadrangle Map  
 Scale: 1:24,000 1" = 2000'

<p>Schlumberger          San Juan 30-6 #92N Well Site          Section 33, Township 30N, Range 7W          Rio Arriba County, New Mexico</p>	<p><b>ENVIROTECH INC.</b>          ENVIRONMENTAL SCIENTISTS &amp; ENGINEERS          5796 U.S. HIGHWAY 64          FARMINGTON, NEW MEXICO 87401          PHONE (505) 632-0615</p>	<p>Vicinity Map</p>	
<p>PROJECT No 97033-0019 Date Drawn: 12/22/09</p>		<p>DRAWN BY:          Sherry Auckland</p>	<p>PROJECT MANAGER:          Greg Crabtree</p>

Figure 1



LEGEND

-  FRACTURING TANKS STAGED ON-SITE
-  BERM
-  COVERED STOCKPILE ON POLY-LINER
-  CONTAMINATED AREA
-  WELL HEAD
-  \* / # SAMPLE LOCATIONS

SITE MAP  
SCHLUMBERGER

SAN JUAN 30-6 #92N & 92M WELL SITES  
SEC 33, TWP 30N, RNG 7W  
RIO ARRIBA COUNTY, NEW MEXICO

SCALE: NTS

FIGURE NO. 2

REV

PROJECT N097033-0019

REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP DRWN	SLA	12/28/09	BASE DRWN

ENVIRONMENTAL SCIENTISTS & ENGINEERS  
**ENVIROTECH**

5796 U.S. HIGHWAY 64, FARMINGTON, NM 87410 505-632-0615

**APPENDIX A**

**Site Photography**

SPILL CLEANUP REPORT  
BURLINGTON RESOURCES  
SAN JUAN 30-6 #92N WELL SITE  
SECTION 33, TOWNSHIP 30N, RANGE 7W  
RIO ARriba COUNTY, NEW MEXICO  
PROJECT No. 97033-0019

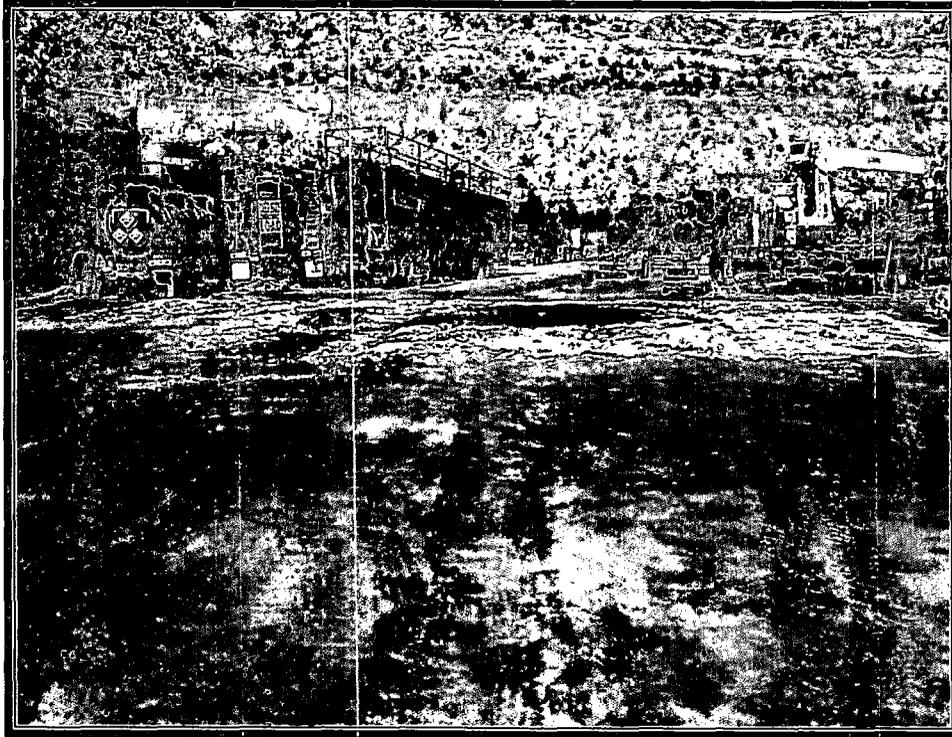


Photo 1: View of Spill Area upon Envirotech's Arrival

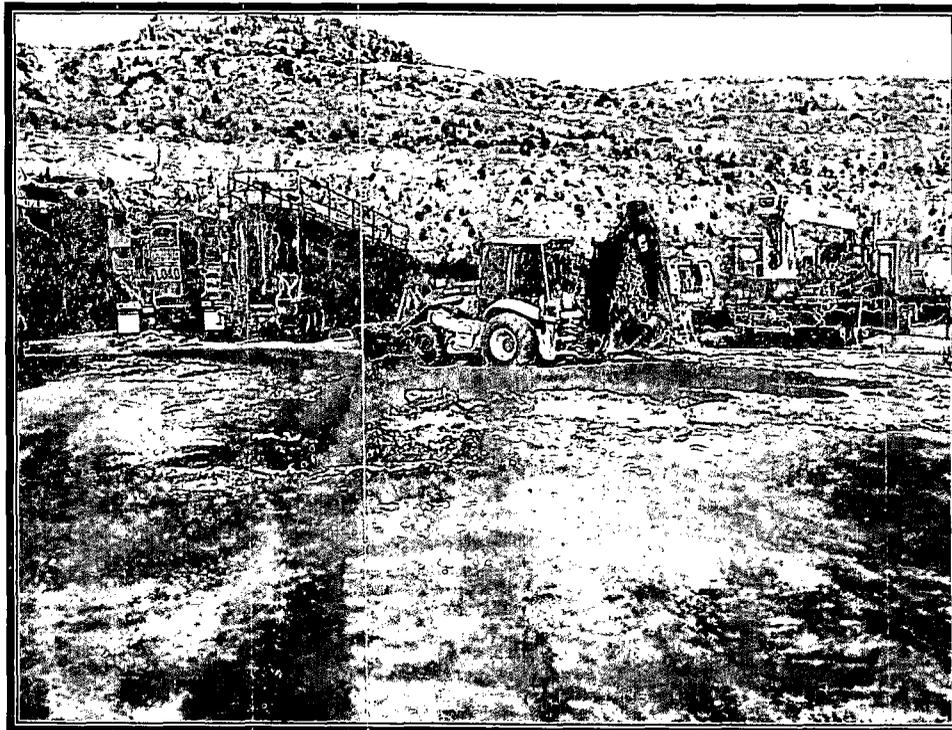


Photo 2: Spill Area Excavation (View 1)

