

**GW -** 295

**REPORTS**

**YEAR(S):**

2005

**REPORT OF PHASE II  
ENVIRONMENTAL SITE ASSESSMENT  
AND SITE REMEDIATION WORK PLAN**

**Smith Services, Drilco Facility  
1120 West Bender Road  
Hobbs, New Mexico 88240**

Prepared for

**Smith International, Inc.  
16740 Hardy Street  
Houston, Texas 77032**

RECEIVED

MAR 18 2005

Oil Conservation Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505

Prepared by

**3-D Environmental, Inc.  
4314 East 107<sup>th</sup> Street  
Tulsa, Oklahoma 74137  
3-D Project 110403**

**February 28, 2005**

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3 - D Environmental, Inc.

February 28, 2005

Mr. Lee Davis  
Smith International, Inc.  
16740 Hardy Street  
Houston, Texas 77032

**REPORT OF PHASE II ENVIRONMENTAL SITE ASSESSMENT  
AND SITE REMEDIATION WORK PLAN  
Smith Services, Drilco Facility  
1120 West Bender Road  
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3-D Environmental, Inc. Project 110403**

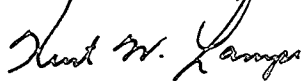
Dear Mr. Davis:

3-D Environmental, Inc. (3-D) is pleased to submit this Report of Phase II Environmental Site Assessment and Site Remediation Work Plan at the Smith Services, Drilco facility located at 1120 West Bender Road in Hobbs, New Mexico. Acting on behalf of Smith International, Inc. (Smith), you authorized 3-D to perform the assessment services. The purpose of the assessment was to establish environmental baseline conditions at the facility. The findings of the field work and analytical results are presented in this report and a follow-up work plan has been developed to address surface soil remediation.

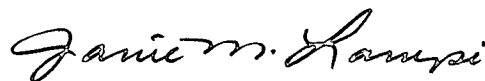
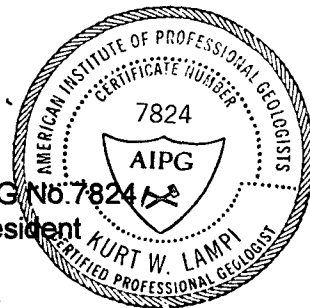
This report is intended for the exclusive use of Smith. Reliance on this document by any other party is forbidden without the express written consent of Smith and 3-D. Use of this report for purposes beyond those intended by 3-D will be at the sole risk of the user.

This report presents project information, which includes field procedures and limitations, along with the findings, conclusions, and recommendations. We appreciate your selection of 3-D for this project. If you have any questions, please do not hesitate to contact Kurt Lampi at (918) 298-7999.

Sincerely,  
3-D Environmental, Inc.



Kurt W. Lampi, AIPG CPG No. 7824  
Hydrogeologist / Vice President



Janie M. Lampi  
Geologist / President

File:\110403\PhaseIIReport

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## 1.0 INTRODUCTION

### 1.1 Purpose of Services

The purpose of the Phase II Environmental Site Assessment (ESA) services at the Smith Services, Drilco facility located at 1120 West Bender Road in Hobbs, New Mexico was to establish environmental baseline conditions.

### 1.2 Scope of Services

The Phase II ESA consisted of the following services:

- A site reconnaissance was conducted to identify areas of potential environmental impact. Areas of significance are soil stained areas, air compressors, product and waste storage areas, paint vents, wash water release points, soil covered areas directly beneath work areas, and areas near mandooors and overhead doors. Interviews were conducted with on-site personnel to obtain site history and past operating practices.
- Surface soil samples were collected between depths of 0.3 to 0.5 foot within biased locations of the Smith Services, Drilco facility. Biased locations are areas within the property where soil staining is present or at locations where soil impacts are possible due to the proximity to facility activities that were identified during the site reconnaissance.
- Soil samples were submitted for analysis to DHL Analytical Laboratory of Round Rock, Texas.
- A water well database, site geology, and other pertinent records were reviewed, as necessary, to complete the Phase II ESA report.
- Upon review of the field and the laboratory analytical data, a report was prepared summarizing the findings of the field assessment and providing a work plan for future site assessment and site remediation.

### **1.3 Qualifications and Limitations**

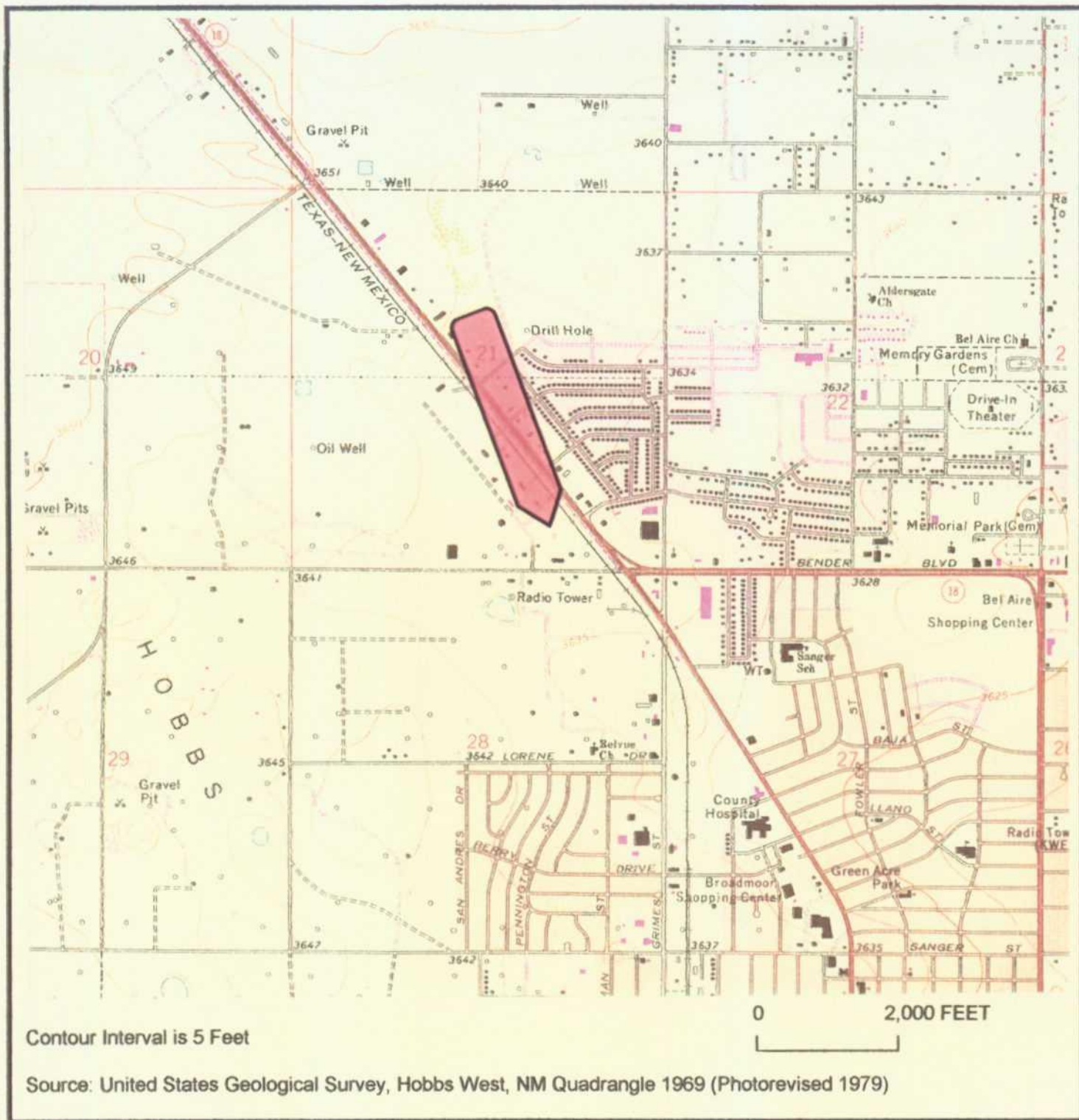
The findings and opinions presented are relative to the dates of the site work and should not be relied on to represent conditions at substantially later dates. The opinions included herein are based on information obtained during the current assessment and our experience. We have assumed that information gained from interviews was accurate unless our on site observations indicated otherwise. 3-D reserves the right to alter our findings based on our review of any information received after the date of this report.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar conditions, by reputable environmental consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional information contained in this report.

## **2.0 SITE CONCEPTUAL MODEL**

### **2.1 Property Use and Description**


The Smith Services, Drilco facility (Drilco facility) is an eight – acre property located in the northwest portion of the city of Hobbs (please refer to Figure 1). Smith acquired the facility in the summer of 2001 when the company purchased Star Tool, a regional oil field service company. The facility was reportedly first developed in the early 1960s as Evans Machine, a machine shop enterprise that repaired downhole fishing tools and pump jack gear boxes. Ownership changed in 1985 when B & B Machine Shop, a Star Tool company, purchased the facility and discontinued the servicing of pump jacks. Smith ceased site operations in July 2004. Intended property use by Smith or future owners would be industrial.



  
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**FIGURE 1**  
**SITE LOCATION MAP**  
**Smith Services, Drilco Facility**  
**1120 West Bender Road**  
**Hobbs, New Mexico**  
**3-D Project 110403**

The Drilco facility is an irregular shaped parcel and has 540 feet of frontage along West Bender Road (please refer to Figure 2 and the 1997 aerial photograph).

The latitude and longitude and physical address are as follows:

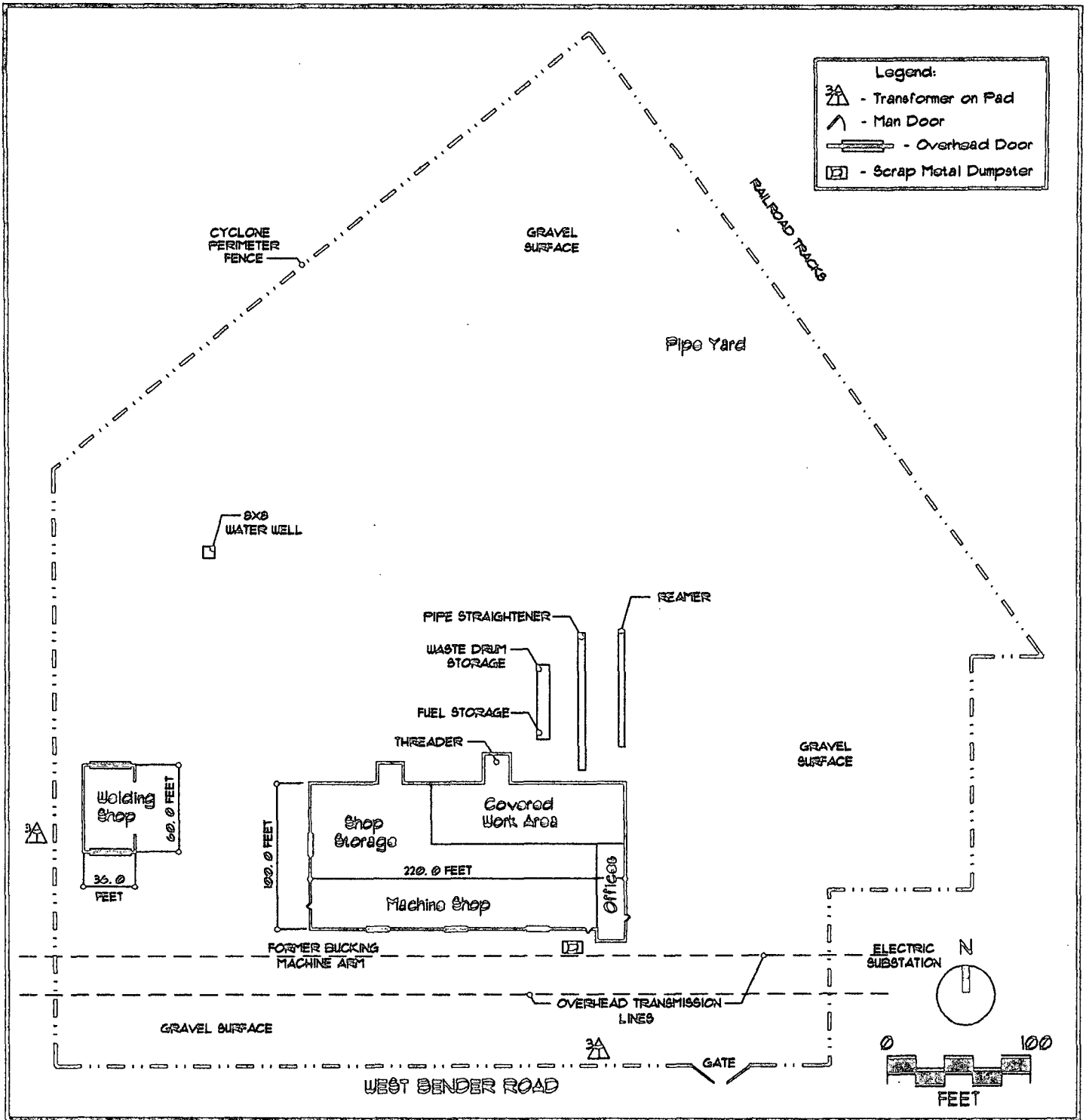
- Latitude and Longitude - 32°43'34" North and 103°08'56" West.
- Physical Address – 1120 West Bender Road, Hobbs, New Mexico 88240.

The facility is developed with two single-story, steel framed, metal walled and roofed buildings. The largest building paralleling Bender Road and centered along the south side of the facility contained a machine shop with an outside covered work area, a warehouse, and a paint booth. A smaller building located along the west side of the facility was a welding shop. The remaining surface areas of the property are gravel surfaced storage yard and access driveways.

## **2.2 Site and Vicinity Characteristics**

The site is located among other industrial properties along West Bender Road. Adjacent companies are:

- Pemco – an oil field services company, adjacent and north.
- Everett Foyt Welding, across West Bender Road to the south.
- Schlumberger, across West Bender Road to the south.
- An electrical substation, adjacent and east.
- Railroad right-of-way, adjacent and east.
- A warehouse for a uniform company, adjacent and west.



  
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**FIGURE 2**  
**SITE FACILITY PLAN**  
  
 Smith Services, Drilco Facility  
 1120 W. Bender Road  
 Hobbs, New Mexico  
  
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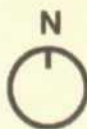
Source: <http://terraserver-usa.com>, November 1, 1997 Aerial Photograph

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**1997 AERIAL PHOTOGRAPH**

**Smith Services, Drilco Facility  
1120 West Bender Road  
Hobbs, New Mexico**

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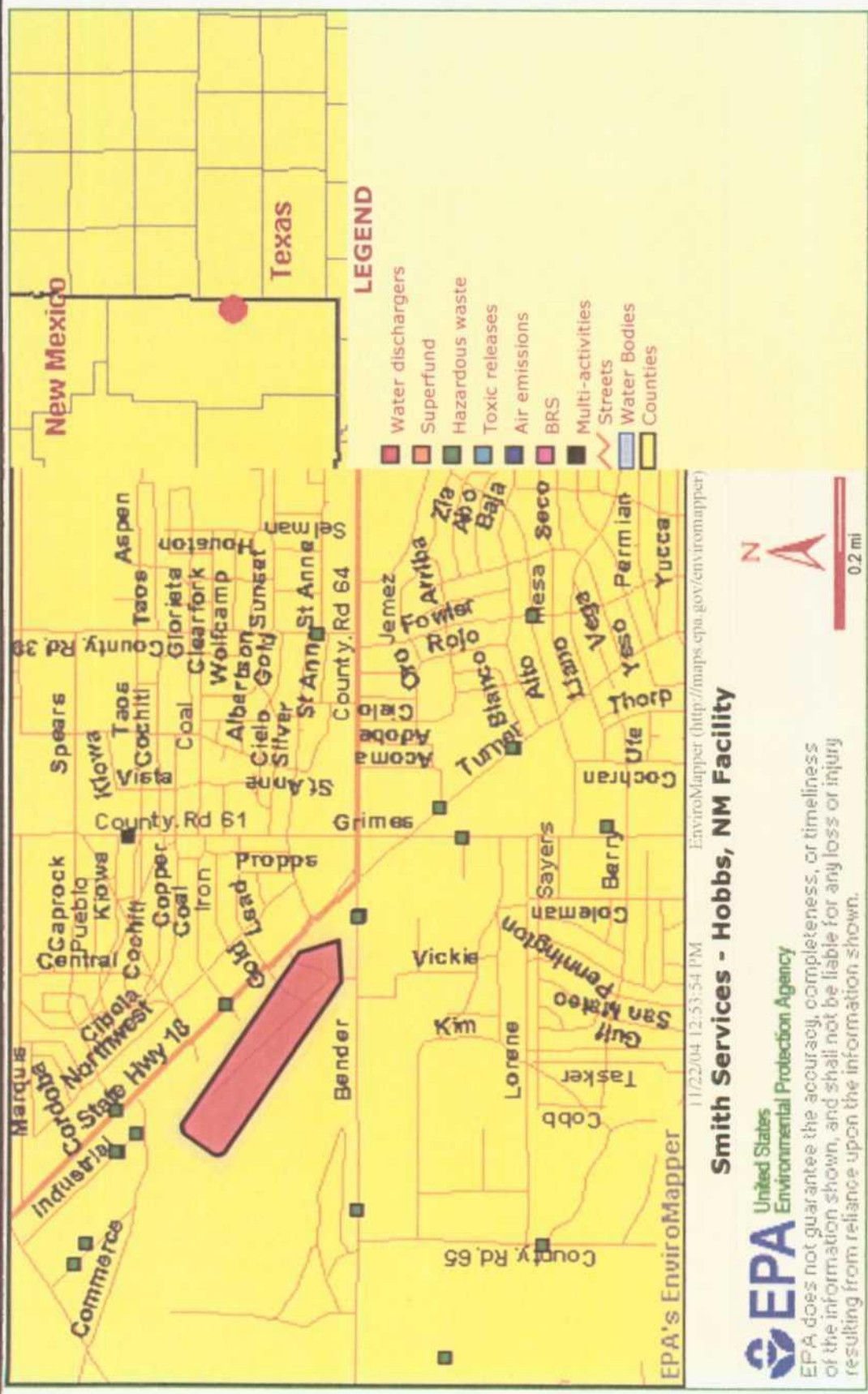
The United States Environmental Protection Agency (EPA) EnviroMapper database was reviewed on November 22, 2004 and an Environmental FirstSearch database was inspected on February 2, 2005 to identify registered EPA facilities on site and within the site vicinity (refer to Figure 3). The Drilco facility was identified as a conditional exempt small quantity generator under the business name of B & B Machine Shop, Inc. updated as of March 18, 1992. None of the other databases listed the Drilco address or identified Drilco.

Schlumberger, located across West Bender Road, was identified as a small quantity generator, an underground storage tank site, and an ERNS (a release site). One leaking underground storage tank (LUST) site listed was listed within the ASTM search radii<sup>1</sup>. The Hines Shell station located approximately 0.4 mile to the southeast at 2208 North Turner had a release in 1989 affecting soils only. This facility is in a hydraulically downgradient direction to the Smith property. No other facilities were located within the ASTM search radii.

### **2.3 Physical Setting**

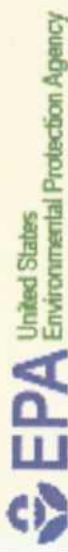
Information with regard to the geology and hydrogeology of the site and surrounding area was obtained from information reasonably ascertainable. A description of the surface water, ground water, and geological characteristics are provided below and provide the basis for opinions rendered specific to the potential for migration of on-site releases of constituents of concern.

1 Search radii as defined in *ASTM E1527-00, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.



11/22/04 12:53:54 PM  
 EnviroMapper (<http://maps.epa.gov/enviromapper>)

**Smith Services - Hobbs, NM Facility**



EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.

**FIGURE 3  
 REGULATORY DATABASE MAP**

**Smith Services, Drilco Facility  
 1120 West Bender Road  
 Hobbs, New Mexico**

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### Topography

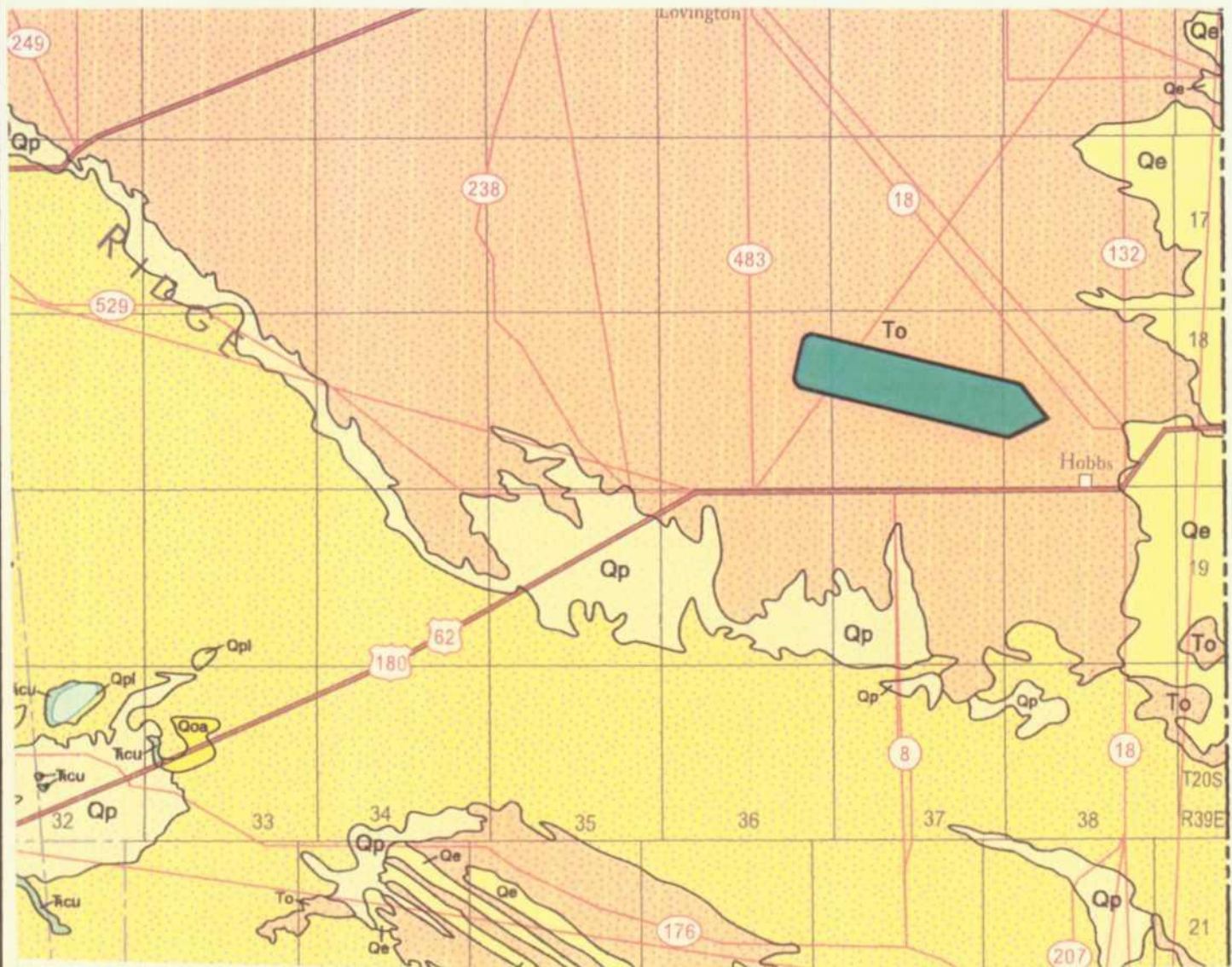
The facility is situated within the Great Plains Province and has a topographic elevation of approximately 3,637 feet above National Geodetic Vertical Datum. The site is located near the divide separating flow to either the Seminole Draw or the Monument Draw. A small depression that occasionally retains water exists off-site to the southwest at a distance of 800 feet. Surface run off is generally to the south. Based on information provided by the former facility manager, Mr. Don Gerth, the facility has flooded three times within the last 20 years. The last time was July 2004. When flooding occurs, the standing water covers the entire Smith property and includes adjacent properties.

### Geology

The Drilco property is located on the lower Pliocene to middle Miocene age Ogallala Formation (see Figure 4). The Ogallala Formation consists of alluvial and eolian deposits, and petrocalcic soils of the southern High Plains. Geologic information was obtained from the *Geologic Map of New Mexico*, New Mexico Bureau of Mines and Mineral Resources dated 2003.

The surface soils are described as Portales or Gomez fine sandy loams according to the *Soil Survey of Lea County, New Mexico*, published by the U.S. Department of the Agriculture, Soil Conservation Service. Both soil classifications form within level areas and depressions. Portales loam consists of dark brown to grayish brown loam to a depth of 12 inches. This layer becomes sticky and slightly plastic when wet. The subsoil is pale brown clay loam to a depth of approximately two feet. The next subsoil layer is made up of four feet of pale brown chalky loam with silty soils. Physical properties of the Portales loam are moderately permeable, slow runoff, and moderate water intake.





**Geologic Legend**

- Qp – Quaternary age, Piedmont alluvial deposits
  - Qe – Quaternary age, Eolian deposits
  - Qep – Quaternary age, Eolian and Piedmont deposits
  - To – Tertiary age, Ogallala Formation
- Source: Geologic Map of New Mexico  
 New Mexico Bureau of Mines and Mineral Resources, 2003.



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**FIGURE 4  
 HOBBS AREA GEOLOGIC MAP**

**Smith Services, Drilco Facility  
 1120 West Bender Road  
 Hobbs, New Mexico**

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Gomez fine sandy loam is described as a well-drained soil that has a fine sandy loam subsoil. The surface layer is composed of a 15-inch thick grayish-brown fine sandy loam. The subsoil consists of a seven-inch thick upper layer of light brownish gray fine sandy loam transitioning into a four foot thick second layer comprised of soft caliche having a fine sandy loam texture. This lower layer may be slightly hard and becomes sticky and plastic when wet. Many medium size calcium carbonate concretions are present in this soil zone. Both soil types are mildly to moderately alkaline and become strongly calcareous with depth.

#### Hydrogeology

The regional surface gradient in the area of the Drilco facility is generally to the east.

Locally, the surface gradient is to the south. According to the *Ground Water Atlas of the United States, Segment 2, Arizona, Colorado, New Mexico and Utah, U.S. Geological Survey, 1995*, the facility is underlain by the High Plains Aquifer. The Ogallala Formation is the principle geologic unit of the aquifer in eastern New Mexico and consists of an unconsolidated sequence and poorly sorted sequence of gravel, sand, silt, and clay. A moderate to well cemented zone near the top of the formation is known as the Ogallala cap rock and may be up to 60 feet thick.

Aquifer recharge is primarily from direct precipitation or stream seepage directly on the outcrop surface of the formation in this region. Soil conditions greatly affect aquifer recharge rates. Clayey soils and well cemented soils impede the vertical migration of water. The depth to ground water is generally less than 50 feet. The saturated thickness of the High Plains Aquifer for the Hobbs area is less than 100 feet. Most of the aquifer water is used for agriculture in eastern New Mexico given water quality. The water typically contains dissolved sulfate as the principal anion and is characterized as either a calcium magnesium sulfate or a bicarbonate sulfate type.

An overview of 40 nearby water wells listed in the New Mexico water well database shows an average depth of 55 feet to ground water with a minimum depth of 35 feet as of January 31, 2005. Water well records are presented in Appendix D. An abandoned water well exists on site. According to the former facility manager, Mr. Don Gerth, the facility water supply was changed to city-supplied water in the mid 1990s due to water quality issues of odor.

#### Wetlands

A review of the United States Geological Survey (USGS) topographic map of *Hobbs West, New Mexico Quadrangle* (1969, photorevised 1979) did not detect the presence of marsh or marsh-type vegetation at the subject site. It is our opinion that the subject property would not be considered a jurisdictional wetland area at this time.

#### Oil and Gas Wells

The facility and the western portions of the city of Hobbs are located within the Hobbs Oil Field. Mr. Don Gerth, the former facility manager, indicated that a P&A oil well exists to the northeast of the office area of the main building. The topographic map (Figure 1) shows the presence of at least one well location on the property, and historic aerial photographs (see following pages) depict a tank battery and reserve pit. Furthermore, the New Mexico Oil and Gas Wells Database (source: <http://octane.nmt.edu/data/>) depicts one plugged and abandoned (P&A) oil well on site (See Appendix E). Additional Phase II assessment is proposed for the areas affected by past oil field activity (Please refer to Section 5.3).

### **2.4 Potential Human and Ecological Receptors**

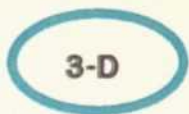
The Drilco facility is a property developed for industrial use. The facility is fully developed with a fenced perimeter, building structures, gravel surfaced service roads, or gravel surfaced storage yards. The potential human receptor would be an outside industrial worker. No ecological receptors exist within the facility.





Source: Banks Information Solutions, Austin, Texas.

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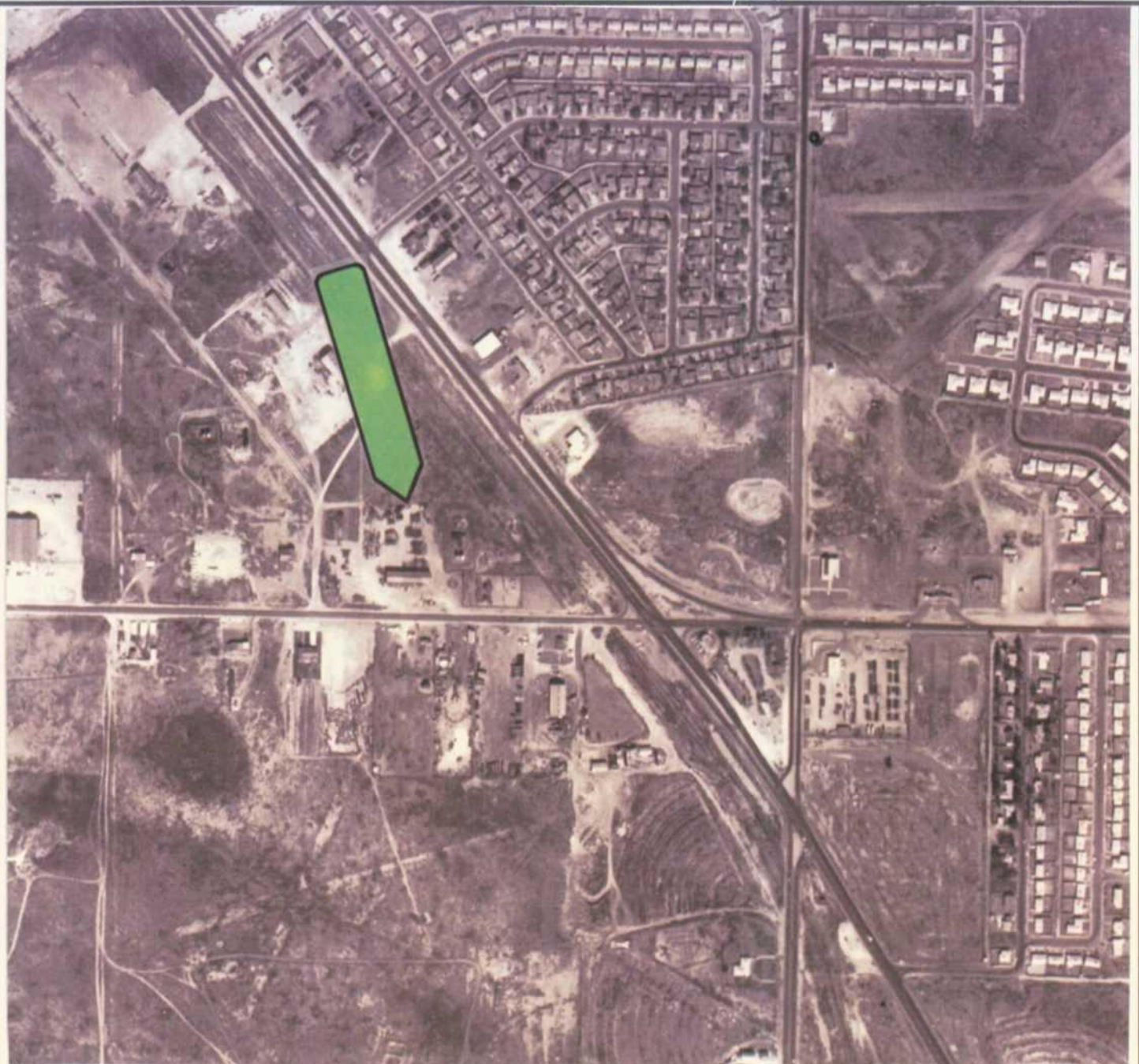
4314 East 107<sup>th</sup> Street  
Tulsa, Oklahoma 74137



1949 AERIAL PHOTOGRAPH  
Smith Services, Drilco Facility  
1120 West Bender Road  
Hobbs, New Mexico

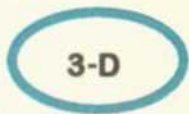
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Source: Banks Information Solutions, Austin, Texas.

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**1966 AERIAL PHOTOGRAPH**  
**Smith Services, Drilco Facility**  
**1120 West Bender Road**  
**Hobbs, New Mexico**

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The shallow ground water is reportedly to be located at depths greater than 35 feet. The soil to ground-water pathway would be eliminated if the constituents in the impacted soil are shown to be vertically limited and / or do not leach at concentration levels exceeding the maximum contaminant levels (MCLs) for drinking water.

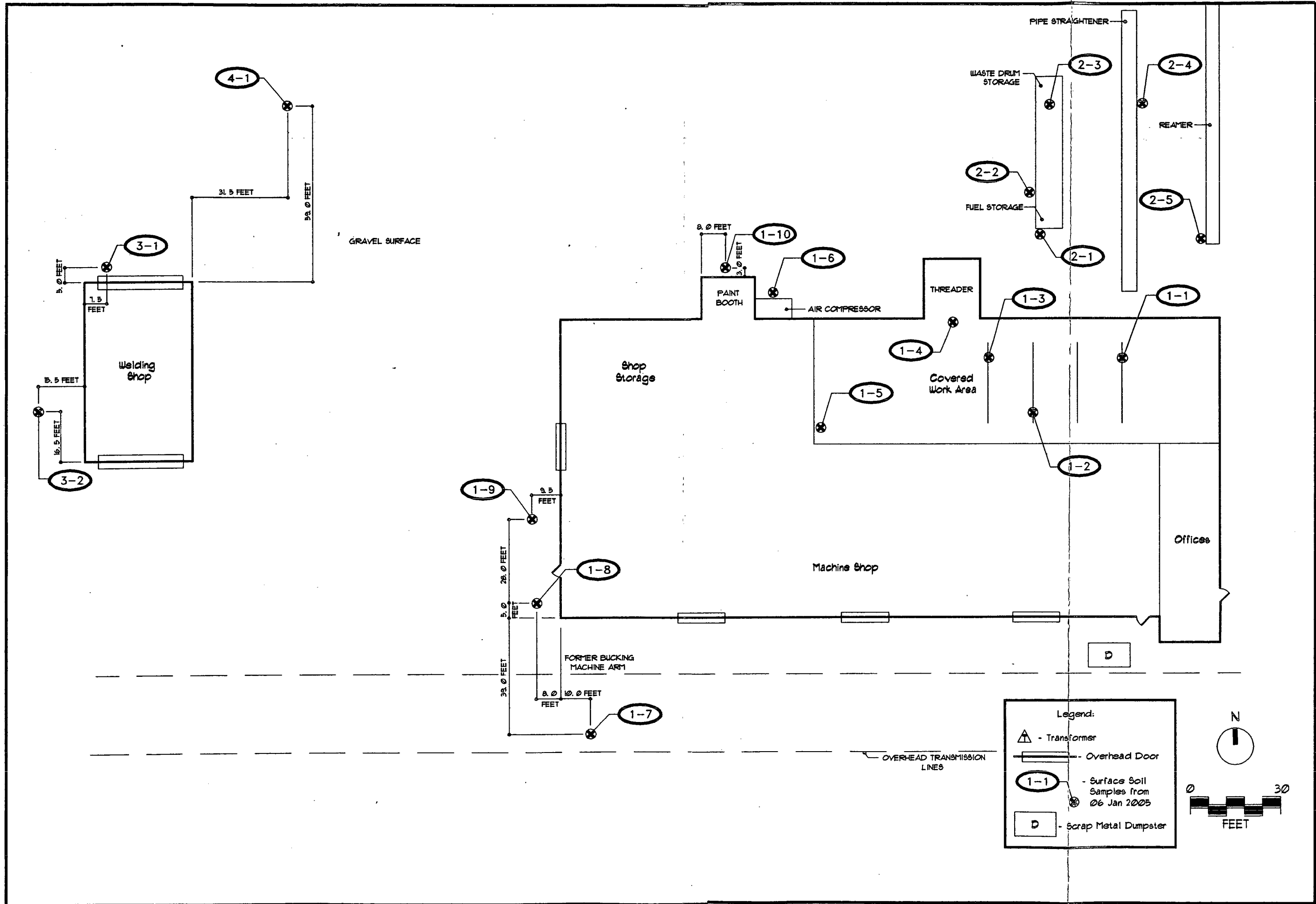
### 3.0 SURFACE SOIL SAMPLING ACTIVITIES

#### 3.1 Soil Sampling Locations

Locations of potential environmental impact within the facility property were identified during the site reconnaissance in December 2004. The sample locations of the suspect areas are identified in Figures 5 and 6 and are as follows:

##### Area 1 – Perimeter Areas Surrounding the Machine Shop Building

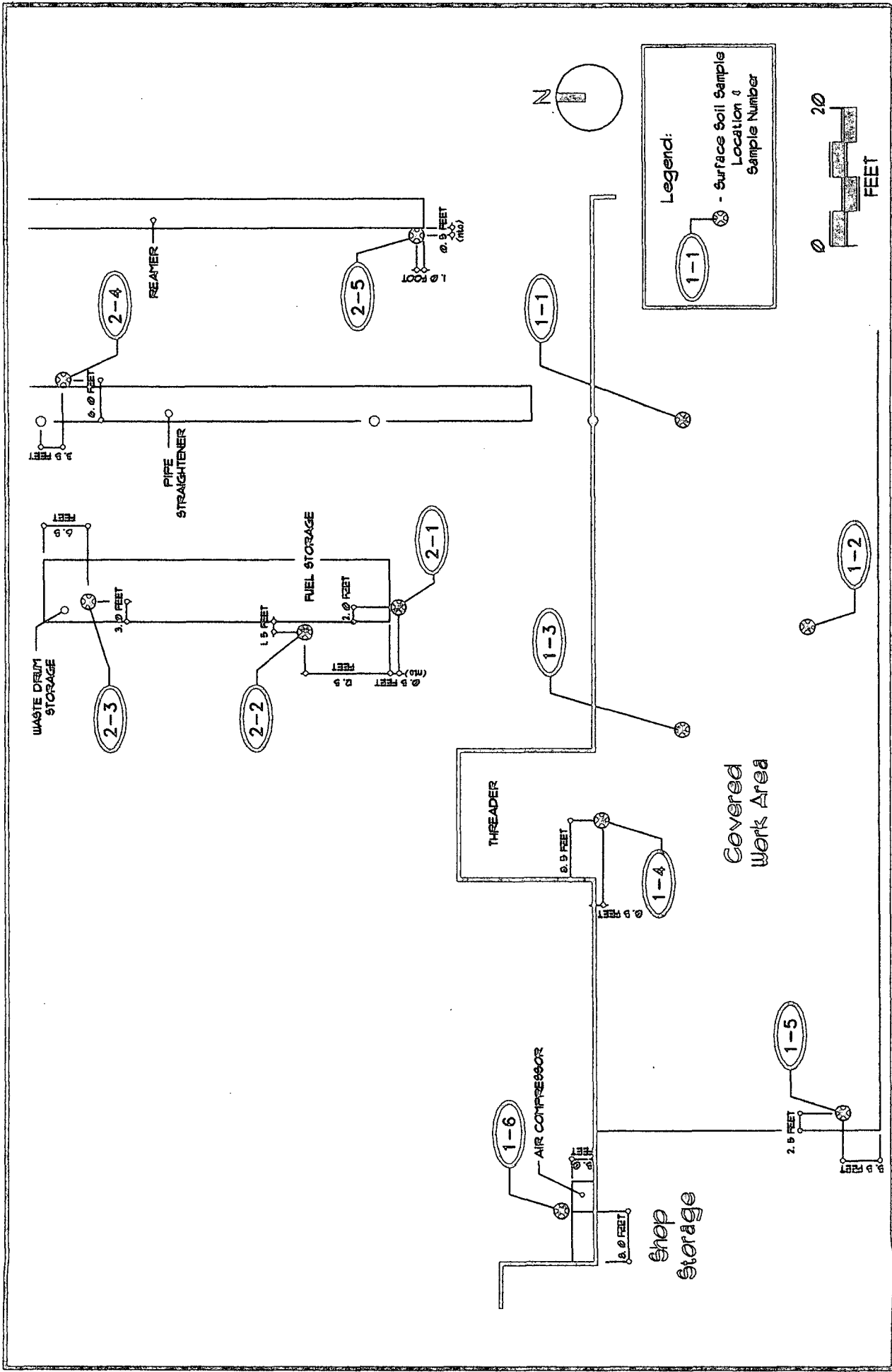
1. The exterior work area located to the north of the Machine Shop. Reason: Potential areas of impact may be present within the pipe racks (Samples NM-HB-DRL-1-1 (1-1), 1-2, and 1-3. Oil stained soils were observed to the south of the Threader Shed (Sample 1-4) and in the southwest corner of the work area (Sample 1-5) where previous hydraulically powered equipment was located.
2. The north side of the air compressor foundation pad. Reason: Potential area of impact from air compressor motor leaks (Sample 1-6), although no surficial staining was observed.
3. A former bucking machine and its hydraulic unit were located at the exterior southwest corner of the Machine Shop building. Reason: Oil stained soils were observed (Samples 1-7, 1-8, and 1-9).
4. Beneath the exterior paint vent located to the north of the former paint booth of the Machine Shop. Reason: Possible accumulation of heavy metals and semi-volatile constituents (Sample 1-10).



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**FIGURE 5**  
**SOIL SAMPLE LOCATION PLAN**

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 Hobbs, New Mexico  
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**FIGURE 6**  
**SOIL SAMPLE PLAN**  
 (North of Machine Shop)

3-D

Area 2 – The Fuel and Product Storage Area, the Pipe Straightener Area, and Pipe Reamer Area Located to the North of the Machine Shop

5. The aboveground storage tank (AST) fueling area. Reason: Potential soil impacts may be present around the secondary containment near the drain valve (Sample 2-1) and along the west side near the dispensing hoses (Sample 2-2).
6. The drum storage area. Reason: Possible releases from drums (Sample 2-3).
7. The Pipe Straightener area. Reason: Soil staining was visible on the ground surface where previous hydraulic equipment was located (Sample 2-4).
8. The Pipe Reamer area. Reason: Soil staining was visible on the ground surface where previous hydraulic equipment was located (Sample 2-5).

Area 3 – Perimeter Area Surrounding the Former Machine Shop Building

9. Northwest corner of Machine Shop Building to the west of the overhead door (Sample 3-1). Reason: Potential soil impacts may exist around building doors where wastes could have been stored.
10. West side of Machine Shop Building near west perimeter fence (Sample 3-2). Reason: Potential soil impacts may exist from possible waste storage between the building and fence.

Area 4 – Storage Yard

11. Burn area located in the storage yard (Sample 4-1). Reason: Possible heavy metal or semi-volatile organic contaminants in the surface soils. Facility personnel stated that only wood material was burned.

Surface soil sampling was conducted during two separate facility visits and consisted of collecting a total of 11 discrete soil samples on December 1, 2004 and seven discrete soil samples on January 6, 2005.

### **3.2 Soil Sampling Procedures**

The surface soil samples were collected using a clean inert polyresin trowel and /or clean plastic syringes and disposable gloves. The sampling equipment was decontaminated between sample points by using a nonphosphate soap wash, distilled water rinse, and air drying. The soil samples were placed in laboratory-supplied jars and were placed in an ice-filled insulated cooler. At the completion of field soil sampling, the samples were conveyed by overnight package service using standard chain-of-custody procedures to DHL Analytical of Round Rock, Texas.

The requested laboratory analytical methods were one or more of the following:

- Semi-volatile Organic Compounds (SVOCs) using EPA Method SW8270C.
- Volatile Organic Compounds (VOCs) using EPA Methods 5035 and SW8260B.
- RCRA metals (Barium, Chromium, Cadmium, Lead, Mercury, Silver, Arsenic, Selenium) using EPA Method SW6020 and EPA Method SW7471A (for Mercury).
- Total Petroleum Hydrocarbons (TPH) using M8015GRO and M8015DRO.

The soil sample chain-of-custodies are provided in Appendices A and B and show the requested analyses for each soil sample that was submitted to the analytical laboratory.

Additional Synthetic Precipitation Leaching Procedure (SPLP) analysis using EPA Method SW1312 / 6020 was performed on select soil samples for metal constituents after the initial results were received. The purpose of the SPLP analysis was to establish a site-specific Soil to Ground Water soil screening level (SSL) for select metal constituents.

### **4.0 LABORATORY ANALYTICAL FINDINGS**

A summary of the analytical results is provided in Tables 1 and 2 on pages 11 through 18. The laboratory data sheets are provided in Appendices A and B.

**TABLE 1**  
**SUMMARY OF LABORATORY ANALYTICAL DATA FOR METAL ELEMENTS AND TPH**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON DECEMBER 1, 2004**

(Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	U.S.G.S. BACKGROUND SOIL CONC. <sup>3</sup>	Direct Contact Residential Soil / Industrial Soil <sup>1,2</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>5</sup>	NM-HB-DRL-1-1	NM-HB-DRL-1-2	NM-HB-DRL-1-3	NM-HB-DRL-1-4	NM-HB-DRL-1-5	NM-HB-DRL-1-6
Assessment Area				1	1	1	1	1	1
Metals / Sample Depth (Ft)									
Mercury	0.051	23.5 / 341	> 0.132 <sup>4</sup>	0.3	0.3	0.3	0.3	0.3	0.3
Arsenic	4.1	3.9 / 17.7	58.3	0.132	0.0642	< 0.018	0.018	< 0.017	< 0.016
Barium	300	5,450 / 78,300	> 3,190 <sup>4</sup>	<b>22.7</b>	<b>15.2</b>	<b>7.18</b>	<b>4.53</b>	<b>4.40</b>	<b>6.86</b>
Cadmium	Not Defined	74.1 / 8,600	7.52	3,190	1,460	350	217	421	472
Chromium (total)	20	234 / 3,400	> 735 <sup>4</sup>	1.30	0.949	0.560	0.28	< 0.11	0.28
Lead	10	400 / 750	> 881 <sup>4</sup>	<b>735</b>	186	14.3	9.36	2.94	11.6
Selenium	0.1	391 / 5,680	5.17	<b>2,900</b>	<b>881</b>	198	123	7.46	49.0
Silver	Not Defined	391 / 5,680	8.47	0.37	0.39	1.02	0.791	1.24	1.03
TPH				1.23	0.728	0.205	< 0.098	< 0.11	0.11
Diesel Range (DRO, C10-C28)	--	--	--	729	1,080	< 3.2	8,900	18,000	< 3.3
Oil Range (ORO, >C28-C35)	--	--	--	312	513	< 3.2	5,820	11,700	< 3.3
Gasoline Range (GRO)	--	Refer to petroleum-related COCs	--	1.3	< 0.64	< 0.70	< 0.61	2.25	< 0.63
Total TPH Ranges	--	880 / 2,200	--	<b>1,042.3</b>	<b>1,593</b>	< 3.2	<b>14,720</b>	<b>29,702.25</b>	< 3.3

Note: <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.  
<sup>2</sup> NMED TPH Screening Guidelines, June 24, 2003, 4 pages.  
<sup>3</sup> Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270, 1982.  
<sup>4</sup> Taken from SPLP analytical results for Mercury, Barium, Chromium, and Lead presented in Table 3.  
<sup>5</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.  
 Bold values exceed the residential and / or industrial SSLs.

**TABLE 1**  
**SUMMARY OF LABORATORY ANALYTICAL DATA FOR METAL ELEMENTS AND TPH**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON JANUARY 6, 2005**  
 (Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	U.S.G.S. BACKGROUND SOIL CONC. <sup>3</sup>	Direct Contact Residential Soil/ Industrial Soil <sup>1,2</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>5</sup>	NM-HB-DRL-1-7	NM-HB-DRL-1-8	NM-HB-DRL-1-9	NM-HB-DRL-1-10
Assessment Area				1	1	1	1
Metals / Sample Depth (Ft)							
Mercury	0.051	23.5 / 341	> 0.132 <sup>4</sup>	0.3	0.5	0.3	0.3
Arsenic	4.1	3.9 / 17.7	58.3	0.027	0.034	0.0494	< 0.019
Barium	300	5,450 / 78,300	> 3,190 <sup>4</sup>	<b>15.5</b>	<b>6.67</b>	<b>10.6</b>	<b>11.3</b>
Cadmium	Not Defined	74.1 / 8,600	7.52	182	269	334	595
Chromium (total)	20	234 / 3,400	> 735 <sup>4</sup>	1.23	0.29	1.67	0.320
Lead	10	400 / 750	> 881 <sup>4</sup>	27.0	10.1	21.1	12.1
Selenium	0.1	391 / 5,680	5.17	115	43.3	184	52.7
Silver	Not Defined	391 / 5,680	8.47	1.50	0.766	0.808	0.900
TPH				< 0.11	0.215	< 0.11	< 0.11
Diesel Range (DRO, C10-C28)	--	--	--	35,000	1,000	442	--
Oil Range (ORO, >C28-C35)	--	--	--	8,790	971	500	--
Gasoline Range (GRO)	--	Refer to petroleum-related COCs	--	2.1	< 0.69	0.94	--
Total TPH Ranges	--	880 / 2,200	--	<b>43,792.1</b>	<b>1,971</b>	<b>942.94</b>	--

Note:

<sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.

<sup>2</sup> NMED TPH Screening Guidelines, June 24, 2003, 4 pages.

<sup>3</sup> Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270, 1982.

<sup>4</sup> Taken from SPLP analytical results for Mercury, Barium, Chromium, and Lead presented in Table 3.

<sup>5</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.

Bold values exceed the residential and / or industrial SSLs.

**TABLE 1**  
**SUMMARY OF LABORATORY ANALYTICAL DATA FOR METAL ELEMENTS AND TPH**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON DECEMBER 1, 2004**  
 (Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	U.S.G.S. BACKGROUND SOIL CONC. <sup>3</sup>	Direct Contact Residential Soil/ <sup>1,2</sup> Industrial Soil	Soil to GW <sup>1</sup> DAF 20 <sup>5</sup>	NM-HB-DRL-2-1	NM-HB-DRL-2-2	NM-HB-DRL-2-3	NM-HB-DRL-2-4	NM-HB-DRL-2-5
Assessment Area				2	2	2	2	2
Metals / Sample Depth (Ft)				0.3	0.3	0.3	0.3	0.3
Mercury	0.051	23.5 / 341	> 0.132 <sup>4</sup>	< 0.016	0.029	< 0.017	< 0.015	0.016
Arsenic	4.1	3.9 / 17.7	58.3	<b>11.6</b>	<b>25.3</b>	<b>15.1</b>	<b>11.6</b>	<b>9.95</b>
Barium	300	5,450 / 78,300	> 3,190 <sup>4</sup>	458	752	402	266	402
Cadmium	Not Defined	74.1 / 8,600	7.52	0.380	0.432	0.373	0.369	2.69
Chromium (total)	20	234 / 3,400	> 735 <sup>4</sup>	14.7	21.4	14.0	11.3	6.88
Lead	10	400 / 750	> 881 <sup>4</sup>	80.7	89.0	119	32.2	31.9
Selenium	0.1	391 / 5,680	5.17	0.923	0.811	0.847	0.916	1.15
Silver	Not Defined	391 / 5,680	8.47	< 0.11	< 0.11	< 0.11	< 0.10	< 0.10
TPH								
Diesel Range (DRO, C10-C28)	--	---	--	< 3.5	457	136	12,600	9,430
Oil Range (ORO, >C28-C35)	--	---	--	< 3.5	< 3.4	73.8	7,510	7,600
Gasoline Range (GRO)	--	Refer to petroleum-related COCs	--	< 0.70	< 0.60	26.0	1.0	< 0.72
Total TPH Ranges	--	880 / 2,200	--	< 3.5	457	235.8	<b>20,111</b>	<b>17,030</b>

Note: <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.  
<sup>2</sup> NMED TPH Screening Guidelines, June 24, 2003, 4 pages.  
<sup>3</sup> Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270, 1982.  
<sup>4</sup> Taken from SPLP analytical results for Mercury, Barium, Chromium, and Lead presented in Table 3.  
<sup>5</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.  
 Bold values exceed the residential and / or industrial SSLs.