**SPILL CLEANUP REPORT  
BURLINGTON RESOURCES  
SAN JUAN 30-6 #92N WELL SITE  
SECTION 33, TOWNSHIP 30N, RANGE 7W  
RIO ARRIBA COUNTY, NEW MEXICO  
PROJECT NO. 97033-0019**

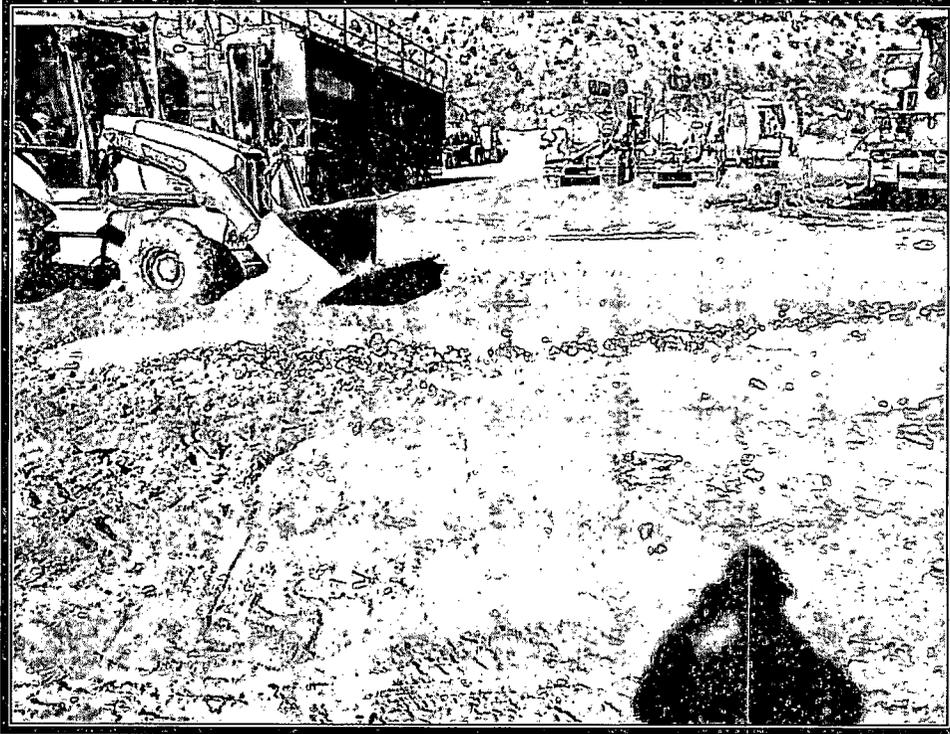


Photo 3: Spill Area Excavation (View 2)

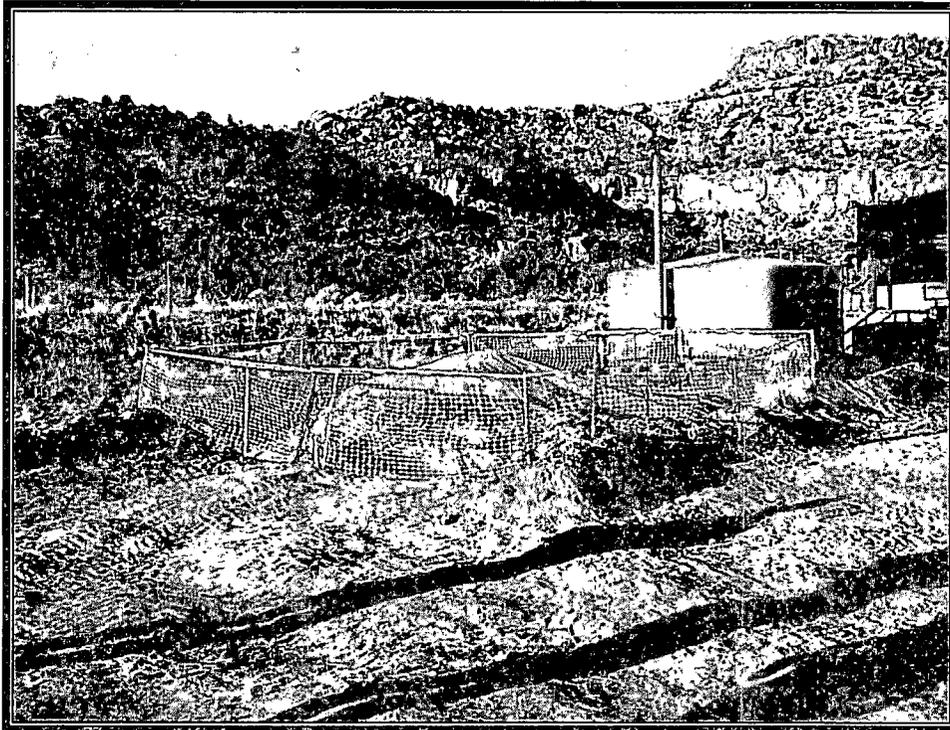


Photo 4: Soil Stockpiled On-Site

## **APPENDIX B**

### **Analytical Results**



**envirotech**  
Analytical Laboratory

**EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons**

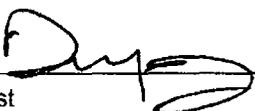
Client:	Slumberger	Project #:	97033-0019
Sample ID:	Waste Composite	Date Reported:	11-20-09
Laboratory Number:	52477	Date Sampled:	11-17-09
Chain of Custody No:	8435	Date Received:	11-18-09
Sample Matrix:	Soil	Date Extracted:	11-18-09
Preservative:	Cool	Date Analyzed:	11-19-09
Condition:	Intact	Analysis Requested:	8015 TPH

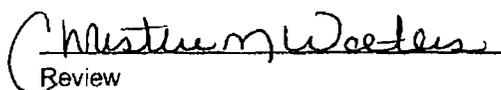
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
<b>Gasoline Range (C5 - C10)</b>	<b>6.0</b>	<b>0.2</b>
<b>Diesel Range (C10 - C28)</b>	<b>20.9</b>	<b>0.1</b>
<b>Total Petroleum Hydrocarbons</b>	<b>26.9</b>	<b>0.2</b>

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **SJ 30-6 #92N**

  
Analyst

  
Review



**EPA Method 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons**

**Quality Assurance Report**

Client:	QA/QC	Project #:	N/A
Sample ID:	11-19-09 QA/QC	Date Reported:	11-20-09
Laboratory Number:	52477	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-19-09
Condition:	N/A	Analysis Requested:	TPH

	Col. Date	Cal. RF	Cal. Ref.	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.1716E+002	9.1753E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.5336E+002	9.5374E+002	0.04%	0 - 15%

Blank Conc. (mg/L - mg/kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	6.0	6.1	1.7%	0 - 30%
Diesel Range C10 - C28	20.9	20.8	0.5%	0 - 30%

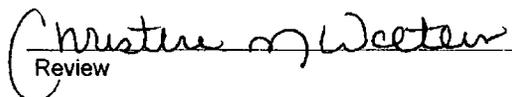
Spike Conc. (mg/kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	6.0	250	261	102%	75 - 125%
Diesel Range C10 - C28	20.9	250	267	98.5%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 52477, 52482, 52488, 52493 - 52494 and 52496.