**TABLE 1**  
**SUMMARY OF LABORATORY ANALYTICAL DATA FOR METAL ELEMENTS AND TPH**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON JANUARY 6, 2005**  
 (Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	U.S.G.S. BACKGROUND SOIL CONC. <sup>3</sup>	Direct Contact Residential Soil / Industrial Soil <sup>1,2</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>5</sup>	NM-HB-DRL-3-1	NM-HB-DRL-3-2	NM-HB-DRL-4-1
Assessment Area				3	3	4
Metals / Sample Depth (Ft)						
Mercury	0.051	23.5 / 341	> 0.132 <sup>4</sup>	0.5	0.3	0.3
Arsenic	4.1	3.9 / 17.7	58.3	<b>6.10</b>	<b>8.11</b>	<b>7.34</b>
Barium	300	5,450 / 78,300	> 3,190 <sup>4</sup>	762	269	190
Cadmium	Not Defined	74.1 / 8,600	7.52	0.22	0.320	0.361
Chromium (total)	20	234 / 3,400	> 735 <sup>4</sup>	19.0	11.9	15.3
Lead	10	400 / 750	> 881 <sup>4</sup>	31.3	38.9	29.9
Selenium	0.1	391 / 5,680	5.17	0.828	0.664	0.795
Silver	Not Defined	391 / 5,680	8.47	< 0.10	< 0.11	< 0.10
TPH						
Diesel Range (DRO, C10-C28)	--	--	--	22.6	< 3.2	< 3.2
Oil Range (ORO, >C28-C35)	--	--	--	15.9	13.4	< 3.2
Gasoline Range (GRO)	--	Refer to petroleum-related COCs	--	5.32	< 0.71	< 0.70
Total TPH Ranges	--	880 / 2,200	--	43.82	13.4	< 3.2

**Note:**

- <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.
  - <sup>2</sup> NMED TPH Screening Guidelines, June 24, 2003, 4 pages.
  - <sup>3</sup> Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270, 1982.
  - <sup>4</sup> Taken from SPLP analytical results for Mercury, Barium, Chromium, and Lead presented in Table 3.
  - <sup>5</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.
- Bold values exceed the residential and / or industrial SSLs.

**TABLE 2**  
**SUMMARY OF LABORATORY ANALYTICAL DATA**  
**FOR DETECTED VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS IN SURFACE SOIL SAMPLES**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON DECEMBER 1, 2004**

(Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	Direct Contact Residential Soil / Industrial Soil <sup>1</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>2</sup>	NM-HB- DRL-1-1	NM-HB- DRL-1-2	NM-HB- DRL-1-3	NM-HB- DRL-1-4	NM-HB- DRL-1-5	NM-HB- DRL-1-6
Assessment Area			1	1	1	1	1	1
Metals / Sample Depth (Ft)			0.3	0.3	0.3	0.3	0.3	0.3
2-Butanone	573 / 2,100	6.63	< 0.0022	< 0.0047	< 0.0052	< 0.0044	0.011	< 0.0043
Acetone	70,400 / 1E5	2.06	< 0.017	< 0.038	< 0.042	< 0.017	0.134	< 0.034
2-Methylnaphthalene	NPT	NPT	< 0.021	0.022	< 0.023	< 0.045	0.48	< 0.022
Acenaphthene	4,690 / 34,800	79.8	< 0.042	0.044	< 0.045	< 0.090	< 0.22	< 0.044
Anthracene	23,500 / 264,000	1,600	0.021	0.176	< 0.023	< 0.045	< 0.11	< 0.022
Benzo[a]anthracene	6.21 / 23.4	1.1	0.070	0.873	< 0.023	< 0.045	< 0.11	< 0.022
Benzo[a]pyrene	0.621 / 2.34	6.12	0.12	<b>0.961</b>	< 0.034	< 0.068	< 0.17	< 0.033
Benzo[g,h,i]perylene	NPT	NPT	0.203	0.535	< 0.068	< 0.14	< 0.34	< 0.066
Benzo[k]fluoranthene	62.1 / 234	34.0	0.245	1.88	< 0.056	< 0.11	< 0.28	< 0.055
Bis(2-ethylhexyl) phthalate	347 / 1,370	2,170	0.147	0.799	< 0.056	1.47	3.10	< 0.055
Butyl benzyl phthalate	NPT	NPT	0.26	0.20	< 0.11	< 0.23	< 0.56	< 0.11
Chrysene	621 / 2,340	110	0.084	0.931	< 0.034	< 0.068	< 0.17	< 0.033
Di-n-butyl phthalate	6,000 / 68,400	3,670	0.17	0.25	0.14	< 0.23	< 0.56	< 0.11
Di-n-octyl phthalate	NPT	NPT	< 0.11	0.12	< 0.11	< 0.23	< 0.56	< 0.11
Dibenz[a,h]anthracene	NPT	NPT	< 0.053	0.191	< 0.056	< 0.11	< 0.28	< 0.055
Fluoranthene	2,250 / 24,400	4,820	0.154	1.96	0.038	< 0.045	< 0.11	< 0.022
Fluorene	3,130 / 29,400	100	< 0.032	0.037	< 0.034	< 0.068	< 0.17	< 0.033
Indeno[1,2,3-cd]pyrene	6.21 / 23.4	9.58	0.140	0.469	< 0.056	< 0.11	< 0.28	< 0.055
Phenanthrene	1,800 / 20,500	76.2	0.091	0.770	< 0.034	< 0.068	< 0.17	< 0.033
Pyrene	2,300 / 31,300	56.8	0.11	1.42	< 0.023	< 0.045	0.11	< 0.022

Notes: <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, *Technical Background Document for Development of Soil Screening Levels*, Revision 2.0, February 2004.

<sup>2</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.

NPT - SSL values were not provided in tables<sup>1</sup>.

Bold values exceed the residential and / or industrial SSLs.

**TABLE 2**  
**SUMMARY OF LABORATORY ANALYTICAL DATA**  
**FOR DETECTED VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS IN SURFACE SOIL SAMPLES**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON JANUARY 6, 2005**  
(Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	Direct Contact Residential Soil / Industrial Soil <sup>1</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>2</sup>	NM-HB- DRL-1-7	NM-HB- DRL-1-8	NM-HB- DRL-1-9	NM-HB- DRL-1-10
Assessment Area			1	1	1	1
Metals / Sample Depth (Ft)			0.3	0.5	0.3	0.3
2-Butanone	573 / 2,100	6.63	< 0.0059	< 0.0058	< 0.0055	—
Acetone	70,400 / 1E5	2.06	0.111	< 0.023	< 0.022	—
2-Methylnaphthalene	NPT	NPT	< 1.2	< 0.022	< 0.022	< 0.024
Acenaphthene	4,690 / 34,800	79.8	< 0.32	< 0.045	< 0.045	< 0.048
Anthracene	23,500 / 264,000	1,600	< 1.2	< 0.022	< 0.022	< 0.024
Benzo[a]anthracene	6.21 / 23.4	1.1	< 0.32	< 0.022	< 0.022	< 0.024
Benzo[a]pyrene	0.621 / 2.34	6.12	< 0.48	< 0.034	< 0.034	< 0.036
Benzo[g,h,i]perylene	NPT	NPT	< 0.32	< 0.067	< 0.067	< 0.072
Benzo[k]fluoranthene	62.1 / 234	34.0	< 0.48	< 0.056	< 0.056	< 0.060
Bis(2-ethylhexyl) phthalate	347 / 1,370	2,170	58.8	0.372	< 0.056	< 0.060
Butyl benzyl phthalate	NPT	NPT	< 6.0	< 0.11	< 0.11	< 0.12
Chrysene	621 / 2,340	110	< 0.32	< 0.034	< 0.034	< 0.036
Di-n-butyl phthalate	6,000 / 68,400	3,670	22.4	< 0.11	< 0.11	< 0.12
Di-n-octyl phthalate	NPT	NPT	< 6.0	< 0.11	< 0.11	< 0.12
Dibenz[a,h]anthracene	NPT	NPT	< 0.32	< 0.056	< 0.056	< 0.060
Fluoranthene	2,250 / 24,400	4,820	< 0.16	< 0.022	0.030	0.048
Fluorene	3,130 / 29,400	100	< 0.16	< 0.034	< 0.034	< 0.036
Indeno[1,2,3-cd]pyrene	6.21 / 23.4	9.58	< 0.16	< 0.056	< 0.056	< 0.060
Phenanthrene	1,800 / 20,500	76.2	0.26	< 0.034	< 0.034	< 0.036
Pyrene	2,300 / 31,300	56.8	< 0.32	0.060	0.022	0.040

Notes: <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.  
<sup>2</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.  
NPT – SSL values were not provided in tables.  
Bold values exceed the residential and / or industrial SSLs.

**TABLE 2**  
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**FOR DETECTED VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS IN SURFACE SOIL SAMPLES**  
**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON DECEMBER 1, 2004**  
 (Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	Direct Contact Residential Soil / Industrial Soil <sup>1</sup>	Soil to GW <sup>2</sup> DAF 20 <sup>2</sup>	NM-HB- DRL-2-1	NM-HB- DRL-2-2	NM-HB- DRL-2-3	NM-HB- DRL-2-4	NM-HB- DRL-2-5
Assessment Area			2	2	2	2	2
Metals / Sample Depth (Ft)			0.3	0.3	0.3	0.3	0.3
2-Butanone	573 / 2,100	6.63	< 0.0046	< 0.0043	< 0.0043	0.108	< 0.010
2-Hexanone	NPT	NPT	< 0.0046	< 0.0043	< 0.0043	0.014	< 0.010
4-Methyl-2-pentanone	NPT	NPT	< 0.0046	< 0.0043	< 0.0043	0.013	< 0.010
Acetone	70,400 / 1E5	2.06	< 0.037	< 0.035	< 0.034	0.446	< 0.082
m,p-Xylene	80 / 80	158	0.0026	< 0.0087	< 0.0086	< 0.0024	< 0.0021
Toluene	248 / 248	6.8	0.0025	< 0.0017	< 0.0017	< 0.0048	< 0.0041
Tetrachloroethene	9.83 / 24.6	0.00644	< 0.00092	< 0.00087	<b>0.00843</b>	< 0.0024	< 0.0021
4-Methylphenol	NPT	NPT	< 0.11	< 0.11	< 0.11	0.55	< 0.23
Benzo[a]anthracene	6.21 / 23.4	1.1	< 0.023	< 0.022	0.045	< 0.11	< 0.046
Benzo[a]pyrene	0.621 / 2.34	6.12	< 0.034	0.037	0.052	< 0.17	< 0.070
Benzo[b]fluoranthene	6.21 / 23.4	3.4	< 0.034	0.037	0.067	< 0.17	< 0.070
Benzo[g,h,i]perylene	NPT	NPT	< 0.068	0.11	0.075	< 0.33	< 0.14
Benzo[k]fluoranthene	62.1 / 234	34.0	< 0.057	< 0.055	< 0.056	< 0.28	< 0.12
Bis(2-ethylhexyl) phthalate	347 / 1,370	2,170	< 0.057	0.095	0.150	3.47	< 0.12
Chrysene	621 / 2,340	110	< 0.034	< 0.033	0.045	< 0.17	< 0.070
Di-n-butyl phthalate	6,000 / 68,400	3,670	< 0.11	0.14	< 0.11	< 0.55	< 0.23
Di-n-octyl phthalate	NPT	NPT	< 0.11	< 0.11	< 0.11	< 0.55	1.07
Fluoranthene	2,250 / 24,400	4,820	< 0.023	0.037	0.060	< 0.11	< 0.046
Indeno[1,2,3-cd]pyrene	6.21 / 23.4	9.58	< 0.057	0.066	< 0.056	< 0.28	< 0.12
Pyrene	2,300 / 31,300	56.8	< 0.023	0.029	0.045	< 0.11	< 0.046

Notes:  
<sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, Technical Background Document for Development of Soil Screening Levels, Revision 2.0, February 2004.  
<sup>2</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.  
 NPT – SSL values were not provided in tables<sup>1</sup>.  
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**TABLE 2**  
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**SMITH SERVICES, DRILCO FACILITY, 1120 WEST BENDER ROAD, HOBBS, NEW MEXICO**  
**SAMPLES COLLECTED ON JANUARY 6, 2005**  
 (Concentrations expressed as milligrams per kilogram, mg/kg)

COC / SAMPLE ID	Direct Contact Residential Soil / Industrial Soil <sup>1</sup>	Soil to GW <sup>1</sup> DAF 20 <sup>2</sup>	NM-HB- DRL-3-1	NM-HB- DRL-3-2	NM-HB- DRL-4-1
Assessment Area			3	3	4
Metals / Sample Depth (Ft)			0.5	0.3	0.3
2-Butanone	573 / 2,100	6.63	< 0.0058	--	--
Acetone	70,400 / 1E5	2.06	< 0.023	--	--
2-Methylnaphthalene	NPT	NPT	< 0.022	< 0.022	< 0.023
Acenaphthene	4,690 / 34,800	79.8	< 0.045	< 0.045	< 0.046
Anthracene	23,500 / 264,000	1,600	< 0.022	< 0.022	< 0.023
Benzo[a]anthracene	6.21 / 23.4	1.1	< 0.022	< 0.022	< 0.023
Benzo[a]pyrene	0.621 / 2.34	6.12	< 0.033	< 0.033	< 0.034
Benzo[g,h,i]perylene	NPT	NPT	< 0.067	< 0.067	< 0.069
Benzo[k]fluoranthene	62.1 / 234	34.0	< 0.056	< 0.045	< 0.057
Bis(2-ethylhexyl) phthalate	347 / 1,370	2,170	< 0.056	< 0.056	< 0.057
Butyl benzyl phthalate	NPT	NPT	< 0.11	< 0.11	< 0.11
Chrysene	621 / 2,340	110	< 0.033	< 0.033	< 0.034
Di-n-butyl phthalate	6,000 / 68,400	3,670	< 0.11	< 0.11	< 0.11
Di-n-octyl phthalate	NPT	NPT	0.505	< 0.11	< 0.11
Dibenz[a,h]anthracene	NPT	NPT	< 0.045	< 0.056	< 0.057
Fluoranthene	2,250 / 24,400	4,820	< 0.022	< 0.022	< 0.023
Fluorene	3,130 / 29,400	100	< 0.033	< 0.033	< 0.034
Indeno[1,2,3-cd]pyrene	6.21 / 23.4	9.58	< 0.056	< 0.045	< 0.057
Phenanthrene	1,800 / 20,500	76.2	< 0.033	< 0.033	< 0.034
Pyrene	2,300 / 31,300	56.8	< 0.022	< 0.022	< 0.023

Notes: <sup>1</sup> New Mexico Environmental Department (NMED) Soil Screening Levels (SSLs), Table A-1, *Technical Background Document for Development of Soil Screening Levels*, Revision 2.0, February 2004.

<sup>2</sup> DAF, Dilution Attenuation Factor is the ratio of the contaminant concentration in soil leachate to the concentration in ground water at the point of withdrawal.

NPT – SSL values were not provided in tables<sup>1</sup>.  
 Bold values exceed the residential and / or industrial SSLs.

#### 4.1 Soil Sample Analysis Summary

The laboratory analysis of the soil samples collected on December 1, 2004 and January 6, 2005 are summarized below. The concentration of the metal element Arsenic exceeded the regional background concentration of 4.1 mg/kg in every sample. The residential direct contact SSL for arsenic is 3.9 mg/kg or the background concentration whichever is greater. The summary comments incorporate the SPLP metal results (Section 4.2) that are described in detail after this section:

##### Area 1 – Perimeters Areas Surrounding the Machine Shop Building

Sample Number / Exceeds SSL Standard	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10
Soil to GW	X	--	--	P	P	--	P	--	--	--
Residential Direct Contact <sup>1</sup>	X	X	--	X	X	--	X	X	X	--
Industrial Direct Contact	X	X	--	X	X	--	X	--	--	--

Note: <sup>1</sup> Does not include Arsenic for Residential Direct Contact.  
 P – Probable for TPH constituents.

- Sample 1-1 contained SVOCs, TPH, and metal elements above background concentrations. Lead SPLP testing on the soil sample produced an extract containing 42.0 micrograms per liter (ug/L) which is greater than the Ground Water SSL of 15 ug/L. Arsenic and Lead constituents exceed the critical industrial SSLs for Direct Contact.
- Sample 1-2 held elevated levels of SVOCs, TPH, and metal elements above background concentrations. Lead constituents exceeded the critical industrial SSL for Direct Contact. One SVOC compound, Benzo[a]pyrene exceeded the residential SSL for Direct Contact.
- Sample 1-3 had SVOC and metal constituents above background levels but less than critical residential and industrial SSLs.
- Sample 1-4 contained SVOC and metal elements above background concentration levels or the laboratory analytical MDL. TPH constituents exceed the critical industrial SSL for Direct Contact.

- Sample 1-5 had high levels of TPH constituents exceeding the critical industrial SSL (Direct Contact). Low concentrations of SVOC compounds were also detected below residential SSLs.
- Sample 1-6 held low level metal elements above background levels. None of the constituents exceeded the critical SSLs in either setting.
- Sample 1-7 had high levels of TPH constituents exceeding the critical industrial SSL (Direct Contact).
- Samples 1-8, 1-9, and 1-10 contained TPH and metal elements above background concentrations. None of the constituents exceeded the critical SSLs in an industrial setting. Residential SSLs were exceeded for TPH compounds in samples 1-8 and 1-9.

Area 2 – The Fuel and Product Storage Area, the Pipe Straightener Area, and Pipe Reamer Area Located to the North of the Machine Shop

Sample Number / Exceeds SSL Standard	2-1	2-2	2-3	2-4	2-5
Soil to GW	--	--	X	P	P
Residential Direct Contact <sup>1</sup>	--	X	--	X	X
Industrial Direct Contact	--	X	--	X	X

Note: <sup>1</sup> Does not include Arsenic for Residential Direct Contact.  
 P – Probable for TPH constituents.

- Samples 2-1, 2-2, and 2-3 contained VOC, SVOC, and/or metal constituents above background concentrations. TPH compounds were also detected in Samples 2-2 and 2-3. All constituents are less than critical SSLs in both residential and industrial settings with the exception of Arsenic in Sample 2-2 for Industrial Direct Contact exposure. The VOC compound, Tetrachloroethene, was present in Sample 2-3 and exceeded the soil to ground water pathway SSL.
- Samples 2-4 and 2-5 contained VOC, SVOC, and/or metal constituents above background concentrations and elevated levels of TPH compounds. TPH constituents exceeded the critical Industrial SSL for Direct Contact.

### Area 3 – Perimeter Area Surrounding the Former Machine Shop Building

Sample Number / Exceeds SSL Standard	3-1	3-2
Soil to GW	--	--
Residential Direct Contact <sup>1</sup>	--	--
Industrial Direct Contact	--	--

Note: <sup>1</sup> Does not include Arsenic for Residential Direct Contact.

Samples 3-1 and 3-2 contained low levels of TPH and metal constituents above background levels but less than critical residential and industrial SSLs. Sample 3-1 contained a single SVOC constituent, Di-n-octyl phthalate.

### Area 4 – Storage Yard

Sample Number / Exceeds SSL Standard	4-1
Soil to GW	--
Residential Direct Contact <sup>1</sup>	--
Industrial Direct Contact	--

Note: <sup>1</sup> Does not include Arsenic for Residential Direct Contact.

Sample 4-1 contained metal constituents above background levels but less than critical residential and industrial SSLs.

## **4.2 SPLP Leachate Analytical Findings**

SPLP testing was performed on five soil samples (1-1, 1-2, 1-3, 1-6, and 1-7) with the purpose of establishing a site-specific Soil to Ground Water SSL for select metal constituents. Table 3 presents the analytical results of the total metal concentrations and the SPLP concentrations and compares these results with the critical Ground Water SSLs.



**TABLE 3**  
**SPLP LABORATORY ANALYTICAL RESULTS**  
**SMITH SERVICES, DRILCO – HOBBS FACILITY**  
**Samples Collected on December 1, 2004 and January 6, 2005**  
 (SPLP soil concentrations values are expressed in micrograms per liter, ug/L. Total metal concentrations are stated in milligrams per kilogram, mg/kg)

Sample No. Prefix:	Ground Water SSL	NM-HB- DRL-1-1	NM-HB- DRL-1-2	NM-HB- DRL-1-3	NM-HB- DRL1-6	NM-HB- DRL1-7
Mercury (total)	--	0.132	0.0642	< 0.018	< 0.016	0.027
Mercury (SPLP)	10	< 0.080 <sup>1</sup>	--	--	--	--
Barium (total)	--	3,190	1,460	350	472	182
Barium (SPLP)	2,000	252	167	--	--	--
Chromium (total)	--	735	186	14.3	11.6	19.2
Chromium (SPLP)	10	2.7	< 2.0	--	--	--
Lead (total)	--	2,900	881	198	49.0	115
Lead (SPLP)	15	42.0	4.19	4.14	5.80	< 0.30

Note: A "--" means that analysis was not requested or that the Ground Water SSL values are not applicable.

<sup>1</sup> Sample was prepared outside of the Hold Time.

On the basis of the SPLP analytical findings presented, soil sample 1-1 produced a Lead leachate (42.0 ug/L) that exceeded the critical ground water SSL of 15 ug/L. The other SPLP tests provide a site-specific baseline for establishing a Soil to Ground Water SSL where no impact will occur that exceeds the critical ground water SSL.

The site-specific soil to ground water SSLs for the various metals are as follows:

- Mercury: > 0.132 mg/kg
- Barium: > 3,190 mg/kg
- Chromium: > 735 mg/kg
- Lead: > 881 mg/kg

## 5.0 SITE REMEDIATION WORK PLAN

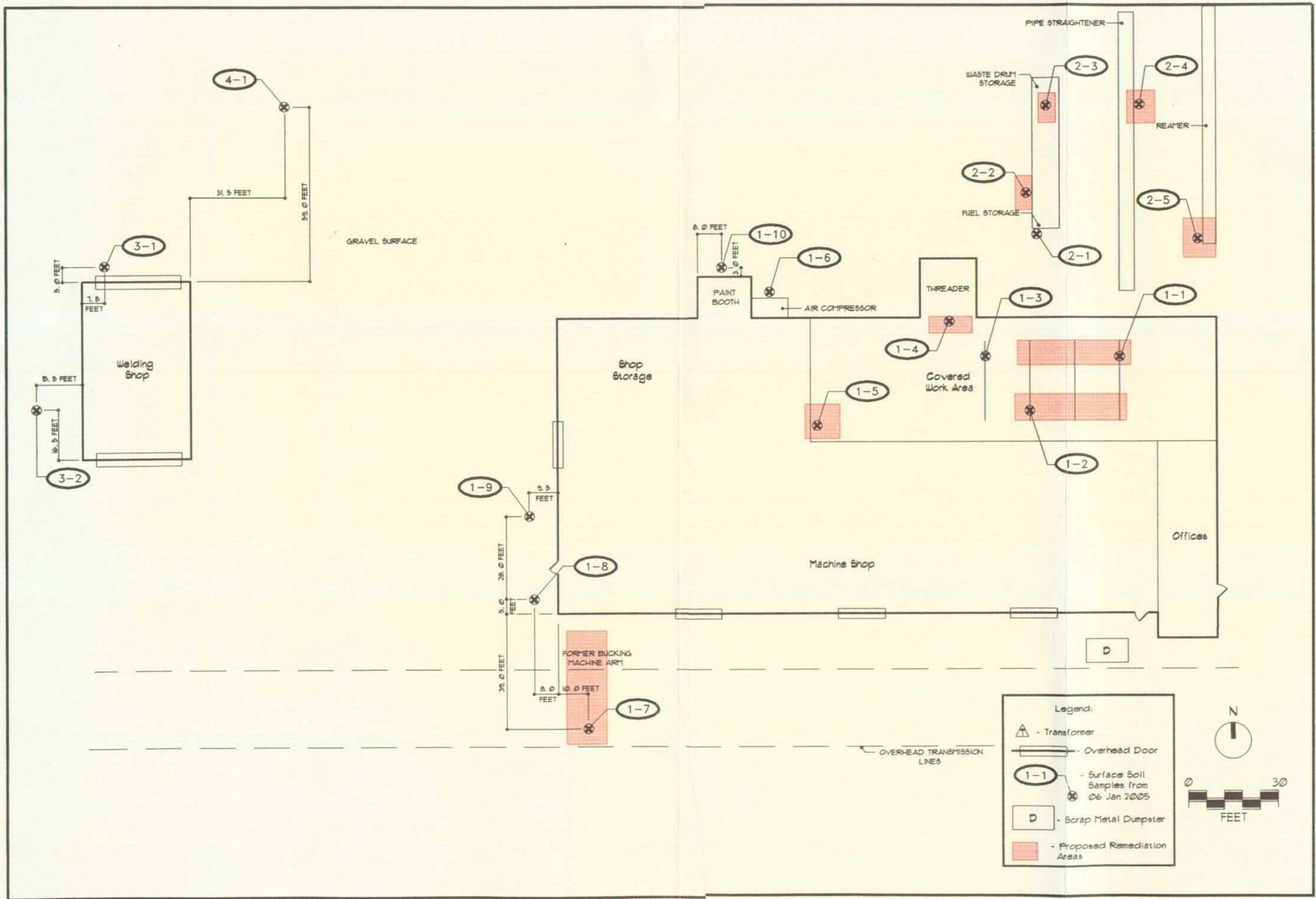
The Phase II ESA documented the presence of certain metal, TPH, VOC, and SVOC constituents (refer to Tables 1 and 2 and descriptions provided in Section 4.1). Some of the chemicals of concern (COCs) exceeded critical SSL standards in an industrial setting. The following work plan is proposed to address the assessment findings (refer to Figure 6):

### 5.1 Proposed Soil Excavation Remediation

The identified affected on-site locations having soil impacts that exceeded the critical industrial SSL are:

#### Area 1 – Perimeters Areas Surrounding the Machine Shop Building

1. Certain areas along the former pipe rack rails located in the work area to the north of the machine shop (Samples 1-1 and 1-2) contained elevated Arsenic and/or Lead exceeding the critical Industrial SSL for Direct Contact. Soil remediation by excavation is proposed to reduce the COC(s) to less than the critical SSL(s).
2. The surface soil (Sample 1-4) located at the south end of the Threader shed had impacted TPH compounds exceeding the critical Industrial SSL for Direct Contact. Soil remediation by excavation is proposed to reduce the COC(s) to less than the critical SSL(s).
3. The surface soil (Sample 1-5) located in the southwest corner of the work area was affected by historic spills or leaks from hydraulic hoses. The soil contains TPH COCs exceeding the critical Industrial SSL for Direct Contact. Soil remediation by excavation is proposed to reduce the COCs to less than the critical SSLs.



Smith Services, Drilco Facility  
 1120 W. Bender Road  
 Hobbs, New Mexico  
 3-D Project : 110403

FIGURE 7  
 PROPOSED SITE REMEDIATION PLAN

3-D

4. The surface soil located to the south of the southwest corner of the machine shop where the former Bucking Machine stood was impacted by hydraulic oil spills and leaks. The soil contains TPH COCs exceeding the critical Industrial SSL for Direct Contact. Soil remediation by excavation is proposed to reduce the COCs to less than the critical SSLs.

Area 2 – The Fuel and Product Storage Area, the Pipe Straightener Area, and Pipe Reamer Area Located to the North of the Machine Shop

5. Elevated Arsenic constituents were detected in Sample 2-2 exceeding Industrial Direct Contact exposure. Soil remediation by excavation is proposed to reduce the Arsenic COC to less than the critical SSL.
6. One VOC constituent, Tetrachloroethene was detected in Sample 2-3. Vertical delineation at this sample point is proposed to show the presence or absence of the COC at depth.
7. TPH compounds were found in surface soil samples 2-4 (pipe straightener) and 2-5 (pipe reamer) exceeding Industrial Direct Contact exposure. Soil remediation by excavation is proposed at both of these locations to reduce the TPH COCs to less than the critical SSL.

The proposed excavation work would typically consist of removing native soil, at each of the sample points identified above, a minimum of eight feet in each horizontal direction and to a depth of two feet. Four sidewalls and one floor soil sample will be collected and submitted for analysis of the appropriate contaminant constituents. Sidewall samples will be collected from the upper twelve inches of native soil.

One composite soil sample will be taken from each soil stockpile generated by the soil remediation activities. The composite soil sample will be analyzed for constituents or other physical parameters required by the disposal facility.

## **5.2 Arsenic Background Soil Sampling**

Eight surface soil samples will be collected in relatively unaffected areas of the storage yard. The soil samples will be submitted to the analytical laboratory for total Arsenic analysis. Following the receipt of the analysis from the laboratory, a site-specific Arsenic background concentration and upper tolerance limit will be calculated and compared against previous analytical findings.

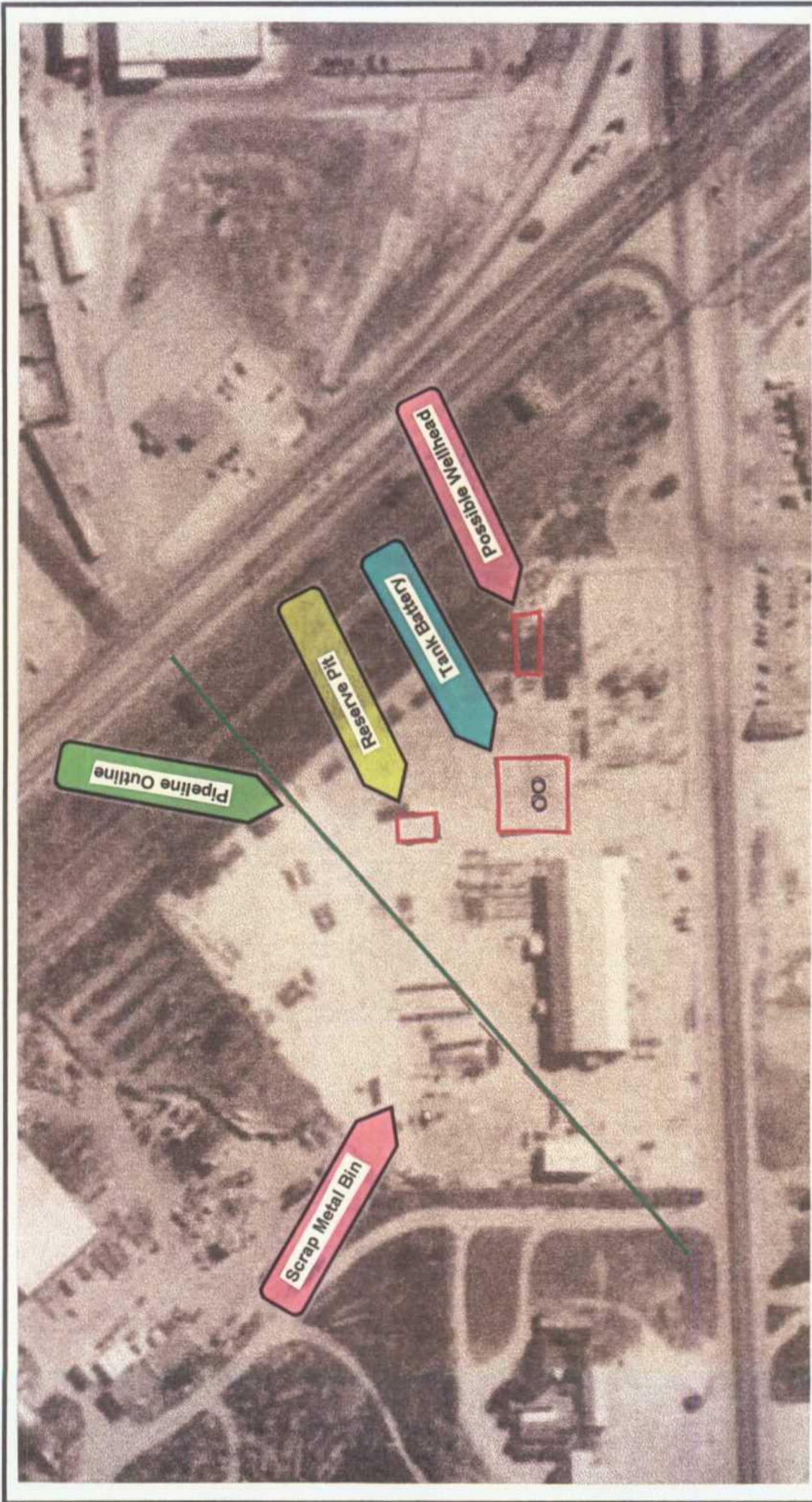
## **5.3 Proposed Continued Phase II Assessment Activities**

Historic information acquired from aerial photographs and an interview with the former facility manager revealed up to four additional areas for assessment. These locations are as follows (see Figure 8):

1. Former Oil Wellhead.
2. Former Tank Battery
3. Former Reserve Pit
4. Former Scrap Metal Bin

A description of the field assessment procedures are provided in Appendix C. The laboratory analytical testing procedures for both the site remediation and continued Phase II assessment will be the same procedures used during the Phase II ESA.

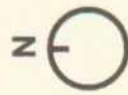




**FIGURE 8**  
**PROPOSED CONTINUED PHASE II ASSESSMENT PLAN**

Smith Services, Drilco Facility  
1120 West Bender Road  
Hobbs, New Mexico

3-D Project 110403



**ENVIRONMENTAL, INC.**  
4314 East 107<sup>th</sup> Street  
Tulsa, Oklahoma 74137

**PHOTOGRAPHS**





**Photograph 1:** Three surface soil samples were collected within the Covered Work Area located to the north of the Machine Shop.



**Photograph 2:** Soil sample NM-HB-DRL-1-4 (1-4) was taken within a soil stained area to the south of the Threader Shed.



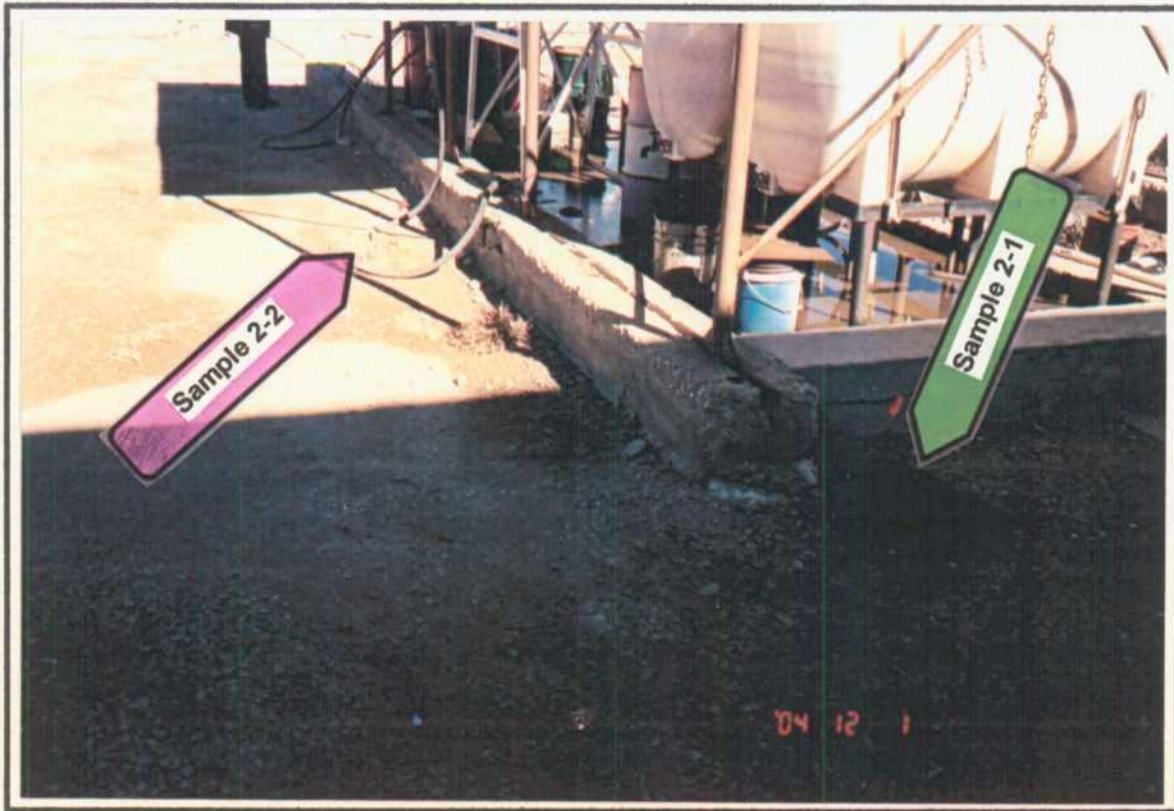


Photograph 3: Sample 1-5 was located in the southwest corner of the Covered Work Area.



Photograph 4: Soil sample 1-6 was taken at the base of the air compressor concrete located along the north exterior wall of the Machine Shop.





**Photograph 5:** Two samples were collected around the containment perimeter of the product storage area.

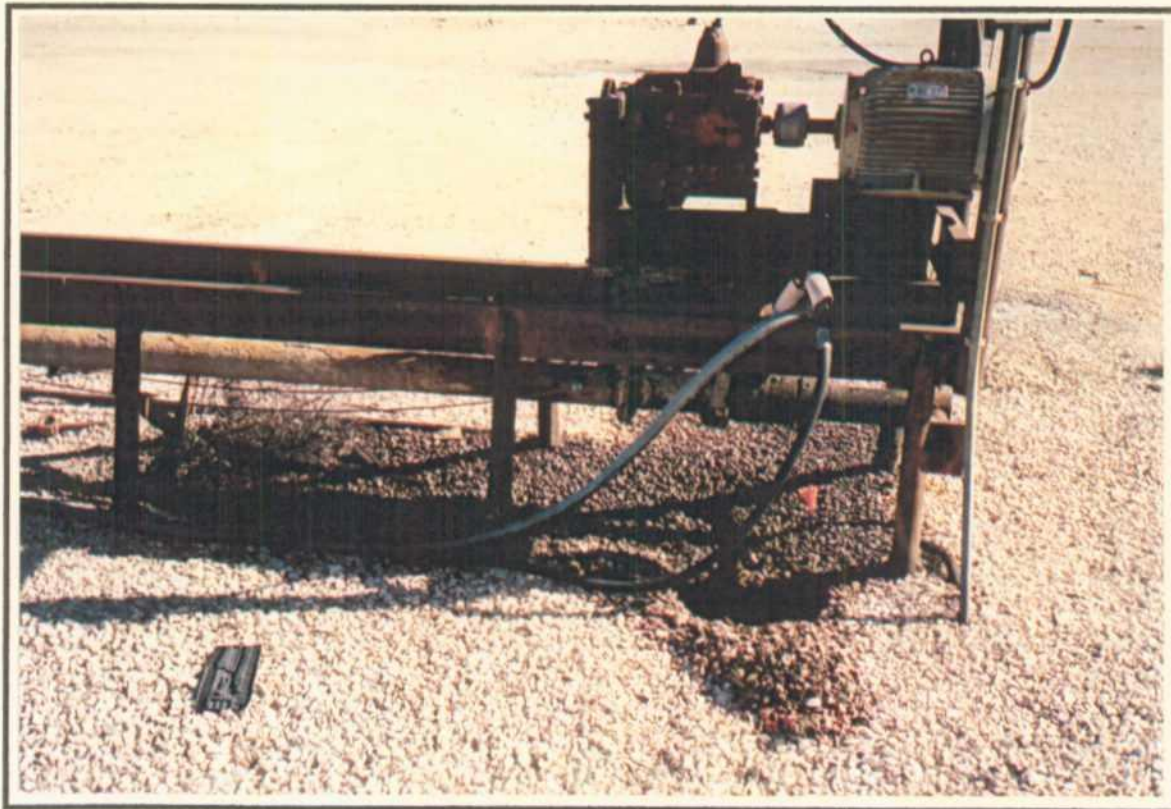


**Photograph 6:** Sample 2-3 was collected in the product drum storage area.





**Photograph 7:** Soil sample 2-4 was taken within the stained area adjacent to the pipe straightener.



**Photograph 8:** The soil at the south end of the pipe reamer was oil stained (Sample 2-5).





**Photograph 9:** The ground surface beneath the former Bucking Machine area was hydrocarbon stained (Sample 1-7).



**Photograph 10:** Additional stained soil was identified to the west of the Machine Shop near the Bucking Machine area (Sample 1-8).





**Photograph 11:** Sample 1-9 was collected between the west overhead door of the Machine Shop and a mandoor.



**Photograph 12:** Sample 1-10 was taken beneath the paint vent located along the north exterior wall of the Machine Shop.





**Photograph 13:** The former Welding Shop was located near the west perimeter fence.



**Photograph 14:** Soil sample 3-1 was taken to the northwest of the north overhead door of the Welding Shop.





**Photograph 15:** Soil sample 2-2 was collected to the west of the Welding Shop near the west perimeter fence.

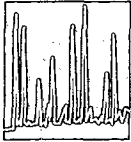


**Photograph 16:** A former burn area within the storage yard was located to the northeast of the Welding Shop (Sample 4-1).

**APPENDICES**



**APPENDIX A**  
**Laboratory Analytical Data**  
**and Chain-of-Custody Record**  
**Soil Samples Collected on December 1, 2004**



# DHL

ANALYTICAL

December 13, 2004

Lee Davis/Kurt Lampi  
SMITH INTERNATIONAL  
P.O. Box 60068  
Houston, Texas 77205-0068

TEL: (281) 233-5401  
FAX (281) 233-5620

RE: Sii Smith Services Hobbs NM

Order No.: 0412014

Dear Lee Davis/Kurt Lampi:

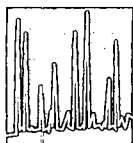
DHL Analytical received 11 samples on 12/2/2004 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont  
General Manager



**DHL**  
ANALYTICAL

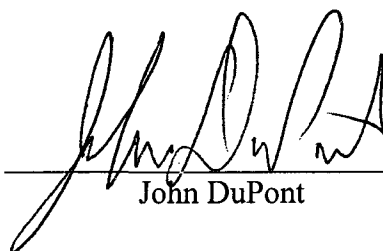
## TABLE OF CONTENTS

This report for SMITH INTERNATIONAL: Sii Smith Services Hobbs NM (DHL Work Order 0412014) contains the following information:

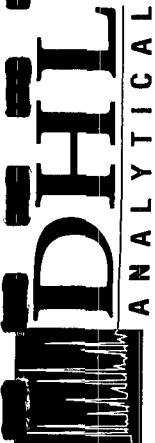
ITEM	Page
• Cover Page	1
• Table of Contents	2
• Original chain of custody, fedex slip (if used), log-in checklist	3-5
• Work Order Sample Summary	6-7
• Preparation Dates Report	8-11
• Analytical Dates Report	12-15
• Sample Results	16-70
• Case Narrative	71-73
• QC Summary Report	74-111
• Total Number of Pages	111

December 13, 2004

Approved: \_\_\_\_\_



John DuPont



2300 Double Creek Drive • Round Rock, TX 78664  
Phone (512) 388-8222 • FAX (512) 388-8229

# 8432 1350 4180

NO 22362

CHAIN-OF-CUSTODY

CLIENT: Smith International, Inc.  
ADDRESS: P.O. Box 60068, Houston, TX 77205-0068  
PHONE: 281-233-5451 FAX 281-233-5620  
DATA REPORTED TO: Mr. Lee Davis  
ADDITIONAL REPORT COPIES TO: K. Lampi email: klampi@cor.net

DATE: 12/01/04 PAGE 1 OF 1  
PO #: \_\_\_\_\_  
DHL WORK ORDER #: 0412014  
PROJECT LOCATION OR NAME: Smith Services Drilco - Hobbs, NM  
CLIENT PROJECT #: Drilco Hobbs - 110403 COLLECTOR: K. Lampi

NM-HB-Drilco Field Sample I.D.	S-SOIL W=WATER A=AIR		P-PAINT SL=SLUDGE OT=OTHER		Matrix	Container Type	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES
	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Sample Prefix:	Authorize 5% surcharge for TRRP report?				HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> NaOH	ICE		
DHL Lab #	Date	Time											
01	12/1	1000			S	P, G	8					X	
02	12/1	1010			S	P, G	8					X	
03	12/1	1020			S	P, G	8					X	
04	12/1	1030			S	P, G	8					X	
05	12/1	1040			S	P, G	8					X	
06	12/1	9100			S	P, G	20					X	
07	12/1	910			S	P, G	8					X	
08	12/1	920			S	P, G	8					X	
09	12/1	930			S	P, G	8					X	
10	12/1	940			S	P, G	8					X	
11	12/1	1100			S	P, G	8					X	
TOTAL													

RELINQUISHED BY: (Signature) Lee Davis DATE/TIME 12/01/04 1500 RECEIVED BY: (Signature) K. Lampi

RELINQUISHED BY: (Signature) K. Lampi DATE/TIME 12-2-4 950 RECEIVED BY: (Signature) K. Lampi

RELINQUISHED BY: (Signature) \_\_\_\_\_ DATE/TIME \_\_\_\_\_ RECEIVED BY: (Signature) \_\_\_\_\_

LABORATORY USE ONLY:  
RECEIVING TEMP: 43 THERM #: 42  
CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL # 1010  
 APC DELIVERY  
 HAND DELIVERED

TURN AROUND TIME  
RUSH  CALL FIRST  
1 DAY  CALL FIRST  
2 DAY   
NORMAL   
OTHER

DHL DISPOSAL @ \$5.00 each  Return

64

200

**FedEx** USA Airbill  
Express

FedEx Tracking Number

8432 1350 4180

1 From This portion can be removed for Recipient's records.

Date 12/01/96 FedEx Tracking Number 843213504180

Sender's Name Kuo Kuo

Company B-D International, Inc.

Address 434 E. 1st St.

City TULSA

State OK ZIP 74101

Dept./Floor/Suite/Room

3 To

Recipient's Name Mgr. / Cash

Company DILL ANALYTICAL

Address 2000 DOUBLEDAY CENTER DR

City BURBANK

State CA ZIP 91504

Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

NO POUCH NEEDED. See back for peel and stick application instructions.

0215  
0215  
Recipient's Copy

4a Express Package Service

FedEx Priority Overnight Next business morning

FedEx Standard Overnight Next business afternoon

FedEx 2Day Second business day

FedEx Express Saver Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service

FedEx 1Day Freight\* Next business day

FedEx 2Day Freight Second business day

FedEx 3Day Freight Third business day

\* Call for Confirmation.

5 Packaging

FedEx Envelope\*

FedEx Pak\* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sure Pak

Other

\* Declared value limit \$500

6 Special Handling

SATURDAY Delivery Available only for FedEx Priority Overnight, FedEx 2Day and FedEx First Overnight to select ZIP codes

HOLD Weekday at FedEx Location

HOLD Saturday at FedEx Location

Does this shipment contain dangerous goods?  No  Yes

As per attached Shipper's Declaration not required

Shipper's Declaration required

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging

7 Payment Bill to:  Recipient  Third Party  Credit Card  Cash/Check

Sender's Account No. in Section 1 will be billed.

Enter FedEx's Auct. No. or Credit Card No. below

8 Release Signature Sign to authorize delivery without obtaining signature

Your liability is limited to \$100 unless you declare a higher value. See the FedEx Service Guide for details.

Total Packages 1

Total Weight 4.9

Total Charges

Credit Card Auth.

447

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com

or call 1.800.Go.FedEx® 800.463.3333.

SIP # Rev. Date 5/03 Fax # 151810 ©1994-2003 FedEx PRINTED IN U.S.A.



DHL Analytical

Sample Receipt Checklist

Client Name SMITH INTERNATIONAL

Date Received: 12/2/04

Work Order Number 0412014

Received by MKS

Checklist completed by

Signature: [Handwritten Signature] Date: 12-2-04

Reviewed by

Initials: [Handwritten JD] Date: 12/02/04

Carrier name: FedEx 2day

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? Yes  No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No  NotApplicable

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: Sample 9A: Broke 1 of 3 vials in lab.

Corrective Action Taken: \_\_\_\_\_

CLIENT: SMITHINTERNATIONAL  
Project: Sii Smith Services Hobbs NM  
LabOrder: 0412014

Work Order Sample Summary

LabSampleID	ClientSampleID	Tag Number	CollectionDate	DateReceived
0412014-01A	NM-HB-DRL-1-1		12/1/2004 10:00:00 AM	12/2/2004
0412014-01B	NM-HB-DRL-1-1		12/1/2004 10:00:00 AM	12/2/2004
0412014-01C	NM-HB-DRL-1-1		12/1/2004 10:00:00 AM	12/2/2004
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0412014-02D	NM-HB-DRL-1-2		12/1/2004 10:10:00 AM	12/2/2004
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0412014-03D	NM-HB-DRL-1-3		12/1/2004 10:20:00 AM	12/2/2004
0412014-04A	NM-HB-DRL-1-4		12/1/2004 10:30:00 AM	12/2/2004
0412014-04B	NM-HB-DRL-1-4		12/1/2004 10:30:00 AM	12/2/2004
0412014-04C	NM-HB-DRL-1-4		12/1/2004 10:30:00 AM	12/2/2004
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0412014-06C	NM-HB-DRL-2-1		12/1/2004 9:00:00 AM	12/2/2004
0412014-06D	NM-HB-DRL-2-1		12/1/2004 9:00:00 AM	12/2/2004
0412014-07A	NM-HB-DRL-2-2		12/1/2004 9:10:00 AM	12/2/2004
0412014-07B	NM-HB-DRL-2-2		12/1/2004 9:10:00 AM	12/2/2004
0412014-07C	NM-HB-DRL-2-2		12/1/2004 9:10:00 AM	12/2/2004
0412014-07D	NM-HB-DRL-2-2		12/1/2004 9:10:00 AM	12/2/2004
0412014-08A	NM-HB-DRL-2-3		12/1/2004 9:20:00 AM	12/2/2004
0412014-08B	NM-HB-DRL-2-3		12/1/2004 9:20:00 AM	12/2/2004
0412014-08C	NM-HB-DRL-2-3		12/1/2004 9:20:00 AM	12/2/2004
0412014-08D	NM-HB-DRL-2-3		12/1/2004 9:20:00 AM	12/2/2004
0412014-09A	NM-HB-DRL-2-4		12/1/2004 9:30:00 AM	12/2/2004
0412014-09B	NM-HB-DRL-2-4		12/1/2004 9:30:00 AM	12/2/2004
0412014-09C	NM-HB-DRL-2-4		12/1/2004 9:30:00 AM	12/2/2004
0412014-09D	NM-HB-DRL-2-4		12/1/2004 9:30:00 AM	12/2/2004
0412014-10A	NM-HB-DRL-2-5		12/1/2004 9:40:00 AM	12/2/2004
0412014-10B	NM-HB-DRL-2-5		12/1/2004 9:40:00 AM	12/2/2004

**CLIENT:** SMITHINTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**LabOrder:** 0412014

### Work Order Sample Summary

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<b>LabSampleID</b>	<b>ClientSampleID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>DateReceived</b>
0412014-10C	NM-HB-DRL-2-5		12/1/2004 9:40:00 AM	12/2/2004
0412014-10D	NM-HB-DRL-2-5		12/1/2004 9:40:00 AM	12/2/2004
0412014-11A	NM-HB-DRL-1-6		12/1/2004 11:00:00 AM	12/2/2004
0412014-11B	NM-HB-DRL-1-6		12/1/2004 11:00:00 AM	12/2/2004
0412014-11C	NM-HB-DRL-1-6		12/1/2004 11:00:00 AM	12/2/2004
0412014-11D	NM-HB-DRL-1-6		12/1/2004 11:00:00 AM	12/2/2004



# DHL Analytical

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

## PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0412014-01A	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-01B	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-01C	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-01D	NM-HB-DRL-1-1	12/1/2004 10:00:00 AI	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-02A	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-02B	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-02C	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-02D	NM-HB-DRL-1-2	12/1/2004 10:10:00 AI	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-03A	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-03B	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-03C	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-03D	NM-HB-DRL-1-3	12/1/2004 10:20:00 AI	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A

DHL Analytical

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0412014-04A	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-04B	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-04C	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-04D	NM-HB-DRL-1-4	12/1/2004 10:30:00 AI	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-05A	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-05B	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/7/2004 10:46:09 AM	17803
0412014-05C	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-05D	NM-HB-DRL-1-5	12/1/2004 10:40:00 AI	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-06A	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-06B	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-06C	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-06D	NM-HB-DRL-2-1	12/1/2004 9:00:00 AN	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A

**DHL Analytical**

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0412014-07A	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-07B	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-07C	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-07D	NM-HB-DRL-2-2	12/1/2004 9:10:00 AM	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-08A	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-08B	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-08C	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-08D	NM-HB-DRL-2-3	12/1/2004 9:20:00 AM	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-09A	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-09B	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-09C	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-09D	NM-HB-DRL-2-4	12/1/2004 9:30:00 AM	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A

**DHL Analytical**

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0412014-10A	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-10B	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-10C	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/9/2004 9:35:09 AM	17828
0412014-10D	NM-HB-DRL-2-5	12/1/2004 9:40:00 AM	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A
0412014-11A	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW5035	Purge and Trap 5035	12/3/2004 4:31:59 PM	17782
0412014-11B	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	12/3/2004 10:26:26 AM	17778
0412014-11C	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	12/3/2004 8:50:33 AM	17765
	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	12/3/2004 9:13:18 AM	17766
	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	12/3/2004 9:22:17 AM	17774
	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	12/6/2004 9:20:49 AM	17787
0412014-11D	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	D2216	Percent Moisture	12/2/2004	PMOIST-12/03/04A

**DHL Analytical**

13-Dec-04

**Lab Order:** 0412014  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0412014-01A	NM-HB-DRL-1-1	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 6:16:00 PM	GCMS2_041203A
0412014-01B	NM-HB-DRL-1-1	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 2:41:54 PM	GC4_041206A
0412014-01C	NM-HB-DRL-1-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	50	12/6/2004 1:52:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 12:59:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-1	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:17:08 PM	CETAC_HG_041203A
	NM-HB-DRL-1-1	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 4:58:00 PM	GCMS3_041208A
	NM-HB-DRL-1-1	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 3:53:22 PM	GC15_041206A
0412014-01D	NM-HB-DRL-1-1	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-02A	NM-HB-DRL-1-2	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 6:48:00 PM	GCMS2_041203A
0412014-02B	NM-HB-DRL-1-2	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 3:03:28 PM	GC4_041206A
0412014-02C	NM-HB-DRL-1-2	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 1:45:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-2	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	50	12/6/2004 1:49:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-2	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:19:11 PM	CETAC_HG_041203A
	NM-HB-DRL-1-2	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 4:20:00 PM	GCMS3_041208A
	NM-HB-DRL-1-2	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	5	12/7/2004 1:27:41 PM	GC15_041207A
0412014-02D	NM-HB-DRL-1-2	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-03A	NM-HB-DRL-1-3	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 7:19:00 PM	GCMS2_041203A
0412014-03B	NM-HB-DRL-1-3	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 3:31:14 PM	GC4_041206A
0412014-03C	NM-HB-DRL-1-3	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 1:56:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-3	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:21:14 PM	CETAC_HG_041203A
	NM-HB-DRL-1-3	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 6:52:00 PM	GCMS3_041208A
	NM-HB-DRL-1-3	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 3:28:18 PM	GC15_041206A
0412014-03D	NM-HB-DRL-1-3	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A

**DHL Analytical**

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0412014-04A	NM-HB-DRL-1-4	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 7:50:00 PM	GCMS2_041203A
	NM-HB-DRL-1-4	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/6/2004 5:18:00 PM	GCMS2_041206A
0412014-04B	NM-HB-DRL-1-4	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 3:52:44 PM	GC4_041206A
0412014-04C	NM-HB-DRL-1-4	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:00:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-4	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:27:31 PM	CETAC_HG_041203A
	NM-HB-DRL-1-4	Soil	SW8270C	Semivolatiles by GC/MS	17774	2	12/8/2004 3:43:00 PM	GCMS3_041208A
	NM-HB-DRL-1-4	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	50	12/7/2004 3:35:08 PM	GC15_041207A
0412014-04D	NM-HB-DRL-1-4	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-05A	NM-HB-DRL-1-5	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 11:34:00 PM	GCMS2_041203A
	NM-HB-DRL-1-5	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/6/2004 5:49:00 PM	GCMS2_041206A
0412014-05B	NM-HB-DRL-1-5	Soil	M8015V	Modified 8015 Gasoline (GRO)	17803	10	12/7/2004 1:38:00 PM	GC4_041207A
0412014-05C	NM-HB-DRL-1-5	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:04:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-5	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:29:34 PM	CETAC_HG_041203A
	NM-HB-DRL-1-5	Soil	SW8270C	Semivolatiles by GC/MS	17774	5	12/8/2004 1:47:00 PM	GCMS3_041208A
	NM-HB-DRL-1-5	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	100	12/7/2004 3:09:46 PM	GC15_041207A
0412014-05D	NM-HB-DRL-1-5	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-06A	NM-HB-DRL-2-1	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 10:30:00 PM	GCMS2_041203A
0412014-06B	NM-HB-DRL-2-1	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 1:37:27 PM	GC4_041206A
0412014-06C	NM-HB-DRL-2-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 12:47:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-1	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:08:58 PM	CETAC_HG_041203A
	NM-HB-DRL-2-1	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 11:53:00 AM	GCMS3_041208A
	NM-HB-DRL-2-1	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 3:03:06 PM	GC15_041206A
0412014-06D	NM-HB-DRL-2-1	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A



**DHL Analytical**

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0412014-07A	NM-HB-DRL-2-2	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 8:22:00 PM	GCMS2_041203A
0412014-07B	NM-HB-DRL-2-2	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 5:14:58 PM	GC4_041206A
0412014-07C	NM-HB-DRL-2-2	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:08:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-2	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	25	12/6/2004 4:20:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-2	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:31:37 PM	CETAC_HG_041203A
	NM-HB-DRL-2-2	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 5:36:00 PM	GCMS3_041208A
	NM-HB-DRL-2-2	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 4:18:25 PM	GC15_041206A
0412014-07D	NM-HB-DRL-2-2	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-08A	NM-HB-DRL-2-3	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 8:54:00 PM	GCMS2_041203A
0412014-08B	NM-HB-DRL-2-3	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 5:36:24 PM	GC4_041206A
0412014-08C	NM-HB-DRL-2-3	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:12:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-3	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:33:40 PM	CETAC_HG_041203A
	NM-HB-DRL-2-3	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 6:14:00 PM	GCMS3_041208A
	NM-HB-DRL-2-3	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 4:43:31 PM	GC15_041206A
0412014-08D	NM-HB-DRL-2-3	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-09A	NM-HB-DRL-2-4	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/6/2004 4:14:00 PM	GCMS2_041206A
	NM-HB-DRL-2-4	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 9:59:00 PM	GCMS2_041203A
0412014-09B	NM-HB-DRL-2-4	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 5:57:50 PM	GC4_041206A
0412014-09C	NM-HB-DRL-2-4	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:16:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-4	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:35:44 PM	CETAC_HG_041203A
	NM-HB-DRL-2-4	Soil	SW8270C	Semivolatiles by GC/MS	17774	5	12/8/2004 2:25:00 PM	GCMS3_041208A
	NM-HB-DRL-2-4	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	25	12/7/2004 1:53:04 PM	GC15_041207A
0412014-09D	NM-HB-DRL-2-4	Soil	D2216	Percent Moisture	PMOIST-12/03/04	1	12/2/2004 1:30:00 PM	PMOIST_041202A

DHL Analytical

13-Dec-04

Lab Order: 0412014  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0412014-10A	NM-HB-DRL-2-5	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 11:02:00 PM	GCMS2_041203A
0412014-10B	NM-HB-DRL-2-5	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/6/2004 4:46:00 PM	GCMS2_041206A
0412014-10C	NM-HB-DRL-2-5	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 6:19:17 PM	GC4_041206A
	NM-HB-DRL-2-5	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 2:20:00 PM	ICP-MS2_041206A
	NM-HB-DRL-2-5	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:37:47 PM	CETAC_HG_041203A
	NM-HB-DRL-2-5	Soil	SW8270C	Semivolatiles by GC/MS	17774	2	12/8/2004 3:04:00 PM	GCMS3_041208A
	NM-HB-DRL-2-5	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	20	12/7/2004 3:09:46 PM	GC15_041207A
	NM-HB-DRL-2-5	Soil	SW8270C	Semivolatiles by GC/MS	17828	2	12/10/2004 5:18:00 AM	GCMS3_041209A
0412014-10D	NM-HB-DRL-2-5	Soil	D2216	Percent Moisture	PMOIST-12/03/04/	1	12/2/2004 1:30:00 PM	PMOIST_041202A
0412014-11A	NM-HB-DRL-1-6	Soil	SW8260B	Volatiles(5035) by GC/MS	17782	1	12/3/2004 9:26:00 PM	GCMS2_041203A
0412014-11B	NM-HB-DRL-1-6	Soil	M8015V	Modified 8015 Gasoline (GRO)	17778	10	12/6/2004 6:40:42 PM	GC4_041206A
0412014-11C	NM-HB-DRL-1-6	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	25	12/6/2004 4:32:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-6	Soil	SW6020	Trace Metals: ICP-MS - Soil	17765	5	12/6/2004 4:17:00 PM	ICP-MS2_041206A
	NM-HB-DRL-1-6	Soil	SW7471A	Total Mercury: Cold Vapor	17766	1	12/3/2004 12:39:50 PM	CETAC_HG_041203A
	NM-HB-DRL-1-6	Soil	SW8270C	Semivolatiles by GC/MS	17774	1	12/8/2004 7:30:00 PM	GCMS3_041208A
	NM-HB-DRL-1-6	Soil	M8015D	GC/FID - Soil DRO+ORO	17787	1	12/6/2004 3:53:22 PM	GC15_041206A
0412014-11D	NM-HB-DRL-1-6	Soil	D2216	Percent Moisture	PMOIST-12/03/04/	1	12/2/2004 1:30:00 PM	PMOIST_041202A

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-1  
**LabID:** 0412014-01  
**CollectionDate:** 12/1/200410:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1,1-Trichloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1,2,2-Tetrachloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1,2-Trichloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1-Dichloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1-Dichloroethene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,1-Dichloropropene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2,3-Trichlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2,3-Trichloropropane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2,4-Trichlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2,4-Trimethylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2-Dibromo-3-chloropropane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2-Dibromoethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2-Dichlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2-Dichloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,2-Dichloropropane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,3,5-Trimethylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,3-Dichlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,3-Dichloropropane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
1,4-Dichlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
2,2-Dichloropropane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
2-Butanone	ND	2.2	6.49		µg/Kg-dry	1	12/3/2004 6:16:00 PM
2-Chloroethylvinylether	ND	2.2	6.49		µg/Kg-dry	1	12/3/2004 6:16:00 PM
2-Chlorotoluene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
2-Hexanone	ND	2.2	6.49		µg/Kg-dry	1	12/3/2004 6:16:00 PM
4-Chlorotoluene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
4-Methyl-2-pentanone	ND	2.2	6.49		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Acetone	ND	17	43.2		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Benzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Bromobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Bromochloromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Bromodichloromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Bromoform	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Bromomethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Carbon disulfide	ND	2.2	6.49		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Carbon tetrachloride	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Chlorobenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Chloroethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Chloroform	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Chloromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-1  
**LabID:** 0412014-01  
**CollectionDate:** 12/1/200410:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>			<b>Analyst: DO</b>		
cis-1,2-Dichloroethene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
cis-1,3-Dichloropropene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Dibromochloromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Dibromomethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Dichlorodifluoromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Ethylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Hexachlorobutadiene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Iodomethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Isopropylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
m,p-Xylene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Methyl tert-butyl ether	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Methylene chloride	ND	2.2	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
n-Butylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
n-Propylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Naphthalene	ND	2.2	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
o-Xylene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
p-Isopropyltoluene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
sec-Butylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Styrene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
tert-Butylbenzene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Tetrachloroethene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Toluene	ND	0.86	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
trans-1,2-Dichloroethene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
trans-1,3-Dichloropropene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Trichloroethene	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Trichlorofluoromethane	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Vinyl chloride	ND	0.43	2.16		µg/Kg-dry	1	12/3/2004 6:16:00 PM
Surr: 1,2-Dichloroethane-d4	127	0	52-149		%REC	1	12/3/2004 6:16:00 PM
Surr: 4-Bromofluorobenzene	98.3	0	65-135		%REC	1	12/3/2004 6:16:00 PM
Surr: Dibromofluoromethane	112	0	65-135		%REC	1	12/3/2004 6:16:00 PM
Surr: Toluene-d8	93.0	0	65-135		%REC	1	12/3/2004 6:16:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>			<b>Analyst: RPC</b>		
1,2,4-Trichlorobenzene	ND	0.021	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
1,2-Dichlorobenzene	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
1,3-Dichlorobenzene	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
1,4-Dichlorobenzene	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,4,5-Trichlorophenol	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,4,6-Trichlorophenol	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,4-Dichlorophenol	ND	0.063	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,4-Dimethylphenol	ND	0.084	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical**

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-1  
**LabID:** 0412014-01  
**CollectionDate:** 12/1/2004 10:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.063	0.693		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,4-Dinitrotoluene	ND	0.063	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2,6-Dinitrotoluene	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Chloronaphthalene	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Chlorophenol	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Methylnaphthalene	ND	0.021	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Methylphenol	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Nitroaniline	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
2-Nitrophenol	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
3,3'-Dichlorobenzidine	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
3-Nitroaniline	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4,6-Dinitro-2-methylphenol	ND	0.084	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Bromophenyl phenyl ether	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Chloro-3-methylphenol	ND	0.063	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Chloroaniline	ND	0.053	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Chlorophenyl phenyl ether	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Methylphenol	ND	0.11	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Nitroaniline	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
4-Nitrophenol	ND	0.15	0.693		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Acenaphthene	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Acenaphthylene	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Aniline	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Anthracene	0.021	0.021	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzo[a]anthracene	0.070	0.021	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzo[a]pyrene	0.12	0.032	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzo[b]fluoranthene	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzo[g,h,i]perylene	0.203	0.063	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzo[k]fluoranthene	0.245	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Benzyl alcohol	ND	0.042	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Bis(2-chloroethoxy)methane	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Bis(2-chloroethyl)ether	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Bis(2-chloroisopropyl)ether	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Bis(2-ethylhexyl)phthalate	0.147	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Butyl benzyl phthalate	0.26	0.11	0.347	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Chrysene	0.084	0.032	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Di-n-butyl phthalate	0.17	0.11	0.347	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Di-n-octyl phthalate	ND	0.11	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Dibenz[a,h]anthracene	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Dibenzofuran	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Diethyl phthalate	ND	0.11	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM

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 S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-1  
**LabID:** 0412014-01  
**Collection Date:** 12/1/2004 10:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Fluoranthene	0.154	0.021	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Fluorene	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Hexachlorobenzene	ND	0.011	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Hexachlorobutadiene	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Hexachlorocyclopentadiene	ND	0.063	0.347		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Hexachloroethane	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Indeno[1,2,3-cd]pyrene	0.140	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Isophorone	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
N-Nitrosodi-n-propylamine	ND	0.053	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
N-Nitrosodiphenylamine	ND	0.032	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Naphthalene	ND	0.042	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Nitrobenzene	ND	0.074	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Pentachlorophenol	ND	0.095	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Phenanthrene	0.091	0.032	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Phenol	ND	0.063	0.140		mg/Kg-dry	1	12/8/2004 4:58:00 PM
Pyrene	0.11	0.021	0.140	J	mg/Kg-dry	1	12/8/2004 4:58:00 PM
Surr: 2,4,6-Tribromophenol	142	0	36-126	S	%REC	1	12/8/2004 4:58:00 PM
Surr: 2-Fluorobiphenyl	115	0	45-125		%REC	1	12/8/2004 4:58:00 PM
Surr: 2-Fluorophenol	97.8	0	37-125		%REC	1	12/8/2004 4:58:00 PM
Surr: 4-Terphenyl-d14	116	0	45-125		%REC	1	12/8/2004 4:58:00 PM
Surr: Nitrobenzene-d5	104	0	45-125		%REC	1	12/8/2004 4:58:00 PM
Surr: Phenol-d6	97.0	0	40-125		%REC	1	12/8/2004 4:58:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	729	3.2	10.6		mg/Kg-dry	1	12/6/2004 3:53:22 PM
TPH-ORO >C28-C35	312	3.2	10.6		mg/Kg-dry	1	12/6/2004 3:53:22 PM
Surr: o-Terphenyl	110	0	47-142		%REC	1	12/6/2004 3:53:22 PM
Surr: Octacosane	87.9	0	25-162		%REC	1	12/6/2004 3:53:22 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	0.132	0.016	0.0410		mg/Kg-dry	1	12/3/2004 12:17:08 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	22.7	0.49	0.981		mg/Kg-dry	5	12/6/2004 12:59:00 PM
Barium	3190	4.9	19.6		mg/Kg-dry	50	12/6/2004 1:52:00 PM
Cadmium	1.30	0.098	0.294		mg/Kg-dry	5	12/6/2004 12:59:00 PM
Chromium	735	4.9	19.6		mg/Kg-dry	50	12/6/2004 1:52:00 PM
Lead	2900	0.98	2.94		mg/Kg-dry	50	12/6/2004 1:52:00 PM
Selenium	0.37	0.15	0.491	J	mg/Kg-dry	5	12/6/2004 12:59:00 PM
Silver	1.23	0.098	0.196		mg/Kg-dry	5	12/6/2004 12:59:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

<b>CLIENT:</b> SMITHINTERNATIONAL	<b>ClientSampleID:</b> NM-HB-DRL-1-1
<b>ProjectName:</b> Sii Smith Services Hobbs NM	<b>LabID:</b> 0412014-01
<b>ProjectNo:</b> DrilcoHobbs-110403	<b>CollectionDate:</b> 12/1/200410:00:00AM
<b>LabOrder:</b> 0412014	<b>Matrix:</b> SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>		Analyst: LY			
Gasoline Range Organics	1.3	0.64	2.14	J	mg/Kg-dry	10	12/6/2004 2:41:54 PM
Surr: Tetrachlorethene	75.9	0	59-121		%REC	10	12/6/2004 2:41:54 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>		Analyst: JBC			
Percent Moisture	9.02	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:**

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B - Analyte detected in the associated Method Blank	E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-2  
**LabID:** 0412014-02  
**CollectionDate:** 12/1/200410:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1,1-Trichloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1,2,2-Tetrachloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1,2-Trichloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1-Dichloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1-Dichloroethene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,1-Dichloropropene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2,3-Trichlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2,3-Trichloropropane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2,4-Trichlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2,4-Trimethylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2-Dibromo-3-chloropropane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2-Dibromoethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2-Dichlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2-Dichloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,2-Dichloropropane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,3,5-Trimethylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,3-Dichlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,3-Dichloropropane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
1,4-Dichlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
2,2-Dichloropropane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
2-Butanone	ND	4.7	14.1		µg/Kg-dry	1	12/3/2004 6:48:00 PM
2-Chloroethylvinylether	ND	4.7	14.1		µg/Kg-dry	1	12/3/2004 6:48:00 PM
2-Chlorotoluene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
2-Hexanone	ND	4.7	14.1		µg/Kg-dry	1	12/3/2004 6:48:00 PM
4-Chlorotoluene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
4-Methyl-2-pentanone	ND	4.7	14.1		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Acetone	ND	38	94.3		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Benzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Bromobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Bromochloromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Bromodichloromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Bromoform	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Bromomethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Carbon disulfide	ND	4.7	14.1		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Carbon tetrachloride	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Chlorobenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Chloroethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Chloroform	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Chloromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-2  
**LabID:** 0412014-02  
**CollectionDate:** 12/1/2004 10:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
cis-1,3-Dichloropropene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Dibromochloromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Dibromomethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Dichlorodifluoromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Ethylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Hexachlorobutadiene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Iodomethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Isopropylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
m,p-Xylene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Methyl tert-butyl ether	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Methylene chloride	ND	4.7	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
n-Butylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
n-Propylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Naphthalene	ND	4.7	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
o-Xylene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
p-Isopropyltoluene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
sec-Butylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Styrene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
tert-Butylbenzene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Tetrachloroethene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Toluene	ND	1.9	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
trans-1,2-Dichloroethene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
trans-1,3-Dichloropropene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Trichloroethene	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Trichlorofluoromethane	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Vinyl chloride	ND	0.94	4.72		µg/Kg-dry	1	12/3/2004 6:48:00 PM
Surr: 1,2-Dichloroethane-d4	127	0	52-149		%REC	1	12/3/2004 6:48:00 PM
Surr: 4-Bromofluorobenzene	99.8	0	65-135		%REC	1	12/3/2004 6:48:00 PM
Surr: Dibromofluoromethane	112	0	65-135		%REC	1	12/3/2004 6:48:00 PM
Surr: Toluene-d8	91.5	0	65-135		%REC	1	12/3/2004 6:48:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
1,2-Dichlorobenzene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
1,3-Dichlorobenzene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
1,4-Dichlorobenzene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,4,5-Trichlorophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,4,6-Trichlorophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,4-Dichlorophenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,4-Dimethylphenol	ND	0.088	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
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CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-1-2  
 LabID: 0412014-02  
 CollectionDate: 12/1/2004 10:10:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.066	0.726		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,4-Dinitrotoluene	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2,6-Dinitrotoluene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Chloronaphthalene	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Chlorophenol	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Methylnaphthalene	0.022	0.022	0.146	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Methylphenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Nitroaniline	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
2-Nitrophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
3,3'-Dichlorobenzidine	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
3-Nitroaniline	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4,6-Dinitro-2-methylphenol	ND	0.088	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Bromophenyl phenyl ether	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Chloro-3-methylphenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Chloroaniline	ND	0.055	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Chlorophenyl phenyl ether	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Methylphenol	ND	0.11	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Nitroaniline	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
4-Nitrophenol	ND	0.15	0.726		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Acenaphthene	0.044	0.044	0.146	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
Acenaphthylene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Aniline	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Anthracene	0.176	0.022	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzo[a]anthracene	0.873	0.022	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzo[a]pyrene	0.961	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzo[b]fluoranthene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzo[g,h,i]perylene	0.535	0.066	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzo[k]fluoranthene	1.88	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Benzyl alcohol	ND	0.044	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Bis(2-chloroethoxy)methane	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Bis(2-chloroethyl)ether	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Bis(2-chloroisopropyl)ether	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Bis(2-ethylhexyl)phthalate	0.799	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Butyl benzyl phthalate	0.20	0.11	0.363	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
Chrysene	0.931	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Di-n-butyl phthalate	0.25	0.11	0.363	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
Di-n-octyl phthalate	0.12	0.11	0.363	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
Dibenz[a,h]anthracene	0.191	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Dibenzofuran	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Diethyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM

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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-2  
**LabID:** 0412014-02  
**CollectionDate:** 12/1/200410:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Fluoranthene	1.96	0.022	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Fluorene	0.037	0.033	0.146	J	mg/Kg-dry	1	12/8/2004 4:20:00 PM
Hexachlorobenzene	ND	0.011	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Hexachlorobutadiene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Hexachlorocyclopentadiene	ND	0.066	0.363		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Hexachloroethane	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Indeno[1,2,3-cd]pyrene	0.469	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Isophorone	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
N-Nitrosodi-n-propylamine	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
N-Nitrosodiphenylamine	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Naphthalene	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Nitrobenzene	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Pentachlorophenol	ND	0.099	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Phenanthrene	0.770	0.033	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Phenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Pyrene	1.42	0.022	0.146		mg/Kg-dry	1	12/8/2004 4:20:00 PM
Surr: 2,4,6-Tribromophenol	137	0	36-126	S	%REC	1	12/8/2004 4:20:00 PM
Surr: 2-Fluorobiphenyl	106	0	45-125		%REC	1	12/8/2004 4:20:00 PM
Surr: 2-Fluorophenol	92.3	0	37-125		%REC	1	12/8/2004 4:20:00 PM
Surr: 4-Terphenyl-d14	111	0	45-125		%REC	1	12/8/2004 4:20:00 PM
Surr: Nitrobenzene-d5	97.0	0	45-125		%REC	1	12/8/2004 4:20:00 PM
Surr: Phenol-d6	93.3	0	40-125		%REC	1	12/8/2004 4:20:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	1080	16	52.6		mg/Kg-dry	5	12/7/2004 1:27:41 PM
TPH-ORO >C28-C35	513	16	52.6		mg/Kg-dry	5	12/7/2004 1:27:41 PM
Surr: o-Terphenyl	78.9	0	47-142		%REC	5	12/7/2004 1:27:41 PM
Surr: Octacosane	111	0	25-162		%REC	5	12/7/2004 1:27:41 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	0.0642	0.017	0.0413		mg/Kg-dry	1	12/3/2004 12:19:11 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	15.2	0.50	0.995		mg/Kg-dry	5	12/6/2004 1:45:00 PM
Barium	1460	5.0	19.9		mg/Kg-dry	50	12/6/2004 1:49:00 PM
Cadmium	0.949	0.10	0.299		mg/Kg-dry	5	12/6/2004 1:45:00 PM
Chromium	186	0.50	1.99		mg/Kg-dry	5	12/6/2004 1:45:00 PM
Lead	881	1.0	2.99		mg/Kg-dry	50	12/6/2004 1:49:00 PM
Selenium	0.39	0.15	0.498	J	mg/Kg-dry	5	12/6/2004 1:45:00 PM
Silver	0.728	0.10	0.199		mg/Kg-dry	5	12/6/2004 1:45:00 PM

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 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-1-2  
 LabID: 0412014-02  
 CollectionDate: 12/1/2004 10:10:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>			Analyst: LY		
Gasoline Range Organics	ND	0.64	2.12		mg/Kg-dry	10	12/6/2004 3:03:28 PM
Surr: Tetrachlorethene	75.8	0	59-121		%REC	10	12/6/2004 3:03:28 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>			Analyst: JBC		
Percent Moisture	10.3	0			WT%	1	12/2/2004 1:30:00 PM

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# DHL Analytical

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-1-3  
 LabID: 0412014-03  
 CollectionDate: 12/1/2004 10:20:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1,1-Trichloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1,2,2-Tetrachloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1,2-Trichloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1-Dichloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1-Dichloroethene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,1-Dichloropropene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2,3-Trichlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2,3-Trichloropropane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2,4-Trichlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2,4-Trimethylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2-Dibromo-3-chloropropane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2-Dibromoethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2-Dichlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2-Dichloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,2-Dichloropropane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,3,5-Trimethylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,3-Dichlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,3-Dichloropropane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
1,4-Dichlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
2,2-Dichloropropane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
2-Butanone	ND	5.2	15.7		µg/Kg-dry	1	12/3/2004 7:19:00 PM
2-Chloroethylvinylether	ND	5.2	15.7		µg/Kg-dry	1	12/3/2004 7:19:00 PM
2-Chlorotoluene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
2-Hexanone	ND	5.2	15.7		µg/Kg-dry	1	12/3/2004 7:19:00 PM
4-Chlorotoluene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
4-Methyl-2-pentanone	ND	5.2	15.7		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Acetone	ND	42	105		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Benzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Bromobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Bromochloromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Bromodichloromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Bromoform	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Bromomethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Carbon disulfide	ND	5.2	15.7		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Carbon tetrachloride	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Chlorobenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Chloroethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Chloroform	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Chloromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM

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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-3  
**LabID:** 0412014-03  
**CollectionDate:** 12/1/2004 10:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
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## VOLATILES(5035)BYGC/MS

SW8260B

Analyst: DO

cis-1,2-Dichloroethene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
cis-1,3-Dichloropropene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Dibromochloromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Dibromomethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Dichlorodifluoromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Ethylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Hexachlorobutadiene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Iodomethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Isopropylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
m,p-Xylene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Methyl tert-butyl ether	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Methylene chloride	ND	5.2	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
n-Butylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
n-Propylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Naphthalene	ND	5.2	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
o-Xylene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
p-Isopropyltoluene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
sec-Butylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Styrene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
tert-Butylbenzene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Tetrachloroethene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Toluene	ND	2.1	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
trans-1,2-Dichloroethene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
trans-1,3-Dichloropropene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Trichloroethene	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Trichlorofluoromethane	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Vinyl chloride	ND	1.0	5.24		µg/Kg-dry	1	12/3/2004 7:19:00 PM
Surr: 1,2-Dichloroethane-d4	128	0	52-149		%REC	1	12/3/2004 7:19:00 PM
Surr: 4-Bromofluorobenzene	92.1	0	65-135		%REC	1	12/3/2004 7:19:00 PM
Surr: Dibromofluoromethane	113	0	65-135		%REC	1	12/3/2004 7:19:00 PM
Surr: Toluene-d8	89.9	0	65-135		%REC	1	12/3/2004 7:19:00 PM

## SEMIVOLATILESBYGC/MS

SW8270C

Analyst: RPC

1,2,4-Trichlorobenzene	ND	0.023	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
1,2-Dichlorobenzene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
1,3-Dichlorobenzene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
1,4-Dichlorobenzene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,4,5-Trichlorophenol	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,4,6-Trichlorophenol	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,4-Dichlorophenol	ND	0.068	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,4-Dimethylphenol	ND	0.090	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM

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# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-3  
**LabID:** 0412014-03  
**Collection Date:** 12/1/2004 10:20:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.068	0.745		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,4-Dinitrotoluene	ND	0.068	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2,6-Dinitrotoluene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Chloronaphthalene	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Chlorophenol	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Methylnaphthalene	ND	0.023	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Methylphenol	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Nitroaniline	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
2-Nitrophenol	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
3,3'-Dichlorobenzidine	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
3-Nitroaniline	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4,6-Dinitro-2-methylphenol	ND	0.090	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Bromophenyl phenyl ether	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Chloro-3-methylphenol	ND	0.068	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Chloroaniline	ND	0.056	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Chlorophenyl phenyl ether	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Methylphenol	ND	0.11	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Nitroaniline	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
4-Nitrophenol	ND	0.16	0.745		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Acenaphthene	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Acenaphthylene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Aniline	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Anthracene	ND	0.023	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzo[a]anthracene	ND	0.023	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzo[a]pyrene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzo[b]fluoranthene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzo[g,h,i]perylene	ND	0.068	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzo[k]fluoranthene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Benzyl alcohol	ND	0.045	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Bis(2-chloroethyl)ether	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Bis(2-ethylhexyl)phthalate	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Butyl benzyl phthalate	ND	0.11	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Chrysene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Di-n-butyl phthalate	0.14	0.11	0.373	J	mg/Kg-dry	1	12/8/2004 6:52:00 PM
Di-n-octyl phthalate	ND	0.11	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Dibenzofuran	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Diethyl phthalate	ND	0.11	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-3  
**LabID:** 0412014-03  
**CollectionDate:** 12/1/2004 10:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Fluoranthene	0.038	0.023	0.150	J	mg/Kg-dry	1	12/8/2004 6:52:00 PM
Fluorene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Hexachlorobenzene	ND	0.011	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Hexachlorobutadiene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Hexachlorocyclopentadiene	ND	0.068	0.373		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Hexachloroethane	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Isophorone	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
N-Nitrosodiphenylamine	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Naphthalene	ND	0.045	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Nitrobenzene	ND	0.079	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Pentachlorophenol	ND	0.10	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Phenanthrene	ND	0.034	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Phenol	ND	0.068	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Pyrene	ND	0.023	0.150		mg/Kg-dry	1	12/8/2004 6:52:00 PM
Surr: 2,4,6-Tribromophenol	142	0	36-126	S	%REC	1	12/8/2004 6:52:00 PM
Surr: 2-Fluorobiphenyl	111	0	45-125		%REC	1	12/8/2004 6:52:00 PM
Surr: 2-Fluorophenol	98.3	0	37-125		%REC	1	12/8/2004 6:52:00 PM
Surr: 4-Terphenyl-d14	115	0	45-125		%REC	1	12/8/2004 6:52:00 PM
Surr: Nitrobenzene-d5	102	0	45-125		%REC	1	12/8/2004 6:52:00 PM
Surr: Phenol-d6	100	0	40-125		%REC	1	12/8/2004 6:52:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	ND	3.2	10.7		mg/Kg-dry	1	12/6/2004 3:28:18 PM
TPH-ORO >C28-C35	ND	3.2	10.7		mg/Kg-dry	1	12/6/2004 3:28:18 PM
Surr: o-Terphenyl	82.5	0	47-142		%REC	1	12/6/2004 3:28:18 PM
Surr: Octacosane	93.4	0	25-162		%REC	1	12/6/2004 3:28:18 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	ND	0.018	0.0460		mg/Kg-dry	1	12/3/2004 12:21:14 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	7.18	0.49	0.985		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Barium	350	0.49	1.97		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Cadmium	0.560	0.098	0.295		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Chromium	14.3	0.49	1.97		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Lead	198	0.098	0.295		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Selenium	1.02	0.15	0.492		mg/Kg-dry	5	12/6/2004 1:56:00 PM
Silver	0.205	0.098	0.197		mg/Kg-dry	5	12/6/2004 1:56:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-3  
**LabID:** 0412014-03  
**CollectionDate:** 12/1/2004 10:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					<b>Analyst: LY</b>
Gasoline Range Organics	ND	0.70	2.34		mg/Kg-dry	10	12/6/2004 3:31:14 PM
Surr: Tetrachlorethene	86.0	0	59-121		%REC	10	12/6/2004 3:31:14 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					<b>Analyst: JBC</b>
Percent Moisture	13.2	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
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B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-4  
**LabID:** 0412014-04  
**Collection Date:** 12/1/2004 10:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,1,1-Trichloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,1,2,2-Tetrachloroethane	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,1,2-Trichloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,1-Dichloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,1-Dichloroethene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,1-Dichloropropene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,2,3-Trichlorobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2,3-Trichloropropane	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2,4-Trichlorobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2,4-Trimethylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2-Dibromo-3-chloropropane	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2-Dibromoethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,2-Dichlorobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,2-Dichloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,2-Dichloropropane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,3,5-Trimethylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,3-Dichlorobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
1,3-Dichloropropane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
1,4-Dichlorobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
2,2-Dichloropropane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
2-Butanone	ND	4.4	13.1		µg/Kg-dry	1	12/3/2004 7:50:00 PM
2-Chloroethylvinylether	ND	4.4	13.1		µg/Kg-dry	1	12/3/2004 7:50:00 PM
2-Chlorotoluene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
2-Hexanone	ND	4.4	13.1		µg/Kg-dry	1	12/3/2004 7:50:00 PM
4-Chlorotoluene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
4-Methyl-2-pentanone	ND	4.4	13.1		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Acetone	ND	17	43.6		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Benzene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Bromobenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
Bromochloromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Bromodichloromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Bromoform	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Bromomethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Carbon disulfide	ND	4.4	13.1		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Carbon tetrachloride	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Chlorobenzene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Chloroethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Chloroform	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Chloromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-4  
**LabID:** 0412014-04  
**CollectionDate:** 12/1/2004 10:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
cis-1,3-Dichloropropene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Dibromochloromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Dibromomethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Dichlorodifluoromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Ethylbenzene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Hexachlorobutadiene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
Iodomethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Isopropylbenzene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
m,p-Xylene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Methyl tert-butyl ether	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Methylene chloride	ND	4.4	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
n-Butylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
n-Propylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
Naphthalene	ND	8.9	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
o-Xylene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
p-Isopropyltoluene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
sec-Butylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
Styrene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
tert-Butylbenzene	ND	1.8	8.91		µg/Kg-dry	1	12/6/2004 5:18:00 PM
Tetrachloroethene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Toluene	ND	1.7	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
trans-1,2-Dichloroethene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
trans-1,3-Dichloropropene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Trichloroethene	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Trichlorofluoromethane	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Vinyl chloride	ND	0.87	4.36		µg/Kg-dry	1	12/3/2004 7:50:00 PM
Surr: 1,2-Dichloroethane-d4	130	0	52-149		%REC	1	12/3/2004 7:50:00 PM
Surr: 4-Bromofluorobenzene	114	0	65-135		%REC	1	12/6/2004 5:18:00 PM
Surr: Dibromofluoromethane	114	0	65-135		%REC	1	12/3/2004 7:50:00 PM
Surr: Toluene-d8	96.6	0	65-135		%REC	1	12/3/2004 7:50:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
1,2-Dichlorobenzene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
1,3-Dichlorobenzene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
1,4-Dichlorobenzene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,4,5-Trichlorophenol	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,4,6-Trichlorophenol	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,4-Dichlorophenol	ND	0.14	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,4-Dimethylphenol	ND	0.18	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-4  
**LabID:** 0412014-04  
**CollectionDate:** 12/1/2004 10:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.14	1.49		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,4-Dinitrotoluene	ND	0.14	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2,6-Dinitrotoluene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Chloronaphthalene	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Chlorophenol	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Methylnaphthalene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Methylphenol	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Nitroaniline	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
2-Nitrophenol	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
3,3'-Dichlorobenzidine	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
3-Nitroaniline	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4,6-Dinitro-2-methylphenol	ND	0.18	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Bromophenyl phenyl ether	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Chloro-3-methylphenol	ND	0.14	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Chloroaniline	ND	0.11	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Chlorophenyl phenyl ether	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Methylphenol	ND	0.23	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Nitroaniline	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
4-Nitrophenol	ND	0.32	1.49		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Acenaphthene	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Acenaphthylene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Aniline	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Anthracene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzo[a]anthracene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzo[a]pyrene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzo[b]fluoranthene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzo[g,h,i]perylene	ND	0.14	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzo[k]fluoranthene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Benzyl alcohol	ND	0.090	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Bis(2-chloroethoxy)methane	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Bis(2-chloroethyl)ether	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Bis(2-chloroisopropyl)ether	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Bis(2-ethylhexyl)phthalate	1.47	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Butyl benzyl phthalate	ND	0.23	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Chrysene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Di-n-butyl phthalate	ND	0.23	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Di-n-octyl phthalate	ND	0.23	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Dibenz[a,h]anthracene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Dibenzofuran	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Diethyl phthalate	ND	0.23	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM

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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-4  
**LabID:** 0412014-04  
**Collection Date:** 12/1/2004 10:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.23	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Fluoranthene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Fluorene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Hexachlorobenzene	ND	0.023	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Hexachlorobutadiene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Hexachlorocyclopentadiene	ND	0.14	0.743		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Hexachloroethane	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Isophorone	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
N-Nitrosodi-n-propylamine	ND	0.11	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
N-Nitrosodiphenylamine	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Naphthalene	ND	0.090	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Nitrobenzene	ND	0.16	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Pentachlorophenol	ND	0.20	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Phenanthrene	ND	0.068	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Phenol	ND	0.14	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Pyrene	ND	0.045	0.299		mg/Kg-dry	2	12/8/2004 3:43:00 PM
Surr: 2,4,6-Tribromophenol	119	0	36-126		%REC	2	12/8/2004 3:43:00 PM
Surr: 2-Fluorobiphenyl	99.0	0	45-125		%REC	2	12/8/2004 3:43:00 PM
Surr: 2-Fluorophenol	84.6	0	37-125		%REC	2	12/8/2004 3:43:00 PM
Surr: 4-Terphenyl-d14	123	0	45-125		%REC	2	12/8/2004 3:43:00 PM
Surr: Nitrobenzene-d5	90.0	0	45-125		%REC	2	12/8/2004 3:43:00 PM
Surr: Phenol-d6	87.1	0	40-125		%REC	2	12/8/2004 3:43:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	8900	160	536		mg/Kg-dry	50	12/7/2004 3:35:08 PM
TPH-ORO >C28-C35	5820	160	536		mg/Kg-dry	50	12/7/2004 3:35:08 PM
Surr: o-Terphenyl	67.9	0	47-142		%REC	50	12/7/2004 3:35:08 PM
Surr: Octacosane	128	0	25-162		%REC	50	12/7/2004 3:35:08 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	0.018	0.017	0.0433	J	mg/Kg-dry	1	12/3/2004 12:27:31 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	4.53	0.49	0.981		mg/Kg-dry	5	12/6/2004 2:00:00 PM
Barium	217	0.49	1.96		mg/Kg-dry	5	12/6/2004 2:00:00 PM
Cadmium	0.28	0.098	0.294	J	mg/Kg-dry	5	12/6/2004 2:00:00 PM
Chromium	9.63	0.49	1.96		mg/Kg-dry	5	12/6/2004 2:00:00 PM
Lead	123	0.098	0.294		mg/Kg-dry	5	12/6/2004 2:00:00 PM
Selenium	0.791	0.15	0.491		mg/Kg-dry	5	12/6/2004 2:00:00 PM
Silver	ND	0.098	0.196		mg/Kg-dry	5	12/6/2004 2:00:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-4  
**LabID:** 0412014-04  
**Collection Date:** 12/1/2004 10:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					<b>Analyst: LY</b>
Gasoline Range Organics	ND	0.61	2.04		mg/Kg-dry	10	12/6/2004 3:52:44 PM
Surr: Tetrachlorethene	62.4	0	59-121		%REC	10	12/6/2004 3:52:44 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					<b>Analyst: JBC</b>
Percent Moisture	12.9	0			WT%	1	12/2/2004 1:30:00 PM

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E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-5  
**LabID:** 0412014-05  
**CollectionDate:** 12/1/2004 10:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,1,1-Trichloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,1,2,2-Tetrachloroethane	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,1,2-Trichloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,1-Dichloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,1-Dichloroethene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,1-Dichloropropene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,2,3-Trichlorobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2,3-Trichloropropane	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2,4-Trichlorobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2,4-Trimethylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2-Dibromo-3-chloropropane	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2-Dibromoethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,2-Dichlorobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,2-Dichloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,2-Dichloropropane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,3,5-Trimethylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,3-Dichlorobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
1,3-Dichloropropane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
1,4-Dichlorobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
2,2-Dichloropropane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
2-Butanone	11	4.9	14.8	J	µg/Kg-dry	1	12/3/2004 11:34:00 PM
2-Chloroethylvinylether	ND	4.9	14.8		µg/Kg-dry	1	12/3/2004 11:34:00 PM
2-Chlorotoluene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
2-Hexanone	ND	4.9	14.8		µg/Kg-dry	1	12/3/2004 11:34:00 PM
4-Chlorotoluene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
4-Methyl-2-pentanone	ND	4.9	14.8		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Acetone	134	20	49.4		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Benzene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Bromobenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
Bromochloromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Bromodichloromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Bromoform	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Bromomethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Carbon disulfide	ND	4.9	14.8		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Carbon tetrachloride	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Chlorobenzene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Chloroethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Chloroform	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Chloromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM

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# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-5  
**LabID:** 0412014-05  
**CollectionDate:** 12/1/200410:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
cis-1,3-Dichloropropene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Dibromochloromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Dibromomethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Dichlorodifluoromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Ethylbenzene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Hexachlorobutadiene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
Iodomethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Isopropylbenzene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
m,p-Xylene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Methyl tert-butyl ether	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Methylene chloride	ND	4.9	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
n-Butylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
n-Propylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
Naphthalene	ND	9.1	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
o-Xylene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
p-Isopropyltoluene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
sec-Butylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
Styrene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
tert-Butylbenzene	ND	1.8	9.09		µg/Kg-dry	1	12/6/2004 5:49:00 PM
Tetrachloroethene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Toluene	ND	2.0	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
trans-1,2-Dichloroethene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
trans-1,3-Dichloropropene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Trichloroethene	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Trichlorofluoromethane	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Vinyl chloride	ND	0.99	4.94		µg/Kg-dry	1	12/3/2004 11:34:00 PM
Surr: 1,2-Dichloroethane-d4	123	0	52-149		%REC	1	12/3/2004 11:34:00 PM
Surr: 4-Bromofluorobenzene	118	0	65-135		%REC	1	12/6/2004 5:49:00 PM
Surr: Dibromofluoromethane	115	0	65-135		%REC	1	12/3/2004 11:34:00 PM
Surr: Toluene-d8	99.8	0	65-135		%REC	1	12/3/2004 11:34:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.11	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
1,2-Dichlorobenzene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
1,3-Dichlorobenzene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
1,4-Dichlorobenzene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,4,5-Trichlorophenol	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,4,6-Trichlorophenol	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,4-Dichlorophenol	ND	0.34	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,4-Dimethylphenol	ND	0.45	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-5  
**LabID:** 0412014-05  
**CollectionDate:** 12/1/2004 10:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.34	3.69		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,4-Dinitrotoluene	ND	0.34	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2,6-Dinitrotoluene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Chloronaphthalene	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Chlorophenol	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Methylnaphthalene	0.48	0.11	0.744	J	mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Methylphenol	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Nitroaniline	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
2-Nitrophenol	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
3,3'-Dichlorobenzidine	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
3-Nitroaniline	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4,6-Dinitro-2-methylphenol	ND	0.45	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Bromophenyl phenyl ether	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Chloro-3-methylphenol	ND	0.34	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Chloroaniline	ND	0.28	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Chlorophenyl phenyl ether	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Methylphenol	ND	0.56	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Nitroaniline	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
4-Nitrophenol	ND	0.78	3.69		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Acenaphthene	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Acenaphthylene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Aniline	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Anthracene	ND	0.11	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzo[a]anthracene	ND	0.11	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzo[a]pyrene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzo[b]fluoranthene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzo[g,h,i]perylene	ND	0.34	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzo[k]fluoranthene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Benzyl alcohol	ND	0.22	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Bis(2-chloroethoxy)methane	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Bis(2-chloroethyl)ether	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Bis(2-chloroisopropyl)ether	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Bis(2-ethylhexyl)phthalate	3.10	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Butyl benzyl phthalate	ND	0.56	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Chrysene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Di-n-butyl phthalate	ND	0.56	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Di-n-octyl phthalate	ND	0.56	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Dibenz[a,h]anthracene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Dibenzofuran	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Diethyl phthalate	ND	0.56	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-5  
**LabID:** 0412014-05  
**CollectionDate:** 12/1/200410:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.56	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Fluoranthene	ND	0.11	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Fluorene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Hexachlorobenzene	ND	0.056	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Hexachlorobutadiene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Hexachlorocyclopentadiene	ND	0.34	1.85		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Hexachloroethane	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Isophorone	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
N-Nitrosodi-n-propylamine	ND	0.28	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
N-Nitrosodiphenylamine	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Naphthalene	ND	0.22	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Nitrobenzene	ND	0.39	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Pentachlorophenol	ND	0.50	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Phenanthrene	ND	0.17	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Phenol	ND	0.34	0.744		mg/Kg-dry	5	12/8/2004 1:47:00 PM
Pyrene	0.11	0.11	0.744	J	mg/Kg-dry	5	12/8/2004 1:47:00 PM
Surr: 2,4,6-Tribromophenol	119	0	36-126		%REC	5	12/8/2004 1:47:00 PM
Surr: 2-Fluorobiphenyl	107	0	45-125		%REC	5	12/8/2004 1:47:00 PM
Surr: 2-Fluorophenol	90.8	0	37-125		%REC	5	12/8/2004 1:47:00 PM
Surr: 4-Terphenyl-d14	112	0	45-125		%REC	5	12/8/2004 1:47:00 PM
Surr: Nitrobenzene-d5	102	0	45-125		%REC	5	12/8/2004 1:47:00 PM
Surr: Phenol-d6	93.3	0	40-125		%REC	5	12/8/2004 1:47:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	18800	340	1140		mg/Kg-dry	100	12/7/2004 3:09:46 PM
TPH-ORO >C28-C35	11700	340	1140		mg/Kg-dry	100	12/7/2004 3:09:46 PM
Surr: o-Terphenyl	75.2	0	47-142		%REC	100	12/7/2004 3:09:46 PM
Surr: Octacosane	79.4	0	25-162		%REC	100	12/7/2004 3:09:46 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	ND	0.017	0.0419		mg/Kg-dry	1	12/3/2004 12:29:34 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	4.40	0.57	1.14		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Barium	421	0.57	2.27		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Cadmium	ND	0.11	0.341		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Chromium	2.94	0.57	2.27		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Lead	7.46	0.11	0.341		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Selenium	1.24	0.17	0.568		mg/Kg-dry	5	12/6/2004 2:04:00 PM
Silver	ND	0.11	0.227		mg/Kg-dry	5	12/6/2004 2:04:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-5  
**LabID:** 0412014-05  
**CollectionDate:** 12/1/2004 10:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					Analyst: LY
Gasoline Range Organics	2.25	0.62	2.06		mg/Kg-dry	10	12/7/2004 1:38:00 PM
Surr: Tetrachlorethene	62.0	0	59-121		%REC	10	12/7/2004 1:38:00 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					Analyst: JBC
Percent Moisture	14.6	0			WT%	1	12/2/2004 1:30:00 PM

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 E - TPH pattern not Gas or Diesel Range Pattern