Analyst 

Review 



**SUSPECTED HAZARDOUS  
WASTE ANALYSIS**

Client:	Slumberger	Project #:	97033-0019
Sample ID:	Waste Composite	Date Reported:	11-19-09
Lab ID#:	52477	Date Sampled:	11-17-09
Sample Matrix:	Soil	Date Received:	11-18-09
Preservative:	Cool	Date Analyzed:	11-19-09
Condition:	Intact	Chain of Custody:	8435

Parameter	Result
-----------	--------

<b>IGNITABILITY:</b>	<b>Negative</b>	
<b>CORROSIVITY:</b>	<b>Negative</b>	<b>pH = 8.42</b>
<b>REACTIVITY:</b>	<b>Negative</b>	

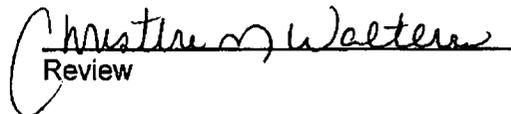
RCRA Hazardous Waste Criteria

Parameter	Hazardous Waste Criterion
IGNITABILITY:	Characteristic of Ignitability as defined by 40 CFR, Subpart C, Sec. 261.21. <i>(i.e. Sample ignition upon direct contact with flame or flash point &lt; 60° C.)</i>
CORROSIVITY:	Characteristic of Corrosivity as defined by 40 CFR, Subpart C, Sec. 261.22. <i>(i.e. pH less than or equal to 2.0 or pH greater than or equal to 12.5)</i>
REACTIVITY:	Characteristic of Reactivity as defined by 40 CFR, Subpart C, Sec. 261.23. <i>(i.e. Violent reaction with water, strong base, strong acid, or the generation of Sulfide or Cyanide gases at STP with pH between 2.0 and 12.5)</i>

Reference: 40 CFR part 261 Subpart C sections 261.21 - 261.23, July 1, 1992.

Comments: **SJ 30-6 #92N.**

Analyst 

  
Review

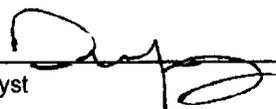


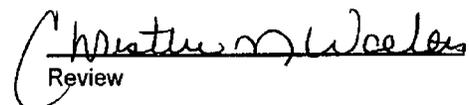
Client:	Slumberger	Project #:	97033-0019
Sample ID:	Spill Area (West)	Date Reported:	11-19-09
Laboratory Number:	52478	Date Sampled:	11-17-09
Chain of Custody:	8435	Date Received:	11-18-09
Sample Matrix:	Soil	Date Extracted:	11-19-09
Preservative:	Cool	Date Analyzed:	11-19-09
Condition:	Intact		

Parameter	Analytical Result	Units
pH	6.57	su

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: **SJ 30-6 #92N.**

  
Analyst

  
Review



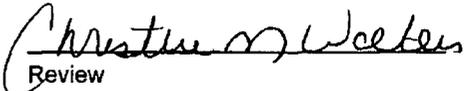
Client:	Slumberger	Project #:	97033-0019
Sample ID:	Spill Area (East)	Date Reported:	11-19-09
Laboratory Number:	52479	Date Sampled:	11-17-09
Chain of Custody:	8435	Date Received:	11-18-09
Sample Matrix:	Soil	Date Extracted:	11-19-09
Preservative:	Cool	Date Analyzed:	11-19-09
Condition:	Intact		

Parameter	Analytical Result	Units
pH	7.95	su

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: SJ 30-6 #92N.

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Review



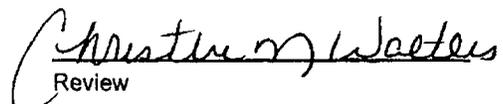
Client:	Slumberger	Project #:	97033-0019
Sample ID:	Background	Date Reported:	11-19-09
Laboratory Number:	52480	Date Sampled:	11-17-09
Chain of Custody:	8435	Date Received:	11-18-09
Sample Matrix:	Soil	Date Extracted:	11-19-09
Preservative:	Cool	Date Analyzed:	11-19-09
Condition:	Intact		

Parameter	Analytical Result	Units
pH	7.58	su

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: **SJ 30-6 #92N.**

Analyst 

  
Review

# CHAIN OF CUSTODY RECORD

8435

Client: <i>Slumberger</i>	Project Name / Location: <i>SJ 30-6 *92 N</i>	ANALYSIS / PARAMETERS												
Client Address:	Sampler Name: <i>G. Crabtree</i>	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	pH	Sample Cool	Sample Intact
Client Phone No.:	Client No.: <i>97033-0019</i>													

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	pH	Sample Cool	Sample Intact	
						HgCl <sub>2</sub>	HCl	Co <sup>2+</sup>														
<i>Waste Composite</i>	<i>11/17/09</i>	<i>1455</i>	<i>52477</i>	<i>Soil</i> Sludge Aqueous	<i>1-402</i>				✓										✓	Y	Y	
<i>Spill Area (West)</i>	}	<i>1545</i>	<i>52478</i>	<i>Soil</i> Sludge Aqueous	}														✓	Y	Y	
<i>Spill Area (East)</i>		<i>1535</i>	<i>52479</i>	<i>Soil</i> Sludge Aqueous																✓	Y	Y
<i>Background</i>		<i>1600</i>	<i>52480</i>	<i>Soil</i> Sludge Aqueous																✓	Y	Y
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		

Relinquished by: (Signature) <i>Madge Calhoun</i>	Date <i>11/18/09</i>	Time <i>0640</i>	Received by: (Signature) <i>[Signature]</i>	Date <i>11/18/09</i>	Time <i>0640</i>
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		



5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com



Client:	Schlumberger Well Service	Project #:	97033-0019
Sample ID:	Spill Material	Date Reported:	12-09-09
Laboratory Number:	52634	Date Sampled:	12-04-09
Chain of Custody:	8519	Date Received:	12-07-09
Sample Matrix:	Soil	Date Analyzed:	12-08-09
Preservative:	Cool	Date Extracted:	12-07-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1,120	0.9
Toluene	21,900	1.0
Ethylbenzene	7,660	1.0
p,m-Xylene	56,800	1.2
o-Xylene	21,000	0.9
<b>Total BTEX</b>	<b>108,000</b>	

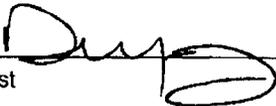
ND - Parameter not detected at the stated detection limit.