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-1  
**LabID:** 0412014-06  
**Collection Date:** 12/1/2004 9:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1,1-Trichloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1,2,2-Tetrachloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1,2-Trichloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1-Dichloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1-Dichloroethene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,1-Dichloropropene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2,3-Trichlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2,3-Trichloropropane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2,4-Trichlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2,4-Trimethylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2-Dibromo-3-chloropropane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2-Dibromoethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2-Dichlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2-Dichloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,2-Dichloropropane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,3,5-Trimethylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,3-Dichlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,3-Dichloropropane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
1,4-Dichlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
2,2-Dichloropropane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
2-Butanone	ND	4.6	13.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
2-Chloroethylvinylether	ND	4.6	13.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
2-Chlorotoluene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
2-Hexanone	ND	4.6	13.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
4-Chlorotoluene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
4-Methyl-2-pentanone	ND	4.6	13.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Acetone	ND	37	91.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Benzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Bromobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Bromochloromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Bromodichloromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Bromoform	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Bromomethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Carbon disulfide	ND	4.6	13.8		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Carbon tetrachloride	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Chlorobenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Chloroethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Chloroform	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Chloromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-1  
**LabID:** 0412014-06  
**Collection Date:** 12/1/2004 9:00:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>			<b>Analyst: DO</b>		
cis-1,2-Dichloroethene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
cis-1,3-Dichloropropene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Dibromochloromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Dibromomethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Dichlorodifluoromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Ethylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Hexachlorobutadiene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Iodomethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Isopropylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
m,p-Xylene	2.6	0.92	4.59	J	µg/Kg-dry	1	12/3/2004 10:30:00 PM
Methyl tert-butyl ether	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Methylene chloride	ND	4.6	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
n-Butylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
n-Propylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Naphthalene	ND	4.6	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
o-Xylene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
p-Isopropyltoluene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
sec-Butylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Styrene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
tert-Butylbenzene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Tetrachloroethene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Toluene	2.5	1.8	4.59	J	µg/Kg-dry	1	12/3/2004 10:30:00 PM
trans-1,2-Dichloroethene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
trans-1,3-Dichloropropene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Trichloroethene	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Trichlorofluoromethane	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Vinyl chloride	ND	0.92	4.59		µg/Kg-dry	1	12/3/2004 10:30:00 PM
Surr: 1,2-Dichloroethane-d4	122	0	52-149		%REC	1	12/3/2004 10:30:00 PM
Surr: 4-Bromofluorobenzene	92.7	0	65-135		%REC	1	12/3/2004 10:30:00 PM
Surr: Dibromofluoromethane	111	0	65-135		%REC	1	12/3/2004 10:30:00 PM
Surr: Toluene-d8	89.7	0	65-135		%REC	1	12/3/2004 10:30:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>			<b>Analyst: RPC</b>		
1,2,4-Trichlorobenzene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
1,2-Dichlorobenzene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
1,3-Dichlorobenzene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
1,4-Dichlorobenzene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,4,5-Trichlorophenol	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,4,6-Trichlorophenol	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,4-Dichlorophenol	ND	0.068	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,4-Dimethylphenol	ND	0.091	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-1  
**LabID:** 0412014-06  
**CollectionDate:** 12/1/20049:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.068	0.750		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,4-Dinitrotoluene	ND	0.068	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2,6-Dinitrotoluene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Chloronaphthalene	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Chlorophenol	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Methylnaphthalene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Methylphenol	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Nitroaniline	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
2-Nitrophenol	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
3,3'-Dichlorobenzidine	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
3-Nitroaniline	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4,6-Dinitro-2-methylphenol	ND	0.091	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Bromophenyl phenyl ether	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Chloro-3-methylphenol	ND	0.068	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Chloroaniline	ND	0.057	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Chlorophenyl phenyl ether	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Methylphenol	ND	0.11	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Nitroaniline	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
4-Nitrophenol	ND	0.16	0.750		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Acenaphthene	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Acenaphthylene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Aniline	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Anthracene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzo[a]anthracene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzo[a]pyrene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzo[b]fluoranthene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzo[g,h,i]perylene	ND	0.068	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzo[k]fluoranthene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Benzyl alcohol	ND	0.045	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Bis(2-chloroethoxy)methane	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Bis(2-chloroethyl)ether	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Bis(2-chloroisopropyl)ether	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Bis(2-ethylhexyl)phthalate	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Butyl benzyl phthalate	ND	0.11	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Chrysene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Di-n-butyl phthalate	ND	0.11	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Di-n-octyl phthalate	ND	0.11	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Dibenz[a,h]anthracene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Dibenzofuran	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Diethyl phthalate	ND	0.11	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**Client Sample ID:** NM-HB-DRL-2-1  
**LabID:** 0412014-06  
**Collection Date:** 12/1/2004 9:00:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>			<b>Analyst: RPC</b>		
Dimethyl phthalate	ND	0.11	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Fluoranthene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Fluorene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Hexachlorobenzene	ND	0.011	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Hexachlorobutadiene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Hexachlorocyclopentadiene	ND	0.068	0.375		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Hexachloroethane	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Indeno[1,2,3-cd]pyrene	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Isophorone	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
N-Nitrosodi-n-propylamine	ND	0.057	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
N-Nitrosodiphenylamine	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Naphthalene	ND	0.045	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Nitrobenzene	ND	0.080	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Pentachlorophenol	ND	0.10	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Phenanthrene	ND	0.034	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Phenol	ND	0.068	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Pyrene	ND	0.023	0.151		mg/Kg-dry	1	12/8/2004 11:53:00 AM
Surr: 2,4,6-Tribromophenol	122	0	36-126		%REC	1	12/8/2004 11:53:00 AM
Surr: 2-Fluorobiphenyl	109	0	45-125		%REC	1	12/8/2004 11:53:00 AM
Surr: 2-Fluorophenol	98.5	0	37-125		%REC	1	12/8/2004 11:53:00 AM
Surr: 4-Terphenyl-d14	112	0	45-125		%REC	1	12/8/2004 11:53:00 AM
Surr: Nitrobenzene-d5	107	0	45-125		%REC	1	12/8/2004 11:53:00 AM
Surr: Phenol-d6	101	0	40-125		%REC	1	12/8/2004 11:53:00 AM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>			<b>Analyst: RPC</b>		
TPH-DRO C10-C28	ND	3.5	11.6		mg/Kg-dry	1	12/6/2004 3:03:06 PM
TPH-ORO >C28-C35	ND	3.5	11.6		mg/Kg-dry	1	12/6/2004 3:03:06 PM
Surr: o-Terphenyl	104	0	47-142		%REC	1	12/6/2004 3:03:06 PM
Surr: Octacosane	81.1	0	25-162		%REC	1	12/6/2004 3:03:06 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>			<b>Analyst: JP</b>		
Mercury	ND	0.016	0.0409		mg/Kg-dry	1	12/3/2004 12:08:58 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>			<b>Analyst: RPC</b>		
Arsenic	11.6	0.53	1.06		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Barium	458	0.53	2.11		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Cadmium	0.380	0.11	0.317		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Chromium	14.7	0.53	2.11		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Lead	80.7	0.11	0.317		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Selenium	0.923	0.16	0.528		mg/Kg-dry	5	12/6/2004 12:47:00 PM
Silver	ND	0.11	0.211		mg/Kg-dry	5	12/6/2004 12:47:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-1  
**LabID:** 0412014-06  
**CollectionDate:** 12/1/2004 9:00:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>		Analyst: LY			
Gasoline Range Organics	ND	0.70	2.35		mg/Kg-dry	10	12/6/2004 1:37:27 PM
Surr: Tetrachlorethene	82.6	0	59-121		%REC	10	12/6/2004 1:37:27 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>		Analyst: JBC			
Percent Moisture	15.4	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL                              C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank              E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-2  
**LabID:** 0412014-07  
**Collection Date:** 12/1/2004 9:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1,1-Trichloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1,2,2-Tetrachloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1,2-Trichloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1-Dichloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1-Dichloroethene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,1-Dichloropropene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2,3-Trichlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2,3-Trichloropropane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2,4-Trichlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2,4-Trimethylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2-Dibromo-3-chloropropane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2-Dibromoethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2-Dichlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2-Dichloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,2-Dichloropropane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,3,5-Trimethylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,3-Dichlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,3-Dichloropropane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
1,4-Dichlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
2,2-Dichloropropane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
2-Butanone	ND	4.3	13.0		µg/Kg-dry	1	12/3/2004 8:22:00 PM
2-Chloroethylvinylether	ND	4.3	13.0		µg/Kg-dry	1	12/3/2004 8:22:00 PM
2-Chlorotoluene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
2-Hexanone	ND	4.3	13.0		µg/Kg-dry	1	12/3/2004 8:22:00 PM
4-Chlorotoluene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
4-Methyl-2-pentanone	ND	4.3	13.0		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Acetone	ND	35	86.9		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Benzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Bromobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Bromochloromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Bromodichloromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Bromoform	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Bromomethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Carbon disulfide	ND	4.3	13.0		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Carbon tetrachloride	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Chlorobenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Chloroethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Chloroform	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Chloromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-2  
**LabID:** 0412014-07  
**Collection Date:** 12/1/20049:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
cis-1,3-Dichloropropene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Dibromochloromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Dibromomethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Dichlorodifluoromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Ethylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Hexachlorobutadiene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Iodomethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Isopropylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
m,p-Xylene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Methyl tert-butyl ether	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Methylene chloride	ND	4.3	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
n-Butylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
n-Propylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Naphthalene	ND	4.3	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
o-Xylene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
p-Isopropyltoluene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
sec-Butylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Styrene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
tert-Butylbenzene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Tetrachloroethene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Toluene	ND	1.7	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
trans-1,2-Dichloroethene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
trans-1,3-Dichloropropene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Trichloroethene	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Trichlorofluoromethane	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Vinyl chloride	ND	0.87	4.35		µg/Kg-dry	1	12/3/2004 8:22:00 PM
Surr: 1,2-Dichloroethane-d4	124	0	52-149		%REC	1	12/3/2004 8:22:00 PM
Surr: 4-Bromofluorobenzene	94.0	0	65-135		%REC	1	12/3/2004 8:22:00 PM
Surr: Dibromofluoromethane	112	0	65-135		%REC	1	12/3/2004 8:22:00 PM
Surr: Toluene-d8	89.3	0	65-135		%REC	1	12/3/2004 8:22:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
1,2-Dichlorobenzene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
1,3-Dichlorobenzene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
1,4-Dichlorobenzene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,4,5-Trichlorophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,4,6-Trichlorophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,4-Dichlorophenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,4-Dimethylphenol	ND	0.088	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-2  
**LabID:** 0412014-07  
**CollectionDate:** 12/1/20049:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.066	0.726		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,4-Dinitrotoluene	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2,6-Dinitrotoluene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Chloronaphthalene	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Chlorophenol	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Methylnaphthalene	ND	0.022	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Methylphenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Nitroaniline	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
2-Nitrophenol	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
3,3'-Dichlorobenzidine	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
3-Nitroaniline	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4,6-Dinitro-2-methylphenol	ND	0.088	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Bromophenyl phenyl ether	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Chloro-3-methylphenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Chloroaniline	ND	0.055	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Chlorophenyl phenyl ether	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Methylphenol	ND	0.11	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Nitroaniline	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
4-Nitrophenol	ND	0.15	0.726		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Acenaphthene	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Acenaphthylene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Aniline	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Anthracene	ND	0.022	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzo[a]anthracene	ND	0.022	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzo[a]pyrene	0.037	0.033	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzo[b]fluoranthene	0.037	0.033	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzo[g,h,i]perylene	0.11	0.066	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzo[k]fluoranthene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Benzyl alcohol	ND	0.044	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Bis(2-chloroethoxy)methane	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Bis(2-chloroethyl)ether	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Bis(2-chloroisopropyl)ether	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Bis(2-ethylhexyl)phthalate	0.095	0.055	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Butyl benzyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Chrysene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Di-n-butyl phthalate	0.14	0.11	0.363	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Di-n-octyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Dibenz[a,h]anthracene	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Dibenzofuran	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Diethyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM

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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-2  
**LabID:** 0412014-07  
**Collection Date:** 12/1/2004 9:10:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Fluoranthene	0.037	0.022	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Fluorene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Hexachlorobenzene	ND	0.011	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Hexachlorobutadiene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Hexachlorocyclopentadiene	ND	0.066	0.363		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Hexachloroethane	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Indeno[1,2,3-cd]pyrene	0.066	0.055	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Isophorone	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
N-Nitrosodi-n-propylamine	ND	0.055	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
N-Nitrosodiphenylamine	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Naphthalene	ND	0.044	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Nitrobenzene	ND	0.077	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Pentachlorophenol	ND	0.099	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Phenanthrene	ND	0.033	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Phenol	ND	0.066	0.146		mg/Kg-dry	1	12/8/2004 5:36:00 PM
Pyrene	0.029	0.022	0.146	J	mg/Kg-dry	1	12/8/2004 5:36:00 PM
Surr: 2,4,6-Tribromophenol	140	0	36-126	S	%REC	1	12/8/2004 5:36:00 PM
Surr: 2-Fluorobiphenyl	107	0	45-125		%REC	1	12/8/2004 5:36:00 PM
Surr: 2-Fluorophenol	94.3	0	37-125		%REC	1	12/8/2004 5:36:00 PM
Surr: 4-Terphenyl-d14	113	0	45-125		%REC	1	12/8/2004 5:36:00 PM
Surr: Nitrobenzene-d5	99.8	0	45-125		%REC	1	12/8/2004 5:36:00 PM
Surr: Phenol-d6	94.8	0	40-125		%REC	1	12/8/2004 5:36:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	457	3.4	11.2		mg/Kg-dry	1	12/6/2004 4:18:25 PM
TPH-ORO >C28-C35	ND	3.4	11.2		mg/Kg-dry	1	12/6/2004 4:18:25 PM
Surr: o-Terphenyl	83.3	0	47-142		%REC	1	12/6/2004 4:18:25 PM
Surr: Octacosane	97.6	0	25-162		%REC	1	12/6/2004 4:18:25 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	0.029	0.016	0.0392	J	mg/Kg-dry	1	12/3/2004 12:31:37 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	25.3	0.56	1.12		mg/Kg-dry	5	12/6/2004 2:08:00 PM
Barium	752	2.8	11.2		mg/Kg-dry	25	12/6/2004 4:20:00 PM
Cadmium	0.432	0.11	0.337		mg/Kg-dry	5	12/6/2004 2:08:00 PM
Chromium	21.4	0.56	2.24		mg/Kg-dry	5	12/6/2004 2:08:00 PM
Lead	89.0	0.11	0.337		mg/Kg-dry	5	12/6/2004 2:08:00 PM
Selenium	0.811	0.17	0.561		mg/Kg-dry	5	12/6/2004 2:08:00 PM
Silver	ND	0.11	0.224		mg/Kg-dry	5	12/6/2004 2:08:00 PM

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 E - TPH pattern not Gas or Diesel Range Pattern



**DHL Analytical**

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-2-2  
 LabID: 0412014-07  
 CollectionDate: 12/1/2004 9:10:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					Analyst: LY
Gasoline Range Organics	ND	0.60	2.01		mg/Kg-dry	10	12/6/2004 5:14:58 PM
Surr: Tetrachlorethene	82.7	0	59-121		%REC	10	12/6/2004 5:14:58 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					Analyst: JBC
Percent Moisture	12.6	0			WT%	1	12/2/2004 1:30:00 PM

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 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-3  
**LabID:** 0412014-08  
**CollectionDate:** 12/1/2004 9:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1,1-Trichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1,2,2-Tetrachloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1,2-Trichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1-Dichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,1-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2,3-Trichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2,3-Trichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2,4-Trichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2,4-Trimethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2-Dibromo-3-chloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2-Dibromoethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2-Dichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,2-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,3,5-Trimethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,3-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,3-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
1,4-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
2,2-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
2-Butanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 8:54:00 PM
2-Chloroethylvinylether	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 8:54:00 PM
2-Chlorotoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
2-Hexanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 8:54:00 PM
4-Chlorotoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
4-Methyl-2-pentanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Acetone	ND	34	85.8		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Benzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Bromobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Bromochloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Bromodichloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Bromoform	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Bromomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Carbon disulfide	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Carbon tetrachloride	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Chlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Chloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Chloroform	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Chloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-2-3  
 LabID: 0412014-08  
 CollectionDate: 12/1/20049:20:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
cis-1,3-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Dibromochloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Dibromomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Dichlorodifluoromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Ethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Hexachlorobutadiene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Iodomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Isopropylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
m,p-Xylene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Methyl tert-butyl ether	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Methylene chloride	ND	4.3	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
n-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
n-Propylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Naphthalene	ND	4.3	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
o-Xylene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
p-Isopropyltoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
sec-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Styrene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
tert-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Tetrachloroethene	8.43	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Toluene	ND	1.7	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
trans-1,2-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
trans-1,3-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Trichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Trichlorofluoromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Vinyl chloride	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 8:54:00 PM
Surr: 1,2-Dichloroethane-d4	124	0	52-149		%REC	1	12/3/2004 8:54:00 PM
Surr: 4-Bromofluorobenzene	99.4	0	65-135		%REC	1	12/3/2004 8:54:00 PM
Surr: Dibromofluoromethane	113	0	65-135		%REC	1	12/3/2004 8:54:00 PM
Surr: Toluene-d8	91.0	0	65-135		%REC	1	12/3/2004 8:54:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
1,2-Dichlorobenzene	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
1,3-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
1,4-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,4,5-Trichlorophenol	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,4,6-Trichlorophenol	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,4-Dichlorophenol	ND	0.067	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,4-Dimethylphenol	ND	0.090	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-3  
**LabID:** 0412014-08  
**CollectionDate:** 12/1/20049:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.067	0.741		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,4-Dinitrotoluene	ND	0.067	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2,6-Dinitrotoluene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Chloronaphthalene	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Chlorophenol	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Methylnaphthalene	ND	0.022	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Methylphenol	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Nitroaniline	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
2-Nitrophenol	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
3,3'-Dichlorobenzidine	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
3-Nitroaniline	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4,6-Dinitro-2-methylphenol	ND	0.090	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Bromophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Chloro-3-methylphenol	ND	0.067	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Chloroaniline	ND	0.056	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Chlorophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Methylphenol	ND	0.11	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Nitroaniline	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
4-Nitrophenol	ND	0.16	0.741		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Acenaphthene	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Acenaphthylene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Aniline	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Anthracene	ND	0.022	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzo[a]anthracene	0.045	0.022	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzo[a]pyrene	0.052	0.034	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzo[b]fluoranthene	0.067	0.034	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzo[g,h,i]perylene	0.075	0.067	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzo[k]fluoranthene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Benzyl alcohol	ND	0.045	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Bis(2-chloroethyl)ether	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Bis(2-ethylhexyl)phthalate	0.150	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Butyl benzyl phthalate	ND	0.11	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Chrysene	0.045	0.034	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Di-n-butyl phthalate	ND	0.11	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Di-n-octyl phthalate	ND	0.11	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Dibenzofuran	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Diethyl phthalate	ND	0.11	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-3  
**LabID:** 0412014-08  
**CollectionDate:** 12/1/20049:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Fluoranthene	0.060	0.022	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Fluorene	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Hexachlorobenzene	ND	0.011	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Hexachlorobutadiene	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Hexachlorocyclopentadiene	ND	0.067	0.371		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Hexachloroethane	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Isophorone	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
N-Nitrosodiphenylamine	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Naphthalene	ND	0.045	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Nitrobenzene	ND	0.079	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Pentachlorophenol	ND	0.10	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Phenanthrene	ND	0.034	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Phenol	ND	0.067	0.149		mg/Kg-dry	1	12/8/2004 6:14:00 PM
Pyrene	0.045	0.022	0.149	J	mg/Kg-dry	1	12/8/2004 6:14:00 PM
Surr: 2,4,6-Tribromophenol	140	0	36-126	S	%REC	1	12/8/2004 6:14:00 PM
Surr: 2-Fluorobiphenyl	109	0	45-125		%REC	1	12/8/2004 6:14:00 PM
Surr: 2-Fluorophenol	96.0	0	37-125		%REC	1	12/8/2004 6:14:00 PM
Surr: 4-Terphenyl-d14	113	0	45-125		%REC	1	12/8/2004 6:14:00 PM
Surr: Nitrobenzene-d5	98.0	0	45-125		%REC	1	12/8/2004 6:14:00 PM
Surr: Phenol-d6	97.8	0	40-125		%REC	1	12/8/2004 6:14:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	136	3.2	10.7		mg/Kg-dry	1	12/6/2004 4:43:31 PM
TPH-ORO >C28-C35	73.8	3.2	10.7		mg/Kg-dry	1	12/6/2004 4:43:31 PM
Surr: o-Terphenyl	79.5	0	47-142		%REC	1	12/6/2004 4:43:31 PM
Surr: Octacosane	102	0	25-162		%REC	1	12/6/2004 4:43:31 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	ND	0.017	0.0416		mg/Kg-dry	1	12/3/2004 12:33:40 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	15.1	0.56	1.11		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Barium	402	0.56	2.23		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Cadmium	0.373	0.11	0.334		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Chromium	14.0	0.56	2.23		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Lead	119	0.11	0.334		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Selenium	0.847	0.17	0.556		mg/Kg-dry	5	12/6/2004 2:12:00 PM
Silver	ND	0.11	0.223		mg/Kg-dry	5	12/6/2004 2:12:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-3  
**LabID:** 0412014-08  
**CollectionDate:** 12/1/2004 9:20:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					<b>Analyst: LY</b>
Gasoline Range Organics	26.0	0.69	2.29		mg/Kg-dry	10	12/6/2004 5:36:24 PM
Surr: Tetrachlorethene	79.2	0	59-121		%REC	10	12/6/2004 5:36:24 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					<b>Analyst: JBC</b>
Percent Moisture	14.4	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
C - Sample Result or QC discussed in Case Narrative  
E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-2-4  
 LabID: 0412014-09  
 CollectionDate: 12/1/2004 9:30:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1,1-Trichloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1,2,2-Tetrachloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1,2-Trichloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1-Dichloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1-Dichloroethene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,1-Dichloropropene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2,3-Trichlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2,3-Trichloropropane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2,4-Trichlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2,4-Trimethylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2-Dibromo-3-chloropropane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2-Dibromoethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2-Dichlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2-Dichloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,2-Dichloropropane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,3,5-Trimethylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,3-Dichlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,3-Dichloropropane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
1,4-Dichlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
2,2-Dichloropropane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
2-Butanone	108	12	36.4		µg/Kg-dry	1	12/6/2004 4:14:00 PM
2-Chloroethylvinylether	ND	12	36.4		µg/Kg-dry	1	12/6/2004 4:14:00 PM
2-Chlorotoluene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
2-Hexanone	14	12	36.4	J	µg/Kg-dry	1	12/6/2004 4:14:00 PM
4-Chlorotoluene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
4-Methyl-2-pentanone	13	12	36.4	J	µg/Kg-dry	1	12/6/2004 4:14:00 PM
Acetone	446	97	242		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Benzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Bromobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Bromochloromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Bromodichloromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Bromoform	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Bromomethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Carbon disulfide	ND	12	36.4		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Carbon tetrachloride	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Chlorobenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Chloroethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Chloroform	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Chloromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-4  
**LabID:** 0412014-09  
**Collection Date:** 12/1/2004 9:30:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
cis-1,3-Dichloropropene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Dibromochloromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Dibromomethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Dichlorodifluoromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Ethylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Hexachlorobutadiene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Iodomethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Isopropylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
m,p-Xylene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Methyl tert-butyl ether	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Methylene chloride	ND	12	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
n-Butylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
n-Propylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Naphthalene	ND	12	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
o-Xylene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
p-Isopropyltoluene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
sec-Butylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Styrene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
tert-Butylbenzene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Tetrachloroethene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Toluene	ND	4.8	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
trans-1,2-Dichloroethene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
trans-1,3-Dichloropropene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Trichloroethene	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Trichlorofluoromethane	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Vinyl chloride	ND	2.4	12.1		µg/Kg-dry	1	12/6/2004 4:14:00 PM
Surr: 1,2-Dichloroethane-d4	125	0	52-149		%REC	1	12/6/2004 4:14:00 PM
Surr: 4-Bromofluorobenzene	121	0	65-135		%REC	1	12/6/2004 4:14:00 PM
Surr: Dibromofluoromethane	111	0	65-135		%REC	1	12/6/2004 4:14:00 PM
Surr: Toluene-d8	96.6	0	65-135		%REC	1	12/6/2004 4:14:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
1,2-Dichlorobenzene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
1,3-Dichlorobenzene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
1,4-Dichlorobenzene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,4,5-Trichlorophenol	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,4,6-Trichlorophenol	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,4-Dichlorophenol	ND	0.33	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,4-Dimethylphenol	ND	0.44	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-2-4  
 LabID: 0412014-09  
 Collection Date: 12/1/2004 9:30:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.33	3.65		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,4-Dinitrotoluene	ND	0.33	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2,6-Dinitrotoluene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Chloronaphthalene	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Chlorophenol	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Methylnaphthalene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Methylphenol	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Nitroaniline	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
2-Nitrophenol	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
3,3'-Dichlorobenzidine	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
3-Nitroaniline	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4,6-Dinitro-2-methylphenol	ND	0.44	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Bromophenyl phenyl ether	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Chloro-3-methylphenol	ND	0.33	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Chloroaniline	ND	0.28	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Chlorophenyl phenyl ether	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Methylphenol	0.55	0.55	0.736	J	mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Nitroaniline	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
4-Nitrophenol	ND	0.78	3.65		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Acenaphthene	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Acenaphthylene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Aniline	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Anthracene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzo[a]anthracene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzo[a]pyrene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzo[b]fluoranthene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzo[g,h,i]perylene	ND	0.33	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzo[k]fluoranthene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Benzyl alcohol	ND	0.22	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Bis(2-chloroethoxy)methane	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Bis(2-chloroethyl)ether	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Bis(2-chloroisopropyl)ether	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Bis(2-ethylhexyl)phthalate	3.47	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Butyl benzyl phthalate	ND	0.55	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Chrysene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Di-n-butyl phthalate	ND	0.55	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Di-n-octyl phthalate	ND	0.55	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Dibenz[a,h]anthracene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Dibenzofuran	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Diethyl phthalate	ND	0.55	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** Drilco Hobbs-110403  
**LabOrder:** 0412014

**Client Sample ID:** NM-HB-DRL-2-4  
**LabID:** 0412014-09  
**Collection Date:** 12/1/2004 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.55	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Fluoranthene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Fluorene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Hexachlorobenzene	ND	0.055	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Hexachlorobutadiene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Hexachlorocyclopentadiene	ND	0.33	1.83		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Hexachloroethane	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Isophorone	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
N-Nitrosodi-n-propylamine	ND	0.28	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
N-Nitrosodiphenylamine	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Naphthalene	ND	0.22	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Nitrobenzene	ND	0.39	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Pentachlorophenol	ND	0.50	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Phenanthrene	ND	0.17	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Phenol	ND	0.33	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Pyrene	ND	0.11	0.736		mg/Kg-dry	5	12/8/2004 2:25:00 PM
Surr: 2,4,6-Tribromophenol	93.3	0	36-126		%REC	5	12/8/2004 2:25:00 PM
Surr: 2-Fluorobiphenyl	74.6	0	45-125		%REC	5	12/8/2004 2:25:00 PM
Surr: 2-Fluorophenol	59.7	0	37-125		%REC	5	12/8/2004 2:25:00 PM
Surr: 4-Terphenyl-d14	72.1	0	45-125		%REC	5	12/8/2004 2:25:00 PM
Surr: Nitrobenzene-d5	64.7	0	45-125		%REC	5	12/8/2004 2:25:00 PM
Surr: Phenol-d6	62.2	0	40-125		%REC	5	12/8/2004 2:25:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	12600	83	275		mg/Kg-dry	25	12/7/2004 1:53:04 PM
TPH-ORO >C28-C35	7510	83	275		mg/Kg-dry	25	12/7/2004 1:53:04 PM
Surr: o-Terphenyl	64.1	0	47-142		%REC	25	12/7/2004 1:53:04 PM
Surr: Octacosane	150	0	25-162		%REC	25	12/7/2004 1:53:04 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	ND	0.015	0.0384		mg/Kg-dry	1	12/3/2004 12:35:44 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	11.6	0.51	1.01		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Barium	266	0.51	2.03		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Cadmium	0.369	0.10	0.304		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Chromium	11.3	0.51	2.03		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Lead	32.2	0.10	0.304		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Selenium	0.916	0.15	0.506		mg/Kg-dry	5	12/6/2004 2:16:00 PM
Silver	ND	0.10	0.203		mg/Kg-dry	5	12/6/2004 2:16:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-4  
**LabID:** 0412014-09  
**CollectionDate:** 12/1/2004 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					<b>Analyst: LY</b>
Gasoline Range Organics	1.0	0.65	2.18	J	mg/Kg-dry	10	12/6/2004 5:57:50 PM
Surr: Tetrachlorethene	53.8	0	59-121	S	%REC	10	12/6/2004 5:57:50 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>					<b>Analyst: JBC</b>
Percent Moisture	12.6	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
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 B - Analyte detected in the associated Method Blank                E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

CLIENT: SMITHINTERNATIONAL  
 ProjectName: Sii Smith Services Hobbs NM  
 ProjectNo: DrilcoHobbs-110403  
 LabOrder: 0412014

ClientSampleID: NM-HB-DRL-2-5  
 LabID: 0412014-10  
 CollectionDate: 12/1/20049:40:00AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1,1-Trichloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1,2,2-Tetrachloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1,2-Trichloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1-Dichloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1-Dichloroethene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,1-Dichloropropene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2,3-Trichlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2,3-Trichloropropane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2,4-Trichlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2,4-Trimethylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2-Dibromo-3-chloropropane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2-Dibromoethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2-Dichlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2-Dichloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,2-Dichloropropane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,3,5-Trimethylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,3-Dichlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,3-Dichloropropane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
1,4-Dichlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
2,2-Dichloropropane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
2-Butanone	ND	10	30.8		µg/Kg-dry	1	12/6/2004 4:46:00 PM
2-Chloroethylvinylether	ND	10	30.8		µg/Kg-dry	1	12/6/2004 4:46:00 PM
2-Chlorotoluene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
2-Hexanone	ND	10	30.8		µg/Kg-dry	1	12/6/2004 4:46:00 PM
4-Chlorotoluene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
4-Methyl-2-pentanone	ND	10	30.8		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Acetone	ND	82	205		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Benzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Bromobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Bromochloromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Bromodichloromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Bromoform	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Bromomethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Carbon disulfide	ND	10	30.8		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Carbon tetrachloride	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Chlorobenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Chloroethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Chloroform	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Chloromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-5  
**LabID:** 0412014-10  
**CollectionDate:** 12/1/20049:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
cis-1,3-Dichloropropene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Dibromochloromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Dibromomethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Dichlorodifluoromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Ethylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Hexachlorobutadiene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Iodomethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Isopropylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
m,p-Xylene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Methyl tert-butyl ether	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Methylene chloride	ND	10	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
n-Butylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
n-Propylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Naphthalene	ND	10	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
o-Xylene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
p-Isopropyltoluene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
sec-Butylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Styrene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
tert-Butylbenzene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Tetrachloroethene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Toluene	ND	4.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
trans-1,2-Dichloroethene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
trans-1,3-Dichloropropene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Trichloroethene	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Trichlorofluoromethane	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Vinyl chloride	ND	2.1	10.3		µg/Kg-dry	1	12/6/2004 4:46:00 PM
Surr: 1,2-Dichloroethane-d4	125	0	52-149		%REC	1	12/6/2004 4:46:00 PM
Surr: 4-Bromofluorobenzene	117	0	65-135		%REC	1	12/6/2004 4:46:00 PM
Surr: Dibromofluoromethane	111	0	65-135		%REC	1	12/6/2004 4:46:00 PM
Surr: Toluene-d8	93.1	0	65-135		%REC	1	12/6/2004 4:46:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
1,2-Dichlorobenzene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
1,3-Dichlorobenzene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
1,4-Dichlorobenzene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,4,5-Trichlorophenol	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,4,6-Trichlorophenol	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,4-Dichlorophenol	ND	0.14	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,4-Dimethylphenol	ND	0.19	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-5  
**LabID:** 0412014-10  
**Collection Date:** 12/1/2004 9:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.14	1.53		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,4-Dinitrotoluene	ND	0.14	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2,6-Dinitrotoluene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Chloronaphthalene	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Chlorophenol	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Methylnaphthalene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Methylphenol	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Nitroaniline	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
2-Nitrophenol	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
3,3'-Dichlorobenzidine	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
3-Nitroaniline	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4,6-Dinitro-2-methylphenol	ND	0.19	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Bromophenyl phenyl ether	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Chloro-3-methylphenol	ND	0.14	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Chloroaniline	ND	0.12	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Chlorophenyl phenyl ether	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Methylphenol	ND	0.23	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Nitroaniline	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
4-Nitrophenol	ND	0.32	1.53		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Acenaphthene	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Acenaphthylene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Aniline	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Anthracene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzo[a]anthracene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzo[a]pyrene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzo[b]fluoranthene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzo[g,h,i]perylene	ND	0.14	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzo[k]fluoranthene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Benzyl alcohol	ND	0.093	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Bis(2-chloroethoxy)methane	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Bis(2-chloroethyl)ether	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Bis(2-chloroisopropyl)ether	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Bis(2-ethylhexyl)phthalate	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Butyl benzyl phthalate	ND	0.23	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Chrysene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Di-n-butyl phthalate	ND	0.23	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Di-n-octyl phthalate	1.07	0.23	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Dibenz[a,h]anthracene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Dibenzofuran	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Diethyl phthalate	ND	0.23	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-5  
**LabID:** 0412014-10  
**Collection Date:** 12/1/2004 9:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.23	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Fluoranthene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Fluorene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Hexachlorobenzene	ND	0.023	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Hexachlorobutadiene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Hexachlorocyclopentadiene	ND	0.14	0.765		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Hexachloroethane	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Indeno[1,2,3-cd]pyrene	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Isophorone	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
N-Nitrosodi-n-propylamine	ND	0.12	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
N-Nitrosodiphenylamine	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Naphthalene	ND	0.093	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Nitrobenzene	ND	0.16	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Pentachlorophenol	ND	0.21	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Phenanthrene	ND	0.070	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Phenol	ND	0.14	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Pyrene	ND	0.046	0.308		mg/Kg-dry	2	12/10/2004 5:18:00 AM
Surr: 2,4,6-Tribromophenol	77.1	0	36-126		%REC	2	12/10/2004 5:18:00 AM
Surr: 2-Fluorobiphenyl	64.2	0	45-125		%REC	2	12/10/2004 5:18:00 AM
Surr: 2-Fluorophenol	56.7	0	37-125		%REC	2	12/10/2004 5:18:00 AM
Surr: 4-Terphenyl-d14	76.1	0	45-125		%REC	2	12/10/2004 5:18:00 AM
Surr: Nitrobenzene-d5	62.2	0	45-125		%REC	2	12/10/2004 5:18:00 AM
Surr: Phenol-d6	57.7	0	40-125		%REC	2	12/10/2004 5:18:00 AM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	9430	69	229		mg/Kg-dry	20	12/7/2004 3:09:46 PM
TPH-ORO >C28-C35	7600	69	229		mg/Kg-dry	20	12/7/2004 3:09:46 PM
Surr: o-Terphenyl	58.4	0	47-142		%REC	20	12/7/2004 3:09:46 PM
Surr: Octacosane	90.3	0	25-162		%REC	20	12/7/2004 3:09:46 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	0.016	0.016	0.0411	J	mg/Kg-dry	1	12/3/2004 12:37:47 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	9.95	0.52	1.04		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Barium	402	0.52	2.09		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Cadmium	2.69	0.10	0.313		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Chromium	6.88	0.52	2.09		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Lead	31.9	0.10	0.313		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Selenium	1.15	0.16	0.522		mg/Kg-dry	5	12/6/2004 2:20:00 PM
Silver	ND	0.10	0.209		mg/Kg-dry	5	12/6/2004 2:20:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-2-5  
**LabID:** 0412014-10  
**CollectionDate:** 12/1/2004 9:40:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>		<b>Analyst: LY</b>			
Gasoline Range Organics	ND	0.72	2.38		mg/Kg-dry	10	12/6/2004 6:19:17 PM
Surr: Tetrachlorethene	42.6	0	59-121	S	%REC	10	12/6/2004 6:19:17 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	16.0	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
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 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-6  
**LabID:** 0412014-11  
**CollectionDate:** 12/1/200411:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1,1-Trichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1,2,2-Tetrachloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1,2-Trichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1-Dichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,1-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2,3-Trichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2,3-Trichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2,4-Trichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2,4-Trimethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2-Dibromo-3-chloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2-Dibromoethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2-Dichloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,2-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,3,5-Trimethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,3-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,3-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
1,4-Dichlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
2,2-Dichloropropane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
2-Butanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 9:26:00 PM
2-Chloroethylvinylether	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 9:26:00 PM
2-Chlorotoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
2-Hexanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 9:26:00 PM
4-Chlorotoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
4-Methyl-2-pentanone	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Acetone	ND	34	85.8		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Benzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Bromobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Bromochloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Bromodichloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Bromoform	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Bromomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Carbon disulfide	ND	4.3	12.9		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Carbon tetrachloride	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Chlorobenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Chloroethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Chloroform	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Chloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-6  
**LabID:** 0412014-11  
**CollectionDate:** 12/1/200411:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES(5035)BYGC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
cis-1,3-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Dibromochloromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Dibromomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Dichlorodifluoromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Ethylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Hexachlorobutadiene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Iodomethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Isopropylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
m,p-Xylene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Methyl tert-butyl ether	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Methylene chloride	ND	4.3	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
n-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
n-Propylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Naphthalene	ND	4.3	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
o-Xylene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
p-Isopropyltoluene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
sec-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Styrene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
tert-Butylbenzene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Tetrachloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Toluene	ND	1.7	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
trans-1,2-Dichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
trans-1,3-Dichloropropene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Trichloroethene	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Trichlorofluoromethane	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Vinyl chloride	ND	0.86	4.29		µg/Kg-dry	1	12/3/2004 9:26:00 PM
Surr: 1,2-Dichloroethane-d4	126	0	52-149		%REC	1	12/3/2004 9:26:00 PM
Surr: 4-Bromofluorobenzene	94.0	0	65-135		%REC	1	12/3/2004 9:26:00 PM
Surr: Dibromofluoromethane	112	0	65-135		%REC	1	12/3/2004 9:26:00 PM
Surr: Toluene-d8	89.5	0	65-135		%REC	1	12/3/2004 9:26:00 PM
<b>SEMIVOLATILESBYGC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
1,2-Dichlorobenzene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
1,3-Dichlorobenzene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
1,4-Dichlorobenzene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,4,5-Trichlorophenol	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,4,6-Trichlorophenol	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,4-Dichlorophenol	ND	0.066	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,4-Dimethylphenol	ND	0.088	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-6  
**LabID:** 0412014-11  
**Collection Date:** 12/1/2004 11:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.066	0.729		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,4-Dinitrotoluene	ND	0.066	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2,6-Dinitrotoluene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Chloronaphthalene	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Chlorophenol	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Methylnaphthalene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Methylphenol	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Nitroaniline	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
2-Nitrophenol	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
3,3'-Dichlorobenzidine	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
3-Nitroaniline	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4,6-Dinitro-2-methylphenol	ND	0.088	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Bromophenyl phenyl ether	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Chloro-3-methylphenol	ND	0.066	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Chloroaniline	ND	0.055	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Chlorophenyl phenyl ether	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Methylphenol	ND	0.11	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Nitroaniline	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
4-Nitrophenol	ND	0.15	0.729		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Acenaphthene	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Acenaphthylene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Aniline	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Anthracene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzo[a]anthracene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzo[a]pyrene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzo[b]fluoranthene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzo[g,h,i]perylene	ND	0.066	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzo[k]fluoranthene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Benzyl alcohol	ND	0.044	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Bis(2-chloroethoxy)methane	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Bis(2-chloroethyl)ether	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Bis(2-chloroisopropyl)ether	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Bis(2-ethylhexyl)phthalate	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Butyl benzyl phthalate	ND	0.11	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Chrysene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Di-n-butyl phthalate	ND	0.11	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Di-n-octyl phthalate	ND	0.11	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Dibenz[a,h]anthracene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Dibenzofuran	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Diethyl phthalate	ND	0.11	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 13-Dec-04

**CLIENT:** SMITHINTERNATIONAL  
**ProjectName:** Sii Smith Services Hobbs NM  
**ProjectNo:** DrilcoHobbs-110403  
**LabOrder:** 0412014

**ClientSampleID:** NM-HB-DRL-1-6  
**LabID:** 0412014-11  
**CollectionDate:** 12/1/200411:00:00AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Fluoranthene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Fluorene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Hexachlorobenzene	ND	0.011	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Hexachlorobutadiene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Hexachlorocyclopentadiene	ND	0.066	0.365		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Hexachloroethane	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Isophorone	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
N-Nitrosodi-n-propylamine	ND	0.055	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
N-Nitrosodiphenylamine	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Naphthalene	ND	0.044	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Nitrobenzene	ND	0.077	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Pentachlorophenol	ND	0.099	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Phenanthrene	ND	0.033	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Phenol	ND	0.066	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Pyrene	ND	0.022	0.147		mg/Kg-dry	1	12/8/2004 7:30:00 PM
Surr: 2,4,6-Tribromophenol	131	0	36-126	S	%REC	1	12/8/2004 7:30:00 PM
Surr: 2-Fluorobiphenyl	104	0	45-125		%REC	1	12/8/2004 7:30:00 PM
Surr: 2-Fluorophenol	91.3	0	37-125		%REC	1	12/8/2004 7:30:00 PM
Surr: 4-Terphenyl-d14	108	0	45-125		%REC	1	12/8/2004 7:30:00 PM
Surr: Nitrobenzene-d5	93.8	0	45-125		%REC	1	12/8/2004 7:30:00 PM
Surr: Phenol-d6	94.3	0	40-125		%REC	1	12/8/2004 7:30:00 PM
<b>GC/FID-SOILDRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	ND	3.3	11.1		mg/Kg-dry	1	12/6/2004 3:53:22 PM
TPH-ORO >C28-C35	ND	3.3	11.1		mg/Kg-dry	1	12/6/2004 3:53:22 PM
Surr: o-Terphenyl	84.0	0	47-142		%REC	1	12/6/2004 3:53:22 PM
Surr: Octacosane	94.6	0	25-162		%REC	1	12/6/2004 3:53:22 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: JP</b>			
Mercury	ND	0.016	0.0391		mg/Kg-dry	1	12/3/2004 12:39:50 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: RPC</b>			
Arsenic	6.86	0.48	0.955		mg/Kg-dry	5	12/6/2004 4:17:00 PM
Barium	472	2.4	9.55		mg/Kg-dry	25	12/6/2004 4:32:00 PM
Cadmium	0.28	0.096	0.287	J	mg/Kg-dry	5	12/6/2004 4:17:00 PM
Chromium	11.6	0.48	1.91		mg/Kg-dry	5	12/6/2004 4:17:00 PM
Lead	49.0	0.096	0.287		mg/Kg-dry	5	12/6/2004 4:17:00 PM
Selenium	1.03	0.14	0.478		mg/Kg-dry	5	12/6/2004 4:17:00 PM
Silver	0.11	0.096	0.191	J	mg/Kg-dry	5	12/6/2004 4:17:00 PM

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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 13-Dec-04

<b>CLIENT:</b> SMITHINTERNATIONAL	<b>Client Sample ID:</b> NM-HB-DRL-1-6
<b>ProjectName:</b> Sii Smith Services Hobbs NM	<b>LabID:</b> 0412014-11
<b>ProjectNo:</b> DrilcoHobbs-110403	<b>Collection Date:</b> 12/1/2004 11:00:00 AM
<b>LabOrder:</b> 0412014	<b>Matrix:</b> SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>				<b>Analyst: LY</b>	
Gasoline Range Organics	ND	0.63	2.11		mg/Kg-dry	10	12/6/2004 6:40:42 PM
Surr: Tetrachlorethene	80.0	0	59-121		%REC	10	12/6/2004 6:40:42 PM
<b>PERCENTMOISTURE</b>		<b>D2216</b>				<b>Analyst: JBC</b>	
Percent Moisture	11.3	0			WT%	1	12/2/2004 1:30:00 PM

**Qualifiers:**

ND - Not Detected at the Method Detection Limit	S - Spike Recovery outside control limits
J - Analyte detected between MDL and RL	C - Sample Result or QC discussed in Case Narrative
B - Analyte detected in the associated Method Blank	E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: SMITHINTERNATIONAL  
Project: Sii Smith Services Hobbs NM  
LabOrder: 0412014

**CASE NARRATIVE**

TestMethodsforEvaluatingSolidWaste,Physical/ChemicalMethods,SW846,3rdEdition.

MethodSW8260B-VolatileOrganics  
MethodSW8270C-SemivolatileOrganics  
MethodSW6020-Metals Analysis  
MethodSW7471A-Mercury Analysis  
MethodM8015D-DRO/ORO Analysis  
MethodM8015V-Gasoline Range Organics  
MethodD2216-PercentMoisture

**LOG IN**

Samples were received and log-in performed on 12/2/04. A total of 11 samples were received. Sample NM-HB-DRL-2-4 had 1 VOA vial broken in the laboratory.

**DRO/ORO**

For DRO/ORO analysis performed on 12/6/04 the surrogate recoveries for a few QC samples were below control limits for Octacosane. These are flagged accordingly in the QC summary report. No further corrective actions were required and no sampler results were adversely affected.

**GASOLINE RANGE ORGANICS**

For GRO analysis performed on 12/6/04 the surrogate recoveries for samples NM-HB-DRL-2-4 and NM-HB-DRL-2-5 were below control limits. The samples were re-analyzed which confirmed matrix interference.

**METALS**

For Metals analysis performed on 12/6/04 the matrix spike and matrix spike duplicate recoveries were below control limits for Barium and/or Lead. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these analytes. No further corrective actions were required and no sampler results were adversely affected.

**SEMIVOLATILES**

For Semivolatiles analysis performed on 12/8/04 Benzo[g,h,I]perylene was detected below the reporting limit in the method blank. All samples that are not below detection limits may be biased high.

**CLIENT:** SMITHINTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**LabOrder:** 0412014

## CASE NARRATIVE

For Semivolatiles analysis performed on 12/8/04 and 12/10/04 a few samples were diluted prior to analysis due to the nature of the samples.

For Semivolatiles analysis performed on 12/8/04 the LCS recovery was slightly above control limits for Acenaphthylene and Hexachlorocyclopentadiene. These are flagged accordingly in the QC summary report. No further corrective actions were required and no sample results were adversely affected.

For Semivolatiles analysis performed on 12/8/04 and 12/9/04 the ICVs were slightly below control limits for Pentachlorophenol. These are flagged accordingly. No further corrective actions were required and no sample results were adversely affected.

For Semivolatiles analysis performed on 12/8/04 and 12/9/04 the surrogate recoveries for some samples and some QC samples were above control limits for 2,4,6-Tribromophenol and/or 4-Terphenyl-d14. These are flagged accordingly. No further corrective actions were required and no sample results were adversely affected.

### VOLATILES

For Volatiles analysis performed on 12/3/04 samples NM-HB-DRL-1-4 and NM-HB-DRL-1-5 had some target analytes reported from the re-analysis on 12/6/04 due to the low internal response for 1,4-Dichlorobenzene-d4.

For Volatiles analysis performed on 12/6/04 the matrix spike and matrix spike duplicate recoveries were below control limits for Chlorobenzene and Toluene. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these compounds. No further corrective actions were required and no sample results were adversely affected.

For Volatiles analysis performed on 12/3/04 the LCS recovery was slightly above control limits for Chloroethane and Trichlorofluoromethane. No further corrective actions were required and no sample results were adversely affected.

For Volatiles analysis performed on 12/3/04 and 12/6/04 the ICVs were slightly above control limits for Trichlorofluoromethane. No further corrective actions were required and no sample results were adversely affected.

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**CLIENT:** SMITHINTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**LabOrder:** 0412014

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**CASE NARRATIVE**

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DATA REPORTING

Sample reports include the Method Detection Limit (MDL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting MDL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometimes appear that a "J" flagged result is lower than the MDL if the sample result is very near the MDL.

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: GC15\_041206A

Sample ID <b>MB-17787</b>	Batch ID: <b>17787</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 2:38:11 PM</b>	Prep Date: <b>12/6/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	ND	10								
TPH-ORO >C28-C35	ND	10								
Surr: o-Terphenyl	11.86	0	15	0	79.1	47	142	0		
Surr: Octacosane	8.137	0	15	0	54.2	25	162	0		

Sample ID <b>LCS-17787</b>	Batch ID: <b>17787</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 2:38:11 PM</b>	Prep Date: <b>12/6/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	204.9	10	250	0	82	50	114	0		
Surr: o-Terphenyl	12.45	0	15	0	83	47	142	0		
Surr: Octacosane	1.676	0	15	0	11.2	25	162	0		S

Sample ID <b>0412014-06CMS</b>	Batch ID: <b>17787</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 3:03:06 PM</b>	Prep Date: <b>12/6/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	239.6	11.6	289.7	0	82.7	50	114	0		
Surr: o-Terphenyl	14.87	0	17.38	0	85.5	47	142	0		
Surr: Octacosane	3.768	0	17.38	0	21.7	25	162	0		S

Sample ID <b>0412014-06CMSD</b>	Batch ID: <b>17787</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 3:28:18 PM</b>	Prep Date: <b>12/6/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	237.9	11.4	284.1	0	83.7	50	114	0.730	30	
Surr: o-Terphenyl	13.62	0	17.05	0	79.9	47	142	0	0	
Surr: Octacosane	5.545	0	17.05	0	32.5	25	162	0	0	

Sample ID <b>CCV-041206</b>	Batch ID: <b>R20290</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 6:24:32 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	529.1	10	500	0	106	85	115	0		
TPH-ORO >C28-C35	7.841	10	0	0	0	0	0	0		
Surr: o-Terphenyl	19.09	0	20	0	95.5	47	142	0		
Surr: Octacosane	20.6	0	20	0	103	25	162	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC15\_041206A

Sample ID <b>CCV-041206</b>	Batch ID: <b>R20290</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 5:59:07 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	428.3	10	500	0	85.7	85	115	0		
TPH-ORO >C28-C35	2.578	10	0	0	0	0	0	0		
Surr: o-Terphenyl	15.38	0	20	0	76.9	47	142	0		
Surr: Octacosane	15.96	0	20	0	79.8	25	162	0		

Sample ID <b>ICV-041206</b>	Batch ID: <b>R20290</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 11:57:49 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1001	10	1000	0	100	85	115	0		
TPH-ORO >C28-C35	ND	10	0	0	0	0	0	0		
Surr: o-Terphenyl	19.41	0	25	0	77.6	47	142	0		
Surr: Octacosane	11.58	0	25	0	46.3	25	162	0		

Sample ID <b>ICV-041206</b>	Batch ID: <b>R20290</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GC15_041206A</b>	Analysis Date: <b>12/6/2004 11:57:49 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	873.7	10	1000	0	87.4	85	115	0		
TPH-ORO >C28-C35	1.11	10	0	0	0	0	0	0		
Surr: o-Terphenyl	16.75	0	25	0	67	47	142	0		
Surr: Octacosane	2.09	0	25	0	8.36	25	162	0		S

**Qualifiers:**    ND - Not Detected at the Method Detection Limit                    R - RPD outside accepted recovery limits  
                     J - Analyte detected below quantitation limits                    B - Analyte detected in the associated Method Blank  
                     S - Spike Recovery outside accepted recovery limits



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC15\_041207A

Sample ID <b>CCV-041207</b>	Batch ID: <b>R20317</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC15_041207A</b>	Analysis Date: <b>12/7/2004 4:00:20 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	471.4	10	500	0	94.3	85	115	0		
TPH-ORO >C28-C35	1.289	10	0	0	0	0	0	0		
Surr: o-Terphenyl	18.31	0	20	0	91.5	47	142	0		
Surr: Octacosane	19.85	0	20	0	99.3	25	162	0		

Sample ID <b>CCV-041207</b>	Batch ID: <b>R20317</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC15_041207A</b>	Analysis Date: <b>12/7/2004 4:00:20 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	489.2	10	500	0	97.8	85	115	0		
TPH-ORO >C28-C35	4.044	10	0	0	0	0	0	0		
Surr: o-Terphenyl	17.89	0	20	0	89.4	47	142	0		
Surr: Octacosane	19.73	0	20	0	98.6	25	162	0		

Sample ID <b>ICV-041207</b>	Batch ID: <b>R20317</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GC15_041207A</b>	Analysis Date: <b>12/7/2004 12:37:02 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	940.3	10	1000	0	94	85	115	0		
TPH-ORO >C28-C35	ND	10	0	0	0	0	0	0		
Surr: o-Terphenyl	19.23	0	25	0	76.9	47	142	0		
Surr: Octacosane	14.11	0	25	0	56.4	25	162	0		

Sample ID <b>ICV-041207</b>	Batch ID: <b>R20317</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GC15_041207A</b>	Analysis Date: <b>12/7/2004 12:37:02 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

TPH-DRO C10-C28	922.8	10	1000	0	92.3	85	115	0		
TPH-ORO >C28-C35	0.15	10	0	0	0	0	0	0		
Surr: o-Terphenyl	18.23	0	25	0	72.9	47	142	0		
Surr: Octacosane	12.54	0	25	0	50.2	25	162	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC4\_041206A

Sample ID <b>MB-17778</b>	Batch ID: <b>17778</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>MBLK</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 12:44:17 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	ND	2								
Surr: Tetrachlorethene	1.886	0	2	0	94.3	59	121	0		

Sample ID <b>LCS-17778</b>	Batch ID: <b>17778</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>LCS</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 1:05:45 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	23.07	2	25	0	92.3	68	106	0		
Surr: Tetrachlorethene	1.953	0	2	0	97.7	59	121	0		

Sample ID <b>0412014-06BMS</b>	Batch ID: <b>17778</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MS</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 1:58:52 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	24.22	2.44	30.46	0	79.5	68	106	0		
Surr: Tetrachlorethene	2.149	0	2.437	0	88.2	59	121	0		

Sample ID <b>0412014-06BMSD</b>	Batch ID: <b>17778</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MSD</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 2:20:19 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	21.71	2.25	28.17	0	77.1	68	106	10.9	30	
Surr: Tetrachlorethene	2.044	0	2.254	0	90.7	59	121	0	0	

Sample ID <b>CCV1-041206</b>	Batch ID: <b>R20300</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 4:38:16 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	5.039	0.2	5	0	101	85	115	0		
Surr: Tetrachlorethene	0.2232	0	0.2	0	112	59	121	0		

Sample ID <b>CCV2-041206</b>	Batch ID: <b>R20300</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC4_041206A</b>	Analysis Date: <b>12/6/2004 7:23:37 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	4.741	0.2	5	0	94.8	85	115	0		
Surr: Tetrachlorethene	0.2117	0	0.2	0	106	59	121	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: GC4\_041206A

Sample ID	ICV-041206	Batch ID:	R20300	TestNo:	M8015V	Units:	mg/Kg			
SampType	ICV	Run ID:	GC4_041206A	Analysis Date:	12/6/2004 12:06:15 PM	Prep Date:				
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics	9.315	0.2	10	0	93.1	85	115	0		
Surr: Tetrachlorethene	0.2014	0	0.2	0	101	59	121	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC4\_041207A

Sample ID <b>MB-17803</b>	Batch ID: <b>17803</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>MBLK</b>	Run ID: <b>GC4_041207A</b>	Analysis Date: <b>12/7/2004 12:26:15 PM</b>	Prep Date: <b>12/7/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	ND	2	0	0	0	0	0	0	
Surr: Tetrachlorethene	1.859	0	2	0	93	59	121	0	

Sample ID <b>LCS-17803</b>	Batch ID: <b>17803</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>LCS</b>	Run ID: <b>GC4_041207A</b>	Analysis Date: <b>12/7/2004 2:42:15 PM</b>	Prep Date: <b>12/7/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	21.36	2	25	0	85.4	68	106	0	
Surr: Tetrachlorethene	1.874	0	2	0	93.7	59	121	0	

Sample ID <b>CCV-041207</b>	Batch ID: <b>R20316</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC4_041207A</b>	Analysis Date: <b>12/7/2004 4:08:54 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	4.487	0.2	5	0	89.7	85	115	0	
Surr: Tetrachlorethene	0.2141	0	0.2	0	107	59	121	0	

Sample ID <b>ICV-041207</b>	Batch ID: <b>R20316</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GC4_041207A</b>	Analysis Date: <b>12/7/2004 11:17:39 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	9.477	0.2	10	0	94.8	85	115	0	
Surr: Tetrachlorethene	0.1902	0	0.2	0	95.1	59	121	0	

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: CETAC\_HG\_041203A

Sample ID <b>MB-17766</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:02:45 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.04								

Sample ID <b>LCS-17766</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:04:47 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.04	0.2	0	85	77	120	0		

Sample ID <b>LCSD-17766</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>LCSD</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:06:55 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.165	0.04	0.2	0	82.5	77	120	2.99	25	

Sample ID <b>0412014-06C MS</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:11:01 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.1954	0.0437	0.2183	0	89.5	77	120	0		

Sample ID <b>0412014-06C MSD</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:13:03 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.2119	0.0458	0.229	0	92.5	77	120	8.08	25	

Sample ID <b>CCV1-041203</b>	Batch ID: <b>R20292</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:23:18 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.04	0.002	0	102	80	120	0		

Sample ID <b>CCV2-041203</b>	Batch ID: <b>R20292</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 1:17:16 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00222	0.04	0.002	0	111	80	120	0		

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: CETAC\_HG\_041203A

Sample ID <b>ICV-041203</b>	Batch ID: <b>R20292</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 11:58:40 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0041	0.04	0.004	0	103	90	110	0		

Sample ID <b>0412014-06C PDS</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>
SampType <b>PDS</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:48:24 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.191	0.0409	0.2043	0	93.5	75	125	0		

Sample ID <b>0412014-01C SD</b>	Batch ID: <b>17766</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>
SampType <b>SD</b>	Run ID: <b>CETAC_HG_041203A</b>	Analysis Date: <b>12/3/2004 12:42:33 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.1893	0.205	0	0	0	0	0	0	0	10

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_041206A

Sample ID <b>MB-17765</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 12:43:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	1								
Barium	ND	2								
Cadmium	ND	0.3								
Chromium	ND	2								
Lead	ND	0.3								
Selenium	ND	0.5								
Silver	ND	0.2								

Sample ID <b>LCS-17765</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:06:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	49.9	1	50	0	99.8	80	120	0		
Barium	50.15	2	50	0	100	80	120	0		
Cadmium	50.42	0.3	50	0	101	80	120	0		
Chromium	51.85	2	50	0	104	80	120	0		
Lead	52.02	0.3	50	0	104	80	120	0		
Selenium	46.58	0.5	50	0	93.2	80	120	0		
Silver	51.48	0.2	50	0	103	80	120	0		

Sample ID <b>LCSD-17765</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>LCSD</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:10:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	51.42	1	50	0	103	80	120	3.01	25	
Barium	51.92	2	50	0	104	80	120	3.48	25	
Cadmium	51.98	0.3	50	0	104	80	120	3.03	25	
Chromium	53.1	2	50	0	106	80	120	2.38	25	
Lead	53.62	0.3	50	0	107	80	120	3.03	25	
Selenium	48.15	0.5	50	0	96.3	80	120	3.33	25	
Silver	52.88	0.2	50	0	106	80	120	2.68	25	

Sample ID <b>0412014-06C MS</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:14:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	66.24	1.12	55.76	11.56	98.1	80	120	0		
Barium	478.7	2.23	55.76	458.3	36.5	80	120	0		S
Cadmium	53.97	0.335	55.76	0.3799	96.1	80	120	0		
Chromium	68.64	2.23	55.76	14.69	96.8	80	120	0		
Lead	128	0.335	55.76	80.71	84.8	80	120	0		

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_041206A

Sample ID <b>0412014-06C MS</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MS</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:14:00 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Selenium	52.52	0.558	55.76	0.9232	92.5	80	120	0		
Silver	53.64	0.223	55.76	0	96.2	80	120	0		

Sample ID <b>0412014-06C MSD</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MSD</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:18:00 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	67.03	1.17	58.52	11.56	94.8	80	120	1.19	25	
Barium	466.7	2.34	58.52	458.3	14.3	80	120	2.54	25	S
Cadmium	59.42	0.351	58.52	0.3799	101	80	120	9.61	25	
Chromium	71.59	2.34	58.52	14.69	97.2	80	120	4.22	25	
Lead	120.6	0.351	58.52	80.71	68.2	80	120	5.94	25	S
Selenium	54.65	0.585	58.52	0.9232	91.8	80	120	3.98	25	
Silver	58.9	0.234	58.52	0	101	80	120	9.35	25	

Sample ID <b>0412014-06C PDS</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>PDS</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:22:00 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	62.8	1.06	52.77	11.56	97.1	75	125	0		
Barium	501.8	2.11	52.77	458.3	82.5	75	125	0		
Cadmium	51.29	0.317	52.77	0.3799	96.5	75	125	0		
Chromium	62.43	2.11	52.77	14.69	90.5	75	125	0		
Lead	132.1	0.317	52.77	80.71	97.4	75	125	0		
Selenium	47.94	0.528	52.77	0.9232	89.1	75	125	0		
Silver	54.06	0.211	52.77	0	102	75	125	0		

Sample ID <b>0412014-06C SD</b>	Batch ID: <b>17765</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>SD</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 12:51:00 PM</b>	Prep Date: <b>12/3/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	12.63	5.28	0	0	0	0	0	8.85	10	
Barium	447.6	10.6	0	0	0	0	0	2.36	10	
Cadmium	ND	1.58	0	0	0	0	0	0	10	
Chromium	14.83	10.6	0	0	0	0	0	0.930	10	
Lead	78.1	1.58	0	0	0	0	0	3.29	10	
Selenium	ND	2.64	0	0	0	0	0	0	10	
Silver	ND	1.06	0	0	0	0	0	0	10	

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_041206A

Sample ID <b>CCV1-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 1:33:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	198.6	6	200	0	99.3	90	110	0		
Barium	204.6	10	200	0	102	90	110	0		
Cadmium	206	1	200	0	103	90	110	0		
Chromium	198.8	6	200	0	99.4	90	110	0		
Lead	203	1	200	0	102	90	110	0		
Selenium	193.4	6	200	0	96.7	90	110	0		
Silver	215.4	2	200	0	108	90	110	0		

Sample ID <b>CCV2-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 2:28:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	195	6	200	0	97.5	90	110	0		
Barium	193.1	10	200	0	96.6	90	110	0		
Cadmium	195.6	1	200	0	97.8	90	110	0		
Chromium	195.1	6	200	0	97.6	90	110	0		
Lead	198	1	200	0	99	90	110	0		
Selenium	191	6	200	0	95.5	90	110	0		
Silver	205	2	200	0	103	90	110	0		

Sample ID <b>CCV4-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 4:05:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	204.3	6	200	0	102	90	110	0		
Barium	193.8	10	200	0	96.9	90	110	0		
Cadmium	197.3	1	200	0	98.6	90	110	0		
Chromium	203.2	6	200	0	102	90	110	0		
Lead	205.8	1	200	0	103	90	110	0		
Selenium	193.1	6	200	0	96.6	90	110	0		
Silver	209.1	2	200	0	105	90	110	0		

Sample ID <b>CCV5-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 4:36:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	201	6	200	0	101	90	110	0		
Barium	195.2	10	200	0	97.6	90	110	0		
Cadmium	197.9	1	200	0	99	90	110	0		
Chromium	203.2	6	200	0	102	90	110	0		
Lead	206.6	1	200	0	103	90	110	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_041206A

Sample ID <b>CCV5-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 4:36:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Selenium	193.5	6	200	0	96.8	90	110	0	
Silver	209.1	2	200	0	105	90	110	0	

Sample ID <b>ICV1-041206</b>	Batch ID: <b>R20302</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType <b>ICV</b>	Run ID: <b>ICP-MS2_041206A</b>	Analysis Date: <b>12/6/2004 12:32:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	102.3	6	100	0	102	90	110	0	
Barium	94.33	10	100	0	94.3	90	110	0	
Cadmium	101.7	1	100	0	102	90	110	0	
Chromium	103.2	6	100	0	103	90	110	0	
Lead	102.4	1	100	0	102	90	110	0	
Selenium	96.22	6	100	0	96.2	90	110	0	
Silver	106.3	2	100	0	106	90	110	0	

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID <b>MB-17774</b>	Batch ID: <b>17774</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 11:15:00 AM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.133								
1,2-Dichlorobenzene	ND	0.133								
1,3-Dichlorobenzene	ND	0.133								
1,4-Dichlorobenzene	ND	0.133								
2,4,5-Trichlorophenol	ND	0.133								
2,4,6-Trichlorophenol	ND	0.133								
2,4-Dichlorophenol	ND	0.133								
2,4-Dimethylphenol	ND	0.133								
2,4-Dinitrophenol	ND	0.66								
2,4-Dinitrotoluene	ND	0.133								
2,6-Dinitrotoluene	ND	0.133								
2-Chloronaphthalene	ND	0.133								
2-Chlorophenol	ND	0.133								
2-Methylnaphthalene	ND	0.133								
2-Methylphenol	ND	0.133								
2-Nitroaniline	ND	0.133								
2-Nitrophenol	ND	0.133								
3,3'-Dichlorobenzidine	ND	0.133								
3-Nitroaniline	ND	0.133								
4,6-Dinitro-2-methylphenol	ND	0.33								
4-Bromophenyl phenyl ether	ND	0.133								
4-Chloro-3-methylphenol	ND	0.133								
4-Chloroaniline	ND	0.33								
4-Chlorophenyl phenyl ether	ND	0.133								
4-Methylphenol	ND	0.133								
4-Nitroaniline	ND	0.133								
4-Nitrophenol	ND	0.66								
Acenaphthene	ND	0.133								
Acenaphthylene	ND	0.133								
Aniline	ND	0.133								
Anthracene	ND	0.133								
Benzo[a]anthracene	ND	0.133								
Benzo[a]pyrene	ND	0.133								
Benzo[b]fluoranthene	ND	0.133								
Benzo[g,h,i]perylene	0.06	0.133								J
Benzo[k]fluoranthene	ND	0.133								
Benzyl alcohol	ND	0.33								
Bis(2-chloroethoxy)methane	ND	0.133								
Bis(2-chloroethyl)ether	ND	0.133								
Bis(2-chloroisopropyl)ether	ND	0.133								
Bis(2-ethylhexyl)phthalate	ND	0.133								
Butyl benzyl phthalate	ND	0.33								

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID <b>MB-17774</b>	Batch ID: <b>17774</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 11:15:00 AM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chrysene	ND	0.133								
Di-n-butyl phthalate	ND	0.33								
Di-n-octyl phthalate	ND	0.33								
Dibenz[a,h]anthracene	ND	0.133								
Dibenzofuran	ND	0.133								
Diethyl phthalate	ND	0.33								
Dimethyl phthalate	ND	0.33								
Fluoranthene	ND	0.133								
Fluorene	ND	0.133								
Hexachlorobenzene	ND	0.133								
Hexachlorobutadiene	ND	0.133								
Hexachlorocyclopentadiene	ND	0.33								
Hexachloroethane	ND	0.133								
Indeno[1,2,3-cd]pyrene	ND	0.133								
Isophorone	ND	0.133								
N-Nitrosodi-n-propylamine	ND	0.133								
N-Nitrosodiphenylamine	ND	0.133								
Naphthalene	ND	0.133								
Nitrobenzene	ND	0.133								
Pentachlorophenol	ND	0.133								
Phenanthrene	ND	0.133								
Phenol	ND	0.133								
Pyrene	ND	0.133								
Surr: 2,4,6-Tribromophenol	3.38	0	2.68	0	126	36	126	0		
Surr: 2-Fluorobiphenyl	2.94	0	2.68	0	110	45	125	0		
Surr: 2-Fluorophenol	2.7	0	2.68	0	101	37	125	0		
Surr: 4-Terphenyl-d14	3.3	0	2.68	0	123	45	125	0		
Surr: Nitrobenzene-d5	2.947	0	2.68	0	110	45	125	0		
Surr: Phenol-d6	2.753	0	2.68	0	103	40	125	0		

Sample ID <b>LCS-17774</b>	Batch ID: <b>17774</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 10:37:00 AM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.593	0.133	1.34	0	119	34	152	0		
1,2-Dichlorobenzene	1.493	0.133	1.34	0	111	32	135	0		
1,3-Dichlorobenzene	1.493	0.133	1.34	0	111	26	135	0		
1,4-Dichlorobenzene	1.313	0.133	1.34	0	98	25	135	0		
2,4,5-Trichlorophenol	1.373	0.133	1.34	0	102	25	175	0		
2,4,6-Trichlorophenol	1.4	0.133	1.34	0	104	29	138	0		
2,4-Dichlorophenol	1.4	0.133	1.34	0	104	36	135	0		
2,4-Dimethylphenol	1.413	0.133	1.34	0	105	35	149	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID	LCS-17774	Batch ID:	17774	TestNo:	SW8270C	Units:	mg/Kg
SampType	LCS	Run ID:	GCMS3_041208A	Analysis Date:	12/8/2004 10:37:00 AM	Prep Date:	12/3/2004

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrophenol	1.033	0.66	1.34	0	77.1	25	161	0		
2,4-Dinitrotoluene	1.767	0.133	1.34	0	132	29	149	0		
2,6-Dinitrotoluene	1.787	0.133	1.34	0	133	41	135	0		
2-Chloronaphthalene	1.58	0.133	1.34	0	118	50	135	0		
2-Chlorophenol	1.26	0.133	1.34	0	94	31	135	0		
2-Methylnaphthalene	1.52	0.133	1.34	0	113	31	135	0		
2-Methylphenol	1.307	0.133	1.34	0	97.5	25	135	0		
2-Nitroaniline	1.607	0.133	1.34	0	120	40	135	0		
2-Nitrophenol	1.367	0.133	1.34	0	102	34	135	0		
3,3'-Dichlorobenzidine	1.393	0.133	1.34	0	104	25	175	0		
3-Nitroaniline	1.52	0.133	1.34	0	113	41	135	0		
4,6-Dinitro-2-methylphenol	1.227	0.33	1.34	0	91.5	25	144	0		
4-Bromophenyl phenyl ether	1.787	0.133	1.34	0	133	43	137	0		
4-Chloro-3-methylphenol	1.38	0.133	1.34	0	103	34	135	0		
4-Chloroaniline	1.327	0.33	1.34	0	99	35	146	0		
4-Chlorophenyl phenyl ether	1.68	0.133	1.34	0	125	41	142	0		
4-Methylphenol	1.3	0.133	1.34	0	97	25	135	0		
4-Nitroaniline	1.553	0.133	1.34	0	116	30	153	0		
4-Nitrophenol	1.507	0.66	1.34	0	112	25	141	0		
Acenaphthene	1.593	0.133	1.34	0	119	39	135	0		
Acenaphthylene	1.82	0.133	1.34	0	136	37	135	0		S
Aniline	1.16	0.133	1.34	0	86.6	40	140	0		
Anthracene	1.593	0.133	1.34	0	119	35	140	0		
Benzo[a]anthracene	1.68	0.133	1.34	0	125	41	143	0		
Benzo[a]pyrene	1.633	0.133	1.34	0	122	31	135	0		
Benzo[b]fluoranthene	1.573	0.133	1.34	0	117	27	135	0		
Benzo[g,h,i]perylene	1.407	0.133	1.34	0.06	100	25	159	0		
Benzo[k]fluoranthene	1.653	0.133	1.34	0	123	25	159	0		
Benzyl alcohol	1.54	0.33	1.34	0	115	25	135	0		
Bis(2-chloroethoxy)methane	1.527	0.133	1.34	0	114	39	135	0		
Bis(2-chloroethyl)ether	1.4	0.133	1.34	0	104	34	135	0		
Bis(2-chloroisopropyl)ether	1.393	0.133	1.34	0	104	26	175	0		
Bis(2-ethylhexyl)phthalate	1.747	0.133	1.34	0	130	25	139	0		
Butyl benzyl phthalate	1.773	0.33	1.34	0	132	25	135	0		
Chrysene	1.633	0.133	1.34	0	122	45	143	0		
Di-n-butyl phthalate	1.707	0.33	1.34	0	127	25	136	0		
Di-n-octyl phthalate	1.553	0.33	1.34	0	116	28	137	0		
Dibenz[a,h]anthracene	1.467	0.133	1.34	0	109	40	135	0		
Dibenzofuran	1.54	0.133	1.34	0	115	42	135	0		
Diethyl phthalate	1.647	0.33	1.34	0	123	27	135	0		
Dimethyl phthalate	1.66	0.33	1.34	0	124	25	175	0		
Fluoranthene	1.713	0.133	1.34	0	128	37	135	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID	LCS-17774	Batch ID:	17774	TestNo:	SW8270C	Units:	mg/Kg			
SampType	LCS	Run ID:	GCMS3_041208A	Analysis Date:	12/8/2004 10:37:00 AM	Prep Date:	12/3/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	1.64	0.133	1.34	0	122	38	149	0		
Hexachlorobenzene	1.807	0.133	1.34	0	135	36	143	0		
Hexachlorobutadiene	1.713	0.133	1.34	0	128	25	135	0		
Hexachlorocyclopentadiene	1.873	0.33	1.34	0	140	31	135	0		S
Hexachloroethane	1.487	0.133	1.34	0	111	25	163	0		
Indeno[1,2,3-cd]pyrene	1.467	0.133	1.34	0	109	25	170	0		
Isophorone	1.633	0.133	1.34	0	122	25	175	0		
N-Nitrosodi-n-propylamine	1.493	0.133	1.34	0	111	27	135	0		
N-Nitrosodiphenylamine	1.713	0.133	1.34	0	128	25	135	0		
Naphthalene	1.54	0.133	1.34	0	115	40	135	0		
Nitrobenzene	1.593	0.133	1.34	0	119	36	143	0		
Pentachlorophenol	0.74	0.133	1.34	0	55.2	38	146	0		
Phenanthrene	1.613	0.133	1.34	0	120	44	135	0		
Phenol	1.173	0.133	1.34	0	87.6	25	135	0		
Pyrene	1.773	0.133	1.34	0	132	37	146	0		
Surr: 2,4,6-Tribromophenol	3.82	0	2.68	0	143	36	126	0		S
Surr: 2-Fluorobiphenyl	3.113	0	2.68	0	116	45	125	0		
Surr: 2-Fluorophenol	2.947	0	2.68	0	110	37	125	0		
Surr: 4-Terphenyl-d14	3.56	0	2.68	0	133	45	125	0		S
Surr: Nitrobenzene-d5	3.147	0	2.68	0	117	45	125	0		
Surr: Phenol-d6	2.96	0	2.68	0	110	40	125	0		

Sample ID	0412014-06CMS	Batch ID:	17774	TestNo:	SW8270C	Units:	mg/Kg-dry			
SampType	MS	Run ID:	GCMS3_041208A	Analysis Date:	12/8/2004 12:31:00 PM	Prep Date:	12/3/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.835	0.155	1.563	0	117	34	152	0		
1,4-Dichlorobenzene	1.579	0.155	1.563	0	101	25	135	0		
2,4-Dinitrotoluene	1.999	0.155	1.563	0	128	29	149	0		
2-Chlorophenol	1.509	0.155	1.563	0	96.5	31	135	0		
4-Chloro-3-methylphenol	1.703	0.155	1.563	0	109	34	135	0		
4-Nitrophenol	1.851	0.77	1.563	0	118	25	141	0		
Acenaphthene	1.874	0.155	1.563	0	120	39	135	0		
N-Nitrosodi-n-propylamine	1.734	0.155	1.563	0	111	27	135	0		
Pentachlorophenol	1.019	0.155	1.563	0	65.2	38	146	0		
Phenol	1.408	0.155	1.563	0	90	25	135	0		
Pyrene	1.975	0.155	1.563	0	126	37	146	0		
Surr: 2,4,6-Tribromophenol	4.604	0	3.126	0	147	36	126	0		S
Surr: 2-Fluorobiphenyl	3.741	0	3.126	0	120	45	125	0		
Surr: 2-Fluorophenol	3.453	0	3.126	0	110	37	125	0		
Surr: 4-Terphenyl-d14	3.935	0	3.126	0	126	45	125	0		S
Surr: Nitrobenzene-d5	3.717	0	3.126	0	119	45	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID <b>0412014-06CMS</b>	Batch ID: <b>17774</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 12:31:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Phenol-d6	3.507	0	3.126	0	112	40	125	0		

Sample ID <b>0412014-06CMSD</b>	Batch ID: <b>17774</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 1:09:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.905	0.155	1.563	0	122	34	152	3.74	30	
1,4-Dichlorobenzene	1.548	0.155	1.563	0	99	25	135	1.99	30	
2,4-Dinitrotoluene	2.084	0.155	1.563	0	133	29	149	4.19	30	
2-Chlorophenol	1.548	0.155	1.563	0	99	31	135	2.54	30	
4-Chloro-3-methylphenol	1.734	0.155	1.563	0	111	34	135	1.81	30	
4-Nitrophenol	1.913	0.77	1.563	0	122	25	141	3.31	30	
Acenaphthene	1.921	0.155	1.563	0	123	39	135	2.46	30	
N-Nitrosodi-n-propylamine	1.812	0.155	1.563	0	116	27	135	4.39	30	
Pentachlorophenol	1.027	0.155	1.563	0	65.7	38	146	0.760	30	
Phenol	1.439	0.155	1.563	0	92	25	135	2.19	30	
Pyrene	2.131	0.155	1.563	0	136	37	146	7.58	30	
Surr: 2,4,6-Tribromophenol	4.619	0	3.126	0	148	36	126	0		S
Surr: 2-Fluorobiphenyl	3.709	0	3.126	0	119	45	125	0		
Surr: 2-Fluorophenol	3.453	0	3.126	0	110	37	125	0		
Surr: 4-Terphenyl-d14	4.176	0	3.126	0	134	45	125	0		S
Surr: Nitrobenzene-d5	3.756	0	3.126	0	120	45	125	0		
Surr: Phenol-d6	3.531	0	3.126	0	113	40	125	0		

Sample ID <b>ICV1-041208</b>	Batch ID: <b>R20323</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS3_041208A</b>	Analysis Date: <b>12/8/2004 9:59:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	4.15	0.133	4	0	104	80	120	0		
1,2-Dichlorobenzene	3.89	0.133	4	0	97.2	80	120	0		
1,3-Dichlorobenzene	3.92	0.133	4	0	98	80	120	0		
1,4-Dichlorobenzene	3.65	0.133	4	0	91.2	80	120	0		
2,4,5-Trichlorophenol	4.04	0.133	4	0	101	80	120	0		
2,4,6-Trichlorophenol	4.08	0.133	4	0	102	80	120	0		
2,4-Dichlorophenol	4.18	0.133	4	0	104	80	120	0		
2,4-Dimethylphenol	3.61	0.133	4	0	90.2	80	120	0		
2,4-Dinitrophenol	3.61	0.66	4	0	90.2	80	120	0		
2,4-Dinitrotoluene	4.06	0.133	4	0	102	80	120	0		
2,6-Dinitrotoluene	4.12	0.133	4	0	103	80	120	0		
2-Chloronaphthalene	3.73	0.133	4	0	93.2	80	120	0		
2-Chlorophenol	3.87	0.133	4	0	96.8	80	120	0		
2-Methylnaphthalene	3.85	0.133	4	0	96.2	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID	ICV1-041208	Batch ID:	R20323	TestNo:	SW8270C	Units:	mg/Kg
SampType	ICV	Run ID:	GCMS3_041208A	Analysis Date:	12/8/2004 9:59:00 AM	Prep Date:	

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	3.73	0.133	4	0	93.2	80	120	0		
2-Nitroaniline	4	0.133	4	0	100	80	120	0		
2-Nitrophenol	4.18	0.133	4	0	104	80	120	0		
3,3'-Dichlorobenzidine	4.3	0.133	4	0	108	70	130	0		
3-Nitroaniline	4.06	0.133	4	0	102	80	120	0		
4,6-Dinitro-2-methylphenol	4.04	0.33	4	0	101	70	130	0		
4-Bromophenyl phenyl ether	4.2	0.133	4	0	105	80	120	0		
4-Chloro-3-methylphenol	4.05	0.133	4	0	101	70	130	0		
4-Chloroaniline	3.74	0.33	4	0	93.5	80	120	0		
4-Chlorophenyl phenyl ether	3.95	0.133	4	0	98.8	80	120	0		
4-Methylphenol	3.63	0.133	4	0	90.8	80	120	0		
4-Nitroaniline	3.93	0.133	4	0	98.2	80	120	0		
4-Nitrophenol	4.44	0.66	4	0	111	60	140	0		
Acenaphthene	3.7	0.133	4	0	92.5	80	120	0		
Acenaphthylene	3.78	0.133	4	0	94.5	80	120	0		
Aniline	3.7	0.133	4	0	92.5	80	120	0		
Anthracene	3.74	0.133	4	0	93.5	80	120	0		
Benzo[a]anthracene	3.96	0.133	4	0	99	80	120	0		
Benzo[a]pyrene	4.01	0.133	4	0	100	80	120	0		
Benzo[b]fluoranthene	3.78	0.133	4	0	94.5	80	120	0		
Benzo[g,h,i]perylene	3.45	0.133	4	0	86.2	80	120	0		
Benzo[k]fluoranthene	4.01	0.133	4	0	100	80	120	0		
Benzyl alcohol	3.96	0.33	4	0	99	70	130	0		
Bis(2-chloroethoxy)methane	3.66	0.133	4	0	91.5	80	120	0		
Bis(2-chloroethyl)ether	3.57	0.133	4	0	89.3	80	120	0		
Bis(2-chloroisopropyl)ether	3.45	0.133	4	0	86.2	80	120	0		
Bis(2-ethylhexyl)phthalate	4.08	0.133	4	0	102	80	120	0		
Butyl benzyl phthalate	4.19	0.33	4	0	105	80	120	0		
Chrysene	4.11	0.133	4	0	103	80	120	0		
Di-n-butyl phthalate	3.74	0.33	4	0	93.5	80	120	0		
Di-n-octyl phthalate	3.83	0.33	4	0	95.8	80	120	0		
Dibenz[a,h]anthracene	3.85	0.133	4	0	96.2	80	120	0		
Dibenzofuran	3.79	0.133	4	0	94.8	80	120	0		
Diethyl phthalate	3.81	0.33	4	0	95.2	80	120	0		
Dimethyl phthalate	3.83	0.33	4	0	95.8	80	120	0		
Fluoranthene	3.9	0.133	4	0	97.5	80	120	0		
Fluorene	3.81	0.133	4	0	95.2	80	120	0		
Hexachlorobenzene	4.23	0.133	4	0	106	80	120	0		
Hexachlorobutadiene	4.51	0.133	4	0	113	80	120	0		
Hexachlorocyclopentadiene	4.04	0.33	4	0	101	70	130	0		
Hexachloroethane	3.9	0.133	4	0	97.5	80	120	0		
Indeno[1,2,3-cd]pyrene	3.72	0.133	4	0	93	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041208A

Sample ID	Batch ID:	TestNo:	Units:							
ICV1-041208	R20323	SW8270C	mg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
ICV	GCMS3_041208A	12/8/2004 9:59:00 AM								
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Isophorone	3.83	0.133	4	0	95.8	80	120	0		
N-Nitrosodi-n-propylamine	3.59	0.133	4	0	89.8	80	120	0		
N-Nitrosodiphenylamine	4.02	0.133	4	0	101	80	120	0		
Naphthalene	3.82	0.133	4	0	95.5	80	120	0		
Nitrobenzene	4	0.133	4	0	100	80	120	0		
Pentachlorophenol	2.97	0.133	4	0	74.2	80	120	0		S
Phenanthrene	3.71	0.133	4	0	92.8	80	120	0		
Phenol	3.43	0.133	4	0	85.8	80	120	0		
Pyrene	4.15	0.133	4	0	104	80	120	0		
Surr: 2,4,6-Tribromophenol	4.69	0	4	0	117	80	120	0		
Surr: 2-Fluorobiphenyl	3.82	0	4	0	95.5	80	120	0		
Surr: 2-Fluorophenol	3.83	0	4	0	95.8	80	120	0		
Surr: 4-Terphenyl-d14	4.53	0	4	0	113	80	120	0		
Surr: Nitrobenzene-d5	4.06	0	4	0	102	80	120	0		
Surr: Phenol-d6	3.75	0	4	0	93.8	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID <b>MB-17828</b>	Batch ID: <b>17828</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/10/2004 12:10:00 AM</b>	Prep Date: <b>12/9/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.133								
1,2-Dichlorobenzene	ND	0.133								
1,3-Dichlorobenzene	ND	0.133								
1,4-Dichlorobenzene	ND	0.133								
2,4,5-Trichlorophenol	ND	0.133								
2,4,6-Trichlorophenol	ND	0.133								
2,4-Dichlorophenol	ND	0.133								
2,4-Dimethylphenol	ND	0.133								
2,4-Dinitrophenol	ND	0.66								
2,4-Dinitrotoluene	ND	0.133								
2,6-Dinitrotoluene	ND	0.133								
2-Chloronaphthalene	ND	0.133								
2-Chlorophenol	ND	0.133								
2-Methylnaphthalene	ND	0.133								
2-Methylphenol	ND	0.133								
2-Nitroaniline	ND	0.133								
2-Nitrophenol	ND	0.133								
3,3'-Dichlorobenzidine	ND	0.133								
3-Nitroaniline	ND	0.133								
4,6-Dinitro-2-methylphenol	ND	0.33								
4-Bromophenyl phenyl ether	ND	0.133								
4-Chloro-3-methylphenol	ND	0.133								
4-Chloroaniline	ND	0.33								
4-Chlorophenyl phenyl ether	ND	0.133								
4-Methylphenol	ND	0.133								
4-Nitroaniline	ND	0.133								
4-Nitrophenol	ND	0.66								
Acenaphthene	ND	0.133								
Acenaphthylene	ND	0.133								
Aniline	ND	0.133								
Anthracene	ND	0.133								
Benzo[a]anthracene	ND	0.133								
Benzo[a]pyrene	ND	0.133								
Benzo[b]fluoranthene	ND	0.133								
Benzo[g,h,i]perylene	ND	0.133								
Benzo[k]fluoranthene	ND	0.133								
Benzyl alcohol	ND	0.33								
Bis(2-chloroethoxy)methane	ND	0.133								
Bis(2-chloroethyl)ether	ND	0.133								
Bis(2-chloroisopropyl)ether	ND	0.133								
Bis(2-ethylhexyl)phthalate	ND	0.133								
Butyl benzyl phthalate	ND	0.33								

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID <b>MB-17828</b>	Batch ID: <b>17828</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/10/2004 12:10:00 AM</b>	Prep Date: <b>12/9/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chrysene	ND	0.133								
Di-n-butyl phthalate	ND	0.33								
Di-n-octyl phthalate	ND	0.33								
Dibenz[a,h]anthracene	ND	0.133								
Dibenzofuran	ND	0.133								
Diethyl phthalate	ND	0.33								
Dimethyl phthalate	ND	0.33								
Fluoranthene	ND	0.133								
Fluorene	ND	0.133								
Hexachlorobenzene	ND	0.133								
Hexachlorobutadiene	ND	0.133								
Hexachlorocyclopentadiene	ND	0.33								
Hexachloroethane	ND	0.133								
Indeno[1,2,3-cd]pyrene	ND	0.133								
Isophorone	ND	0.133								
N-Nitrosodi-n-propylamine	ND	0.133								
N-Nitrosodiphenylamine	ND	0.133								
Naphthalene	ND	0.133								
Nitrobenzene	ND	0.133								
Pentachlorophenol	ND	0.133								
Phenanthrene	ND	0.133								
Phenol	ND	0.133								
Pyrene	ND	0.133								
Surr: 2,4,6-Tribromophenol	3.18	0	2.68	0	119	36	126	0		
Surr: 2-Fluorobiphenyl	2.6	0	2.68	0	97	45	125	0		
Surr: 2-Fluorophenol	2.427	0	2.68	0	90.5	37	125	0		
Surr: 4-Terphenyl-d14	2.88	0	2.68	0	107	45	125	0		
Surr: Nitrobenzene-d5	2.54	0	2.68	0	94.8	45	125	0		
Surr: Phenol-d6	2.427	0	2.68	0	90.5	40	125	0		

Sample ID <b>LCS-17828</b>	Batch ID: <b>17828</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/9/2004 10:55:00 PM</b>	Prep Date: <b>12/9/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.487	0.133	1.34	0	111	34	152	0		
1,2-Dichlorobenzene	1.333	0.133	1.34	0	99.5	32	135	0		
1,3-Dichlorobenzene	1.327	0.133	1.34	0	99	26	135	0		
1,4-Dichlorobenzene	1.273	0.133	1.34	0	95	25	135	0		
2,4,5-Trichlorophenol	1.287	0.133	1.34	0	96	25	175	0		
2,4,6-Trichlorophenol	1.287	0.133	1.34	0	96	29	138	0		
2,4-Dichlorophenol	1.313	0.133	1.34	0	98	36	135	0		
2,4-Dimethylphenol	1.247	0.133	1.34	0	93	35	149	0		

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID	LCS-17828	Batch ID:	17828	TestNo:	SW8270C	Units:	mg/Kg			
SampType	LCS	Run ID:	GCMS3_041209A	Analysis Date:	12/9/2004 10:55:00 PM	Prep Date:	12/9/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrophenol	0.6867	0.66	1.34	0	51.2	25	161	0		
2,4-Dinitrotoluene	1.6	0.133	1.34	0	119	29	149	0		
2,6-Dinitrotoluene	1.6	0.133	1.34	0	119	41	135	0		
2-Chloronaphthalene	1.433	0.133	1.34	0	107	50	135	0		
2-Chlorophenol	1.12	0.133	1.34	0	83.6	31	135	0		
2-Methylnaphthalene	1.393	0.133	1.34	0	104	31	135	0		
2-Methylphenol	1.14	0.133	1.34	0	85.1	25	135	0		
2-Nitroaniline	1.5	0.133	1.34	0	112	40	135	0		
2-Nitrophenol	1.22	0.133	1.34	0	91	34	135	0		
3,3'-Dichlorobenzidine	1.3	0.133	1.34	0	97	25	175	0		
3-Nitroaniline	1.367	0.133	1.34	0	102	41	135	0		
4,6-Dinitro-2-methylphenol	0.7933	0.33	1.34	0	59.2	25	144	0		
4-Bromophenyl phenyl ether	1.68	0.133	1.34	0	125	43	137	0		
4-Chloro-3-methylphenol	1.293	0.133	1.34	0	96.5	34	135	0		
4-Chloroaniline	1.127	0.33	1.34	0	84.1	35	146	0		
4-Chlorophenyl phenyl ether	1.513	0.133	1.34	0	113	41	142	0		
4-Methylphenol	1.153	0.133	1.34	0	86.1	25	135	0		
4-Nitroaniline	1.407	0.133	1.34	0	105	30	153	0		
4-Nitrophenol	1.433	0.66	1.34	0	107	25	141	0		
Acenaphthene	1.433	0.133	1.34	0	107	39	135	0		
Acenaphthylene	1.62	0.133	1.34	0	121	37	135	0		
Aniline	0.9533	0.133	1.34	0	71.1	40	140	0		
Anthracene	1.427	0.133	1.34	0	106	35	140	0		
Benzo[a]anthracene	1.513	0.133	1.34	0	113	41	143	0		
Benzo[a]pyrene	1.527	0.133	1.34	0	114	31	135	0		
Benzo[b]fluoranthene	1.453	0.133	1.34	0	108	27	135	0		
Benzo[g,h,i]perylene	1.487	0.133	1.34	0	111	25	159	0		
Benzo[k]fluoranthene	1.48	0.133	1.34	0	110	25	159	0		
Benzyl alcohol	1.433	0.33	1.34	0	107	25	135	0		
Bis(2-chloroethoxy)methane	1.387	0.133	1.34	0	103	39	135	0		
Bis(2-chloroethyl)ether	1.207	0.133	1.34	0	90	34	135	0		
Bis(2-chloroisopropyl)ether	1.22	0.133	1.34	0	91	26	175	0		
Bis(2-ethylhexyl)phthalate	1.613	0.133	1.34	0	120	25	139	0		
Butyl benzyl phthalate	1.52	0.33	1.34	0	113	25	135	0		
Chrysene	1.507	0.133	1.34	0	112	45	143	0		
Di-n-butyl phthalate	1.553	0.33	1.34	0	116	25	136	0		
Di-n-octyl phthalate	1.533	0.33	1.34	0	114	28	137	0		
Dibenz[a,h]anthracene	1.507	0.133	1.34	0	112	40	135	0		
Dibenzofuran	1.387	0.133	1.34	0	103	42	135	0		
Diethyl phthalate	1.54	0.33	1.34	0	115	27	135	0		
Dimethyl phthalate	1.547	0.33	1.34	0	115	25	175	0		
Fluoranthene	1.513	0.133	1.34	0	113	37	135	0		

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID	Batch ID:	TestNo:	Units:
LCS-17828	17828	SW8270C	mg/Kg
SampType	Run ID:	Analysis Date:	Prep Date:
LCS	GCMS3_041209A	12/9/2004 10:55:00 PM	12/9/2004

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	1.487	0.133	1.34	0	111	38	149	0		
Hexachlorobenzene	1.7	0.133	1.34	0	127	36	143	0		
Hexachlorobutadiene	1.62	0.133	1.34	0	121	25	135	0		
Hexachlorocyclopentadiene	1.787	0.33	1.34	0	133	31	135	0		
Hexachloroethane	1.333	0.133	1.34	0	99.5	25	163	0		
Indeno[1,2,3-cd]pyrene	1.527	0.133	1.34	0	114	25	170	0		
Isophorone	1.48	0.133	1.34	0	110	25	175	0		
N-Nitrosodi-n-propylamine	1.353	0.133	1.34	0	101	27	135	0		
N-Nitrosodiphenylamine	1.58	0.133	1.34	0	118	25	135	0		
Naphthalene	1.38	0.133	1.34	0	103	40	135	0		
Nitrobenzene	1.427	0.133	1.34	0	106	36	143	0		
Pentachlorophenol	0.5867	0.133	1.34	0	43.8	38	146	0		
Phenanthrene	1.473	0.133	1.34	0	110	44	135	0		
Phenol	1.06	0.133	1.34	0	79.1	25	135	0		
Pyrene	1.487	0.133	1.34	0	111	37	146	0		
Surr: 2,4,6-Tribromophenol	3.607	0	2.68	0	135	36	126	0		S
Surr: 2-Fluorobiphenyl	2.747	0	2.68	0	102	45	125	0		
Surr: 2-Fluorophenol	2.6	0	2.68	0	97	37	125	0		
Surr: 4-Terphenyl-d14	2.953	0	2.68	0	110	45	125	0		
Surr: Nitrobenzene-d5	2.74	0	2.68	0	102	45	125	0		
Surr: Phenol-d6	2.593	0	2.68	0	96.8	40	125	0		

Sample ID	Batch ID:	TestNo:	Units:
0412059-10CMS	17828	SW8270C	mg/Kg-dry
SampType	Run ID:	Analysis Date:	Prep Date:
MS	GCMS3_041209A	12/10/2004 4:01:00 AM	12/9/2004

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.642	0.146	1.473	0	111	34	152	0		
1,4-Dichlorobenzene	1.429	0.146	1.473	0	97	25	135	0		
2,4-Dinitrotoluene	1.774	0.146	1.473	0	120	29	149	0		
2-Chlorophenol	1.253	0.146	1.473	0	85.1	31	135	0		
4-Chloro-3-methylphenol	1.459	0.146	1.473	0	99	34	135	0		
4-Nitrophenol	1.656	0.726	1.473	0	112	25	141	0		
Acenaphthene	1.635	0.146	1.473	0	111	39	135	0		
N-Nitrosodi-n-propylamine	1.547	0.146	1.473	0	105	27	135	0		
Pentachlorophenol	0.689	0.146	1.473	0	46.8	38	146	0		
Phenol	1.202	0.146	1.473	0	81.6	25	135	0		
Pyrene	1.73	0.146	1.473	0	117	37	146	0		
Surr: 2,4,6-Tribromophenol	3.841	0	2.947	0	130	36	126	0		S
Surr: 2-Fluorobiphenyl	3.071	0	2.947	0	104	45	125	0		
Surr: 2-Fluorophenol	2.837	0	2.947	0	96.3	37	125	0		
Surr: 4-Terphenyl-d14	3.408	0	2.947	0	116	45	125	0		
Surr: Nitrobenzene-d5	3.027	0	2.947	0	103	45	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
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 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID <b>0412059-10CMS</b>	Batch ID: <b>17828</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/10/2004 4:01:00 AM</b>	Prep Date: <b>12/9/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Phenol-d6	2.851	0	2.947	0	96.8	40	125	0		

Sample ID <b>0412059-10CMSD</b>	Batch ID: <b>17828</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/10/2004 4:40:00 AM</b>	Prep Date: <b>12/9/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.734	0.151	1.522	0	114	34	152	5.44	30	
1,4-Dichlorobenzene	1.499	0.151	1.522	0	98.5	25	135	4.76	30	
2,4-Dinitrotoluene	1.885	0.151	1.522	0	124	29	149	6.09	30	
2-Chlorophenol	1.332	0.151	1.522	0	87.6	31	135	6.12	30	
4-Chloro-3-methylphenol	1.529	0.151	1.522	0	100	34	135	4.73	30	
4-Nitrophenol	1.741	0.75	1.522	0	114	25	141	4.99	30	
Acenaphthene	1.711	0.151	1.522	0	112	39	135	4.57	30	
N-Nitrosodi-n-propylamine	1.62	0.151	1.522	0	106	27	135	4.65	30	
Pentachlorophenol	0.7344	0.151	1.522	0	48.3	38	146	6.38	30	
Phenol	1.272	0.151	1.522	0	83.6	25	135	5.64	30	
Pyrene	1.832	0.151	1.522	0	120	37	146	5.75	30	
Surr: 2,4,6-Tribromophenol	3.891	0	3.043	0	128	36	126	0		S
Surr: 2-Fluorobiphenyl	3.134	0	3.043	0	103	45	125	0		
Surr: 2-Fluorophenol	2.907	0	3.043	0	95.5	37	125	0		
Surr: 4-Terphenyl-d14	3.452	0	3.043	0	113	45	125	0		
Surr: Nitrobenzene-d5	3.096	0	3.043	0	102	45	125	0		
Surr: Phenol-d6	2.907	0	3.043	0	95.5	40	125	0		

Sample ID <b>ICV-041209</b>	Batch ID: <b>R20341</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/9/2004 10:49:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	4.25	0.133	4	0	106	80	120	0		
1,2-Dichlorobenzene	3.94	0.133	4	0	98.5	80	120	0		
1,3-Dichlorobenzene	3.8	0.133	4	0	95	80	120	0		
1,4-Dichlorobenzene	3.55	0.133	4	0	88.8	80	120	0		
2,4,5-Trichlorophenol	4.11	0.133	4	0	103	80	120	0		
2,4,6-Trichlorophenol	4.12	0.133	4	0	103	80	120	0		
2,4-Dichlorophenol	4.23	0.133	4	0	106	80	120	0		
2,4-Dimethylphenol	3.59	0.133	4	0	89.8	80	120	0		
2,4-Dinitrophenol	3.85	0.66	4	0	96.2	80	120	0		
2,4-Dinitrotoluene	4.1	0.133	4	0	103	80	120	0		
2,6-Dinitrotoluene	4.09	0.133	4	0	102	80	120	0		
2-Chloronaphthalene	3.72	0.133	4	0	93	80	120	0		
2-Chlorophenol	3.85	0.133	4	0	96.2	80	120	0		
2-Methylnaphthalene	3.85	0.133	4	0	96.2	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID	Batch ID:	TestNo:			Units:					
ICV-041209	R20341	SW8270C			mg/Kg					
SampType	Run ID:	Analysis Date:			Prep Date:					
ICV	GCMS3_041209A	12/9/2004 10:49:00 AM								
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	3.68	0.133	4	0	92	80	120	0		
2-Nitroaniline	3.8	0.133	4	0	95	80	120	0		
2-Nitrophenol	4.15	0.133	4	0	104	80	120	0		
3,3'-Dichlorobenzidine	4.34	0.133	4	0	108	70	130	0		
3-Nitroaniline	3.92	0.133	4	0	98	80	120	0		
4,6-Dinitro-2-methylphenol	4.19	0.33	4	0	105	70	130	0		
4-Bromophenyl phenyl ether	4.39	0.133	4	0	110	80	120	0		
4-Chloro-3-methylphenol	4.02	0.133	4	0	101	70	130	0		
4-Chloroaniline	3.73	0.33	4	0	93.2	80	120	0		
4-Chlorophenyl phenyl ether	4.07	0.133	4	0	102	80	120	0		
4-Methylphenol	3.65	0.133	4	0	91.2	80	120	0		
4-Nitroaniline	3.81	0.133	4	0	95.2	80	120	0		
4-Nitrophenol	5.08	0.66	4	0	127	60	140	0		
Acenaphthene	3.7	0.133	4	0	92.5	80	120	0		
Acenaphthylene	3.78	0.133	4	0	94.5	80	120	0		
Aniline	3.67	0.133	4	0	91.8	80	120	0		
Anthracene	3.71	0.133	4	0	92.8	80	120	0		
Benzo[a]anthracene	3.89	0.133	4	0	97.2	80	120	0		
Benzo[a]pyrene	4.06	0.133	4	0	102	80	120	0		
Benzo[b]fluoranthene	4.13	0.133	4	0	103	80	120	0		
Benzo[g,h,i]perylene	4.37	0.133	4	0	109	80	120	0		
Benzo[k]fluoranthene	4.21	0.133	4	0	105	80	120	0		
Benzyl alcohol	3.95	0.33	4	0	98.8	70	130	0		
Bis(2-chloroethoxy)methane	3.5	0.133	4	0	87.5	80	120	0		
Bis(2-chloroethyl)ether	3.44	0.133	4	0	86	80	120	0		
Bis(2-chloroisopropyl)ether	3.18	0.133	4	0	79.5	80	120	0		
Bis(2-ethylhexyl)phthalate	3.93	0.133	4	0	98.2	80	120	0		
Butyl benzyl phthalate	3.68	0.33	4	0	92	80	120	0		
Chrysene	4.07	0.133	4	0	102	80	120	0		
Di-n-butyl phthalate	3.72	0.33	4	0	93	80	120	0		
Di-n-octyl phthalate	3.81	0.33	4	0	95.2	80	120	0		
Dibenz[a,h]anthracene	4.56	0.133	4	0	114	80	120	0		
Dibenzofuran	3.77	0.133	4	0	94.3	80	120	0		
Diethyl phthalate	3.79	0.33	4	0	94.8	80	120	0		
Dimethyl phthalate	3.81	0.33	4	0	95.2	80	120	0		
Fluoranthene	3.9	0.133	4	0	97.5	80	120	0		
Fluorene	3.85	0.133	4	0	96.2	80	120	0		
Hexachlorobenzene	4.41	0.133	4	0	110	80	120	0		
Hexachlorobutadiene	4.7	0.133	4	0	118	80	120	0		
Hexachlorocyclopentadiene	4.06	0.33	4	0	102	70	130	0		
Hexachloroethane	3.63	0.133	4	0	90.8	80	120	0		
Indeno[1,2,3-cd]pyrene	4.4	0.133	4	0	110	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID	Batch ID:	TestNo:	Units:							
ICV-041209	R20341	SW8270C	mg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
ICV	GCMS3_041209A	12/9/2004 10:49:00 AM								
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Isophorone	3.69	0.133	4	0	92.2	80	120	0		
N-Nitrosodi-n-propylamine	3.51	0.133	4	0	87.8	80	120	0		
N-Nitrosodiphenylamine	3.95	0.133	4	0	98.8	80	120	0		
Naphthalene	3.8	0.133	4	0	95	80	120	0		
Nitrobenzene	3.76	0.133	4	0	94	80	120	0		
Pentachlorophenol	3	0.133	4	0	75	80	120	0		S
Phenanthrene	3.67	0.133	4	0	91.8	80	120	0		
Phenol	3.46	0.133	4	0	86.5	80	120	0		
Pyrene	3.55	0.133	4	0	88.8	80	120	0		
Surr: 2,4,6-Tribromophenol	5.05	0	4	0	126	80	120	0		S
Surr: 2-Fluorobiphenyl	3.85	0	4	0	96.2	80	120	0		
Surr: 2-Fluorophenol	3.71	0	4	0	92.8	80	120	0		
Surr: 4-Terphenyl-d14	3.97	0	4	0	99.2	80	120	0		
Surr: Nitrobenzene-d5	3.82	0	4	0	95.5	80	120	0		
Surr: Phenol-d6	3.69	0	4	0	92.2	80	120	0		

Sample ID	Batch ID:	TestNo:	Units:							
ICV2-041209	R20341	SW8270C	mg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
ICV	GCMS3_041209A	12/9/2004 10:17:00 PM								
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	4.23	0.133	4	0	106	80	120	0		
1,2-Dichlorobenzene	3.87	0.133	4	0	96.8	80	120	0		
1,3-Dichlorobenzene	3.91	0.133	4	0	97.8	80	120	0		
1,4-Dichlorobenzene	3.73	0.133	4	0	93.2	80	120	0		
2,4,5-Trichlorophenol	4.1	0.133	4	0	103	80	120	0		
2,4,6-Trichlorophenol	4.22	0.133	4	0	106	80	120	0		
2,4-Dichlorophenol	4.24	0.133	4	0	106	80	120	0		
2,4-Dimethylphenol	3.52	0.133	4	0	88	80	120	0		
2,4-Dinitrophenol	3.44	0.66	4	0	86	80	120	0		
2,4-Dinitrotoluene	4.06	0.133	4	0	102	80	120	0		
2,6-Dinitrotoluene	4.01	0.133	4	0	100	80	120	0		
2-Chloronaphthalene	3.77	0.133	4	0	94.3	80	120	0		
2-Chlorophenol	3.89	0.133	4	0	97.2	80	120	0		
2-Methylnaphthalene	3.87	0.133	4	0	96.8	80	120	0		
2-Methylphenol	3.67	0.133	4	0	91.8	80	120	0		
2-Nitroaniline	3.92	0.133	4	0	98	80	120	0		
2-Nitrophenol	4.22	0.133	4	0	106	80	120	0		
3,3'-Dichlorobenzidine	4.04	0.133	4	0	101	70	130	0		
3-Nitroaniline	3.98	0.133	4	0	99.5	80	120	0		
4,6-Dinitro-2-methylphenol	3.86	0.33	4	0	96.5	70	130	0		
4-Bromophenyl phenyl ether	4.3	0.133	4	0	108	80	120	0		
4-Chloro-3-methylphenol	4.1	0.133	4	0	103	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID <b>ICV2-041209</b>	Batch ID: <b>R20341</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS3_041209A</b>	Analysis Date: <b>12/9/2004 10:17:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chloroaniline	3.75	0.33	4	0	93.8	80	120	0		
4-Chlorophenyl phenyl ether	4.05	0.133	4	0	101	80	120	0		
4-Methylphenol	3.6	0.133	4	0	90	80	120	0		
4-Nitroaniline	3.9	0.133	4	0	97.5	80	120	0		
4-Nitrophenol	5.17	0.66	4	0	129	60	140	0		
Acenaphthene	3.71	0.133	4	0	92.8	80	120	0		
Acenaphthylene	3.73	0.133	4	0	93.2	80	120	0		
Aniline	3.65	0.133	4	0	91.2	80	120	0		
Anthracene	3.66	0.133	4	0	91.5	80	120	0		
Benzo[a]anthracene	3.91	0.133	4	0	97.8	80	120	0		
Benzo[a]pyrene	4.01	0.133	4	0	100	80	120	0		
Benzo[b]fluoranthene	4.13	0.133	4	0	103	80	120	0		
Benzo[g,h,i]perylene	3.75	0.133	4	0	93.8	80	120	0		
Benzo[k]fluoranthene	4.21	0.133	4	0	105	80	120	0		
Benzyl alcohol	4.01	0.33	4	0	100	70	130	0		
Bis(2-chloroethoxy)methane	3.58	0.133	4	0	89.5	80	120	0		
Bis(2-chloroethyl)ether	3.44	0.133	4	0	86	80	120	0		
Bis(2-chloroisopropyl)ether	3.35	0.133	4	0	83.8	80	120	0		
Bis(2-ethylhexyl)phthalate	4.02	0.133	4	0	101	80	120	0		
Butyl benzyl phthalate	3.78	0.33	4	0	94.5	80	120	0		
Chrysene	4.09	0.133	4	0	102	80	120	0		
Di-n-butyl phthalate	3.6	0.33	4	0	90	80	120	0		
Di-n-octyl phthalate	3.93	0.33	4	0	98.2	80	120	0		
Dibenz[a,h]anthracene	4.09	0.133	4	0	102	80	120	0		
Dibenzofuran	3.78	0.133	4	0	94.5	80	120	0		
Diethyl phthalate	3.87	0.33	4	0	96.8	80	120	0		
Dimethyl phthalate	3.81	0.33	4	0	95.2	80	120	0		
Fluoranthene	3.6	0.133	4	0	90	80	120	0		
Fluorene	3.83	0.133	4	0	95.8	80	120	0		
Hexachlorobenzene	4.41	0.133	4	0	110	80	120	0		
Hexachlorobutadiene	4.72	0.133	4	0	118	80	120	0		
Hexachlorocyclopentadiene	4.12	0.33	4	0	103	70	130	0		
Hexachloroethane	3.86	0.133	4	0	96.5	80	120	0		
Indeno[1,2,3-cd]pyrene	3.98	0.133	4	0	99.5	80	120	0		
Isophorone	3.78	0.133	4	0	94.5	80	120	0		
N-Nitrosodi-n-propylamine	3.56	0.133	4	0	89	80	120	0		
N-Nitrosodiphenylamine	4.03	0.133	4	0	101	80	120	0		
Naphthalene	3.83	0.133	4	0	95.8	80	120	0		
Nitrobenzene	3.86	0.133	4	0	96.5	80	120	0		
Pentachlorophenol	3.23	0.133	4	0	80.8	80	120	0		
Phenanthrene	3.69	0.133	4	0	92.2	80	120	0		
Phenol	3.48	0.133	4	0	87	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_041209A

Sample ID	ICV2-041209	Batch ID:	R20341	TestNo:	SW8270C	Units:	mg/Kg			
SampType	ICV	Run ID:	GCMS3_041209A	Analysis Date:	12/9/2004 10:17:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pyrene	3.67	0.133	4	0	91.8	80	120	0		
Surr: 2,4,6-Tribromophenol	5.07	0	4	0	127	80	120	0		S
Surr: 2-Fluorobiphenyl	3.79	0	4	0	94.8	80	120	0		
Surr: 2-Fluorophenol	3.8	0	4	0	95	80	120	0		
Surr: 4-Terphenyl-d14	4.1	0	4	0	103	80	120	0		
Surr: Nitrobenzene-d5	3.98	0	4	0	99.5	80	120	0		
Surr: Phenol-d6	3.72	0	4	0	93	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041203A

Sample ID MB-17782	Batch ID: 17782	TestNo: SW8260B	Units: µg/Kg
SampType MBLK	Run ID: GCMS2_041203A	Analysis Date: 12/3/2004 5:45:00 PM	Prep Date: 12/3/2004