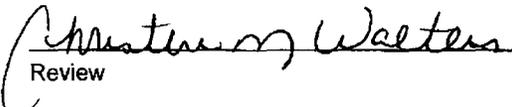
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: 30-6 #92M

  
Analyst

  
Review



# envirotech

Analytical Laboratory

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	12-08-BT QA/QC	Date Reported:	12-09-09
Laboratory Number:	52623	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	12-08-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	Cal. RF	C-Cal. RF	% Diff.	Blank Conc.	Detect Limit
		Accept. Range	± 15%		
Benzene	1.3885E+006	1.3912E+006	0.2%	ND	0.1
Toluene	1.2945E+006	1.2971E+006	0.2%	ND	0.1
Ethylbenzene	1.1675E+006	1.1699E+006	0.2%	ND	0.1
p,m-Xylene	2.9472E+006	2.9531E+006	0.2%	ND	0.1
o-Xylene	1.1033E+006	1.1055E+006	0.2%	ND	0.1

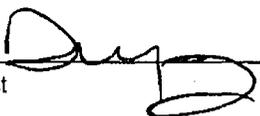
Duplicate Conc. (ug/Kg)	Sample	Duplicate	% Diff.	Accept Range	Detect Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	ND	ND	0.0%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	ND	ND	0.0%	0 - 30%	0.9

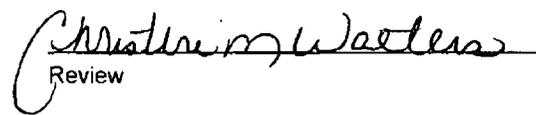
Spiked Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	49.4	98.8%	39 - 150
Toluene	ND	50.0	46.1	92.2%	46 - 148
Ethylbenzene	ND	50.0	45.3	90.6%	32 - 160
p,m-Xylene	ND	100	88.9	88.9%	46 - 148
o-Xylene	ND	50.0	51.5	103%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 52623 - 52631, and 52634.

Analyst 

Review 

# CHAIN OF CUSTODY RECORD

8519

Client: <u>Schlumberger Well Service</u> <del>Schlumberger J</del> MB		Project Name / Location: 30-6*92 M			ANALYSIS / PARAMETERS											
Client Address:		Sampler Name: J. Kitchner			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
Client Phone No.:		Client No.: 97033-0019														

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Sample Cool	Sample Intact
						HgCl <sub>2</sub>	HCl	None												
Spill Material	11-7	1335	52634	Soil Solid Aqueous	4					✓									✓	✓
				Soil Solid Aqueous																
				Soil Solid Aqueous																
				Soil Solid Aqueous																
				Soil Solid Aqueous																
				Soil Solid Aqueous																
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				Soil Solid Aqueous																

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	11-7	0655		11/7/09	0655
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		



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**APPENDIX C**

**MSDS**



**MATERIAL SAFETY DATA SHEET**

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 2

Revision date: 21 October 2008

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

Product code: H015  
 Product name: Hydrochloric Acid 15% H15  
 Company identification: Schlumberger Technology Corporation  
 110 Schlumberger Drive  
 Sugar Land, Texas 77478, USA  
 Telephone: 1-281-285-7873  
 Emergency telephone number: USA: +1-281-595-3518 (24hr)

**2. HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW	
WARNING	
Main physical hazards:	Corrosive to metals.
Main health hazards:	Causes eye irritation. Causes skin irritation. Causes irritation if swallowed. May cause respiratory tract irritation.
Other hazards:	Gives off hydrogen by reaction with metals.
Precautions:	Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling.
HMIS classification:	Health: 2 Flammability: 0 Physical hazard: 0

Form: Liquid                      Color: Colorless - Light yellow                      Odor: Pungent  
 Principle routes of exposure:  
 Eye contact. Skin contact. Inhalation.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components classified as hazardous:

Component	CAS-No	Weight % - Range
Hydrochloric acid	7647-01-0	15

**4. FIRST AID MEASURES**

Eye contact: Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.  
 Skin contact: After contact with skin, wash immediately with plenty of soap and water for at least 15 minutes. Seek medical attention.  
 Ingestion: DO NOT induce vomiting. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, minimize the risk of aspiration by properly positioning the affected person.  
 Inhalation: Move to fresh air. Obtain medical attention.

Schlumberger

Product code: H075

Revision date: 21 October 2005

**5. FIRE-FIGHTING MEASURES**

Fire hazard: Not combustible.  
 Flash point: Not combustible  
 Autoignition temperature: Not applicable.  
 Flammability limits in air:  
   Lower: Not applicable  
   Upper: Not applicable  
 Oxidizing properties: None.

**Suitable extinguishing media:**

The product itself does not burn. Use extinguishing media appropriate for surrounding material.

**Extinguishing media which must not be used for safety reasons:**

None known.

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**

Thermal decomposition can lead to release of irritating gases and vapors. Gives off hydrogen by reaction with metals.

**Special protective equipment for firefighters:**

Wear self-contained breathing apparatus and protective suit.

**NFPA rating:**

Health: 3  
 Flammability: 0  
 Instability: 0  
 Special: None

**6. ACCIDENTAL RELEASE MEASURES**

Main physical hazards: Corrosive to metals.  
 Other hazards: Gives off hydrogen by reaction with metals.  
 Personal precautions: Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Ensure adequate ventilation. See also Section 8.  
 Methods for cleaning up: Dam up. Neutralize with lime milk or soda and flush with plenty of water. Flush residual with plenty of water.  
 Environmental precautions: No information available.

**7. HANDLING AND STORAGE****Handling:**

Precautions: Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling.  
 Safe handling advice: Keep airborne concentrations below exposure limits. Wear suitable protective equipment.  
 Technical measures/ storage conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.  
 Packaging requirements: High density polyethylene (HDPE) drum or can.  
 Incompatible products: Strong bases. Metals. Oxidizing agents.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Engineering measures to reduce exposure: Control the source.

Schlumberger

Product code: H015

Revision date: 21 October 2000

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Keep airborne concentrations below exposure limits. Do not breathe vapors or spray mist. Wear suitable protective equipment.

**Respiratory protection:** Use NIOSH approved respirator with organic vapor/acid gas protection (color coded yellow). Use SCBA (self contained breathing apparatus) in confined areas and for emergencies.

**Eye protection:** Tightly fitting safety goggles. Face-shield.

**Hand protection:** Impervious gloves. Butyl, Neoprene, Nitrile, Viton.

**Skin and body protection:** Chemical resistant apron. For spills and emergencies, also wear boots and impervious suit.

**Occupational Exposure Limits**

Component	ACGIH - TLVs			OSHA - PELs		
	TWA / Ceiling	STEL	Skin	TWA / C	STEL	Final PELs - Skin
Hydrochloric acid	2 ppm C			5 ppm C 7 mg/m <sup>3</sup> C		

Particles Not Otherwise Regulated/Specified [PNOR or PNOS] (insoluble or poorly soluble):

OSHA PELs for Inert or Nuisance Dust are covered by PNOR limits: respirable fraction: 5 mg/m<sup>3</sup>; total dust 15 mg/m<sup>3</sup>.

ACGIH PNOS Recommendations: airborne concentrations should be kept below 3 mg/m<sup>3</sup>, respirable particulate, and 10 mg/m<sup>3</sup>, inhalable particles.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Chemical characterization:** Inorganic acid.

**Fire hazard:** Not combustible.

**Form:** Liquid

**Color:** Colorless - Light yellow

**Odor:** Pungent

**Odor threshold:** No information available.

**pH:** < 2

**Boiling point/range:** No data available.

**Flash point:** Not combustible

**Flammability limits in air:**

**Lower:** Not applicable

**Upper:** Not applicable

**Bulk density:** Not applicable.

**Melting point/range:** < 0 °C / 32 °F

**Decomposition temperature:** No data available.

**Solubility:**

**Water solubility:** Soluble.

**Fat solubility:** No information available.

**Partition coefficient (n-octanol/water):** Not applicable.

**Relative density:** 1.1 (@ 16°C)

**Vapor pressure:** No data available.

**Vapor density:** > 1 (air = 1)

**Viscosity:** 1 mPa.s (@ 20 °C)

**Evaporation rate:** No data available.

**% Volatile (VOC):** 15



Product code: H016

Revision date: 21 October 2006

**10. STABILITY AND REACTIVITY**

**Stability:**  
Stable under recommended storage conditions.

**Conditions to avoid:**  
None known.

**Incompatibility with other substances:**  
Metals. Bases. Oxidizers.

**Hazardous decomposition products:**  
Chlorine, chlorine oxides, hydrogen chloride. May release hydrogen gas (explosive) on contact with metals.

**Hazardous polymerization:**  
Hazardous polymerization does not occur.

**Other hazards:**  
Gives off hydrogen by reaction with metals.

**11. TOXICOLOGICAL INFORMATION**

**PRODUCT TOXICOLOGICAL INFORMATION**

**Acute Health Hazard**

**Eye contact:** Severe eye irritation. Causes pain and redness. Prolonged or repeated contact may cause mild burn.  
**Skin contact:** Severe irritant; causes pain, redness, dermatitis or mild burn.  
**Ingestion:** Irritant; may cause pain or discomfort to mouth, throat and stomach.  
**Inhalation:** Irritant; may cause pain and coughing.  
**Sensitization - lung:** Not known to cause allergic reaction.  
**Sensitization - skin:** Not known to cause allergic reaction.  
**Toxicologically synergistic products:** None known.  
**Other information:** Prolonged exposure at low concentration may cause erosion of the teeth.

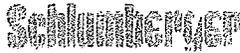
**Chronic Health Hazard**

**Carcinogenic effects:** None known.  
**Mutagenic effects:** Not known to cause heritable genetic damage.  
**Teratogenic effects:** Not known to cause birth defects or have a deleterious effect on a developing fetus.  
**Reproductive toxicity:** Not known to adversely affect reproductive functions and organs.  
**Target organ effects:** See COMPONENT TOXICOLOGICAL INFORMATION below.

**COMPONENT TOXICOLOGICAL INFORMATION**

Component	Target Organ Effects	LD50 / LC50
Hydrochloric acid	skin, eyes, respiratory system	= 3124 ppm (Inhalation LC50: Rat)

Component	IARC:	ACGIH - Carcinogens:	OSHA Regulated Carcinogens	NTP:
Hydrochloric acid		A4 - Not Classifiable as a Human Carcinogen		



Product code: H015

Revision date: 21 October 2009

## 12. ECOLOGICAL INFORMATION

### PRODUCT INFORMATION

### COMPONENT INFORMATION

#### Hydrochloric acid

**Bioaccumulation:** Not applicable  
**Persistence / degradability:** The methods for determining biodegradability are not applicable to inorganic substances.  
**Freshwater Fish Species Data**  
 = 282 mg/L (LC50; Gambusia affinis)  
 = 3.6 mg/L (LC50; Lepomis macrochirus)

## 13. DISPOSAL CONSIDERATIONS

#### Waste from residues / unused products:

Dispose of by injection or other acceptable method in accordance with local regulations.

#### Contaminated packaging:

If reusable containers are used, send them back to the product supplier, after the required rinsing. Triple rinse, crush and ship to sanitary landfill unless prohibited by local regulations.