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5								
1,1,1-Trichloroethane	ND	5								
1,1,2,2-Tetrachloroethane	ND	5								
1,1,2-Trichloroethane	ND	5								
1,1-Dichloroethane	ND	5								
1,1-Dichloroethene	ND	5								
1,1-Dichloropropene	ND	5								
1,2,3-Trichlorobenzene	ND	5								
1,2,3-Trichloropropane	ND	5								
1,2,4-Trichlorobenzene	ND	5								
1,2,4-Trimethylbenzene	ND	5								
1,2-Dibromo-3-chloropropane	ND	5								
1,2-Dibromoethane	ND	5								
1,2-Dichlorobenzene	ND	5								
1,2-Dichloroethane	ND	5								
1,2-Dichloropropane	ND	5								
1,3,5-Trimethylbenzene	ND	5								
1,3-Dichlorobenzene	ND	5								
1,3-Dichloropropane	ND	5								
1,4-Dichlorobenzene	ND	5								
2,2-Dichloropropane	ND	5								
2-Butanone	ND	15								
2-Chloroethylvinylether	ND	15								
2-Chlorotoluene	ND	5								
2-Hexanone	ND	15								
4-Chlorotoluene	ND	5								
4-Methyl-2-pentanone	ND	15								
Acetone	ND	100								
Benzene	ND	5								
Bromobenzene	ND	5								
Bromochloromethane	ND	5								
Bromodichloromethane	ND	5								
Bromoform	ND	5								
Bromomethane	ND	5								
Carbon disulfide	ND	15								
Carbon tetrachloride	ND	5								
Chlorobenzene	ND	5								
Chloroethane	ND	5								
Chloroform	ND	5								
Chloromethane	ND	5								
cis-1,2-Dichloroethene	ND	5								
cis-1,3-Dichloropropene	ND	5								

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041203A

Sample ID <b>MB-17782</b>	Batch ID: <b>17782</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS2_041203A</b>	Analysis Date: <b>12/3/2004 5:45:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	5								
Dibromomethane	ND	5								
Dichlorodifluoromethane	ND	5								
Ethylbenzene	ND	5								
Hexachlorobutadiene	ND	5								
Iodomethane	ND	5								
Isopropylbenzene	ND	5								
m,p-Xylene	ND	5								
Methyl tert-butyl ether	ND	5								
Methylene chloride	ND	5								
n-Butylbenzene	ND	5								
n-Propylbenzene	ND	5								
Naphthalene	ND	5								
o-Xylene	ND	5								
p-Isopropyltoluene	ND	5								
sec-Butylbenzene	ND	5								
Styrene	ND	5								
tert-Butylbenzene	ND	5								
Tetrachloroethene	ND	5								
Toluene	ND	5								
trans-1,2-Dichloroethene	ND	5								
trans-1,3-Dichloropropene	ND	5								
Trichloroethene	ND	5								
Trichlorofluoromethane	ND	15								
Vinyl chloride	ND	5								
Surr: 1,2-Dichloroethane-d4	62.69	0	50	0	125	52	149	0		
Surr: 4-Bromofluorobenzene	47.32	0	50	0	94.6	65	135	0		
Surr: Dibromofluoromethane	55.2	0	50	0	110	65	135	0		
Surr: Toluene-d8	45.64	0	50	0	91.3	65	135	0		

Sample ID <b>LCS-17782</b>	Batch ID: <b>17782</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS2_041203A</b>	Analysis Date: <b>12/3/2004 5:14:00 PM</b>	Prep Date: <b>12/3/2004</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.71	5	23.2	0	102	70	130	0		
1,1,1-Trichloroethane	27.02	5	23.2	0	116	70	130	0		
1,1,2,2-Tetrachloroethane	19.94	5	23.2	0	85.9	70	130	0		
1,1,2-Trichloroethane	24.66	5	23.2	0	106	70	130	0		
1,1-Dichloroethane	24.92	5	23.2	0	107	70	130	0		
1,1-Dichloroethene	24.68	5	23.2	0	106	70	130	0		
1,1-Dichloropropene	23.94	5	23.2	0	103	70	130	0		
1,2,3-Trichlorobenzene	21.12	5	23.2	0	91	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041203A

Sample ID	LCS-17782	Batch ID:	17782	TestNo:	SW8260B	Units:	µg/Kg
SampType	LCS	Run ID:	GCMS2_041203A	Analysis Date:	12/3/2004 5:14:00 PM	Prep Date:	12/3/2004

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	22.52	5	23.2	0	97.1	70	130	0		
1,2,4-Trichlorobenzene	21.1	5	23.2	0	90.9	70	130	0		
1,2,4-Trimethylbenzene	20.42	5	23.2	0	88	70	130	0		
1,2-Dibromo-3-chloropropane	21.46	5	23.2	0	92.5	70	130	0		
1,2-Dibromoethane	22.13	5	23.2	0	95.4	70	130	0		
1,2-Dichlorobenzene	21.47	5	23.2	0	92.5	70	130	0		
1,2-Dichloroethane	29.04	5	23.2	0	125	70	130	0		
1,2-Dichloropropane	24.87	5	23.2	0	107	70	130	0		
1,3,5-Trimethylbenzene	20.54	5	23.2	0	88.5	70	130	0		
1,3-Dichlorobenzene	21.46	5	23.2	0	92.5	70	130	0		
1,3-Dichloropropane	21.7	5	23.2	0	93.5	70	130	0		
1,4-Dichlorobenzene	21.56	5	23.2	0	92.9	70	130	0		
2,2-Dichloropropane	23.7	5	23.2	0	102	70	130	0		
2-Butanone	25.83	15	23.2	0	111	50	150	0		
2-Chloroethylvinylether	18.41	15	23.2	0	79.4	50	150	0		
2-Chlorotoluene	20.39	5	23.2	0	87.9	70	130	0		
2-Hexanone	23.48	15	23.2	0	101	50	150	0		
4-Chlorotoluene	20.52	5	23.2	0	88.4	70	130	0		
4-Methyl-2-pentanone	22.76	15	23.2	0	98.1	50	150	0		
Acetone	28.98	50	23.2	0	125	50	150	0		
Benzene	23.75	5	23.2	0	102	70	130	0		
Bromobenzene	21.2	5	23.2	0	91.4	70	130	0		
Bromochloromethane	26.32	5	23.2	0	113	70	130	0		
Bromodichloromethane	26.23	5	23.2	0	113	70	130	0		
Bromoform	23.36	5	23.2	0	101	70	130	0		
Bromomethane	27.45	5	23.2	0	118	70	130	0		
Carbon disulfide	21.87	15	23.2	0	94.3	50	150	0		
Carbon tetrachloride	25.33	5	23.2	0	109	70	130	0		
Chlorobenzene	21.61	5	23.2	0	93.1	70	130	0		
Chloroethane	31.59	5	23.2	0	136	70	130	0		S
Chloroform	25.53	5	23.2	0	110	70	130	0		
Chloromethane	24.76	5	23.2	0	107	70	130	0		
cis-1,2-Dichloroethene	23.29	5	23.2	0	100	70	130	0		
cis-1,3-Dichloropropene	25.25	5	23.2	0	109	70	130	0		
Dibromochloromethane	23.19	5	23.2	0	100	70	130	0		
Dibromomethane	26.89	5	23.2	0	116	70	130	0		
Dichlorodifluoromethane	28.03	5	23.2	0	121	70	130	0		
Ethylbenzene	21.03	5	23.2	0	90.6	70	130	0		
Hexachlorobutadiene	21.69	5	23.2	0	93.5	70	130	0		
Iodomethane	17.81	5	23.2	0	76.8	50	150	0		
Isopropylbenzene	21.16	5	23.2	0	91.2	70	130	0		
m,p-Xylene	42.48	5	46.4	0	91.6	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL

# ANALYTICAL QC SUMMARY REPORT

Work Order: 0412014

Project: Sii Smith Services Hobbs NM

RunID: GCMS2\_041203A

Sample ID	LCS-17782	Batch ID:	17782	TestNo:	SW8260B	Units:	µg/Kg			
SampType	LCS	Run ID:	GCMS2_041203A	Analysis Date:	12/3/2004 5:14:00 PM	Prep Date:	12/3/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	27.43	5	23.2	0	118	70	130	0		
Methylene chloride	17.19	5	23.2	0	74.1	70	130	0		
n-Butylbenzene	20.35	5	23.2	0	87.7	70	130	0		
n-Propylbenzene	20.06	5	23.2	0	86.5	70	130	0		
Naphthalene	20.52	5	23.2	0	88.4	70	130	0		
o-Xylene	20.85	5	23.2	0	89.9	70	130	0		
p-Isopropyltoluene	20.75	5	23.2	0	89.4	70	130	0		
sec-Butylbenzene	19.97	5	23.2	0	86.1	70	130	0		
Styrene	20.24	5	23.2	0	87.2	70	130	0		
tert-Butylbenzene	21.02	5	23.2	0	90.6	70	130	0		
Tetrachloroethene	22.6	5	23.2	0	97.4	70	130	0		
Toluene	23.56	5	23.2	0	102	70	130	0		
trans-1,2-Dichloroethene	22.74	5	23.2	0	98	70	130	0		
trans-1,3-Dichloropropene	25.32	5	23.2	0	109	70	130	0		
Trichloroethene	25.78	5	23.2	0	111	70	130	0		
Trichlorofluoromethane	31.72	15	23.2	0	137	70	130	0		S
Vinyl chloride	27.38	5	23.2	0	118	70	130	0		
Surr: 1,2-Dichloroethane-d4	59.9	0	50	0	120	52	149	0		
Surr: 4-Bromofluorobenzene	48.16	0	50	0	96.3	65	135	0		
Surr: Dibromofluoromethane	55.2	0	50	0	110	65	135	0		
Surr: Toluene-d8	46.43	0	50	0	92.9	65	135	0		

Sample ID	ICV-041203	Batch ID:	R20311	TestNo:	SW8260B	Units:	µg/Kg			
SampType	ICV	Run ID:	GCMS2_041203A	Analysis Date:	12/3/2004 4:42:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	47.03	5	46.4	0	101	75	125	0		
1,1,1-Trichloroethane	53.64	5	46.4	0	116	75	125	0		
1,1,2,2-Tetrachloroethane	40.74	5	46.4	0	87.8	75	125	0		
1,1,2-Trichloroethane	50.48	5	46.4	0	109	75	125	0		
1,1-Dichloroethane	49.08	5	46.4	0	106	75	125	0		
1,1-Dichloroethene	48.13	5	46.4	0	104	75	125	0		
1,1-Dichloropropene	47.93	5	46.4	0	103	75	125	0		
1,2,3-Trichlorobenzene	45.84	5	46.4	0	98.8	75	125	0		
1,2,3-Trichloropropane	44.87	5	46.4	0	96.7	75	125	0		
1,2,4-Trichlorobenzene	45.32	5	46.4	0	97.7	75	125	0		
1,2,4-Trimethylbenzene	40.61	5	46.4	0	87.5	75	125	0		
1,2-Dibromo-3-chloropropane	48.26	5	46.4	0	104	75	125	0		
1,2-Dibromoethane	45.46	5	46.4	0	98	75	125	0		
1,2-Dichlorobenzene	42.93	5	46.4	0	92.5	75	125	0		
1,2-Dichloroethane	57.09	5	46.4	0	123	75	125	0		
1,2-Dichloropropane	48.4	5	46.4	0	104	75	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041203A

Sample ID <b>ICV-041203</b>	Batch ID: <b>R20311</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS2_041203A</b>	Analysis Date: <b>12/3/2004 4:42:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	40.21	5	46.4	0	86.7	75	125	0		
1,3-Dichlorobenzene	42.51	5	46.4	0	91.6	75	125	0		
1,3-Dichloropropane	43.61	5	46.4	0	94	75	125	0		
1,4-Dichlorobenzene	42.89	5	46.4	0	92.4	75	125	0		
2,2-Dichloropropane	53.21	5	46.4	0	115	75	125	0		
2-Butanone	55.63	15	46.4	0	120	60	140	0		
2-Chloroethylvinylether	41.48	15	46.4	0	89.4	60	140	0		
2-Chlorotoluene	39.88	5	46.4	0	85.9	75	125	0		
2-Hexanone	48.83	15	46.4	0	105	60	140	0		
4-Chlorotoluene	40.32	5	46.4	0	86.9	75	125	0		
4-Methyl-2-pentanone	46.98	15	46.4	0	101	60	140	0		
Acetone	64.15	100	46.4	0	138	60	140	0		
Benzene	46.6	5	46.4	0	100	75	125	0		
Bromobenzene	42.54	5	46.4	0	91.7	75	125	0		
Bromochloromethane	53.68	5	46.4	0	116	75	125	0		
Bromodichloromethane	52.63	5	46.4	0	113	75	125	0		
Bromoform	49.9	5	46.4	0	108	75	125	0		
Bromomethane	49.58	5	46.4	0	107	75	125	0		
Carbon disulfide	40.95	15	46.4	0	88.3	60	140	0		
Carbon tetrachloride	50.68	5	46.4	0	109	75	125	0		
Chlorobenzene	43.07	5	46.4	0	92.8	75	125	0		
Chloroethane	54.95	5	46.4	0	118	75	125	0		
Chloroform	50.38	5	46.4	0	109	75	125	0		
Chloromethane	48.68	5	46.4	0	105	75	125	0		
cis-1,2-Dichloroethene	46.37	5	46.4	0	99.9	75	125	0		
cis-1,3-Dichloropropene	51.2	5	46.4	0	110	75	125	0		
Dibromochloromethane	48.73	5	46.4	0	105	75	125	0		
Dibromomethane	54.47	5	46.4	0	117	75	125	0		
Dichlorodifluoromethane	53.9	5	46.4	0	116	75	125	0		
Ethylbenzene	41.6	5	46.4	0	89.7	75	125	0		
Hexachlorobutadiene	44.87	5	46.4	0	96.7	75	125	0		
Iodomethane	36.86	5	46.4	0	79.4	60	140	0		
Isopropylbenzene	42.51	5	46.4	0	91.6	75	125	0		
m,p-Xylene	83.57	5	92.8	0	90.1	75	125	0		
Methyl tert-butyl ether	54.59	5	46.4	0	118	75	125	0		
Methylene chloride	38.81	5	46.4	0	83.6	75	125	0		
n-Butylbenzene	40.01	5	46.4	0	86.2	75	125	0		
n-Propylbenzene	38.84	5	46.4	0	83.7	75	125	0		
Naphthalene	44.16	5	46.4	0	95.2	75	125	0		
o-Xylene	42.07	5	46.4	0	90.7	75	125	0		
p-Isopropyltoluene	40.96	5	46.4	0	88.3	75	125	0		
sec-Butylbenzene	38.96	5	46.4	0	84	75	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041203A

Sample ID <b>ICV-041203</b>	Batch ID: <b>R20311</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS2_041203A</b>	Analysis Date: <b>12/3/2004 4:42:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Styrene	40.36	5	46.4	0	87	75	125	0		
tert-Butylbenzene	40.84	5	46.4	0	88	75	125	0		
Tetrachloroethene	44.85	5	46.4	0	96.7	75	125	0		
Toluene	46.74	5	46.4	0	101	75	125	0		
trans-1,2-Dichloroethene	45.68	5	46.4	0	98.4	75	125	0		
trans-1,3-Dichloropropene	52.34	5	46.4	0	113	75	125	0		
Trichloroethene	51.33	5	46.4	0	111	75	125	0		
Trichlorofluoromethane	60.2	15	46.4	0	130	75	125	0		S
Vinyl chloride	50.98	5	46.4	0	110	75	125	0		
Surr: 1,2-Dichloroethane-d4	58.74	0	50	0	117	52	149	0		
Surr: 4-Bromofluorobenzene	47.07	0	50	0	94.1	65	135	0		
Surr: Dibromofluoromethane	55.33	0	50	0	111	65	135	0		
Surr: Toluene-d8	46.19	0	50	0	92.4	65	135	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: GCMS2\_041206A

Sample ID	0412014-06A MS	Batch ID:	17782	TestNo:	SW8260B	Units:	µg/Kg-dry			
SampType	MS	Run ID:	GCMS2_041206A	Analysis Date:	12/6/2004 8:59:00 PM	Prep Date:	12/3/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.81	4.55	45.46	0	107	70	130	0		
Benzene	36.82	4.55	45.46	0	81	70	130	0		
Chlorobenzene	26.8	4.55	45.46	0	58.9	70	130	0		S
Toluene	31.09	4.55	45.46	2.524	62.8	70	130	0		S
Trichloroethene	34.36	4.55	45.46	0	75.6	70	130	0		
Surr: 1,2-Dichloroethane-d4	57.42	0	45.46	0	126	52	149	0		
Surr: 4-Bromofluorobenzene	42.46	0	45.46	0	93.4	65	135	0		
Surr: Dibromofluoromethane	51.27	0	45.46	0	113	65	135	0		
Surr: Toluene-d8	40.73	0	45.46	0	89.6	65	135	0		

Sample ID	0412014-06A MSD	Batch ID:	17782	TestNo:	SW8260B	Units:	µg/Kg-dry			
SampType	MSD	Run ID:	GCMS2_041206A	Analysis Date:	12/6/2004 9:31:00 PM	Prep Date:	12/3/2004			
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	47.79	4.71	47.06	0	102	70	130	2.11	30	
Benzene	36.52	4.71	47.06	0	77.6	70	130	0.845	30	
Chlorobenzene	25.83	4.71	47.06	0	54.9	70	130	3.66	30	S
Toluene	29.83	4.71	47.06	2.524	58	70	130	4.12	30	S
Trichloroethene	32.87	4.71	47.06	0	69.9	70	130	4.43	30	
Surr: 1,2-Dichloroethane-d4	59.69	0	47.06	0	127	52	149	0	0	
Surr: 4-Bromofluorobenzene	43.78	0	47.06	0	93	65	135	0	0	
Surr: Dibromofluoromethane	53.18	0	47.06	0	113	65	135	0	0	
Surr: Toluene-d8	42.72	0	47.06	0	90.8	65	135	0	0	

Sample ID	ICV-041206	Batch ID:	R20315	TestNo:	SW8260B	Units:	µg/Kg			
SampType	ICV	Run ID:	GCMS2_041206A	Analysis Date:	12/6/2004 11:05:00 AM	Prep Date:				
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	45.68	5	46.4	0	98.4	75	125	0		
1,1,1-Trichloroethane	53.89	5	46.4	0	116	75	125	0		
1,1,2,2-Tetrachloroethane	36.82	5	46.4	0	79.4	75	125	0		
1,1,2-Trichloroethane	48.78	5	46.4	0	105	75	125	0		
1,1-Dichloroethane	48.83	5	46.4	0	105	75	125	0		
1,1-Dichloroethene	46.57	5	46.4	0	100	75	125	0		
1,1-Dichloropropene	48.22	5	46.4	0	104	75	125	0		
1,2,3-Trichlorobenzene	42.08	5	46.4	0	90.7	75	125	0		
1,2,3-Trichloropropane	41.37	5	46.4	0	89.2	75	125	0		
1,2,4-Trichlorobenzene	43.27	5	46.4	0	93.3	75	125	0		
1,2,4-Trimethylbenzene	38.25	5	46.4	0	82.4	75	125	0		
1,2-Dibromo-3-chloropropane	43.93	5	46.4	0	94.7	75	125	0		
1,2-Dibromoethane	44.21	5	46.4	0	95.3	75	125	0		
1,2-Dichlorobenzene	40.99	5	46.4	0	88.3	75	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041206A

Sample ID	ICV-041206	Batch ID:	R20315	TestNo:	SW8260B	Units:	µg/Kg
SampType	ICV	Run ID:	GCMS2_041206A	Analysis Date:	12/6/2004 11:05:00 AM	Prep Date:	

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dichloroethane	56.96	5	46.4	0	123	75	125	0		
1,2-Dichloropropane	49.51	5	46.4	0	107	75	125	0		
1,3,5-Trimethylbenzene	38.33	5	46.4	0	82.6	75	125	0		
1,3-Dichlorobenzene	40.42	5	46.4	0	87.1	75	125	0		
1,3-Dichloropropane	42.68	5	46.4	0	92	75	125	0		
1,4-Dichlorobenzene	40.92	5	46.4	0	88.2	75	125	0		
2,2-Dichloropropane	58.07	5	46.4	0	125	75	125	0		S
2-Butanone	52.8	15	46.4	0	114	60	140	0		
2-Chloroethylvinylether	48	15	46.4	0	103	60	140	0		
2-Chlorotoluene	37.9	5	46.4	0	81.7	75	125	0		
2-Hexanone	44.21	15	46.4	0	95.3	60	140	0		
4-Chlorotoluene	38.6	5	46.4	0	83.2	75	125	0		
4-Methyl-2-pentanone	42.95	15	46.4	0	92.6	60	140	0		
Acetone	60.73	100	46.4	0	131	60	140	0		
Benzene	46.37	5	46.4	0	99.9	75	125	0		
Bromobenzene	40.51	5	46.4	0	87.3	75	125	0		
Bromochloromethane	52.18	5	46.4	0	112	75	125	0		
Bromodichloromethane	53.35	5	46.4	0	115	75	125	0		
Bromoform	46.38	5	46.4	0	100	75	125	0		
Bromomethane	46.85	5	46.4	0	101	75	125	0		
Carbon disulfide	40.62	15	46.4	0	87.5	60	140	0		
Carbon tetrachloride	52.09	5	46.4	0	112	75	125	0		
Chlorobenzene	41.11	5	46.4	0	88.6	75	125	0		
Chloroethane	52.74	5	46.4	0	114	75	125	0		
Chloroform	50.08	5	46.4	0	108	75	125	0		
Chloromethane	45.47	5	46.4	0	98	75	125	0		
cis-1,2-Dichloroethene	46.58	5	46.4	0	100	75	125	0		
cis-1,3-Dichloropropene	51.34	5	46.4	0	111	75	125	0		
Dibromochloromethane	48.2	5	46.4	0	104	75	125	0		
Dibromomethane	55.14	5	46.4	0	119	75	125	0		
Dichlorodifluoromethane	52.09	5	46.4	0	112	75	125	0		
Ethylbenzene	40.08	5	46.4	0	86.4	75	125	0		
Hexachlorobutadiene	44.74	5	46.4	0	96.4	75	125	0		
Iodomethane	41.42	5	46.4	0	89.3	60	140	0		
Isopropylbenzene	40.76	5	46.4	0	87.8	75	125	0		
m,p-Xylene	80.73	5	92.8	0	87	75	125	0		
Methyl tert-butyl ether	54.75	5	46.4	0	118	75	125	0		
Methylene chloride	38.95	5	46.4	0	83.9	75	125	0		
n-Butylbenzene	38.5	5	46.4	0	83	75	125	0		
n-Propylbenzene	37.45	5	46.4	0	80.7	75	125	0		
Naphthalene	39.73	5	46.4	0	85.6	75	125	0		
o-Xylene	40.28	5	46.4	0	86.8	75	125	0		

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_041206A

Sample ID	Batch ID:	TestNo:	Units:
ICV-041206	R20315	SW8260B	µg/Kg
SampType	Run ID:	Analysis Date:	Prep Date:
ICV	GCMS2_041206A	12/6/2004 11:05:00 AM	

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
p-Isopropyltoluene	39.59	5	46.4	0	85.3	75	125	0		
sec-Butylbenzene	37.27	5	46.4	0	80.3	75	125	0		
Styrene	38.22	5	46.4	0	82.4	75	125	0		
tert-Butylbenzene	39.25	5	46.4	0	84.6	75	125	0		
Tetrachloroethene	43.5	5	46.4	0	93.8	75	125	0		
Toluene	44.78	5	46.4	0	96.5	75	125	0		
trans-1,2-Dichloroethene	45.94	5	46.4	0	99	75	125	0		
trans-1,3-Dichloropropene	51.96	5	46.4	0	112	75	125	0		
Trichloroethene	51.24	5	46.4	0	110	75	125	0		
Trichlorofluoromethane	58.71	15	46.4	0	127	75	125	0		S
Vinyl chloride	51.29	5	46.4	0	111	75	125	0		
Surr: 1,2-Dichloroethane-d4	60.38	0	50	0	121	52	149	0		
Surr: 4-Bromofluorobenzene	48.02	0	50	0	96	65	135	0		
Surr: Dibromofluoromethane	57.03	0	50	0	114	65	135	0		
Surr: Toluene-d8	46.14	0	50	0	92.3	65	135	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0412014  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

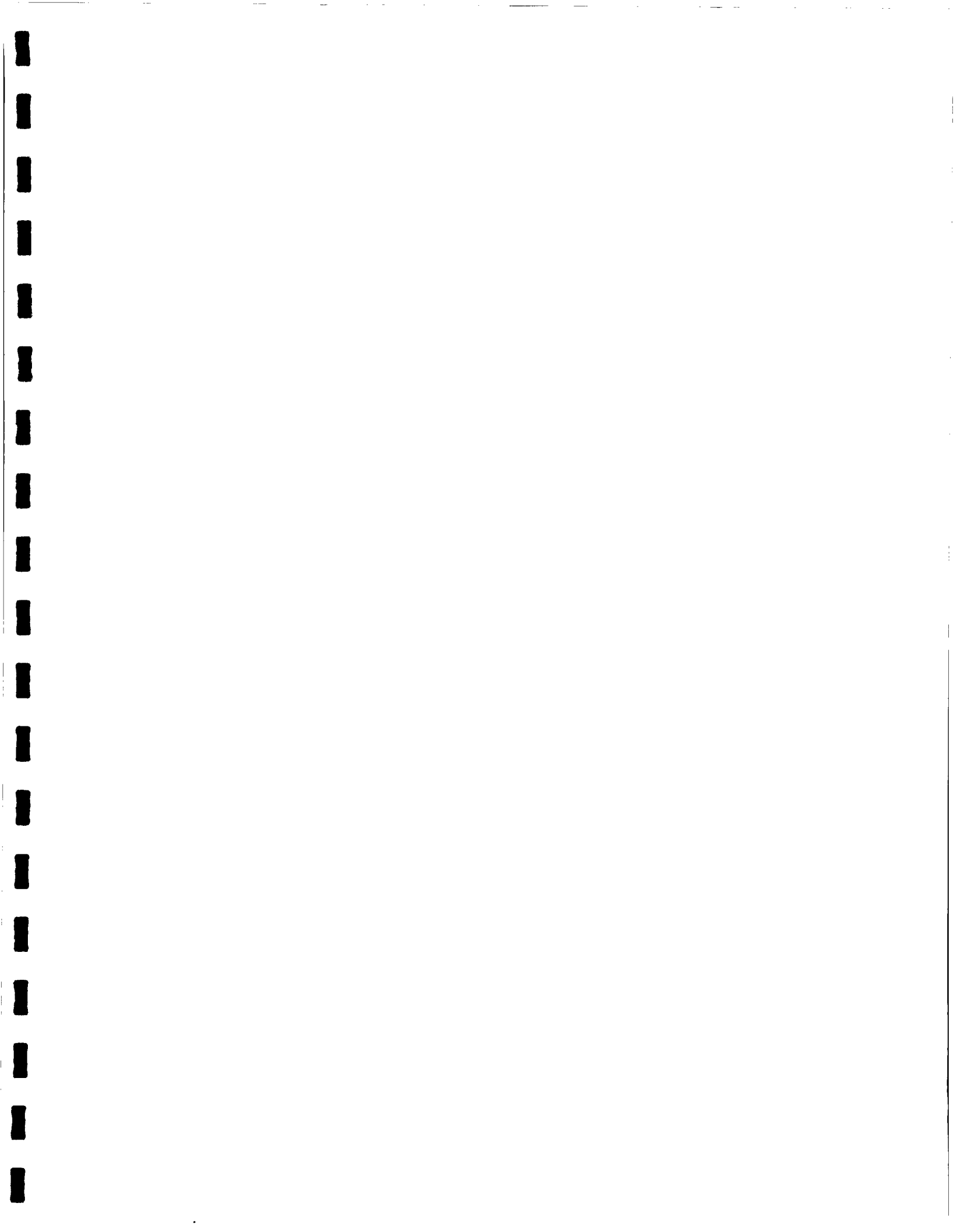
RunID: PMOIST\_041202A

Sample ID <b>0412015-06A DUP</b>	Batch ID: <b>PMOIST-12/03/04</b>	TestNo: <b>D2216</b>	Units: <b>WT%</b>							
SampType <b>DUP</b>	Run ID: <b>PMOIST_041202A</b>	Analysis Date: <b>12/2/2004 1:30:00 PM</b>	Prep Date: <b>12/2/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture	5.48	0	0	0	0	0	0	3.96	30	

Sample ID <b>0412015-07A DUP</b>	Batch ID: <b>PMOIST-12/03/04</b>	TestNo: <b>D2216</b>	Units: <b>WT%</b>							
SampType <b>DUP</b>	Run ID: <b>PMOIST_041202A</b>	Analysis Date: <b>12/2/2004 1:30:00 PM</b>	Prep Date: <b>12/2/2004</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture	6.48	0	0	0	0	0	0	0.615	30	

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank





January 27, 2005

Lee Davis/Kurt Lampi  
SMITH INTERNATIONAL  
P.O. Box 60068  
Houston, Texas 77205-0068

TEL: (281) 233-5401  
FAX (281) 233-5620

RE: Sii Smith Services Drilco Hobbs NM

Order No.: 0501104

Dear Lee Davis/Kurt Lampi:

DHL Analytical received 5 samples on 1/20/2005 for the analyses presented in the following report.

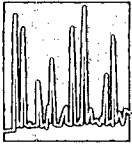
There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont  
General Manager





**DHL**  
ANALYTICAL

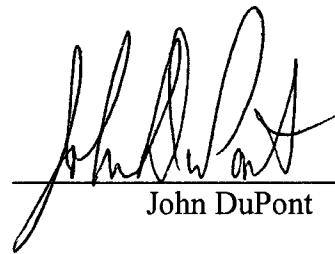
## TABLE OF CONTENTS

This report for SMITH INTERNATIONAL: Sii Smith Services Drilco Hobbs NM (DHL Work Order 0501104) contains the following information:

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• Case Narrative	6
• Work Order Sample Summary	7
• Preparation Dates Report	8
• TCLP/SPLP Prep Dates Report	9
• Analytical Dates Report	10
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• QC Summary Report	16-20
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January 27, 2005

Approved: \_\_\_\_\_



John DuPont



2300 Double Creek Drive • Round Rock, TX 78664  
Phone (512) 388-8222 • FAX (512) 388-8229

# 8432 1350 4180

22362 0501104

CHAIN-OF-CUSTODY

CLIENT: Smith International, Inc.  
ADDRESS: P.O. Box 60068, Houston, TX 77205-0068  
PHONE: 281-233-5401 FAX 281-233-5620  
DATA REPORTED TO: Mr. Lee Davis  
ADDITIONAL REPORT COPIES TO: K Lampi email: klampi@con.com

DATE: 12/01/04 PAGE 1 OF 1  
DHL WORK ORDER #: 6412001  
PROJECT LOCATION OR NAME: Smith Service - Davis - Hbbs - N  
CLIENT PROJECT #: Davis Hbbs - 110703 COLLECTOR: K. Lampi

Authorize 5% surcharge for TRRP report?  
 Yes  No  
Sample prefix: NM-HB-DRL-

PRESERVATION:  
HCl  
HNO<sub>3</sub>  
H<sub>2</sub>SO<sub>4</sub> □ NaOH  
ICE  
UNPRESERVED

ANALYSES:  
BTEX □ MTBE □ TPH 418 □ TPH 100 □ TPH 106 □  
GASOLINE MOD 8015 □  
DIESEL MOD 8015 □  
NOC 820 □  
808 PESTICIDES □ PAH 820 □ HOLDRA □  
TCLP METALS (RCRA) □ TCLP VOC □  
TCLP PCBs □  
TOTAL METALS (RCRA) □ OTHER USE □  
LEAD - TOX □ FLASHPOINT □  
PHD TSS □ % MOISTURE □  
EXPLOSIVES □  
CHLORIDE ANIONS □ ALKALINITY □

Field Sample I.D.	S-SOIL W-WATER A-AIR		P=PAINT SL=SLUDGE OT=OTHER		Matrix	Container Type	# of Containers	PRESERVATION				FIELD NOTES	
	DHL Lab #	Date	Time	HCl				HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH	ICE	UNPRESERVED		
1-1	01	12/1	1000	S	S	P.G	8	X					
1-2	02	12/1	1010	S	S	P.G	8	X					
1-3	03	12/1	1020	S	S	P.G	8	X					
1-4	04	12/1	1030	S	S	P.G	8	X					
1-5	05	12/1	1040	S	S	P.G	8	X					
2-1	06	12/1	900	S	S	P.G	20	X					
2-2	07	12/1	910	S	S	P.G	8	X					
2-3	08	12/1	920	S	S	P.G	8	X					
2-4	09	12/1	930	S	S	P.G	8	X					
2-5	10	12/1	940	S	S	P.G	8	X					
1-6	11	12/1	1100	S	S	P.G	8	X					
<b>TOTAL</b>													

RELINQUISHED BY: (Signature) [Signature] DATE/TIME 12/01/04 1500 RECEIVED BY: (Signature) [Signature]  
RELINQUISHED BY: (Signature) [Signature] DATE/TIME 12-1-11 1500 RECEIVED BY: (Signature) [Signature]  
RELINQUISHED BY: (Signature) [Signature] DATE/TIME 12-1-11 1500 RECEIVED BY: (Signature) [Signature]

LABORATORY USE ONLY:  
RECEIVING TEMP: 13 THERM #: 42  
CUSTODY SEALS -  BROKEN  INTACT  NOT USI  
 CARRIER BILL # 1111  
 APC DELIVERY  
 HAND DELIVERED

DHL DISPOSAL @ \$5.00 each  Return



2300 Double Creek Drive • Round Rock, TX 78664  
 Phone (512) 388-8222 • FAX (512) 388-8229

22361

#834679207170

**CHAIN-OF-CUSTODY**

CLIENT: Smith International, Inc. DATE: 01/06/05 PAGE 1 OF 1  
 ADDRESS: P.O. Box 60007, Houston, TX 77235-0068 DHL WORK ORDER #: 0501027  
 PHONE: 281-233-5631 FAX: 281-233-5630 PROJECT LOCATION OR NAME: Smith Services Drilling - Hobbs, NM East  
 DATA REPORTED TO: Mr. Lee Davis CLIENT PROJECT #: Dr. Lee Hobbs 113403 COLLECTOR: K. Lampi  
 ADDITIONAL REPORT COPIES TO: K. Lampi, email: K.Lampi@cur.net

Field Sample I.D.	S-SOIL W-WATER A-AIR	P-PAINT SL-SLUDGE OT-OTHER	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES
								HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	ICE		
1-7			01/06	0930	S	PG	8	X				X	5270 49 See K Lampi 11-20-04 (Signature)
1-8			01/06	0940	S	PG	8	X				X	
1-9			01/06	0950	S	PG	20	X				X	
1-10			01/06	1000	S	G	1	X				X	
3-1			01/06	1010	S	PG	8	X				X	
3-2			01/06	1020	S	PG	5	X				X	
4-1			01/06	1030	S	PG	5	X				X	
TOTAL													

TRHP 418.1 □ TPH 105 □ TPH 1006 □  
 DIESEL - MOD 8015 □  
 (KOC 820) □ PAH 8270 □ HOLDPAH □  
 8082 PESTICIDES □  
 TOLP - METALS (PCPA) □ HOLDPAH □  
 TOLP - METALS (PCPA) 8151 HERBICIDES □  
 TOLP - PESTICIDES □  
 LEAD - TOTAL □  
 TOTAL METALS (PCPA) □  
 FCL □ TOX □  
 TDS □ TSS □  
 PH □ HEXAVALENT CHROMIUM □  
 EXPLOSIVES □  
 CHLORIDE □ AMMONIO ALKALINITY □

TURN AROUND TIME  
 RUSH □ CALL FIRST  
 1 DAY □ CALL FIRST  
 2 DAY □  
 NORMAL   
 OTHER □

LABORATORY USE ONLY:  
 RECEIVING TEMP: 51 C THERM #: 42  
 CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL #  
 APC DELIVERY  
 HAND DELIVERED

RELINQUISHED BY: (Signature) DATE/TIME: 01/06/05 1200 RECEIVED BY: (Signature)  
 RELINQUISHED BY: (Signature) DATE/TIME: 1-7-05 1111 RECEIVED BY: (Signature)  
 RELINQUISHED BY: (Signature) DATE/TIME: \_\_\_\_\_ RECEIVED BY: (Signature)

DHL DISPOSAL @ \$5.00 each  Return

# DHL Analytical

## Sample Receipt Checklist

Client Name **SMITH INTERNATIONAL**

Date Received: **1/20/05**

Work Order Number **0501104**

Received by **MKS**

Checklist completed by \_\_\_\_\_

Signature

Date

Reviewed by \_\_\_\_\_

Initials

Date

Carrier name: FedEx 2day

- |   |  |                              |   |
|---|--|------------------------------|---|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  | Not Present <input type="checkbox"/>              |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  | Not Present <input type="checkbox"/>              |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                               | No <input type="checkbox"/>  | Not Present <input checked="" type="checkbox"/>   |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Container/Temp Blank temperature in compliance?         | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> | No <input type="checkbox"/>                       |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                               | No <input type="checkbox"/>  | NotApplicable <input checked="" type="checkbox"/> |

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

CLIENT: SMITH INTERNATIONAL  
Project: Sii Smith Services Drilco Hobbs NM  
Lab Order: 0501104

**CASE NARRATIVE**

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Method SW1312/6020 - SPLP Metals  
Method SW1312/7470A - SPLP Mercury

LOG IN

Samples were received and log-in performed on 1/20/05. A total of 5 samples were received. The samples were added on from previous DHL work orders (0412014 and 0501027).

SPLP MERCURY

For SPLP Mercury analysis sample NM-HB-DRL-1-1 was prepared outside the Hold Time. The sample result is flagged "C".

DATA REPORTING

Sample reports include the Method Detection Limit (MDL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting MDL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometimes appear that a "J" flagged result is lower than the MDL if the sample result is very near the MDL.

**CLIENT:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Drilco Hobbs NM  
**Lab Order:** 0501104

**Work Order Sample Summary**

---

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
0501104-01	NM-HB-DRL-1-1		12/1/2004 10:00:00 AM	1/20/2005
0501104-02	NM-HB-DRL-1-2		12/1/2004 10:10:00 AM	1/20/2005
0501104-03	NM-HB-DRL-1-3		12/1/2004 10:20:00 AM	1/20/2005
0501104-04	NM-HB-DRL-1-6		12/1/2004 11:00:00 AM	1/20/2005
0501104-05	NM-HB-DRL-1-7		1/6/2005 9:30:00 AM	1/20/2005

**DHL Analytical**

27-Jan-05

**Lab Order:** 0501104  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Drilco Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0501104-01A	NM-HB-DRL-1-1	12/1/2004 10:00:00 AM	Soil	SW7470A	Mercury Aq Prep, Total	1/25/2005 10:31:52 AM	18165
	NM-HB-DRL-1-1	12/1/2004 10:00:00 AM	Soil	SW3005A	Aq Prep Metals : ICP-MS	1/25/2005 12:15:18 PM	18167
0501104-02A	NM-HB-DRL-1-2	12/1/2004 10:10:00 AM	Soil	SW3005A	Aq Prep Metals : ICP-MS	1/25/2005 12:15:18 PM	18167
0501104-03A	NM-HB-DRL-1-3	12/1/2004 10:20:00 AM	Soil	SW3005A	Aq Prep Metals : ICP-MS	1/25/2005 12:15:18 PM	18167
0501104-04A	NM-HB-DRL-1-6	12/1/2004 11:00:00 AM	Soil	SW3005A	Aq Prep Metals : ICP-MS	1/25/2005 12:15:18 PM	18167
0501104-05A	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW3005A	Aq Prep Metals : ICP-MS	1/25/2005 12:15:18 PM	18167

**DHL Analytical**

27-Jan-05

**Lab Order:** 0501104  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Drilco Hobbs NM

**TCLP/SPLP PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0501104-01A	NM-HB-DRJL-1-1	12/1/2004 10:00:00 AM	Soil	SW1312	SPLP Sample Prep (Metals)	1/24/2005 4:00:00 PM	18156
0501104-02A	NM-HB-DRJL-1-2	12/1/2004 10:10:00 AM	Soil	SW1312	SPLP Sample Prep (Metals)	1/24/2005 4:00:00 PM	18156
0501104-03A	NM-HB-DRJL-1-3	12/1/2004 10:20:00 AM	Soil	SW1312	SPLP Sample Prep (Metals)	1/24/2005 4:00:00 PM	18156
0501104-04A	NM-HB-DRJL-1-6	12/1/2004 11:00:00 AM	Soil	SW1312	SPLP Sample Prep (Metals)	1/24/2005 4:00:00 PM	18156
0501104-05A	NM-HB-DRJL-1-7	1/6/2005 9:30:00 AM	Soil	SW1312	SPLP Sample Prep (Metals)	1/24/2005 4:00:00 PM	18156



DHL Analytical

27-Jan-05

Lab Order: 0501104  
Client: SMITH INTERNATIONAL  
Project: Sii Smith Services Drillco Hobbs NM

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0501104-01A	NM-HB-DRL-1-1	Soil	SW1312/7470A	SPLP Mercury	18165	1	1/26/2005 11:05:40 AM	CETAC_HG_050126B
	NM-HB-DRL-1-1	Soil	SW1312/6020	SPLP Metals	18167	1	1/26/2005 2:54:00 PM	ICP-MS_050126A
0501104-02A	NM-HB-DRL-1-2	Soil	SW1312/6020	SPLP Metals	18167	1	1/26/2005 2:58:00 PM	ICP-MS_050126A
0501104-03A	NM-HB-DRL-1-3	Soil	SW1312/6020	SPLP Metals	18167	1	1/26/2005 3:02:00 PM	ICP-MS_050126A
0501104-04A	NM-HB-DRL-1-6	Soil	SW1312/6020	SPLP Metals	18167	1	1/26/2005 3:06:00 PM	ICP-MS_050126A
0501104-05A	NM-HB-DRL-1-7	Soil	SW1312/6020	SPLP Metals	18167	1	1/26/2005 3:10:00 PM	ICP-MS_050126A

**DHL Analytical**

Date: 28-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Drilco Hobbs NM  
 Project No: Drilco Hobbs 110403  
 Lab Order: 0501104

Client Sample ID: NM-HB-DRL-1-1  
 Lab ID: 0501104-01  
 Collection Date: 12/1/2004 10:00:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SPLP MERCURY</b>		<b>SW1312/7470A</b>		Analyst: IH			
Mercury	ND	0.080	0.200	C	µg/L	1	1/26/2005 11:05:40 AM
<b>SPLP METALS</b>		<b>SW1312/6020</b>		Analyst: IH			
Barium	252	3.0	10.0		µg/L	1	1/26/2005 2:54:00 PM
Chromium	2.7	2.0	6.00	J	µg/L	1	1/26/2005 2:54:00 PM
Lead	42.0	0.30	1.00		µg/L	1	1/26/2005 2:54:00 PM

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical**

Date: 28-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Drilco Hobbs NM  
 Project No: Drilco Hobbs 110403  
 Lab Order: 0501104

Client Sample ID: NM-HB-DRL-1-2  
 Lab ID: 0501104-02  
 Collection Date: 12/1/2004 10:10:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SPLP METALS</b>		<b>SW1312/6020</b>					Analyst: IH
Barium	167	3.0	10.0		µg/L	1	1/26/2005 2:58:00 PM
Chromium	ND	2.0	6.00		µg/L	1	1/26/2005 2:58:00 PM
Lead	4.19	0.30	1.00		µg/L	1	1/26/2005 2:58:00 PM

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 28-Jan-05

CLIENT: SMITH INTERNATIONAL  
Project Name: Sii Smith Services Drilco Hobbs NM  
Project No: Drilco Hobbs 110403  
Lab Order: 0501104

Client Sample ID: NM-HB-DRL-1-3  
Lab ID: 0501104-03  
Collection Date: 12/1/2004 10:20:00 AM  
Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SPLP METALS</b>		<b>SW1312/6020</b>					Analyst: IH
Lead	4.14	0.30	1.00		µg/L	1	1/26/2005 3:02:00 PM

Qualifiers: ND - Not Detected at the Method Detection Limit  
J - Analyte detected between MDL and RL  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
C - Sample Result or QC discussed in Case Narrative  
E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical**

Date: 28-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Drilco Hobbs NM  
 Project No: Drilco Hobbs 110403  
 Lab Order: 0501104

Client Sample ID: NM-HB-DRL-1-6  
 Lab ID: 0501104-04  
 Collection Date: 12/1/2004 11:00:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SPLP METALS</b>		<b>SW1312/6020</b>					Analyst: IH
Lead	5.80	0.30	1.00		µg/L	1	1/26/2005 3:06:00 PM

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical**

Date: 28-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Drilco Hobbs NM  
**Project No:** Drilco Hobbs 110403  
**Lab Order:** 0501104

**Client Sample ID:** NM-HB-DRL-1-7  
**Lab ID:** 0501104-05  
**Collection Date:** 1/6/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SPLP METALS</b>		<b>SW1312/6020</b>					Analyst: IH
Lead	ND	0.30	1.00		µg/L	1	1/26/2005 3:10:00 PM

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
J - Analyte detected between MDL and RL  
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
C - Sample Result or QC discussed in Case Narrative  
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501104  
 Project: Sii Smith Services Drilco Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: CETAC\_HG\_050126B

Sample ID: MB-18165	Batch ID: 18165	TestNo: SW7470A	Units: µg/L							
SampType: MBLK	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 10:53:21 AM	Prep Date: 1/25/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury ND 0.2

Sample ID: LCS-18165	Batch ID: 18165	TestNo: SW7470A	Units: µg/L							
SampType: LCS	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 10:55:24 AM	Prep Date: 1/25/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 1.98 0.2 2 0 99 77 120 0

Sample ID: LCSD-18165	Batch ID: 18165	TestNo: SW7470A	Units: µg/L							
SampType: LCSD	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 10:57:27 AM	Prep Date: 1/25/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 2 0.2 2 0 100 77 120 1.01 15

Sample ID: 0501117-01C MS	Batch ID: 18165	TestNo: SW7470A	Units: µg/L							
SampType: MS	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 11:01:34 AM	Prep Date: 1/25/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 1.91 0.2 2 0 95.5 77 120 0

Sample ID: 0501117-01C MSD	Batch ID: 18165	TestNo: SW7470A	Units: µg/L							
SampType: MSD	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 11:03:37 AM	Prep Date: 1/25/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 1.92 0.2 2 0 96 77 120 0.522 15

Sample ID: CCV1-050126	Batch ID: R20814	TestNo: SW7470A	Units: µg/L							
SampType: CCV	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 10:44:02 AM	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 2.02 0.2 2 0 101 80 120 0

Sample ID: CCV2-050126	Batch ID: R20814	TestNo: SW7470A	Units: µg/L							
SampType: CCV	Run ID: CETAC_HG_050126B	Analysis Date: 1/26/2005 11:11:58 AM	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 2.05 0.2 2 0 103 80 120 0

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501104  
 Project: Sii Smith Services Drilco Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: CETAC\_HG\_050126B

Sample ID: <b>CCV3-050126</b>	Batch ID: <b>R20814</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 11:42:40 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	2.06	0.2	2	0	103	80	120	0		

Sample ID: <b>CCV5-050126</b>	Batch ID: <b>R20814</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 2:36:24 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	1.97	0.2	2	0	98.5	80	120	0		

Sample ID: <b>CCV6-050126</b>	Batch ID: <b>R20814</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 2:51:59 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	2.04	0.2	2	0	102	80	120	0		

Sample ID: <b>ICV-050126</b>	Batch ID: <b>R20814</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 10:19:23 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	4.07	0.2	4	0	102	90	110	0		

Sample ID: <b>0501117-01C PDS</b>	Batch ID: <b>18165</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 11:40:35 AM</b>	Prep Date: <b>1/25/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	2.04	0.2	2	0	102	75	125	0		

Sample ID: <b>0501117-01C SD</b>	Batch ID: <b>18165</b>	TestNo: <b>SW7470A</b>	Units: <b>µg/L</b>							
SampType: <b>SD</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 11:38:31 AM</b>	Prep Date: <b>1/25/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	1	0	0	0	0	0	0	10	

Sample ID: <b>MB-18156 SPLP</b>	Batch ID: <b>18165</b>	TestNo: <b>SW1312/7470</b>	Units: <b>µg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>CETAC_HG_050126B</b>	Analysis Date: <b>1/26/2005 10:51:18 AM</b>	Prep Date: <b>1/25/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.2								

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank



**CLIENT:** SMITH INTERNATIONAL  
**Work Order:** 0501104  
**Project:** Sii Smith Services Drilco Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS\_050126A

Sample ID: <b>MB-18167</b>	Batch ID: <b>18167</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:09:00 PM</b>	Prep Date: <b>1/25/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	10								
Chromium	ND	6								
Lead	ND	1								

Sample ID: <b>LCS-18167</b>	Batch ID: <b>18167</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>LCS</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:21:00 PM</b>	Prep Date: <b>1/25/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	181.1	10	200	0	90.6	80	120	0		
Chromium	172.5	6	200	0	86.2	80	120	0		
Lead	183.1	1	200	0	91.6	80	120	0		

Sample ID: <b>LCSD-18167</b>	Batch ID: <b>18167</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:25:00 PM</b>	Prep Date: <b>1/25/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	192.6	10	200	0	96.3	80	120	6.15	15	
Chromium	180.7	6	200	0	90.4	80	120	4.64	15	
Lead	192.3	1	200	0	96.2	80	120	4.90	15	

Sample ID: <b>0501117-02C MS</b>	Batch ID: <b>18167</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>MS</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:29:00 PM</b>	Prep Date: <b>1/25/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	288.9	10	200	92.53	98.2	80	120	0		
Chromium	179.9	6	200	0	90	80	120	0		
Lead	197.6	1	200	0	98.8	80	120	0		

Sample ID: <b>0501117-02C MSD</b>	Batch ID: <b>18167</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>MSD</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:33:00 PM</b>	Prep Date: <b>1/25/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	287.6	10	200	92.53	97.5	80	120	0.451	15	
Chromium	177.2	6	200	0	88.6	80	120	1.51	15	
Lead	197.8	1	200	0	98.9	80	120	0.101	15	

Sample ID: <b>CCV1-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 11:19:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	195.7	1	200	0	97.8	90	110	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501104  
 Project: Sii Smith Services Drilco Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS\_050126A

Sample ID: <b>CCV2-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 12:12:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Lead	198.1	1	200	0	99	90	110	0
------	-------	---	-----	---	----	----	-----	---

Sample ID: <b>CCV3-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 1:21:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	193.7	10	200	0	96.8	90	110	0
Chromium	183.5	6	200	0	91.8	90	110	0
Lead	196.3	1	200	0	98.2	90	110	0

Sample ID: <b>CCV4-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 2:42:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	194.7	10	200	0	97.4	90	110	0
Chromium	185.3	6	200	0	92.6	90	110	0
Lead	197	1	200	0	98.5	90	110	0

Sample ID: <b>CCV5-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 3:54:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	193.2	10	200	0	96.6	90	110	0
Chromium	185.8	6	200	0	92.9	90	110	0
Lead	194	1	200	0	97	90	110	0

Sample ID: <b>CCV6-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 4:23:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	197.4	10	200	0	98.7	90	110	0
Chromium	187.7	6	200	0	93.8	90	110	0
Lead	199.2	1	200	0	99.6	90	110	0

Sample ID: <b>ICV1-050126</b>	Batch ID: <b>R20817</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>ICP-MS_050126A</b>	Analysis Date: <b>1/26/2005 10:27:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	98.2	10	100	0	98.2	90	110	0
Chromium	98.9	6	100	0	98.9	90	110	0
Lead	103.3	1	100	0	103	90	110	0

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501104  
 Project: Sii Smith Services Drilco Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS\_050126A

Sample ID: 0501117-02C PDS	Batch ID: 18167	TestNo: SW6020	Units: µg/L
SampType: PDS	Run ID: ICP-MS_050126A	Analysis Date: 1/26/2005 2:37:00 PM	Prep Date: 1/25/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	273.4	10	200	92.53	90.4	75	125	0		
Chromium	174.6	6	200	0	87.3	75	125	0		
Lead	201.8	1	200	0	101	75	125	0		

Sample ID: 0501117-02C SD	Batch ID: 18167	TestNo: SW6020	Units: µg/L
SampType: SD	Run ID: ICP-MS_050126A	Analysis Date: 1/26/2005 2:17:00 PM	Prep Date: 1/25/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	92.9	50	0	0	0	0	0	0.399	10	
Chromium	ND	30	0	0	0	0	0	0	10	
Lead	ND	5	0	0	0	0	0	0	10	

Sample ID: MB-18156 SPLP	Batch ID: 18167	TestNo: SW1312/6020	Units: µg/L
SampType: MBLK	Run ID: ICP-MS_050126A	Analysis Date: 1/26/2005 2:05:00 PM	Prep Date: 1/25/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	10								
Chromium	ND	6								
Lead	ND	1								

**Qualifiers:**  
 ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

**APPENDIX B**  
**Laboratory Analytical Data**  
**and Chain-of-Custody Record**  
**Soil Samples Collected on January 6, 2005**



**DHL**  
ANALYTICAL

January 17, 2005

Lee Davis/Kurt Lampi  
SMITH INTERNATIONAL  
P.O. Box 60068  
Houston, Texas 77205-0068

TEL: (281) 233-5401  
FAX (281) 233-5620

RE: Sii Smith Services Hobbs NM

Order No.: 0501027

Dear Lee Davis/Kurt Lampi:

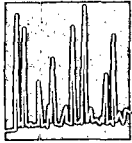
DHL Analytical received 7 samples on 1/7/2005 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont  
General Manager



**DHL**  
ANALYTICAL

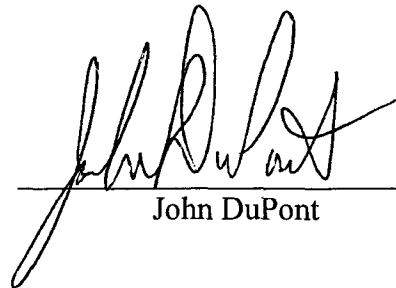
## TABLE OF CONTENTS

This report for SMITH INTERNATIONAL: Sii Smith Services Hobbs NM (DHL Work Order 0501027) contains the following information:

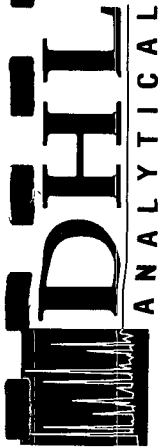
ITEM	Page
• Cover Page	1
• Table of Contents	2
• Original chain of custody, fedex slip (if used), log-in checklist	3-5
• Work Order Sample Summary	6
• Preparation Dates Report	7-9
• Analytical Dates Report	10-12
• Sample Results	13-41
• Case Narrative	42-43
• QC Summary Report	44-75
• Total Number of Pages	75

January 17, 2005

Approved: \_\_\_\_\_



John DuPont



2300 Double Creek Drive • Round Rock, TX 78664  
Phone (512) 388-8222 • FAX (512) 388-8229

NO 22361

#834679207170

CHAIN-OF-CUSTODY

CLIENT: Smith International, Inc.  
ADDRESS: P.O. Box 60068, Houston, TX 77205-0068  
PHONE: 281-233-5401 FAX 281-233-5620  
DATA REPORTED TO: Mr. Lee Davis  
ADDITIONAL REPORT COPIES TO: K. Lampi email: Klampi@car.net

DATE: 01/06/05 PAGE 1 OF 1  
PO #: \_\_\_\_\_ DHL WORK ORDER #: 0501027  
PROJECT LOCATION OR NAME: Smith Services Drilco - Hobbs, NM ESA  
CLIENT PROJECT #: Drilco Hobbs - 110403 COLLECTOR: K. Lampi

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION				UNPRESERVED	FIELD NOTES
							HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub> □ NaOH	ICE		
00 1-7	01	01/06	0930	S	P-Plastic Syringe	8	X	X	X	X		
1-8	02	01/06	0940	S	P-Glass	8	X	X	X	X		
1-9	03	01/06	0950	S	P-Glass	20	X	X	X	X		
1-10	04	01/06	1000	S	G	1	X	X	X	X		
3-1	05	01/06	1010	S	P-G	8	X	X	X	X		
3-2	06	01/06	1020	S	P-G	5	X	X	X	X		
4-1	07	01/06	1030	S	P-G	5	X	X	X	X		
/												
TOTAL												

ANALYSES: 503-535  
 BREX □ MREB □ TPH 418.1 □ TPH 1005 □ TPH 1006 □  
 GASOLINE MOD 8015 □ 503-535 503-535  
 DIESEL - MOD 8015 □ 503-535 503-535  
 SVOC 8270 PAK 8270 □ HOLDPAH □  
 8082 PESTICIDES □ 8151 HERBICIDES □  
 TCLP - METALS (RCRA) □ TCLP VOC □  
 TCLP - METALS (RCRA) □ TCLP VOC □  
 LEAD - TOTAL □ HERB □ SEMI-VOC □  
 TOTAL METALS (RCRA) □ OTHER LIST □  
 TCLP TOX □ D.W. 200.8 □ TCLP □  
 TCLP TSS □ FLASHPOINT □  
 TCLP HEXAVALENT CHROMIUM □  
 CYANIDE □  
 EXPLOSIVES □ PESTICIDES □  
 CHLORIDE ANIONS □ ALKALINITY □

TURN AROUND TIME: \_\_\_\_\_  
 RUSH - CALL FIRST  
 1 DAY □ CALL FIRST  
 2 DAY □  
 NORMAL  
 OTHER □

RECEIVED BY: (Signature) \_\_\_\_\_ DATE/TIME: 01/06/05 1200  
 RECEIVED BY: (Signature) \_\_\_\_\_ DATE/TIME: 1-7-5 9:00  
 RECEIVED BY: (Signature) \_\_\_\_\_ DATE/TIME: \_\_\_\_\_

LABORATORY USE ONLY  
 RECEIVING TEMP: 3.1 C THERM #: 42  
 CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL # \_\_\_\_\_  
 APC DELIVERY  
 HAND DELIVERED

RELINQUISHED BY: (Signature) Scott M. Lampi  
 RELINQUISHED BY: (Signature) \_\_\_\_\_  
 RELINQUISHED BY: (Signature) \_\_\_\_\_

□ DHL DISPOSAL @ \$5.00 each □ Return

**FedEx**  
Express  
USA Airbill

834679207370

0200

Form  
I.D. No.