#### EPA RCRA Hazardous Waste Code:

D002

## 14. TRANSPORT INFORMATION

#### DOT:

**UNNA Number:** UN 1789  
**CERCLA RC:** 3,720 gal (HCl)

**Packing size:** < 3720 gals  
**Hazard class:** 8  
**Proper shipping name:** Hydrochloric acid solution (15%), 8, UN 1789, PG II  
**Label(s):** Corrosive 8

**Packing size:** > 3720 gals  
**Hazard class:** 8  
**Proper shipping name:** Hydrochloric acid solution (15%), 8, UN 1789, PG II, RC  
**Label(s):** Corrosive 8

#### IMDG/IMO

**Shipping name:** HYDROCHLORIC ACID SOLUTION (15%)  
**Label(s):** Corrosive 8  
**Class or Div.:** 8  
**UN number:** UN 1789  
**Packing group:** II  
**EMS:** F-A, S-B



Product code: H015

Revision date: 21 October 2008

#### 14. TRANSPORT INFORMATION

##### ICAO/IATA

Shipping name:	Hydrochloric acid solution (15%)	
Label(s):	Corrosive 8	
Class or Div.:	8	
UN number:	UN 1789	
Packing group:	II	
Packing instruction (passenger aircraft):	809	Max Net Qty/Pkg: 1 L
Packing instruction (cargo aircraft):	813	Max Net Qty/Pkg: 30 L

##### TDS (Canada):

Shipping name:	HYDROCHLORIC ACID SOLUTION (15%), 8, UN 1789, PG II
Label(s):	Corrosive 8
PIN:	UN 1789
Class:	8
Packing group:	II

##### Note 1:

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

#### 15. REGULATORY INFORMATION

##### International Chemical Inventories

Inventory - United States TSCA -	This product complies with TSCA requirements.
Canada DSL Inventory List -	This product complies with DSL requirements.
EC-No	This product complies with EINECS/ELINCS requirements.
China inventory of existing chemical substances list -	This product complies with China inventory requirements.
Inventory - Japan - Existing and New Chemicals list -	This product does not comply with JPENCS
Australia (AICS):	All the constituents of this material are listed on the Australian inventory of Chemical Substances (AICS).

##### U.S.A. Regulations

OSHA Hazard Communication Standard:  
(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

EPA RCRA Hazardous Waste Code:  
D002

EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):

Immediate (Acute) Health Hazard:	YES
Delayed (Chronic) Health Hazard:	None
Fire Hazard:	None
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	None

EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):

This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

##### Additional Regulatory Information



Product code: H015

Revision date: 21 October 2008

**Hydrochloric acid**

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): Listed

CERCLA/SARA - Hazardous Substances and their RQs: 2270 kg final RQ

5000 lb final RQ

EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 366.40): 500 lb TPCl gas only

California Proposition 65: None

**International Hazard Class****WHMIS Hazard Class:**

E (CORROSIVE MATERIAL)

D2B (Other Toxic Effects - Toxic Material)

**16. OTHER INFORMATION****Current references:**

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati, OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer, Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational Safety and Health, Cincinnati, OH.*
5. LOLI Database.

**Explanation of terms:**

ACGIH: American Conference of Governmental Industrial Hygienist  
 ACGIH-TL: Threshold Limit Value  
 DSL: Domestic Substance List  
 HMIRC: Hazardous Materials Information Review Commission  
 IARC: International Agency for Research on Cancer  
 NTP: National Toxicology Program  
 NIOSH: National Institute of Occupational Safety & Health  
 NIOSH-REL: Recommended Exposure Limit  
 OSHA: Occupational Safety & Health Administration  
 OSHA-PEL: Permissible Exposure Limit  
 TSCA: Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling  
 Limit; units: [mg/m<sup>3</sup>]

**ACGIH Notations:**

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

Section(s) revised: 4, 8

Additional advice: Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Prepared by: Well Services Safety & Environment (WSSE), Donald Graves.

Revision date: 21 October 2008

**Schlumberger**

Product code: H015

Revision date: 21 October 2008

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End of the Material Safety Data Sheet



## MATERIAL SAFETY DATA SHEET

(USA)

(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

Version: 1

Revision date: 11 January 2006

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code: M003  
 Product name: Soda Ash M3  
 Company identification: Schlumberger Technology Corporation  
 110 Schlumberger Drive  
 Sugar Land, Texas 77478, USA  
 Telephone: 1-281-285-7873  
 Emergency telephone number: USA: 1-281-595-3518

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

#### CAUTION

Main physical hazards: No classified physical hazards.  
 Main health hazards: May cause eye irritation. Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.  
 Other hazards: Dust. Corrosive to aluminum when wet.  
 Precautions: Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Do not breathe dust.  
 HMIS classification: Health: 1 Flammability: 0 Physical hazard: 0 PPE: C, n

Form: Powder

Color: White

Odor: None

#### Principle routes of exposure:

Eye contact. Skin contact. Respiratory system.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components classified as hazardous:

Component	CAS-No	Weight % - Range
Sodium carbonate	497-19-8	60 - 100

### 4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with water for 15 minutes while holding eyelids open. Seek medical attention.  
 Skin contact: Rinse with water. Seek medical attention if irritation occurs.  
 Ingestion: Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician if necessary.  
 Inhalation: Move to fresh air. Consult a physician if necessary.



Product code: 0003

Revision date: 11 January 2006

## 5. FIRE-FIGHTING MEASURES

Fire hazard: Not combustible.  
 Flash point: Does not flash.  
 Autoignition temperature: Not applicable.  
 Flammability limits in air:  
     Lower: None  
     Upper: None  
 Oxidizing properties: None.

**Suitable extinguishing media:**  
 Use extinguishing media appropriate for surrounding material

**Extinguishing media which must not be used for safety reasons:**  
 None known

**Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases:**  
 Thermal decomposition can lead to release of irritating gases and vapors.

**Special protective equipment for firefighters:**  
 Wear protective fire fighting clothing and avoid breathing vapors. Use self-contained breathing apparatus in closed areas.

**NFPA rating:**  
     Health: 1  
     Flammability: 0  
     Instability: 0  
     Special: None

## 6. ACCIDENTAL RELEASE MEASURES

**Main physical hazards:** No classified physical hazards.  
**Other hazards:** Dust. Corrosive to aluminum when wet.  
**Personal precautions:** Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Do not breathe dust.  
**Methods for cleaning up:** Sweep up and shovel into suitable containers for disposal. Flush residual with plenty of water.  
**Environmental precautions:** None known.

## 7. HANDLING AND STORAGE

**Handling:**  
     **Precautions:** Avoid contact with eyes. Do not get on skin or clothing. Wash thoroughly after handling. Do not breathe dust.  
     **Safe handling advice:** Wear suitable protective equipment. Ensure adequate ventilation.  
**Technical measures/ storage conditions:** Keep material dry. Do not store in contact with aluminum.  
**Packaging requirements:** Paper bag (minimum 3 ply), or other industrial container designed for powders and granulated materials.  
**Incompatible products:** Strong acids. Aluminium.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Schlumberger**

Product code: M003

Revision date: 11 January 2008

**Engineering measures to reduce exposure:** Control the source.

**Hygiene measures:** Avoid contact with eyes. Keep airborne concentrations below exposure limits.

**Respiratory protection:** In case of insufficient ventilation, wear suitable respiratory equipment. If dust or mist is generated use NIOSH approved respirator with dust and mist protection (3M 8210).

**Eye protection:** Tightly fitting safety goggles.

**Hand protection:** Impervious gloves. Butyl, PVC.

**Skin and body protection:** Clean, body-covering clothing.

**Occupational Exposure Limits**

ACGIH - TLVs	OSHA - PELs
--------------	-------------

**Nuisance dust:**ACGIH: inhalable particulate TLV-TWA=10 mg/m<sup>3</sup>; respirable particulate TLV-TWA= 3 mg/m<sup>3</sup>**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Fire hazard:** Not combustible.

**Form:** Powder

**Color:** White

**Odor:** None

**Odor threshold:** Not applicable.

**pH:** 11.6

**pH concentration:** @ 10.6 g/l

**Boiling point/range:** Not applicable.

**Flash point:** Does not flash.

**Flammability limits in air:**

**Lower:** None

**Upper:** None

**Bulk density:** Not determined.

**Melting point/range:** No data available.

**Decomposition temperature:** No data available.

**Solubility:**

**Water solubility:** 210 g/l (@ 20°C)

**Fat solubility:** No information available.

**Partition coefficient (n-octanol/water):** Not applicable.

**Relative density:** 2.6 (@ 20°C)

**Vapor pressure:** Not applicable.

**Vapor density:** Not applicable.

**Viscosity:** Not applicable.

**Evaporation rate:** No data available.

**% Volatile:** None.

**10. STABILITY AND REACTIVITY****Stability:**

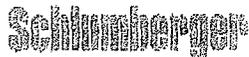
Stable under recommended storage conditions.

**Conditions to avoid:**

None reasonably foreseeable.

**Incompatibility with other substances:**

Strong acids, Aluminum.



Product code: M003

Revision date: 11 January 2006

**Hazardous decomposition products:**  
None known.

**Hazardous polymerization:**  
Hazardous polymerization does not occur.

**Other hazards:**  
Dust. Corrosive to aluminum when wet.

**11. TOXICOLOGICAL INFORMATION**

PRODUCT TOXICOLOGICAL INFORMATION

Acute Health Hazard

**Eye contact:** Irritant. May cause pain, redness, discomfort.  
**Skin contact:** No effect expected. Prolonged or repeated contact may cause mild irritation.  
**Ingestion:** No effect expected. Swallowing large amounts may be harmful.  
**Inhalation:** Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.  
**Sensitization - lung:** None known.  
**Sensitization - skin:** None known.

Chronic Health Hazard

**Carcinogenic effects:** None known.  
**Mutagenic effects:** Not known to cause heritable genetic damage.  
**Teratogenic effects:** Not known to cause birth defects or have a deleterious effect on a developing fetus.  
**Reproductive toxicity:** Not known to adversely affect reproductive functions and organs.  
**Target organ effects:** None known.

COMPONENT TOXICOLOGICAL INFORMATION

Component	Target Organ Effects	LD50 / LC50
Sodium carbonate		= 4090 mg/kg (Oral LD50; Rat)

**12. ECOLOGICAL INFORMATION**

PRODUCT INFORMATION

**Aquatic toxicity:**  
Low toxicity to fish. See component information below.

COMPONENT INFORMATION

Sodium carbonate  
 Freshwater Fish Species Data = 320 mg/L (LC50; bluegill)



Product code: M003

Revision date: 11 January 2006

### 13. DISPOSAL CONSIDERATIONS

#### Waste from residues / unused products:

Dispose of by sanitary landfilling or other acceptable method in accordance with local regulations.

#### Contaminated packaging:

Send empty bags to sanitary landfill. Render other types of containers unuseable by puncturing or crushing and sanitary landfill unless prohibited by local regulations. If reusable containers are used, send them back to the product supplier, after the required rinsing.

#### EPA RCRA Hazardous Waste Code:

None

### 14. TRANSPORT INFORMATION

#### DOT:

CERCLA RQ:	None
Hazard class:	Not regulated.
Proper shipping name:	Not regulated
Label(s):	None required.

#### IMPG/IMO

Shipping name:	Not regulated.
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UN number:	None
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#### ICAO/IATA

Shipping name:	Not regulated.
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UN number:	None
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#### TDG (Canada):

Shipping name:	Not regulated.
PIN:	None

#### Note 1:

For the applicable placard selection refer to the appropriate transport regulations; the selection may vary depending on the cargo size and categories of other hazardous materials in the cargo.

### 15. REGULATORY INFORMATION

#### International Chemical Inventories

Inventory - United States TSCA -	This product complies with TSCA requirements.
Canada DSL Inventory List -	This product complies with DSL requirements.
EC-No	This product complies with EINECS/ELINCS requirements.



Product code: M003

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China inventory of existing chemical substances list -	This product complies with China inventory requirements.
Inventory - Japan - Existing and New Chemicals list -	This product does not comply with JPENCS
Australia (AICS):	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

#### U.S.A. Regulations

OSHA Hazard Communication Standard:  
(Complies with USA OSHA 29 CFR 1910.1200 and ANSI Z 400.1)

EPA RCRA Hazardous Waste Code:  
None

EPA, Sections 311 and 312 - Material Safety Data Sheet Requirements (40 CFR 370):

Immediate (Acute) Health Hazard:	YES
Delayed (Chronic) Health Hazard:	None
Fire Hazard:	None
Sudden Release or Pressure Hazard:	None
Reactive Hazard:	None

EPA, Sections 313 - List of Toxic Chemicals (40 CFR 372):  
This product contains the following substance(s), which appear(s) on the List of Toxic Chemicals:

#### Additional Regulatory Information

Sodium carbonate

EPA, CERCLA Section 102a/103 Hazardous Substances (40 CFR 302.4): None  
 CERCLA/SARA - Hazardous Substances and their RQs: None  
 EPA, SARA TITLE III Section 304, Extremely Hazardous Substances (40 CFR 355.40): None  
 California Proposition 65: None

#### International Hazard Class

WHMIS Hazard Class:  
D2B (Other Toxic Effects - Toxic Material)

### **16. OTHER INFORMATION**

#### Current references:

1. Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. *American Conference of Governmental Industrial Hygienists, Cincinnati OH.*
2. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. *World Health Organization, International Agency for Research on Cancer. Geneva, Switzerland.*
3. Annual Report on Carcinogens. National Toxicology Program. *U.S. Department of Health and Human Services, Public Health Service.*
4. NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). *National Institute for Occupational safety and Health. Cincinnati, OH.*
5. LOLI Database.



Product code: 0005

Revision date: 11 January 2006

**Explanation of terms:**

ACGIH: American Conference of Governmental Industrial Hygienist  
ACGIH-TL: Threshold Limit Value  
DSL: Domestic Substance List  
HMIRC: Hazardous Materials Information Review Commission  
IARC: International Agency for Research on Cancer  
NTP: National Toxicology Program  
NIOSH: National Institute of Occupational Safety & Health  
NIOSH-REL: Recommended Exposure Limit  
OSHA: Occupational Safety & Health Administration  
OSHA-PEL: Permissible Exposure Limit  
TSCA: Toxic Substance Control Act (Inventory)

Occupational Exposure Limits indicators: TWA - Time Weighted Average; STEL - Short Term Limit; C - Ceiling Limit; units: [mg/m<sup>3</sup>]

**ACGIH Notations:**

"Skin" refers to the potential significant contribution to the overall exposure by the cutaneous route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance.

"A" notation indicates carcinogenicity as follows:

ACGIH classification: A1 - Confirmed Human Carcinogen; A2 - Suspected Human Carcinogen; A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans; A4 - Not Classifiable as a Human Carcinogen; A5 - Not suspected as a Human Carcinogen.

"SEN" refers to the potential for an agent to product sensitization as confirmed by human and animal data.

**Section(s) revised:** MSDS fully updated in the new database.

**Additional advice:** Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

**Prepared by:** Well Services Safety & Environment (WSSE)

**Revision date:** 11 January 2006

The information and recommendations contained herein are based upon tests believed to be reliable. However, Schlumberger does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. Schlumberger assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

**End of the Material Safety Data Sheet**

**APPENDIX D**

**Special Waste Shipment Records**

1095914  
**SPECIAL WASTE SHIPMENT RECORD**  
 WASTE MANAGEMENT OF NEW MEXICO, INC.  
 SAN JUAN COUNTY REGIONAL LANDFILL  
 PERMIT #SWM-052426, #SWM-052426SP  
 #78 CR 3140 P.O. Box 1402  
 Aztec, New Mexico 87410  
 505/334-1121

15839  
 Shipment # \_\_\_\_\_  
 Profile # 100268NM  
 (Required)

1. Generator's Work site name and address (physical site address of waste generation) 306 S. 2nd St. Aztec, NM 87410		
2. Generator's name and address Environmental Waste Solutions 7716 Highway 64 Farmington, NM 87401		Generator's Telephone no. 505-326-5046
3. Authorized Agent name and address (if different from #2) Env. Waste Solutions 7716 Highway 64 Farmington, NM 87401		Agent's Telephone no. 505-326-5046
4. Description materials Soil, Asbestos, PCB's and HCL's	5. Container's No. 1 Type Truck	6. Total Quantity (tons) (yds) 12
7. Special handling instructions		
8. GENERATOR or AUTHORIZED AGENT CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway in accordance with applicable international and government regulations. I hereby certify that the above named material does not contain free liquid as defined by 40CFR Part 258.28 and is not a hazardous waste as defined by 40CFR 261 or any applicable state law.		
Generator or Agent (Printed/typed name and title) Sherry Anderson, Env. Scientist	Generator or Agents Signature 	Month/Day/Year 12/11/09
9. Transporter 1 (Acknowledgement of receipt of materials)		
Printed/typed name & title, address, telephone no. Edward Lee, Driver 5796 US Hwy 64 Farmington, NM 87401	Driver Signature 	Month/Day/Year 12-18-09
10. Transporter 2 (Acknowledgement of receipt of materials)		
Printed/typed name & title, address, telephone no.	Driver Signature	Month/Day/Year 1/1
11. Discrepancy indication space		
12. Waste disposal site Location co-ordinates (X, Y, Z) N 26° 46.061 W 108° 02.763 ELEV 5764		
Received by name and title (Printed/typed) M. [unclear]	SJC Landfill Rep. Signature 	Month / Day / Year 12/17/09

12/20/09 12yds 1046578 15840

**SPECIAL WASTE SHIPMENT RECORD**  
 WASTE MANAGEMENT OF NEW MEXICO, INC.  
 SAN JUAN COUNTY REGIONAL LANDFILL  
 PERMIT #SWM-052426, #SWM-052426SP  
 #78 CR 3140 P.O. Box 1402  
 Aztec, New Mexico 87410  
 505/334-1121

Shipment # \_\_\_\_\_  
 Profile # 100268 NM  
 (Required)

envirotech 628

1. Generator's Work site name and address (physical site address of waste generation) San Juan 3106 472 N. Section 33 Township 30N. Range 7W. R. Arapahoe County, NM		
2. Generator's name and address Schlumberger 3106 Stearns Road Hwy Farmington, NM 87401		Generator's Telephone no. 505-326-5096
3. Authorized Agent name and address (if different from #2) Envirotech Inc 5796 Hwy 64 Farmington, NM 87401		Agent's Telephone no. 505-632-0615
4. Description materials Soil with Soda Ash MB and HCL 15%	5. Container's No. 1 Type Truck	6. Total Quantity (tons) (yd3) 70
	-B	12yds
7. Special handling instructions		

**8. GENERATOR or AUTHORIZED AGENT CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway in accordance with applicable international and government regulations. I hereby certify that the above named material does not contain free liquid as defined by 40CFR Part 258.28 and is not a hazardous waste as defined by 40CFR 261 or any applicable state law.

Generator or Agent (Printed/typed name and title) Sherry Buckland, Env Scientist	Generator or Agents Signature <i>Sherry Buckland</i>	Month/Day/Year 12/17/09
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9. Transporter 1 (Acknowledgement of receipt of materials)		
Printed/typed name & title, address, telephone no. Driver Verna Bettyjohn Envirotech Inc 5796 Hwy 64 Farmington NM 87401	Driver Signature <i>Verna Bettyjohn</i>	Month/Day/Year 12/17/09

10. Transporter 2 (Acknowledgement of receipt of materials)		
Printed/typed name & title, address, telephone no.	Driver Signature	Month/Day/Year / /

11. Discrepancy indication space  
 9# Date signed different than Date Brought in

12. Waste disposal site Location co-ordinates (X,Y, Z)  
 Elev. 5788 N 32° 46.655 W 108° 02.781

Received by name and title (Printed/typed) Nancy Baca/Contentendant	SJC Landfill Rep. Signature <i>Nancy Baca</i>	Month / Day / Year 12/21/09
--	--	--------------------------------