FedEx Retrieval Copy

1 From  
Date 01/06/05  
Sender's FedEx  
Account Number

Sender's Name  
Kurt Lampi

Phone 918 298-7499

Company  
3-D Environmental, Inc.

Address  
4314 E. 107th St.

City  
Tulsa

State OK ZIP 74137

2 Your Internal Billing Reference

3 To  
Recipient's Name  
Megan / Carlos

Phone 512 388-8222

Company  
DHL Analytical

Address  
2300 Double Creek Drive

Address  
to "HOLD" at FedEx location, and FedEx address

City Round Rock State TX ZIP 78664



8346 7920 7370

L

4a Express Package Service  
1  FedEx Priority Overnight 5 | FedEx Standard Overnight 6 | Packages up to 150 lbs. Priority commitment may be later in some areas. FedEx First Overnight (subject to special handling) delivery to select locations.

3 | FedEx 2Day 20 | FedEx Express Saver 20 | Third business day. FedEx Envelope (size not available. Minimum charge: One pound, one ounce).

4b Express Freight Service  
7 | FedEx 1Day Freight\* 8 | FedEx 2Day Freight 83 | FedEx 3Day Freight 83 | Third business day. Delivery commitment may be later in some areas.

5 Packaging  
6 | FedEx Envelope\* 2 | FedEx Pak\* 1  Other  
Includes FedEx Small Pak, FedEx Large Pak, and FedEx Shrink Pak. \*Declared value limit \$500.

6 Special Handling  
3 | SATURDAY Delivery 1 | HOLD Saturday 31 |  
Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes. Does this shipment contain dangerous goods? One box must be checked: Yes  No . Includes FedEx Location, FedEx First Overnight, and FedEx 2Day to select locations.

X No 4 | Yes  No . Includes Signature Required, Signature Required for Return, Signature Required for Return and Signature Required for Return. Dry Ice Dry Ice, up to 195 lbs. Cargo Aircraft Only.

7 Payment Bill to:  
1 | Shipper 2  Recipient 3 | Third Party 4 | Credit Card 5 | Cash/Check  
Enter FedEx Acct. No. or Credit Card No. below. Obtain Receipt. Acct. No.  Credit Card No.  Cash/Check No.

FedEx Acct. No. 1745-0763-5  
Credit Card No. Exp. Date

Total Packages 2 Total Weight 70  
Total Charges  
Credit Card with

8 Release Signature  
I hereby certify that I am the authorized delivery recipient of the above shipment and I hereby authorize delivery without obtaining signature.

Signature  
446

Rev. 06/04 FedEx Form 415 (01/04) © 2004 FedEx Corporation WGS 02



**DHL Analytical**

**Sample Receipt Checklist**

Client Name **SMITH INTERNATIONAL**

Date Received: **1/7/05**

Work Order Number **0501027**

Received by **MKS**

Checklist completed by \_\_\_\_\_

Signature

Date

Reviewed by \_\_\_\_\_

Initials

Date

Carrier name: FedEx 2day

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No  NotApplicable

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: 3A<sup>o</sup> 1 of 9 VOA's broken in transit

Corrective Action Taken: \_\_\_\_\_

CLIENT: SMITH INTERNATIONAL  
Project: Sii Smith Services Hobbs NM  
Lab Order: 0501027

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
0501027-01	NM-HB-DRL-1-7		1/6/2005 9:30:00 AM	1/7/2005
0501027-02	NM-HB-DRL-1-8		1/6/2005 9:40:00 AM	1/7/2005
0501027-03	NM-HB-DRL-1-9		1/6/2005 9:50:00 AM	1/7/2005
0501027-04	NM-HB-DRL-1-10		1/6/2005 10:00:00 AM	1/7/2005
0501027-05	NM-HB-DRL-3-1		1/6/2005 10:10:00 AM	1/7/2005
0501027-06	NM-HB-DRL-3-2		1/6/2005 10:20:00 AM	1/7/2005
0501027-07	NM-HB-DRL-4-1		1/6/2005 10:30:00 AM	1/7/2005

**DHL Analytical**

17-Jan-05

Lab Order: 0501027  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch I
0501027-01A	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 5035	Purge and Trap 5035	1/7/2005 4:14:28 PM	18028
	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 5035	Purge and Trap 5035	1/13/2005 3:26:04 PM	18072
0501027-01B	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-01C	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	SW 3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
0501027-01D	NM-HB-DRL-1-7	1/6/2005 9:30:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-02A	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 5035	Purge and Trap 5035	1/7/2005 4:14:28 PM	18028
0501027-02B	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-02C	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	SW 3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
0501027-02D	NM-HB-DRL-1-8	1/6/2005 9:40:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-03A	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 5035	Purge and Trap 5035	1/7/2005 4:14:28 PM	18028
0501027-03B	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-03C	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	SW 3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
0501027-03D	NM-HB-DRL-1-9	1/6/2005 9:50:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-04A	NM-HB-DRL-1-10	1/6/2005 10:00:00 AM	Soil	SW 3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034

DHL Analytical

17-Jan-05

Lab Order: 0501027  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch I
0501027-04A	NM-HB-DRL-1-10	1/6/2005 10:00:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-1-10	1/6/2005 10:00:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-1-10	1/6/2005 10:00:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
	NM-HB-DRL-1-10	1/6/2005 10:00:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-05A	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW5035	Purge and Trap 5035	1/7/2005 4:14:28 PM	18028
0501027-05B	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-05C	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
0501027-05D	NM-HB-DRL-3-1	1/6/2005 10:10:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-06A	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-06B	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047
0501027-06C	NM-HB-DRL-3-2	1/6/2005 10:20:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B
0501027-07A	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	SW5030B	Purge and Trap Soils GC- Gas	1/10/2005 8:55:31 AM	18031
0501027-07B	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	1/11/2005 10:55:12 A	18034
	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	SW7471A	Mercury Soil Prep, Total	1/11/2005 9:52:16 AM	18044
	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	SW3550B	Soil Prep Sonication: DRO	1/11/2005 12:14:38 P	18045
	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	SW3550B	Soil Prep Sonication: BNA	1/11/2005 2:54:09 PM	18047

**DHL Analytical**

17-Jan-05

**Lab Order:** 0501027  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch I
0501027-07C	NM-HB-DRL-4-1	1/6/2005 10:30:00 AM	Soil	D2216	Percent Moisture	1/10/2005 9:30:00 AM	PMOIST-01/10/05B

# DHL Analytical

17-Jan-05

Lab Order: 0501027  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0501027-01A	NM-HB-DRL-1-7	Soil	SW8260B	Volatiles(5035) by GC/MS	18028	1	1/8/2005 1:34:00 AM	GCMS2_050107B
	NM-HB-DRL-1-7	Soil	SW8260B	Volatiles(5035) by GC/MS	18072	1	1/13/2005 10:30:00 PM	GCMS2_050113A
0501027-01B	NM-HB-DRL-1-7	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 2:02:50 PM	GC4_050110A
0501027-01C	NM-HB-DRL-1-7	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:09:00 AM	ICP-MS2_050112A
	NM-HB-DRL-1-7	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:04:04 PM	CETAC_HG_050111
	NM-HB-DRL-1-7	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	100	1/13/2005 10:19:25 AM	GC15_050113A
	NM-HB-DRL-1-7	Soil	SW8270C	Semivolatiles by GC/MS	18047	50	1/13/2005 12:21:00 PM	GCMSS_050113A
0501027-01D	NM-HB-DRL-1-7	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-02A	NM-HB-DRL-1-8	Soil	SW8260B	Volatiles(5035) by GC/MS	18028	1	1/8/2005 12:28:00 AM	GCMS2_050107B
0501027-02B	NM-HB-DRL-1-8	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 2:24:20 PM	GC4_050110A
0501027-02C	NM-HB-DRL-1-8	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:12:00 AM	ICP-MS2_050112A
	NM-HB-DRL-1-8	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:06:07 PM	CETAC_HG_050111
	NM-HB-DRL-1-8	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	5	1/13/2005 10:44:41 AM	GC15_050113A
	NM-HB-DRL-1-8	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 3:30:00 PM	GCMSS_050113A
0501027-02D	NM-HB-DRL-1-8	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-03A	NM-HB-DRL-1-9	Soil	SW8260B	Volatiles(5035) by GC/MS	18028	1	1/8/2005 1:01:00 AM	GCMS2_050107B
0501027-03B	NM-HB-DRL-1-9	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 12:58:35 PM	GC4_050110A
0501027-03C	NM-HB-DRL-1-9	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 10:11:00 AM	ICP-MS2_050112A
	NM-HB-DRL-1-9	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 3:57:57 PM	CETAC_HG_050111
	NM-HB-DRL-1-9	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	1	1/12/2005 1:40:56 PM	GC15_050112A
	NM-HB-DRL-1-9	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 4:08:00 PM	GCMSS_050113A
0501027-03D	NM-HB-DRL-1-9	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-04A	NM-HB-DRL-1-10	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	25	1/12/2005 10:57:00 AM	ICP-MS2_050112A

# DHL Analytical

17-Jan-05

Lab Order: 0501027  
 Client: SMITH INTERNATIONAL  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0501027-04A	NM-HB-DRL-1-10	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:16:00 AM	ICP-MS2_050112A
	NM-HB-DRL-1-10	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:08:10 PM	CETAC_HG_050111
	NM-HB-DRL-1-10	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 11:43:00 AM	GCMS3_050113A
	NM-HB-DRL-1-10	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-05A	NM-HB-DRL-3-1	Soil	SW8260B	Volatiles(5035) by GC/MS	18028	1	1/7/2005 11:56:00 PM	GCMS2_050107B
0501027-05B	NM-HB-DRL-3-1	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 2:52:15 PM	GC4_050110A
0501027-05C	NM-HB-DRL-3-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:20:00 AM	ICP-MS2_050112A
	NM-HB-DRL-3-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	25	1/12/2005 11:01:00 AM	ICP-MS2_050112A
	NM-HB-DRL-3-1	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:10:13 PM	CETAC_HG_050111
	NM-HB-DRL-3-1	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	1	1/12/2005 4:14:02 PM	GC15_050112A
	NM-HB-DRL-3-1	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 2:14:00 PM	GCMS3_050113A
0501027-05D	NM-HB-DRL-3-1	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-06A	NM-HB-DRL-3-2	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 3:43:40 PM	GC4_050110A
0501027-06B	NM-HB-DRL-3-2	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:24:00 AM	ICP-MS2_050112A
	NM-HB-DRL-3-2	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:16:31 PM	CETAC_HG_050111
	NM-HB-DRL-3-2	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	1	1/12/2005 4:39:03 PM	GC15_050112A
	NM-HB-DRL-3-2	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 2:52:00 PM	GCMS3_050113A
0501027-06C	NM-HB-DRL-3-2	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A
0501027-07A	NM-HB-DRL-4-1	Soil	M8015V	Modified 8015 Gasoline (GRO)	18031	10	1/10/2005 4:05:05 PM	GC4_050110A
0501027-07B	NM-HB-DRL-4-1	Soil	SW6020	Trace Metals: ICP-MS - Soil	18034	5	1/12/2005 11:28:00 AM	ICP-MS2_050112A
	NM-HB-DRL-4-1	Soil	SW7471A	Total Mercury: Cold Vapor	18044	1	1/11/2005 4:18:33 PM	CETAC_HG_050111
	NM-HB-DRL-4-1	Soil	M8015D	GC/FID - Soil DRO+ORO	18045	1	1/12/2005 2:06:31 PM	GC15_050112A
	NM-HB-DRL-4-1	Soil	SW8270C	Semivolatiles by GC/MS	18047	1	1/13/2005 11:05:00 AM	GCMS3_050113A

17-Jan-05

**DHL Analytical**

**Lab Order:** 0501027  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0501027-07C	NM-HB-DRL-4-1	Soil	D2216	Percent Moisture	PMOIST-01/10/05B	1	1/10/2005 3:00:00 PM	PMOIST_050110A



# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-7  
**Lab ID:** 0501027-01  
**Collection Date:** 1/6/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1,1-Trichloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1,2,2-Tetrachloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1,2-Trichloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1-Dichloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1-Dichloroethene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,1-Dichloropropene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2,3-Trichlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2,3-Trichloropropane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2,4-Trichlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2,4-Trimethylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2-Dibromo-3-chloropropane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2-Dibromoethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2-Dichlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2-Dichloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,2-Dichloropropane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,3,5-Trimethylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,3-Dichlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,3-Dichloropropane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
1,4-Dichlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
2,2-Dichloropropane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
2-Butanone	ND	5.9	17.7		µg/Kg-dry	1	1/13/2005 10:30:00 PM
2-Chloroethylvinylether	ND	5.9	17.7		µg/Kg-dry	1	1/13/2005 10:30:00 PM
2-Chlorotoluene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
2-Hexanone	ND	5.9	17.7		µg/Kg-dry	1	1/13/2005 10:30:00 PM
4-Chlorotoluene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
4-Methyl-2-pentanone	ND	5.9	17.7		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Acetone	111	24	59.0		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Benzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Bromobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Bromochloromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Bromodichloromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Bromoform	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Bromomethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Carbon disulfide	ND	5.9	17.7		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Carbon tetrachloride	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Chlorobenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Chloroethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Chloroform	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Chloromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM

**Qualifiers**  
 ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-7  
**Lab ID:** 0501027-01  
**Collection Date:** 1/6/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
cis-1,3-Dichloropropene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Dibromochloromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Dibromomethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Dichlorodifluoromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Ethylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Hexachlorobutadiene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Iodomethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Isopropylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
m,p-Xylene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Methyl tert-butyl ether	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Methylene chloride	ND	5.9	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
n-Butylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
n-Propylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Naphthalene	ND	5.9	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
o-Xylene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
p-Isopropyltoluene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
sec-Butylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Styrene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
tert-Butylbenzene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Tetrachloroethene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Toluene	ND	2.4	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
trans-1,2-Dichloroethene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
trans-1,3-Dichloropropene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Trichloroethene	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Trichlorofluoromethane	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Vinyl chloride	ND	1.2	5.90		µg/Kg-dry	1	1/13/2005 10:30:00 PM
Surr: 1,2-Dichloroethane-d4	125	0	52-149		% REC	1	1/13/2005 10:30:00 PM
Surr: 4-Bromofluorobenzene	151	0	65-135	S	% REC	1	1/13/2005 10:30:00 PM
Surr: Dibromofluoromethane	120	0	65-135		% REC	1	1/13/2005 10:30:00 PM
Surr: Toluene-d8	95.1	0	65-135		% REC	1	1/13/2005 10:30:00 PM

<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
1,2-Dichlorobenzene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
1,3-Dichlorobenzene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
1,4-Dichlorobenzene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,4,5-Trichlorophenol	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,4,6-Trichlorophenol	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,4-Dichlorophenol	ND	3.6	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,4-Dimethylphenol	ND	4.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit  
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 S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-1-7  
 Lab ID: 0501027-01  
 Collection Date: 1/6/2005 9:30:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst RPC</b>			
2,4-Dinitrophenol	ND	3.6	39.6		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,4-Dinitrotoluene	ND	3.6	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2,6-Dinitrotoluene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Chloronaphthalene	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Chlorophenol	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Methylnaphthalene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Methylphenol	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Nitroaniline	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
2-Nitrophenol	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
3,3'-Dichlorobenzidine	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
3-Nitroaniline	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4,6-Dinitro-2-methylphenol	ND	4.8	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Bromophenyl phenyl ether	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Chloro-3-methylphenol	ND	3.6	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Chloroaniline	ND	3.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Chlorophenyl phenyl ether	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Methylphenol	ND	6.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Nitroaniline	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
4-Nitrophenol	ND	8.4	39.6		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Acenaphthene	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Acenaphthylene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Aniline	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Anthracene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzo[a]anthracene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzo[a]pyrene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzo[b]fluoranthene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzo[g,h,i]perylene	ND	3.6	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzo[k]fluoranthene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Benzyl alcohol	ND	2.4	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Bis(2-chloroethoxy)methane	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Bis(2-chloroethyl)ether	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Bis(2-chloroisopropyl)ether	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Bis(2-ethylhexyl)phthalate	58.8	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Butyl benzyl phthalate	ND	6.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Chrysene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Di-n-butyl phthalate	22.4	6.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Di-n-octyl phthalate	ND	6.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Dibenz[a,h]anthracene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Dibenzofuran	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Diethyl phthalate	ND	6.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
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 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-7  
**Lab ID:** 0501027-01  
**Collection Date:** 1/6/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	6.0	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Fluoranthene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Fluorene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Hexachlorobenzene	ND	0.60	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Hexachlorobutadiene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Hexachlorocyclopentadiene	ND	3.6	19.8		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Hexachloroethane	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Indeno[1,2,3-cd]pyrene	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Isophorone	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
N-Nitrosodi-n-propylamine	ND	3.0	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
N-Nitrosodiphenylamine	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Naphthalene	ND	2.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Nitrobenzene	ND	4.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Pentachlorophenol	ND	5.4	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Phenanthrene	ND	1.8	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Phenol	ND	3.6	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Pyrene	ND	1.2	7.97		mg/Kg-dry	50	1/13/2005 12:21:00 PM
Surr: 2,4,6-Tribromophenol	99.5	0	36-126		% REC	50	1/13/2005 12:21:00 PM
Surr: 2-Fluorobiphenyl	74.6	0	45-125		% REC	50	1/13/2005 12:21:00 PM
Surr: 2-Fluorophenol	62.2	0	37-125		% REC	50	1/13/2005 12:21:00 PM
Surr: 4-Terphenyl-d14	87.1	0	45-125		% REC	50	1/13/2005 12:21:00 PM
Surr: Nitrobenzene-d5	62.2	0	45-125		% REC	50	1/13/2005 12:21:00 PM
Surr: Phenol-d6	74.6	0	40-125		% REC	50	1/13/2005 12:21:00 PM
<b>GC/HD - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	35000	360	1190		mg/Kg-dry	100	1/13/2005 10:19:25 AM
TPH-ORO >C28-C35	8790	360	1190		mg/Kg-dry	100	1/13/2005 10:19:25 AM
Surr: o-Terphenyl	44.0	0	47-142	S	% REC	100	1/13/2005 10:19:25 AM
Surr: Octacosane	134	0	25-162		% REC	100	1/13/2005 10:19:25 AM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	0.027	0.019	0.0468	J	mg/Kg-dry	1	1/11/2005 4:04:04 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	15.5	0.55	1.10		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Barium	182	0.55	2.19		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Cadmium	1.23	0.11	0.329		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Chromium	27.0	0.55	2.19		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Lead	115	0.11	0.329		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Selenium	1.50	0.16	0.548		mg/Kg-dry	5	1/12/2005 11:09:00 AM
Silver	ND	0.11	0.219		mg/Kg-dry	5	1/12/2005 11:09:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical**

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-7  
**Lab ID:** 0501027-01  
**Collection Date:** 1/6/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>		<b>Analyst: LY</b>			
Gasoline Range Organics	2.1	0.78	2.60	J	mg/Kg-dry	10	1/10/2005 2:02:50 PM
Surr: Tetrachlorethene	55.3	0	59-121	S	%REC	10	1/10/2005 2:02:50 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	19.3	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
                          J - Analyte detected between MDL and RL                      C - Sample Result or QC discussed in Case Narrative  
                          B - Analyte detected in the associated Method Blank              E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-1-8  
 Lab ID: 0501027-02  
 Collection Date: 1/6/2005 9:40:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1,1-Trichloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1,2,2-Tetrachloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1,2-Trichloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1-Dichloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1-Dichloroethene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,1-Dichloropropene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2,3-Trichlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2,3-Trichloropropane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2,4-Trichlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2,4-Trimethylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2-Dibromo-3-chloropropane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2-Dibromoethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2-Dichlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2-Dichloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,2-Dichloropropane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,3,5-Trimethylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,3-Dichlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,3-Dichloropropane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
1,4-Dichlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
2,2-Dichloropropane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
2-Butanone	ND	5.8	17.3		µg/Kg-dry	1	1/8/2005 12:28:00 AM
2-Chloroethylvinylether	ND	5.8	17.3		µg/Kg-dry	1	1/8/2005 12:28:00 AM
2-Chlorotoluene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
2-Hexanone	ND	5.8	17.3		µg/Kg-dry	1	1/8/2005 12:28:00 AM
4-Chlorotoluene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
4-Methyl-2-pentanone	ND	5.8	17.3		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Acetone	ND	23	57.6		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Benzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Bromobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Bromochloromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Bromodichloromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Bromoform	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Bromomethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Carbon disulfide	ND	5.8	17.3		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Carbon tetrachloride	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Chlorobenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Chloroethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Chloroform	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Chloromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-8  
**Lab ID:** 0501027-02  
**Collection Date:** 1/6/2005 9:40:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
cis-1,3-Dichloropropene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Dibromochloromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Dibromomethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Dichlorodifluoromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Ethylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Hexachlorobutadiene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Iodomethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Isopropylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
m,p-Xylene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Methyl tert-butyl ether	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Methylene chloride	ND	5.8	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
n-Butylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
n-Propylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Naphthalene	ND	5.8	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
o-Xylene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
p-Isopropyltoluene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
sec-Butylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Styrene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
tert-Butylbenzene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Tetrachloroethene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Toluene	ND	2.3	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
trans-1,2-Dichloroethene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
trans-1,3-Dichloropropene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Trichloroethene	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Trichlorofluoromethane	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Vinyl chloride	ND	1.2	5.76		µg/Kg-dry	1	1/8/2005 12:28:00 AM
Surr: 1,2-Dichloroethane-d4	114	0	52-149		% REC	1	1/8/2005 12:28:00 AM
Surr: 4-Bromofluorobenzene	95.1	0	65-135		% REC	1	1/8/2005 12:28:00 AM
Surr: Dibromofluoromethane	112	0	65-135		% REC	1	1/8/2005 12:28:00 AM
Surr: Toluene-d8	88.5	0	65-135		% REC	1	1/8/2005 12:28:00 AM

<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
1,2-Dichlorobenzene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
1,3-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
1,4-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,4,5-Trichlorophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,4,6-Trichlorophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,4-Dichlorophenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,4-Dimethylphenol	ND	0.089	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-8  
**Lab ID:** 0501027-02  
**Collection Date:** 1/6/2005 9:40:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.067	0.738		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,4-Dinitrotoluene	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2,6-Dinitrotoluene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Chloronaphthalene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Chlorophenol	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Methylnaphthalene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Methylphenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Nitroaniline	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
2-Nitrophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
3,3'-Dichlorobenzidine	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
3-Nitroaniline	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4,6-Dinitro-2-methylphenol	ND	0.089	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Bromophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Chloro-3-methylphenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Chloroaniline	ND	0.056	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Chlorophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Methylphenol	ND	0.11	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Nitroaniline	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
4-Nitrophenol	ND	0.16	0.738		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Acenaphthene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Acenaphthylene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Aniline	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Anthracene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzo[a]anthracene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzo[a]pyrene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzo[b]fluoranthene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzo[g,h,i]perylene	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzo[k]fluoranthene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Benzyl alcohol	ND	0.045	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Bis(2-chloroethyl)ether	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Bis(2-ethylhexyl)phthalate	0.372	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Butyl benzyl phthalate	ND	0.11	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Chrysene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Di-n-butyl phthalate	ND	0.11	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Di-n-octyl phthalate	ND	0.11	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Dibenzofuran	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Diethyl phthalate	ND	0.11	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-8  
**Lab ID:** 0501027-02  
**Collection Date:** 1/6/2005 9:40:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Fluoranthene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Fluorene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Hexachlorobenzene	ND	0.011	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Hexachlorobutadiene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Hexachlorocyclopentadiene	ND	0.067	0.369		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Hexachloroethane	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Isophorone	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
N-Nitrosodiphenylamine	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Naphthalene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Nitrobenzene	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Pentachlorophenol	ND	0.10	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Phenanthrene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Phenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 3:30:00 PM
Pyrene	0.060	0.022	0.149	J	mg/Kg-dry	1	1/13/2005 3:30:00 PM
Surr: 2,4,6-Tribromophenol	116	0	36-126		% REC	1	1/13/2005 3:30:00 PM
Surr: 2-Fluorobiphenyl	97.3	0	45-125		% REC	1	1/13/2005 3:30:00 PM
Surr: 2-Fluorophenol	87.1	0	37-125		% REC	1	1/13/2005 3:30:00 PM
Surr: 4-Terphenyl-d14	88.6	0	45-125		% REC	1	1/13/2005 3:30:00 PM
Surr: Nitrobenzene-d5	78.6	0	45-125		% REC	1	1/13/2005 3:30:00 PM
Surr: Phenol-d6	87.3	0	40-125		% REC	1	1/13/2005 3:30:00 PM
<b>GC/HD - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	1000	16	53.5		mg/Kg-dry	5	1/13/2005 10:44:41 AM
TPH-ORO >C28-C35	971	16	53.5		mg/Kg-dry	5	1/13/2005 10:44:41 AM
Surr: o-Terphenyl	103	0	47-142		% REC	5	1/13/2005 10:44:41 AM
Surr: Octacosane	86.8	0	25-162		% REC	5	1/13/2005 10:44:41 AM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	0.034	0.017	0.0414	J	mg/Kg-dry	1	1/11/2005 4:06:07 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	6.67	0.49	0.979		mg/Kg-dry	5	1/12/2005 11:12:00 AM
Barium	269	0.49	1.96		mg/Kg-dry	5	1/12/2005 11:12:00 AM
Cadmium	0.29	0.098	0.294	J	mg/Kg-dry	5	1/12/2005 11:12:00 AM
Chromium	10.1	0.49	1.96		mg/Kg-dry	5	1/12/2005 11:12:00 AM
Lead	43.3	0.098	0.294		mg/Kg-dry	5	1/12/2005 11:12:00 AM
Selenium	0.766	0.15	0.489		mg/Kg-dry	5	1/12/2005 11:12:00 AM
Silver	0.215	0.098	0.196		mg/Kg-dry	5	1/12/2005 11:12:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-8  
**Lab ID:** 0501027-02  
**Collection Date:** 1/6/2005 9:40:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>		<b>Analyst: LY</b>			
Gasoline Range Organics	ND	0.69	2.30		mg/Kg-dry	10	1/10/2005 2:24:20 PM
Surr: Tetrachlorethene	94.0	0	59-121		%REC	10	1/10/2005 2:24:20 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	13.4	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**    ND - Not Detected at the Method Detection Limit    S - Spike Recovery outside control limits  
                   J - Analyte detected between MDL and RL            C - Sample Result or QC discussed in Case Narrative  
                   B - Analyte detected in the associated Method Blank    E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-9  
**Lab ID:** 0501027-03  
**Collection Date:** 1/6/2005 9:50:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1,1-Trichloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1,2,2-Tetrachloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1,2-Trichloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1-Dichloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1-Dichloroethene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,1-Dichloropropene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2,3-Trichlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2,3-Trichloropropane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2,4-Trichlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2,4-Trimethylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2-Dibromo-3-chloropropane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2-Dibromoethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2-Dichlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2-Dichloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,2-Dichloropropane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,3,5-Trimethylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,3-Dichlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,3-Dichloropropane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
1,4-Dichlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
2,2-Dichloropropane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
2-Butanone	ND	5.5	16.6		µg/Kg-dry	1	1/8/2005 1:01:00 AM
2-Chloroethylvinylether	ND	5.5	16.6		µg/Kg-dry	1	1/8/2005 1:01:00 AM
2-Chlorotoluene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
2-Hexanone	ND	5.5	16.6		µg/Kg-dry	1	1/8/2005 1:01:00 AM
4-Chlorotoluene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
4-Methyl-2-pentanone	ND	5.5	16.6		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Acetone	ND	22	55.5		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Benzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Bromobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Bromochloromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Bromodichloromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Bromoform	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Bromomethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Carbon disulfide	ND	5.5	16.6		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Carbon tetrachloride	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Chlorobenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Chloroethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Chloroform	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Chloromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-9  
**Lab ID:** 0501027-03  
**Collection Date:** 1/6/2005 9:50:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
cis-1,3-Dichloropropene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Dibromochloromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Dibromomethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Dichlorodifluoromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Ethylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Hexachlorobutadiene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Iodomethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Isopropylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
m,p-Xylene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Methyl tert-butyl ether	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Methylene chloride	ND	5.5	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
n-Butylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
n-Propylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Naphthalene	ND	5.5	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
o-Xylene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
p-Isopropyltoluene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
sec-Butylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Styrene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
tert-Butylbenzene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Tetrachloroethene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Toluene	ND	2.2	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
trans-1,2-Dichloroethene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
trans-1,3-Dichloropropene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Trichloroethene	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Trichlorofluoromethane	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Vinyl chloride	ND	1.1	5.55		µg/Kg-dry	1	1/8/2005 1:01:00 AM
Surr: 1,2-Dichloroethane-d4	114	0	52-149		% REC	1	1/8/2005 1:01:00 AM
Surr: 4-Bromofluorobenzene	97.8	0	65-135		% REC	1	1/8/2005 1:01:00 AM
Surr: Dibromofluoromethane	112	0	65-135		% REC	1	1/8/2005 1:01:00 AM
Surr: Toluene-d8	89.6	0	65-135		% REC	1	1/8/2005 1:01:00 AM
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
1,2-Dichlorobenzene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
1,3-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
1,4-Dichlorobenzene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,4,5-Trichlorophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,4,6-Trichlorophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,4-Dichlorophenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,4-Dimethylphenol	ND	0.090	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-9  
**Lab ID:** 0501027-03  
**Collection Date:** 1/6/2005 9:50:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.067	0.740		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,4-Dinitrotoluene	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2,6-Dinitrotoluene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Chloronaphthalene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Chlorophenol	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Methylnaphthalene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Methylphenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Nitroaniline	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
2-Nitrophenol	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
3,3'-Dichlorobenzidine	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
3-Nitroaniline	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4,6-Dinitro-2-methylphenol	ND	0.090	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Bromophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Chloro-3-methylphenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Chloroaniline	ND	0.056	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Chlorophenyl phenyl ether	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Methylphenol	ND	0.11	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Nitroaniline	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
4-Nitrophenol	ND	0.16	0.740		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Acenaphthene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Acenaphthylene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Aniline	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Anthracene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzo[a]anthracene	ND	0.022	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzo[a]pyrene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzo[b]fluoranthene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzo[g,h,i]perylene	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzo[k]fluoranthene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Benzyl alcohol	ND	0.045	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Bis(2-chloroethyl)ether	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Bis(2-ethylhexyl)phthalate	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Butyl benzyl phthalate	ND	0.11	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Chrysene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Di-n-butyl phthalate	ND	0.11	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Di-n-octyl phthalate	ND	0.11	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Dibenzofuran	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Diethyl phthalate	ND	0.11	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - T PH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-9  
**Lab ID:** 0501027-03  
**Collection Date:** 1/6/2005 9:50:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Fluoranthene	0.030	0.022	0.149	J	mg/Kg-dry	1	1/13/2005 4:08:00 PM
Fluorene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Hexachlorobenzene	ND	0.011	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Hexachlorobutadiene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Hexachlorocyclopentadiene	ND	0.067	0.370		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Hexachloroethane	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Isophorone	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
N-Nitrosodiphenylamine	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Naphthalene	ND	0.045	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Nitrobenzene	ND	0.078	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Pentachlorophenol	ND	0.10	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Phenanthrene	ND	0.034	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Phenol	ND	0.067	0.149		mg/Kg-dry	1	1/13/2005 4:08:00 PM
Pyrene	0.022	0.022	0.149	J	mg/Kg-dry	1	1/13/2005 4:08:00 PM
Surr: 2,4,6-Tribromophenol	127	0	36-126	S	% REC	1	1/13/2005 4:08:00 PM
Surr: 2-Fluorobiphenyl	100	0	45-125		% REC	1	1/13/2005 4:08:00 PM
Surr: 2-Fluorophenol	88.3	0	37-125		% REC	1	1/13/2005 4:08:00 PM
Surr: 4-Terphenyl-d14	90.0	0	45-125		% REC	1	1/13/2005 4:08:00 PM
Surr: Nitrobenzene-d5	77.4	0	45-125		% REC	1	1/13/2005 4:08:00 PM
Surr: Phenol-d6	84.6	0	40-125		% REC	1	1/13/2005 4:08:00 PM
<b>GC/FID - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	442	3.4	11.4		mg/Kg-dry	1	1/12/2005 1:40:56 PM
TPH-ORO >C28-C35	500	3.4	11.4		mg/Kg-dry	1	1/12/2005 1:40:56 PM
Surr: o-Terphenyl	68.0	0	47-142		% REC	1	1/12/2005 1:40:56 PM
Surr: Octacosane	32.4	0	25-162		% REC	1	1/12/2005 1:40:56 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	0.0494	0.019	0.0469		mg/Kg-dry	1	1/11/2005 3:57:57 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	10.6	0.54	1.09		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Barium	334	0.54	2.17		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Cadmium	1.67	0.11	0.326		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Chromium	21.1	0.54	2.17		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Lead	184	0.11	0.326		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Selenium	0.808	0.16	0.543		mg/Kg-dry	5	1/12/2005 10:11:00 AM
Silver	ND	0.11	0.217		mg/Kg-dry	5	1/12/2005 10:11:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-9  
**Lab ID:** 0501027-03  
**Collection Date:** 1/6/2005 9:50:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>					<b>Analyst: LY</b>
Gasoline Range Organics	0.94	0.69	2.29	J	mg/Kg-dry	10	1/10/2005 12:58:35 PM
Surr: Tetrachlorethene	76.4	0	59-121		%REC	10	1/10/2005 12:58:35 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>					<b>Analyst: JBC</b>
Percent Moisture	14.8	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**    ND - Not Detected at the Method Detection Limit    S - Spike Recovery outside control limits  
                   J - Analyte detected between MDL and RL            C - Sample Result or QC discussed in Case Narrative  
                   B - Analyte detected in the associated Method Blank    E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-10  
**Lab ID:** 0501027-04  
**Collection Date:** 1/6/2005 10:00:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.024	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
1,2-Dichlorobenzene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
1,3-Dichlorobenzene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
1,4-Dichlorobenzene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4,5-Trichlorophenol	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4,6-Trichlorophenol	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4-Dichlorophenol	ND	0.072	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4-Dimethylphenol	ND	0.096	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4-Dinitrophenol	ND	0.072	0.789		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,4-Dinitrotoluene	ND	0.072	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2,6-Dinitrotoluene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Chloronaphthalene	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Chlorophenol	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Methylnaphthalene	ND	0.024	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Methylphenol	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Nitroaniline	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
2-Nitrophenol	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
3,3'-Dichlorobenzidine	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
3-Nitroaniline	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4,6-Dinitro-2-methylphenol	ND	0.096	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Bromophenyl phenyl ether	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Chloro-3-methylphenol	ND	0.072	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Chloroaniline	ND	0.060	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Chlorophenyl phenyl ether	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Methylphenol	ND	0.12	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Nitroaniline	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
4-Nitrophenol	ND	0.17	0.789		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Acenaphthene	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Acenaphthylene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Aniline	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Anthracene	ND	0.024	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzo[a]anthracene	ND	0.024	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzo[a]pyrene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzo[b]fluoranthene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzo[g,h,i]perylene	ND	0.072	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzo[k]fluoranthene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Benzyl alcohol	ND	0.048	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Bis(2-chloroethoxy)methane	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Bis(2-chloroethyl)ether	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Bis(2-chloroisopropyl)ether	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 17-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-1-10  
 Lab ID: 0501027-04  
 Collection Date: 1/6/2005 10:00:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Bis(2-ethylhexyl)phthalate	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Butyl benzyl phthalate	ND	0.12	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Chrysene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Di-n-butyl phthalate	ND	0.12	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Di-n-octyl phthalate	ND	0.12	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Dibenz[a,h]anthracene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Dibenzofuran	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Diethyl phthalate	ND	0.12	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Dimethyl phthalate	ND	0.12	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Fluoranthene	0.048	0.024	0.159	J	mg/Kg-dry	1	1/13/2005 11:43:00 AM
Fluorene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Hexachlorobenzene	ND	0.012	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Hexachlorobutadiene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Hexachlorocyclopentadiene	ND	0.072	0.394		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Hexachloroethane	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Indeno[1,2,3-cd]pyrene	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Isophorone	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
N-Nitrosodi-n-propylamine	ND	0.060	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
N-Nitrosodiphenylamine	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Naphthalene	ND	0.048	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Nitrobenzene	ND	0.084	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Pentachlorophenol	ND	0.11	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Phenanthrene	ND	0.036	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Phenol	ND	0.072	0.159		mg/Kg-dry	1	1/13/2005 11:43:00 AM
Pyrene	0.040	0.024	0.159	J	mg/Kg-dry	1	1/13/2005 11:43:00 AM
Surr: 2,4,6-Tribromophenol	113	0	36-126		% REC	1	1/13/2005 11:43:00 AM
Surr: 2-Fluorobiphenyl	101	0	45-125		% REC	1	1/13/2005 11:43:00 AM
Surr: 2-Fluorophenol	96.0	0	37-125		% REC	1	1/13/2005 11:43:00 AM
Surr: 4-Terphenyl-d14	96.3	0	45-125		% REC	1	1/13/2005 11:43:00 AM
Surr: Nitrobenzene-d5	88.8	0	45-125		% REC	1	1/13/2005 11:43:00 AM
Surr: Phenol-d6	95.5	0	40-125		% REC	1	1/13/2005 11:43:00 AM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	ND	0.019	0.0467		mg/Kg-dry	1	1/11/2005 4:08:10 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	11.3	0.53	1.06		mg/Kg-dry	5	1/12/2005 11:16:00 AM
Barium	595	2.7	10.6		mg/Kg-dry	25	1/12/2005 10:57:00 AM
Cadmium	0.320	0.11	0.319		mg/Kg-dry	5	1/12/2005 11:16:00 AM
Chromium	12.1	0.53	2.13		mg/Kg-dry	5	1/12/2005 11:16:00 AM
Lead	52.7	0.11	0.319		mg/Kg-dry	5	1/12/2005 11:16:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range P pattern

**DHL Analytical**

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-1-10  
**Lab ID:** 0501027-04  
**Collection Date:** 1/6/2005 10:00:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Selenium	0.900	0.16	0.532		mg/Kg-dry	5	1/12/2005 11:16:00 AM
Silver	ND	0.11	0.213		mg/Kg-dry	5	1/12/2005 11:16:00 AM
<b>PERCENT MOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	19.0	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
                          J - Analyte detected between MDL and RL                      C - Sample Result or QC discussed in Case Narrative  
                          B - Analyte detected in the associated Method Blank              E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-1  
**Lab ID:** 0501027-05  
**Collection Date:** 1/6/2005 10:10:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
1,1,1,2-Tetrachloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1,1-Trichloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1,2,2-Tetrachloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1,2-Trichloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1-Dichloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1-Dichloroethene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,1-Dichloropropene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2,3-Trichlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2,3-Trichloropropane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2,4-Trichlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2,4-Trimethylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2-Dibromo-3-chloropropane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2-Dibromoethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2-Dichlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2-Dichloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,2-Dichloropropane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,3,5-Trimethylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,3-Dichlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,3-Dichloropropane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
1,4-Dichlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
2,2-Dichloropropane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
2-Butanone	ND	5.8	17.5		µg/Kg-dry	1	1/7/2005 11:56:00 PM
2-Chloroethylvinylether	ND	5.8	17.5		µg/Kg-dry	1	1/7/2005 11:56:00 PM
2-Chlorotoluene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
2-Hexanone	ND	5.8	17.5		µg/Kg-dry	1	1/7/2005 11:56:00 PM
4-Chlorotoluene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
4-Methyl-2-pentanone	ND	5.8	17.5		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Acetone	ND	23	58.4		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Benzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Bromobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Bromochloromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Bromodichloromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Bromoform	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Bromomethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Carbon disulfide	ND	5.8	17.5		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Carbon tetrachloride	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Chlorobenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Chloroethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Chloroform	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Chloromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-1  
**Lab ID:** 0501027-05  
**Collection Date:** 1/6/2005 10:10:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILES (5035) BY GC/MS</b>		<b>SW8260B</b>		<b>Analyst: DO</b>			
cis-1,2-Dichloroethene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
cis-1,3-Dichloropropene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Dibromochloromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Dibromomethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Dichlorodifluoromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Ethylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Hexachlorobutadiene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Iodomethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Isopropylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
m,p-Xylene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Methyl tert-butyl ether	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Methylene chloride	ND	5.8	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
n-Butylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
n-Propylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Naphthalene	ND	5.8	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
o-Xylene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
p-Isopropyltoluene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
sec-Butylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Styrene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
tert-Butylbenzene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Tetrachloroethene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Toluene	ND	2.3	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
trans-1,2-Dichloroethene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
trans-1,3-Dichloropropene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Trichloroethene	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Trichlorofluoromethane	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Vinyl chloride	ND	1.2	5.84		µg/Kg-dry	1	1/7/2005 11:56:00 PM
Surr: 1,2-Dichloroethane-d4	113	0	52-149		% REC	1	1/7/2005 11:56:00 PM
Surr: 4-Bromofluorobenzene	94.3	0	65-135		% REC	1	1/7/2005 11:56:00 PM
Surr: Dibromofluoromethane	112	0	65-135		% REC	1	1/7/2005 11:56:00 PM
Surr: Toluene-d8	89.0	0	65-135		% REC	1	1/7/2005 11:56:00 PM
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
1,2-Dichlorobenzene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
1,3-Dichlorobenzene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
1,4-Dichlorobenzene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,4,5-Trichlorophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,4,6-Trichlorophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,4-Dichlorophenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,4-Dimethylphenol	ND	0.089	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-3-1  
 Lab ID: 0501027-05  
 Collection Date: 1/6/2005 10:10:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
2,4-Dinitrophenol	ND	0.067	0.736		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,4-Dinitrotoluene	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2,6-Dinitrotoluene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Chloronaphthalene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Chlorophenol	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Methylnaphthalene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Methylphenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Nitroaniline	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
2-Nitrophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
3,3'-Dichlorobenzidine	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
3-Nitroaniline	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4,6-Dinitro-2-methylphenol	ND	0.089	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Bromophenyl phenyl ether	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Chloro-3-methylphenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Chloroaniline	ND	0.056	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Chlorophenyl phenyl ether	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Methylphenol	ND	0.11	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Nitroaniline	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
4-Nitrophenol	ND	0.16	0.736		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Acenaphthene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Acenaphthylene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Aniline	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Anthracene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzo[a]anthracene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzo[a]pyrene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzo[b]fluoranthene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzo[g,h,i]perylene	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzo[k]fluoranthene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Benzyl alcohol	ND	0.045	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Bis(2-chloroethyl)ether	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Bis(2-ethylhexyl)phthalate	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Butyl benzyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Chrysene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Di-n-butyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Di-n-octyl phthalate	0.505	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Dibenzofuran	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Diethyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-1  
**Lab ID:** 0501027-05  
**Collection Date:** 1/6/2005 10:10:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Dimethyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Fluoranthene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Fluorene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Hexachlorobenzene	ND	0.011	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Hexachlorobutadiene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Hexachlorocyclopentadiene	ND	0.067	0.368		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Hexachloroethane	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Isophorone	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
N-Nitrosodiphenylamine	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Naphthalene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Nitrobenzene	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Pentachlorophenol	ND	0.10	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Phenanthrene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Phenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Pyrene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:14:00 PM
Surr: 2,4,6-Tribromophenol	99.0	0	36-126		% REC	1	1/13/2005 2:14:00 PM
Surr: 2-Fluorobiphenyl	87.8	0	45-125		% REC	1	1/13/2005 2:14:00 PM
Surr: 2-Fluorophenol	82.8	0	37-125		% REC	1	1/13/2005 2:14:00 PM
Surr: 4-Terphenyl-d14	89.3	0	45-125		% REC	1	1/13/2005 2:14:00 PM
Surr: Nitrobenzene-d5	76.6	0	45-125		% REC	1	1/13/2005 2:14:00 PM
Surr: Phenol-d6	82.3	0	40-125		% REC	1	1/13/2005 2:14:00 PM
<b>GC/FID - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	22.6	3.4	11.3		mg/Kg-dry	1	1/12/2005 4:14:02 PM
TPH-ORO >C28-C35	15.9	3.4	11.3		mg/Kg-dry	1	1/12/2005 4:14:02 PM
Surr: o-Terphenyl	75.9	0	47-142		% REC	1	1/12/2005 4:14:02 PM
Surr: Octacosane	81.6	0	25-162		% REC	1	1/12/2005 4:14:02 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	ND	0.017	0.0413		mg/Kg-dry	1	1/11/2005 4:10:13 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	6.10	0.51	1.02		mg/Kg-dry	5	1/12/2005 11:20:00 AM
Barium	762	2.5	10.2		mg/Kg-dry	25	1/12/2005 11:01:00 AM
Cadmium	0.22	0.10	0.306	J	mg/Kg-dry	5	1/12/2005 11:20:00 AM
Chromium	19.0	0.51	2.04		mg/Kg-dry	5	1/12/2005 11:20:00 AM
Lead	31.3	0.10	0.306		mg/Kg-dry	5	1/12/2005 11:20:00 AM
Selenium	0.828	0.15	0.510		mg/Kg-dry	5	1/12/2005 11:20:00 AM
Silver	ND	0.10	0.204		mg/Kg-dry	5	1/12/2005 11:20:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-1  
**Lab ID:** 0501027-05  
**Collection Date:** 1/6/2005 10:10:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>GAS</b>		<b>M8015V</b>			<b>Analyst: LY</b>		
Gasoline Range Organics	5.32	0.66	2.22		mg/Kg-dry	10	1/10/2005 2:52:15 PM
Surr: Tetrachlorethene	91.3	0	59-121		% REC	10	1/10/2005 2:52:15 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>			<b>Analyst: JBC</b>		
Percent Moisture	13.2	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**    ND - Not Detected at the Method Detection Limit    S - Spike Recovery outside control limits  
                   J - Analyte detected between MDL and RL                C - Sample Result or QC discussed in Case Narrative  
                   B - Analyte detected in the associated Method Blank    E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-2  
**Lab ID:** 0501027-06  
**Collection Date:** 1/6/2005 10:20:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
1,2-Dichlorobenzene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
1,3-Dichlorobenzene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
1,4-Dichlorobenzene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4,5-Trichlorophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4,6-Trichlorophenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4-Dichlorophenol	ND	0.089	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4-Dimethylphenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4-Dinitrophenol	ND	0.056	0.735		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,4-Dinitrotoluene	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2,6-Dinitrotoluene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Chloronaphthalene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Chlorophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Methylnaphthalene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Methylphenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Nitroaniline	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
2-Nitrophenol	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
3,3'-Dichlorobenzidine	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
3-Nitroaniline	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4,6-Dinitro-2-methylphenol	ND	0.089	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Bromophenyl phenyl ether	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Chloro-3-methylphenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Chloroaniline	ND	0.056	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Chlorophenyl phenyl ether	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Methylphenol	ND	0.11	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Nitroaniline	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
4-Nitrophenol	ND	0.16	0.735		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Acenaphthene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Acenaphthylene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Aniline	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Anthracene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzo[a]anthracene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzo[a]pyrene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzo[b]fluoranthene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzo[g,h,i]perylene	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzo[k]fluoranthene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Benzyl alcohol	ND	0.045	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Bis(2-chloroethoxy)methane	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Bis(2-chloroethyl)ether	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Bis(2-chloroisopropyl)ether	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern



# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-2  
**Lab ID:** 0501027-06  
**Collection Date:** 1/6/2005 10:20:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Bis(2-ethylhexyl)phthalate	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Butyl benzyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Chrysene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Di-n-butyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Di-n-octyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Dibenz[a,h]anthracene	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Dibenzofuran	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Diethyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Dimethyl phthalate	ND	0.11	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Fluoranthene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Fluorene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Hexachlorobenzene	ND	0.011	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Hexachlorobutadiene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Hexachlorocyclopentadiene	ND	0.067	0.368		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Hexachloroethane	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Isophorone	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
N-Nitrosodi-n-propylamine	ND	0.056	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
N-Nitrosodiphenylamine	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Naphthalene	ND	0.045	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Nitrobenzene	ND	0.078	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Pentachlorophenol	ND	0.10	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Phenanthrene	ND	0.033	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Phenol	ND	0.067	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Pyrene	ND	0.022	0.148		mg/Kg-dry	1	1/13/2005 2:52:00 PM
Surr: 2,4,6-Tribromophenol	105	0	36-126		% REC	1	1/13/2005 2:52:00 PM
Surr: 2-Fluorobiphenyl	91.5	0	45-125		% REC	1	1/13/2005 2:52:00 PM
Surr: 2-Fluorophenol	84.8	0	37-125		% REC	1	1/13/2005 2:52:00 PM
Surr: 4-Terphenyl-d14	92.0	0	45-125		% REC	1	1/13/2005 2:52:00 PM
Surr: Nitrobenzene-d5	77.6	0	45-125		% REC	1	1/13/2005 2:52:00 PM
Surr: Phenol-d6	85.3	0	40-125		% REC	1	1/13/2005 2:52:00 PM
<b>GC/HD - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH-DRO C10-C28	ND	3.2	10.6		mg/Kg-dry	1	1/12/2005 4:39:03 PM
TPH-ORO >C28-C35	13.4	3.2	10.6		mg/Kg-dry	1	1/12/2005 4:39:03 PM
Surr: o-Terphenyl	82.6	0	47-142		% REC	1	1/12/2005 4:39:03 PM
Surr: Octacosane	90.2	0	25-162		% REC	1	1/12/2005 4:39:03 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	0.018	0.016	0.0389	J	mg/Kg-dry	1	1/11/2005 4:16:31 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-3-2  
**Lab ID:** 0501027-06  
**Collection Date:** 1/6/2005 10:20:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	8.11	0.53	1.06		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Barium	269	0.53	2.13		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Cadmium	0.320	0.11	0.319		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Chromium	11.9	0.53	2.13		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Lead	38.9	0.11	0.319		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Selenium	0.664	0.16	0.532		mg/Kg-dry	5	1/12/2005 11:24:00 AM
Silver	ND	0.11	0.213		mg/Kg-dry	5	1/12/2005 11:24:00 AM
<b>GAS</b>		<b>M8015V</b>		<b>Analyst: LY</b>			
Gasoline Range Organics	ND	0.71	2.35		mg/Kg-dry	10	1/10/2005 3:43:40 PM
Surr: Tetrachlorethene	83.5	0	59-121		% REC	10	1/10/2005 3:43:40 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	13.7	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
                          J - Analyte detected between MDL and RL                      C - Sample Result or QC discussed in Case Narrative  
                          B - Analyte detected in the associated Method Blank              E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-4-1  
 Lab ID: 0501027-07  
 Collection Date: 1/6/2005 10:30:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
1,2,4-Trichlorobenzene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
1,2-Dichlorobenzene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
1,3-Dichlorobenzene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
1,4-Dichlorobenzene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4,5-Trichlorophenol	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4,6-Trichlorophenol	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4-Dichlorophenol	ND	0.069	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4-Dimethylphenol	ND	0.092	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4-Dinitrophenol	ND	0.069	0.757		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,4-Dinitrotoluene	ND	0.069	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2,6-Dinitrotoluene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Chloronaphthalene	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Chlorophenol	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Methylnaphthalene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Methylphenol	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Nitroaniline	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
2-Nitrophenol	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
3,3'-Dichlorobenzidine	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
3-Nitroaniline	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4,6-Dinitro-2-methylphenol	ND	0.092	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Bromophenyl phenyl ether	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Chloro-3-methylphenol	ND	0.069	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Chloroaniline	ND	0.057	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Chlorophenyl phenyl ether	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Methylphenol	ND	0.11	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Nitroaniline	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
4-Nitrophenol	ND	0.16	0.757		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Acenaphthene	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Acenaphthylene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Aniline	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Anthracene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzo[a]anthracene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzo[a]pyrene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzo[b]fluoranthene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzo[g,h,i]perylene	ND	0.069	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzo[k]fluoranthene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Benzyl alcohol	ND	0.046	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Bis(2-chloroethoxy)methane	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Bis(2-chloroethyl)ether	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Bis(2-chloroisopropyl)ether	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range P pattern

# DHL Analytical

Date: 17-Jan-05

**CLIENT:** SMITH INTERNATIONAL  
**Project Name:** Sii Smith Services Hobbs NM  
**Project No:** Drilco Hobbs-110403  
**Lab Order:** 0501027

**Client Sample ID:** NM-HB-DRL-4-1  
**Lab ID:** 0501027-07  
**Collection Date:** 1/6/2005 10:30:00 AM  
**Matrix:** SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>SEMIVOLATILES BY GC/MS</b>		<b>SW8270C</b>		<b>Analyst: RPC</b>			
Bis(2-ethylhexyl)phthalate	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Butyl benzyl phthalate	ND	0.11	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Chrysene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Di-n-butyl phthalate	ND	0.11	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Di-n-octyl phthalate	ND	0.11	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Dibenz[a,h]anthracene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Dibenzofuran	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Diethyl phthalate	ND	0.11	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Dimethyl phthalate	ND	0.11	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Fluoranthene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Fluorene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Hexachlorobenzene	ND	0.011	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Hexachlorobutadiene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Hexachlorocyclopentadiene	ND	0.069	0.378		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Hexachloroethane	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Indeno[1,2,3-cd]pyrene	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Isophorone	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
N-Nitrosodi-n-propylamine	ND	0.057	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
N-Nitrosodiphenylamine	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Naphthalene	ND	0.046	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Nitrobenzene	ND	0.080	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Pentachlorophenol	ND	0.10	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Phenanthrene	ND	0.034	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Phenol	ND	0.069	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Pyrene	ND	0.023	0.153		mg/Kg-dry	1	1/13/2005 11:05:00 AM
Surr: 2,4,6-Tribromophenol	104	0	36-126		% REC	1	1/13/2005 11:05:00 AM
Surr: 2-Fluorobiphenyl	96.8	0	45-125		% REC	1	1/13/2005 11:05:00 AM
Surr: 2-Fluorophenol	90.5	0	37-125		% REC	1	1/13/2005 11:05:00 AM
Surr: 4-Terphenyl-d14	99.3	0	45-125		% REC	1	1/13/2005 11:05:00 AM
Surr: Nitrobenzene-d5	86.3	0	45-125		% REC	1	1/13/2005 11:05:00 AM
Surr: Phenol-d6	89.8	0	40-125		% REC	1	1/13/2005 11:05:00 AM
<b>GC/FID - SOIL DRO+ORO</b>		<b>M8015D</b>		<b>Analyst: RPC</b>			
TPH+DRO C10-C28	ND	3.2	10.8		mg/Kg-dry	1	1/12/2005 2:06:31 PM
TPH+ORO >C28- C35	ND	3.2	10.8		mg/Kg-dry	1	1/12/2005 2:06:31 PM
Surr: o-Terphenyl	78.9	0	47-142		% REC	1	1/12/2005 2:06:31 PM
Surr: Octacosane	67.4	0	25-162		% REC	1	1/12/2005 2:06:31 PM
<b>TOTAL MERCURY</b>		<b>SW7471A</b>		<b>Analyst: IH</b>			
Mercury	0.020	0.018	0.0453	J	mg/Kg-dry	1	1/11/2005 4:18:33 PM
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			

**Qualifiers** ND - Not Detected at the Method Detection Limit S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank E - TPH pattern not Gas or Diesel Range Pattern

# DHL Analytical

Date: 17-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501027

Client Sample ID: NM-HB-DRL-4-1  
 Lab ID: 0501027-07  
 Collection Date: 1/6/2005 10:30:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS</b>		<b>SW6020</b>		<b>Analyst: IH</b>			
Arsenic	7.34	0.51	1.02		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Barium	190	0.51	2.03		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Cadmium	0.361	0.10	0.305		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Chromium	15.3	0.51	2.03		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Lead	29.9	0.10	0.305		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Selenium	0.795	0.15	0.509		mg/Kg-dry	5	1/12/2005 11:28:00 AM
Silver	ND	0.10	0.203		mg/Kg-dry	5	1/12/2005 11:28:00 AM
<b>GAS</b>		<b>M8015V</b>		<b>Analyst: LY</b>			
Gasoline Range Organics	ND	0.70	2.34		mg/Kg-dry	10	1/10/2005 4:05:05 PM
Surr: Tetrachlorethene	93.8	0	59-121		% REC	10	1/10/2005 4:05:05 PM
<b>PERCENT MOISTURE</b>		<b>D2216</b>		<b>Analyst: JBC</b>			
Percent Moisture	14.5	0			WT%	1	1/10/2005 3:00:00 PM

**Qualifiers**      ND - Not Detected at the Method Detection Limit      S - Spike Recovery outside control limits  
 J - Analyte detected between MDL and RL      C - Sample Result or QC discussed in Case Narrative  
 B - Analyte detected in the associated Method Blank      E - TPH pattern not Gas or Diesel Range Pattern

**CLIENT:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**Lab Order:** 0501027

**CASE NARRATIVE**

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Method SW8260B - Volatile Organics  
Method SW8270C - Semivolatile Organics  
Method SW6020 - Metals Analysis  
Method SW7471A - Mercury Analysis  
Method M8015D - DRO/ORO Analysis  
Method M8015V - Gasoline Range Organics  
Method D2216 - Percent Moisture

**LOG IN**

Samples were received and log-in performed on 1/7/05. A total of 7 samples were received. Sample NM-HB-DRL-1-9 had 1 of 9 VOA vials broken in transit.

**DRO/ORO**

For DRO/ORO analysis performed on 1/13/05 the surrogate recoveries for sample NM-HB-DRL-1-7 and the LCS and ICV were below control limits for o-Terphenyl or Octacosane. These are flagged accordingly. No further corrective actions were required and no sample results were adversely affected.

For DRO/ORO analysis performed on 1/12/05 the matrix spike and matrix spike duplicate recoveries were out of control limits. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits. No further corrective actions were required and no sample results were adversely affected.

**GASOLINE RANGE ORGANICS**

For GRO analysis performed on 1/10/05 the surrogate recovery for sample NM-HB-DRL-1-7 was slightly below control limits. The sample was re-prepped and re-analyzed which confirmed matrix effect.

**METALS**

For Metals analysis performed on 1/12/05 the matrix spike and matrix spike duplicate recoveries were out of control limits for some analytes. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these analytes. No further corrective actions were required and no sample results were adversely affected.

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**CLIENT:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**Lab Order:** 0501027

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## CASE NARRATIVE

### SEMIVOLATILES

For Semivolatiles analysis performed on 1/13/05 sample NM-HB-DRL-1-7 was diluted prior to analysis due to the nature of the sample.

For Semivolatiles analysis performed on 1/13/05 the surrogate recoveries sample NM-HB-DRL-1-7 and the matrix spike and matrix spike duplicate were slightly above control limits for 2,4,6-Tribromophenol. These are flagged accordingly in the QC summary report. No further corrective actions were required and no sample results were adversely affected.

### VOLATILES

For Volatiles analysis performed on 1/13/05 sample NM-HB-DRL-1-7 had the low internal response for 1,4-Dichlorobenzene-d4. The sample was re-prepped and re-analyzed which confirmed matrix interference.

For Volatiles analysis performed on 1/7/05 Toluene was detected below the reporting limit in the method blank.

For Volatiles analysis performed on 1/7/05 the matrix spike and matrix spike duplicate recoveries were below control limits for Chlorobenzene and Toluene. In addition, the matrix spike and matrix spike duplicate had the RPD out of control limits for Chlorobenzene. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for these compounds. No further corrective actions were required and no sample results were adversely affected.

For Volatiles analysis performed on 1/13/05 the surrogate recovery for sample NM-HB-DRL-1-7 was above control limits for 4-Bromofluorobenzene. No further corrective actions were required and no sample results were adversely affected.

### DATA REPORTING

Sample reports include the Method Detection Limit (MDL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting MDL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometimes appear that a "J" flagged result is lower than the MDL if the sample result is very near the MDL.

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: GC15\_050112A

Sample ID <b>MB-18045</b>	Batch ID: <b>18045</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 12:34:59 PM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	ND	10								
TPH-ORO >C28-C35	ND	10								
Surr: o-Terphenyl	12.61	0	15	0	84.1	47	142	0		
Surr: Octacosane	7.117	0	15	0	47.4	25	162	0		

Sample ID <b>LCS-18045</b>	Batch ID: <b>18045</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 12:34:59 PM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	197.2	10	250	0	78.9	50	114	0		
Surr: o-Terphenyl	11.7	0	15	0	78	47	142	0		
Surr: Octacosane	0.9708	0	15	0	6.47	25	162	0		S

Sample ID <b>0501027-03CMS</b>	Batch ID: <b>18045</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 2:06:31 PM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	457.7	11.3	282.1	442.3	5.48	50	114	0		S
Surr: o-Terphenyl	13.5	0	16.93	0	79.8	47	142	0		
Surr: Octacosane	12.92	0	16.93	0	76.3	25	162	0		

Sample ID <b>0501027-03CMSD</b>	Batch ID: <b>18045</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 2:32:26 PM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	430.2	11.2	279.5	442.3	-4.33	50	114	6.21	30	S
Surr: o-Terphenyl	13.07	0	16.77	0	77.9	47	142	0	0	
Surr: Octacosane	13.82	0	16.77	0	82.4	25	162	0	0	

Sample ID <b>CCV-050112</b>	Batch ID: <b>R20652</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 5:16:22 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	507.8	10	500	0	102	85	115	0		
TPH-ORO >C28-C35	1.705	10	0	0	0	0	0	0		
Surr: o-Terphenyl	17.91	0	20	0	89.5	47	142	0		
Surr: Octacosane	19.01	0	20	0	95.1	25	162	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC15\_050112A

Sample ID <b>CCV-050112</b>	Batch ID: <b>R20652</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 5:16:22 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	471.1	10	500	0	94.2	85	115	0		
TPH-ORO >C28-C35	7.611	10	0	0	0	0	0	0		
Surr: o-Terphenyl	16.54	0	20	0	82.7	47	142	0		
Surr: Octacosane	17.12	0	20	0	85.6	25	162	0		

Sample ID <b>ICV-050112</b>	Batch ID: <b>R20652</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 12:09:54 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	982.3	10	1000	0	98.2	85	115	0		
TPH-ORO >C28-C35	0.2143	10	0	0	0	0	0	0		
Surr: o-Terphenyl	20.55	0	25	0	82.2	47	142	0		
Surr: Octacosane	9.111	0	25	0	36.4	25	162	0		

Sample ID <b>ICV-050112</b>	Batch ID: <b>R20652</b>	TestNo: <b>M 8015D</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GC15_050112A</b>	Analysis Date: <b>1/12/2005 12:09:54 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	867.6	10	1000	0	86.8	85	115	0		
TPH-ORO >C28-C35	0.8891	10	0	0	0	0	0	0		
Surr: o-Terphenyl	16.62	0	25	0	66.5	47	142	0		
Surr: Octacosane	1.276	0	25	0	5.11	25	162	0		S

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GC15\_050113A

Sample ID <b>CCV-050113</b>	Batch ID: <b>R20662</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>
SampType <b>CCV</b>	Run ID: <b>GC15_050113A</b>	Analysis Date: <b>1/13/2005 11:35:42 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	525	10	500	0	105	85	115	0		
TPH-ORO >C28-C35	1.451	10	0	0	0	0	0	0		
Surr: o-Terphenyl	18.84	0	20	0	94.2	47	142	0		
Surr: Octacosane	18.94	0	20	0	94.7	25	162	0		

Sample ID <b>ICV-050113</b>	Batch ID: <b>R20662</b>	TestNo: <b>M8015D</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GC15_050113A</b>	Analysis Date: <b>1/13/2005 9:28:40 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
TPH-DRO C10-C28	1040	10	1000	0	104	85	115	0		
TPH-ORO >C28-C35	ND	10	0	0	0	0	0	0		
Surr: o-Terphenyl	21.43	0	25	0	85.7	47	142	0		
Surr: Octacosane	14.52	0	25	0	58.1	25	162	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GC4\_050110A

Sample ID <b>MB-18031</b>	Batch ID: <b>18031</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>MBLK</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 12:03:57 PM</b>	Prep Date: <b>1/10/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	ND	2								
Surr: Tetrachlorethene	1.933	0	2	0	96.7	59	121	0		

Sample ID <b>LCS-18031</b>	Batch ID: <b>18031</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>LCS</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 10:27:59 AM</b>	Prep Date: <b>1/10/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	22.49	2	25	0	90	68	106	0		
Surr: Tetrachlorethene	2.027	0	2	0	101	59	121	0		

Sample ID <b>0501027-03BMS</b>	Batch ID: <b>18031</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MS</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 1:20:01 PM</b>	Prep Date: <b>1/10/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	24.51	2.42	30.28	0.9371	77.8	68	106	0		
Surr: Tetrachlorethene	2.249	0	2.423	0	92.8	59	121	0		

Sample ID <b>0501027-03BM SD</b>	Batch ID: <b>18031</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>M SD</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 1:41:26 PM</b>	Prep Date: <b>1/10/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	19.65	2.16	27.04	0.9371	69.2	68	106	22.0	30	
Surr: Tetrachlorethene	1.792	0	2.164	0	82.8	59	121	0	0	

Sample ID <b>CCV1-050110</b>	Batch ID: <b>R20606</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 3:13:40 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	4.771	0.2	5	0	95.4	85	115	0		
Surr: Tetrachlorethene	0.2348	0	0.2	0	117	59	121	0		

Sample ID <b>CCV2-050110</b>	Batch ID: <b>R20606</b>	TestNo: <b>M 8015V</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 5:03:15 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics	4.713	0.2	5	0	94.3	85	115	0		
Surr: Tetrachlorethene	0.235	0	0.2	0	117	59	121	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

**CLIENT:** SMITH INTERNATIONAL  
**Work Order:** 0501027  
**Project:** Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GC4\_050110A

Sample ID <b>ICV-050110</b>	Batch ID: <b>R20606</b>	TestNo: <b>M8015V</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GC4_050110A</b>	Analysis Date: <b>1/10/2005 10:04:09 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Gasoline Range Organics	9.34	0.2	10	0	93.4	85	115	0		
Surr: Tetrachlorethene	0.22	0	0.2	0	110	59	121	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: **CETAC\_HG\_050111A**

Sample ID <b>MB-18044</b>	Batch ID: <b>18044</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>							
SampType <b>MBLK</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 3:51:45 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury ND 0.04

Sample ID <b>LCS-18044</b>	Batch ID: <b>18044</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>							
SampType <b>LCS</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 3:53:47 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.169 0.04 0.2 0 84.5 77 120 0

Sample ID <b>LCSD-18044</b>	Batch ID: <b>18044</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>							
SampType <b>LCSD</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 3:55:55 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.176 0.04 0.2 0 88 77 120 4.06 25

Sample ID <b>0501027-03C MS</b>	Batch ID: <b>18044</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MS</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 4:00:00 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.2614 0.0455 0.2273 0.04937 93.3 77 120 0

Sample ID <b>0501027-03C MSD</b>	Batch ID: <b>18044</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MSD</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 4:02:02 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.2377 0.0462 0.2308 0.04937 81.6 77 120 9.49 25

Sample ID <b>CCV6-050111</b>	Batch ID: <b>R20626</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 4:12:18 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00193 0.04 0.002 0 96.5 80 120 0

Sample ID <b>CCV7-050111</b>	Batch ID: <b>R20626</b>	TestNo: <b>SW7471A</b>	Units: <b>mg/Kg</b>							
SampType <b>CCV</b>	Run ID: <b>CETAC_HG_050111A</b>	Analysis Date: <b>1/11/2005 4:37:10 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00205 0.04 0.002 0 103 80 120 0

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: CETAC\_HG\_050111A

Sample ID	CCV8-050111	Batch ID:	R20626	TestNo:	SW7471A	Units:	mg/Kg				
SampType	CCV	Run ID:	CETAC_HG_050111A	Analysis Date:	1/11/2005 4:48:28 PM	Prep Date:					
Analyte		Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.002	0.04	0.002	0	100	80	120	0		
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Sample ID	ICV2-050111	Batch ID:	R20626	TestNo:	SW7471A	Units:	mg/Kg				
SampType	ICV	Run ID:	CETAC_HG_050111A	Analysis Date:	1/11/2005 3:47:40 PM	Prep Date:					
Analyte		Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00392	0.04	0.004	0	98	90	110	0		
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Sample ID	0501027-03C PDS	Batch ID:	18044	TestNo:	SW7471A	Units:	mg/Kg-dry				
SampType	PDS	Run ID:	CETAC_HG_050111A	Analysis Date:	1/11/2005 4:46:24 PM	Prep Date:	1/11/2005				
Analyte		Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.2568	0.0469	0.2346	0.04937	88.5	75	125	0		
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Sample ID	0501027-03C SD	Batch ID:	18044	TestNo:	SW7471A	Units:	mg/Kg-dry				
SampType	SD	Run ID:	CETAC_HG_050111A	Analysis Date:	1/11/2005 4:44:20 PM	Prep Date:	1/11/2005				
Analyte		Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual

Mercury	ND	0.235	0	0	0	0	0	0	0	10
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 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_050112A

Sample ID <b>MB-18034</b>	Batch ID: <b>18034</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 10:07:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	1								
Barium	ND	2								
Cadmium	ND	0.3								
Chromium	ND	2								
Lead	ND	0.3								
Selenium	ND	0.5								
Silver	ND	0.2								

Sample ID <b>LCS-18034</b>	Batch ID: <b>18034</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 10:27:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	46.25	1	50	0	92.5	80	120	0		
Barium	48.25	2	50	0	96.5	80	120	0		
Cadmium	47.4	0.3	50	0	94.8	80	120	0		
Chromium	48.98	2	50	0	98	80	120	0		
Lead	49.95	0.3	50	0	99.9	80	120	0		
Selenium	44.28	0.5	50	0	88.6	80	120	0		
Silver	51.88	0.2	50	0	104	80	120	0		

Sample ID <b>LCSD-18034</b>	Batch ID: <b>18034</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg</b>
SampType <b>LCSD</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 10:30:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	48.95	1	50	0	97.9	80	120	5.67	25	
Barium	49.88	2	50	0	99.8	80	120	3.31	25	
Cadmium	49	0.3	50	0	98	80	120	3.32	25	
Chromium	51.62	2	50	0	103	80	120	5.27	25	
Lead	52.02	0.3	50	0	104	80	120	4.07	25	
Selenium	46.3	0.5	50	0	92.6	80	120	4.47	25	
Silver	53.65	0.2	50	0	107	80	120	3.36	25	

Sample ID <b>0501027-03C MS</b>	Batch ID: <b>18034</b>	TestNo: <b>SW6020</b>	Units: <b>mg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 10:34:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	56.33	1.05	52.4	10.62	87.2	80	120	0		
Barium	384.9	2.1	52.4	334.2	96.7	80	120	0		
Cadmium	51.9	0.314	52.4	1.668	95.9	80	120	0		
Chromium	65.13	2.1	52.4	21.09	84	80	120	0		
Lead	147.1	0.314	52.4	184.5	-71.3	80	120	0		S

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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_050112A

Sample ID	0501027-03C MS	Batch ID:	18034	TestNo:	SW6020	Units:	mg/Kg-dry
SampType	MS	Run ID:	ICP-MS2_050112A	Analysis Date:	1/12/2005 10:34:00 AM	Prep Date:	1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	45.38	0.524	52.4	0.8077	85.1	80	120	0		
Silver	52.11	0.21	52.4	0	99.4	80	120	0		

Sample ID	0501027-03C MSD	Batch ID:	18034	TestNo:	SW6020	Units:	mg/Kg-dry
SampType	MSD	Run ID:	ICP-MS2_050112A	Analysis Date:	1/12/2005 10:38:00 AM	Prep Date:	1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	52.16	1.1	54.85	10.62	75.7	80	120	7.69	25	S
Barium	388.6	2.19	54.85	334.2	99.2	80	120	0.963	25	
Cadmium	44.73	0.329	54.85	1.668	78.5	80	120	14.8	25	S
Chromium	69.98	2.19	54.85	21.09	89.1	80	120	7.18	25	
Lead	156.7	0.329	54.85	184.5	-50.6	80	120	6.33	25	S
Selenium	41.24	0.548	54.85	0.8077	73.7	80	120	9.54	25	S
Silver	46.15	0.219	54.85	0	84.2	80	120	12.1	25	

Sample ID	0501027-03C PDS	Batch ID:	18034	TestNo:	SW6020	Units:	mg/Kg-dry
SampType	PDS	Run ID:	ICP-MS2_050112A	Analysis Date:	1/12/2005 10:42:00 AM	Prep Date:	1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	61.78	1.09	54.34	10.62	94.2	75	125	0		
Barium	379.8	2.17	54.34	334.2	84	75	125	0		
Cadmium	51.57	0.326	54.34	1.668	91.8	75	125	0		
Chromium	68.93	2.17	54.34	21.09	88	75	125	0		
Lead	237.1	0.326	54.34	184.5	96.8	75	125	0		
Selenium	47.08	0.543	54.34	0.8077	85.2	75	125	0		
Silver	53.22	0.217	54.34	0	98	75	125	0		

Sample ID	0501027-03C SD	Batch ID:	18034	TestNo:	SW6020	Units:	mg/Kg-dry
SampType	SD	Run ID:	ICP-MS2_050112A	Analysis Date:	1/12/2005 10:15:00 AM	Prep Date:	1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	9.671	5.43	0	0	0	0	0	9.36	10	
Barium	333.9	10.9	0	0	0	0	0	0.0813	10	
Cadmium	1.804	1.63	0	0	0	0	0	7.86	10	
Chromium	21.31	10.9	0	0	0	0	0	1.04	10	
Lead	189.4	1.63	0	0	0	0	0	2.62	10	
Selenium	ND	2.72	0	0	0	0	0	0	10	
Silver	ND	1.09	0	0	0	0	0	0	10	

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS2\_050112A

Sample ID <b>CCV1-050112</b>	Batch ID: <b>R20642</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 10:46:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Arsenic	193.8	6	200	0	96.9	90	110	0		
Barium	195.4	10	200	0	97.7	90	110	0		
Cadmium	193.3	1	200	0	96.6	90	110	0		
Chromium	194.5	6	200	0	97.2	90	110	0		
Lead	199.8	1	200	0	99.9	90	110	0		
Selenium	189.3	6	200	0	94.6	90	110	0		
Silver	202	2	200	0	101	90	110	0		

Sample ID <b>CCV2-050112</b>	Batch ID: <b>R20642</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType <b>CCV</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 11:36:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Arsenic	192.2	6	200	0	96.1	90	110	0		
Barium	201.8	10	200	0	101	90	110	0		
Cadmium	195.6	1	200	0	97.8	90	110	0		
Chromium	194.1	6	200	0	97	90	110	0		
Lead	200.5	1	200	0	100	90	110	0		
Selenium	192.7	6	200	0	96.4	90	110	0		
Silver	209	2	200	0	104	90	110	0		

Sample ID <b>ICV1-050112</b>	Batch ID: <b>R20642</b>	TestNo: <b>SW6020</b>	Units: <b>µg/L</b>
SampType <b>ICV</b>	Run ID: <b>ICP-MS2_050112A</b>	Analysis Date: <b>1/12/2005 9:56:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Arsenic	99.02	6	100	0	99	90	110	0		
Barium	96.19	10	100	0	96.2	90	110	0		
Cadmium	101	1	100	0	101	90	110	0		
Chromium	96.27	6	100	0	96.3	90	110	0		
Lead	102.9	1	100	0	103	90	110	0		
Selenium	95.95	6	100	0	96	90	110	0		
Silver	105.9	2	100	0	106	90	110	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID <b>MB-18047</b>	Batch ID: <b>18047</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 10:27:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	0.133								
1,2-Dichlorobenzene	ND	0.133								
1,3-Dichlorobenzene	ND	0.133								
1,4-Dichlorobenzene	ND	0.133								
2,4,5-Trichlorophenol	ND	0.133								
2,4,6-Trichlorophenol	ND	0.133								
2,4-Dichlorophenol	ND	0.133								
2,4-Dimethylphenol	ND	0.133								
2,4-Dinitrophenol	ND	0.66								
2,4-Dinitrotoluene	ND	0.133								
2,6-Dinitrotoluene	ND	0.133								
2-Chloronaphthalene	ND	0.133								
2-Chlorophenol	ND	0.133								
2-Methylnaphthalene	ND	0.133								
2-Methylphenol	ND	0.133								
2-Nitroaniline	ND	0.133								
2-Nitrophenol	ND	0.133								
3,3'-Dichlorobenzidine	ND	0.133								
3-Nitroaniline	ND	0.133								
4,6-Dinitro-2-methylphenol	ND	0.33								
4-Bromophenyl phenyl ether	ND	0.133								
4-Chloro-3-methylphenol	ND	0.133								
4-Chloroaniline	ND	0.33								
4-Chlorophenyl phenyl ether	ND	0.133								
4-Methylphenol	ND	0.133								
4-Nitroaniline	ND	0.133								
4-Nitrophenol	ND	0.66								
Acenaphthene	ND	0.133								
Acenaphthylene	ND	0.133								
Aniline	ND	0.133								
Anthracene	ND	0.133								
Benz[a]anthracene	ND	0.133								
Benz[a]pyrene	ND	0.133								
Benz[b]fluoranthene	ND	0.133								
Benz[g,h,i]perylene	ND	0.133								
Benz[k]fluoranthene	ND	0.133								
Benzyl alcohol	ND	0.33								
Bis(2-chloroethoxy)methane	ND	0.133								
Bis(2-chloroethyl)ether	ND	0.133								
Bis(2-chloroisopropyl)ether	ND	0.133								
Bis(2-ethylhexyl)phthalate	ND	0.133								
Butyl benzyl phthalate	ND	0.33								

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID <b>MB-18047</b>	Batch ID: <b>18047</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 10:27:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Chrysene	ND	0.133								
Di-n-butyl phthalate	ND	0.33								
Di-n-octyl phthalate	ND	0.33								
Dibenz[a,h]anthracene	ND	0.133								
Dibenzofuran	ND	0.133								
Diethyl phthalate	ND	0.33								
Dimethyl phthalate	ND	0.33								
Fluoranthene	ND	0.133								
Fluorene	ND	0.133								
Hexachlorobenzene	ND	0.133								
Hexachlorobutadiene	ND	0.133								
Hexachlorocyclopentadiene	ND	0.33								
Hexachloroethane	ND	0.133								
Indeno[1,2,3-cd]pyrene	ND	0.133								
Isophorone	ND	0.133								
N-Nitrosodi-n-propylamine	ND	0.133								
N-Nitrosodiphenylamine	ND	0.133								
Naphthalene	ND	0.133								
Nitrobenzene	ND	0.133								
Pentachlorophenol	ND	0.133								
Phenanthrene	ND	0.133								
Phenol	ND	0.133								
Pyrene	ND	0.133								
Surr: 2,4,6-Tribromophenol	3.127	0	2.68	0	117	36	126	0		
Surr: 2-Fluorobiphenyl	2.873	0	2.68	0	107	45	125	0		
Surr: 2-Fluorophenol	2.74	0	2.68	0	102	37	125	0		
Surr: 4-Terphenyl-d14	2.847	0	2.68	0	106	45	125	0		
Surr: Nitrobenzene-d5	2.547	0	2.68	0	95	45	125	0		
Surr: Phenol-d6	2.713	0	2.68	0	101	40	125	0		

Sample ID <b>LCS-18047</b>	Batch ID: <b>18047</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 9:48:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.2	0.133	1.34	0	89.6	34	152	0		
1,2-Dichlorobenzene	1.18	0.133	1.34	0	88.1	32	135	0		
1,3-Dichlorobenzene	1.173	0.133	1.34	0	87.6	26	135	0		
1,4-Dichlorobenzene	1.133	0.133	1.34	0	84.6	25	135	0		
2,4,5-Trichlorophenol	1.167	0.133	1.34	0	87.1	25	175	0		
2,4,6-Trichlorophenol	1.173	0.133	1.34	0	87.6	29	138	0		
2,4-Dichlorophenol	1.22	0.133	1.34	0	91	36	135	0		
2,4-Dimethylphenol	1.18	0.133	1.34	0	88.1	35	149	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID	LCS-18047	Batch ID:	18047	TestNo:	SW8270C	Units:	mg/Kg
SampType	LCS	Run ID:	GCMS3_050113A	Analysis Date:	1/13/2005 9:48:00 AM	Prep Date:	1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrophenol	0.8933	0.66	1.34	0	66.7	25	161	0		
2,4-Dinitrotoluene	1.22	0.133	1.34	0	91	29	149	0		
2,6-Dinitrotoluene	1.193	0.133	1.34	0	89.1	41	135	0		
2-Chloronaphtalene	1.167	0.133	1.34	0	87.1	50	135	0		
2-Chlorophenol	1.12	0.133	1.34	0	83.6	31	135	0		
2-Methylnaphtalene	1.16	0.133	1.34	0	86.6	31	135	0		
2-Methylphenol	1.167	0.133	1.34	0	87.1	25	135	0		
2-Nitroaniline	1.06	0.133	1.34	0	79.1	40	135	0		
2-Nitrophenol	1.16	0.133	1.34	0	86.6	34	135	0		
3,3'-Dichlorobenzidine	1	0.133	1.34	0	74.6	25	175	0		
3-Nitroaniline	1.12	0.133	1.34	0	83.6	41	135	0		
4,6-Dinitro-2-methylphenol	1.127	0.33	1.34	0	84.1	25	144	0		
4-Bromophenyl phenyl ether	1.26	0.133	1.34	0	94	43	137	0		
4-Chloro-3-methylphenol	1.153	0.133	1.34	0	86.1	34	135	0		
4-Chloroaniline	0.96	0.33	1.34	0	71.6	35	146	0		
4-Chlorophenyl phenyl ether	1.233	0.133	1.34	0	92	41	142	0		
4-Methylphenol	1.167	0.133	1.34	0	87.1	25	135	0		
4-Nitroaniline	1.147	0.133	1.34	0	85.6	30	153	0		
4-Nitrophenol	1	0.66	1.34	0	74.6	25	141	0		
Acenaphthene	1.167	0.133	1.34	0	87.1	39	135	0		
Acenaphthylene	1.553	0.133	1.34	0	116	37	135	0		
Aniline	0.9333	0.133	1.34	0	69.7	40	140	0		
Anthracene	1.187	0.133	1.34	0	88.6	35	140	0		
Benz[a]anthracene	1.133	0.133	1.34	0	84.6	41	143	0		
Benz[a]pyrene	1.187	0.133	1.34	0	88.6	31	135	0		
Benz[b]fluoranthene	1.12	0.133	1.34	0	83.6	27	135	0		
Benz[g,h,i]perylene	1.213	0.133	1.34	0	90.5	25	159	0		
Benz[k]fluoranthene	1.213	0.133	1.34	0	90.5	25	159	0		
Benzyl alcohol	1.107	0.33	1.34	0	82.6	25	135	0		
Bis(2-chloroethoxy)methane	1.14	0.133	1.34	0	85.1	39	135	0		
Bis(2-chloroethyl)ether	1.133	0.133	1.34	0	84.6	34	135	0		
Bis(2-chloroisopropyl)ether	1.02	0.133	1.34	0	76.1	26	175	0		
Bis(2-ethylhexyl)phthalate	1.1	0.133	1.34	0	82.1	25	139	0		
Butyl benzyl phthalate	1.1	0.33	1.34	0	82.1	25	135	0		
Chrysene	1.14	0.133	1.34	0	85.1	45	143	0		
Di-n-butyl phthalate	1.18	0.33	1.34	0	88.1	25	136	0		
Di-n-octyl phthalate	1.06	0.33	1.34	0	79.1	28	137	0		
Dibenz[a,h]anthracene	1.193	0.133	1.34	0	89.1	40	135	0		
Dibenzofuran	1.187	0.133	1.34	0	88.6	42	135	0		
Diethyl phthalate	1.14	0.33	1.34	0	85.1	27	135	0		
Dimethyl phthalate	1.173	0.33	1.34	0	87.6	25	175	0		
Fluoranthene	1.233	0.133	1.34	0	92	37	135	0		

Qualifiers: ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID	LCS-18047	Batch ID:	18047	TestNo:	SW8270C	Units:	mg/Kg			
SampType	LCS	Run ID:	GCMS3_050113A	Analysis Date:	1/13/2005 9:48:00 AM	Prep Date:	1/11/2005			
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	1.187	0.133	1.34	0	88.6	38	149	0		
Hexachlorobenzene	1.233	0.133	1.34	0	92	36	143	0		
Hexachlorobutadiene	1.22	0.133	1.34	0	91	25	135	0		
Hexachlorocyclopentadiene	1.54	0.33	1.34	0	115	31	135	0		
Hexachloroethane	1.107	0.133	1.34	0	82.6	25	163	0		
Indeno[1,2,3-cd]pyrene	1.18	0.133	1.34	0	88.1	25	170	0		
Isophorone	1.153	0.133	1.34	0	86.1	25	175	0		
N-Nitrosodi-n-propylamine	1.08	0.133	1.34	0	80.6	27	135	0		
N-Nitrosodiphenylamine	1.207	0.133	1.34	0	90	25	135	0		
Naphthalene	1.167	0.133	1.34	0	87.1	40	135	0		
Nitrobenzene	1.107	0.133	1.34	0	82.6	36	143	0		
Pentachlorophenol	1.12	0.133	1.34	0	83.6	38	146	0		
Phenanthrene	1.187	0.133	1.34	0	88.6	44	135	0		
Phenol	1.133	0.133	1.34	0	84.6	25	135	0		
Pyrene	1.153	0.133	1.34	0	86.1	37	146	0		
Surr: 2,4,6-Tribromophenol	3.093	0	2.68	0	115	36	126	0		
Surr: 2-Fluorobiphenyl	2.727	0	2.68	0	102	45	125	0		
Surr: 2-Fluorophenol	2.653	0	2.68	0	99	37	125	0		
Surr: 4-Terphenyl-d14	2.74	0	2.68	0	102	45	125	0		
Surr: Nitrobenzene-d5	2.473	0	2.68	0	92.3	45	125	0		
Surr: Phenol-d6	2.607	0	2.68	0	97.3	40	125	0		

Sample ID	0501027-03CMS	Batch ID:	18047	TestNo:	SW8270C	Units:	mg/Kg-dry			
SampType	MS	Run ID:	GCMS3_050113A	Analysis Date:	1/13/2005 4:45:00 PM	Prep Date:	1/11/2005			
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.435	0.149	1.503	0	95.5	34	152	0		
1,4-Dichlorobenzene	1.241	0.149	1.503	0	82.6	25	135	0		
2,4-Dinitrotoluene	1.039	0.149	1.503	0	69.2	29	149	0		
2-Chlorophenol	1.301	0.149	1.503	0	86.6	31	135	0		
4-Chloro-3-methylphenol	1.263	0.149	1.503	0	84.1	34	135	0		
4-Nitrophenol	0.927	0.74	1.503	0	61.7	25	141	0		
Acenaphthene	1.361	0.149	1.503	0	90.5	39	135	0		
N-Nitrosodi-n-propylamine	1.151	0.149	1.503	0	76.6	27	135	0		
Pentachlorophenol	1.136	0.149	1.503	0	75.6	38	146	0		
Phenol	1.241	0.149	1.503	0	82.6	25	135	0		
Pyrene	1.241	0.149	1.503	0.02243	81.1	37	146	0		
Surr: 2,4,6-Tribromophenol	4.037	0	3.005	0	134	36	126	0		S
Surr: 2-Fluorobiphenyl	3.185	0	3.005	0	106	45	125	0		
Surr: 2-Fluorophenol	2.803	0	3.005	0	93.3	37	125	0		
Surr: 4-Terphenyl-d14	2.923	0	3.005	0	97.3	45	125	0		
Surr: Nitrobenzene-d5	2.549	0	3.005	0	84.8	45	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID <b>0501027-03CMS</b>	Batch ID: <b>18047</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MS</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 4:45:00 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Surr: Phenol-d6	2.826	0	3.005	0	94	40	125	0		

Sample ID <b>0501027-03CMSD</b>	Batch ID: <b>18047</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg-dry</b>							
SampType <b>MSD</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 5:23:00 PM</b>	Prep Date: <b>1/11/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	1.428	0.149	1.503	0	95	34	152	0.522	30	
1,4-Dichlorobenzene	1.099	0.149	1.503	0	73.1	25	135	12.1	30	
2,4-Dinitrotoluene	1.121	0.149	1.503	0	74.6	29	149	7.61	30	
2-Chlorophenol	1.316	0.149	1.503	0	87.6	31	135	1.14	30	
4-Chloro-3-methylphenol	1.316	0.149	1.503	0	87.6	34	135	4.06	30	
4-Nitrophenol	0.9793	0.74	1.503	0	65.2	25	141	5.49	30	
Acenaphthene	1.353	0.149	1.503	0	90	39	135	0.551	30	
N-Nitrosodi-n-propylamine	1.166	0.149	1.503	0	77.6	27	135	1.29	30	
Pentachlorophenol	1.159	0.149	1.503	0	77.1	38	146	1.95	30	
Phenol	1.241	0.149	1.503	0	82.6	25	135	0	30	
Pyrene	1.248	0.149	1.503	0.02243	81.6	37	146	0.601	30	
Surr: 2,4,6-Tribromophenol	3.887	0	3.005	0	129	36	126	0		S
Surr: 2-Fluorobiphenyl	3.147	0	3.005	0	105	45	125	0		
Surr: 2-Fluorophenol	2.744	0	3.005	0	91.3	37	125	0		
Surr: 4-Terphenyl-d14	2.893	0	3.005	0	96.3	45	125	0		
Surr: Nitrobenzene-d5	2.504	0	3.005	0	83.3	45	125	0		
Surr: Phenol-d6	2.759	0	3.005	0	91.8	40	125	0		

Sample ID <b>ICV-050113</b>	Batch ID: <b>R20657</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 9:10:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	4.02	0.133	4	0	101	80	120	0		
1,2-Dichlorobenzene	3.91	0.133	4	0	97.8	80	120	0		
1,3-Dichlorobenzene	3.94	0.133	4	0	98.5	80	120	0		
1,4-Dichlorobenzene	3.56	0.133	4	0	89	80	120	0		
2,4,5-Trichlorophenol	4	0.133	4	0	100	80	120	0		
2,4,6-Trichlorophenol	3.96	0.133	4	0	99	80	120	0		
2,4-Dichlorophenol	4.13	0.133	4	0	103	80	120	0		
2,4-Dimethylphenol	3.45	0.133	4	0	86.2	80	120	0		
2,4-Dinitrophenol	3.39	0.66	4	0	84.8	80	120	0		
2,4-Dinitrotoluene	4.02	0.133	4	0	101	80	120	0		
2,6-Dinitrotoluene	4.04	0.133	4	0	101	80	120	0		
2-Chloronaphthalene	3.86	0.133	4	0	96.5	80	120	0		
2-Chlorophenol	3.83	0.133	4	0	95.8	80	120	0		
2-Methylnaphthalene	3.91	0.133	4	0	97.8	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID <b>ICV-050113</b>	Batch ID: <b>R20657</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS3_050113A</b>	Analysis Date: <b>1/13/2005 9:10:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
2-Methylphenol	3.79	0.133	4	0	94.8	80	120	0		
2-Nitroaniline	3.53	0.133	4	0	88.2	80	120	0		
2-Nitrophenol	4.02	0.133	4	0	101	80	120	0		
3,3'-Dichlorobenzidine	4.2	0.133	4	0	105	70	130	0		
3-Nitroaniline	4.03	0.133	4	0	101	80	120	0		
4,6-Dinitro-2-methylphenol	4.1	0.33	4	0	103	70	130	0		
4-Bromophenyl phenyl ether	4.2	0.133	4	0	105	80	120	0		
4-Chloro-3-methylphenol	3.85	0.133	4	0	96.2	70	130	0		
4-Chloroaniline	3.9	0.33	4	0	97.5	80	120	0		
4-Chlorophenyl phenyl ether	4.05	0.133	4	0	101	80	120	0		
4-Methylphenol	3.72	0.133	4	0	93	80	120	0		
4-Nitroaniline	4.01	0.133	4	0	100	80	120	0		
4-Nitrophenol	3.52	0.66	4	0	88	60	140	0		
Acenaphthene	3.79	0.133	4	0	94.8	80	120	0		
Acenaphthylene	3.86	0.133	4	0	96.5	80	120	0		
Aniline	3.71	0.133	4	0	92.8	80	120	0		
Anthracene	3.81	0.133	4	0	95.2	80	120	0		
Benz[a]anthracene	3.84	0.133	4	0	96	80	120	0		
Benz[a]pyrene	4.09	0.133	4	0	102	80	120	0		
Benz[b]fluoranthene	4.08	0.133	4	0	102	80	120	0		
Benz[g,h,i]perylene	4.32	0.133	4	0	108	80	120	0		
Benz[k]fluoranthene	3.92	0.133	4	0	98	80	120	0		
Benzyl alcohol	3.74	0.33	4	0	93.5	70	130	0		
Bis(2-chloroethoxy)methane	3.73	0.133	4	0	93.2	80	120	0		
Bis(2-chloroethyl)ether	3.75	0.133	4	0	93.8	80	120	0		
Bis(2-chloroisopropyl)ether	3.31	0.133	4	0	82.8	80	120	0		
Bis(2-ethylhexyl)phthalate	3.82	0.133	4	0	95.5	80	120	0		
Butyl benzyl phthalate	3.75	0.33	4	0	93.8	80	120	0		
Chrysene	3.85	0.133	4	0	96.2	80	120	0		
Di-n-butyl phthalate	3.66	0.33	4	0	91.5	80	120	0		
Di-n-octyl phthalate	3.82	0.33	4	0	95.5	80	120	0		
Dibenz[a,h]anthracene	4.34	0.133	4	0	108	80	120	0		
Dibenzofuran	3.91	0.133	4	0	97.8	80	120	0		
Diethyl phthalate	3.76	0.33	4	0	94	80	120	0		
Dimethyl phthalate	3.85	0.33	4	0	96.2	80	120	0		
Fluoranthene	4.03	0.133	4	0	101	80	120	0		
Fluorene	3.91	0.133	4	0	97.8	80	120	0		
Hexachlorobenzene	4.21	0.133	4	0	105	80	120	0		
Hexachlorobutadiene	4.15	0.133	4	0	104	80	120	0		
Hexachlorocyclopentadiene	3.7	0.33	4	0	92.5	70	130	0		
Hexachloroethane	3.73	0.133	4	0	93.2	80	120	0		
Indeno[1,2,3-cd]pyrene	4.29	0.133	4	0	107	80	120	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_050113A

Sample ID	ICV-050113	Batch ID:	R20657	TestNo:	SW8270C	Units:	mg/Kg
SampType	ICV	Run ID:	GCMS3_050113A	Analysis Date:	1/13/2005 9:10:00 AM	Prep Date:	

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
Isophorone	3.63	0.133	4	0	90.8	80	120	0		
N-Nitrosodi-n-propylamine	3.5	0.133	4	0	87.5	80	120	0		
N-Nitrosodiphenylamine	3.9	0.133	4	0	97.5	80	120	0		
Naphthalene	3.85	0.133	4	0	96.2	80	120	0		
Nitrobenzene	3.63	0.133	4	0	90.8	80	120	0		
Pentachlorophenol	4.2	0.133	4	0	105	80	120	0		
Phenanthrene	3.86	0.133	4	0	96.5	80	120	0		
Phenol	3.77	0.133	4	0	94.3	80	120	0		
Pyrene	3.85	0.133	4	0	96.2	80	120	0		
Surr: 2,4,6-Tribromophenol	4.47	0	4	0	112	80	120	0		
Surr: 2-Fluorobiphenyl	3.95	0	4	0	98.8	80	120	0		
Surr: 2-Fluorophenol	3.88	0	4	0	97	80	120	0		
Surr: 4-Terphenyl-d14	3.98	0	4	0	99.5	80	120	0		
Surr: Nitrobenzene-d5	3.65	0	4	0	91.2	80	120	0		
Surr: Phenol-d6	3.72	0	4	0	93	80	120	0		

Qualifiers: ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID <b>MB-18028</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/7/2005 8:02:00 PM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5								
1,1,1-Trichloroethane	ND	5								
1,1,2,2-Tetrachloroethane	ND	5								
1,1,2-Trichloroethane	ND	5								
1,1-Dichloroethane	ND	5								
1,1-Dichloroethene	ND	5								
1,1-Dichloropropene	ND	5								
1,2,3-Trichlorobenzene	ND	5								
1,2,3-Trichloropropane	ND	5								
1,2,4-Trichlorobenzene	ND	5								
1,2,4-Trimethylbenzene	ND	5								
1,2-Dibromo-3-chloropropane	ND	5								
1,2-Dibromoethane	ND	5								
1,2-Dichlorobenzene	ND	5								
1,2-Dichloroethane	ND	5								
1,2-Dichloropropane	ND	5								
1,3,5-Trimethylbenzene	ND	5								
1,3-Dichlorobenzene	ND	5								
1,3-Dichloropropane	ND	5								
1,4-Dichlorobenzene	ND	5								
2,2-Dichloropropane	ND	5								
2-Butanone	ND	15								
2-Chloroethylvinylether	ND	15								
2-Chlorotoluene	ND	5								
2-Hexanone	ND	15								
4-Chlorotoluene	ND	5								
4-Methyl-2-pentanone	ND	15								
Acetone	ND	50								
Benzene	ND	5								
Bromobenzene	ND	5								
Bromochloromethane	ND	5								
Bromodichloromethane	ND	5								
Bromoform	ND	5								
Bromomethane	ND	5								
Carbon disulfide	ND	15								
Carbon tetrachloride	ND	5								
Chlorobenzene	ND	5								
Chloroethane	ND	5								
Chloroform	ND	5								
Chloromethane	ND	5								
cis-1,2-Dichloroethene	ND	5								
cis-1,3-Dichloropropene	ND	5								

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID <b>MB-18028</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/7/2005 8:02:00 PM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	5								
Dibromomethane	ND	5								
Dichlorodifluoromethane	ND	5								
Ethylbenzene	ND	5								
Hexachlorobutadiene	ND	5								
Iodomethane	ND	5								
Isopropylbenzene	ND	5								
m,p-Xylene	ND	5								
Methyl tert-butyl ether	ND	5								
Methylene chloride	ND	5								
n-Butylbenzene	ND	5								
n-Propylbenzene	ND	5								
Naphthalene	ND	5								
o-Xylene	ND	5								
p-Isopropyltoluene	ND	5								
sec-Butylbenzene	ND	5								
Styrene	ND	5								
tert-Butylbenzene	ND	5								
Tetrachloroethene	ND	5								
Toluene	2.88	5								
trans-1,2-Dichloroethene	ND	5								
trans-1,3-Dichloropropene	ND	5								
Trichloroethene	ND	5								
Trichlorofluoromethane	ND	15								
Vinyl chloride	ND	5								
Surr: 1,2-Dichloroethane-d4	56.89	0	50	0	114	52	149	0		
Surr: 4-Bromofluorobenzene	46.14	0	50	0	92.3	65	135	0		
Surr: Dibromofluoromethane	54.94	0	50	0	110	65	135	0		
Surr: Toluene-d8	44.71	0	50	0	89.4	65	135	0		

Sample ID <b>LCS-18028</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/7/2005 7:28:00 PM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.2	5	23.2	0	100	70	130	0		
1,1,1-Trichloroethane	26.97	5	23.2	0	116	70	130	0		
1,1,2,2-Tetrachloroethane	20.62	5	23.2	0	88.9	70	130	0		
1,1,2-Trichloroethane	25.89	5	23.2	0	112	70	130	0		
1,1-Dichloroethane	23.62	5	23.2	0	102	70	130	0		
1,1-Dichloroethene	24.41	5	23.2	0	105	70	130	0		
1,1-Dichloropropene	25.88	5	23.2	0	112	70	130	0		
1,2,3-Trichlorobenzene	23.74	5	23.2	0	102	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID	LCS-18028	Batch ID:	18028	TestNo:	SW8260B	Units:	µg/Kg
SampType	LCS	Run ID:	GCMS2_050107B	Analysis Date:	1/7/2005 7:28:00 PM	Prep Date:	1/7/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	23.27	5	23.2	0	100	70	130	0		
1,2,4-Trichlorobenzene	22.98	5	23.2	0	99.1	70	130	0		
1,2,4-Trimethylbenzene	20.52	5	23.2	0	88.4	70	130	0		
1,2-Dibromo-3-chloropropane	22.62	5	23.2	0	97.5	70	130	0		
1,2-Dibromoethane	22.24	5	23.2	0	95.9	70	130	0		
1,2-Dichlorobenzene	22.27	5	23.2	0	96	70	130	0		
1,2-Dichloroethane	27.34	5	23.2	0	118	70	130	0		
1,2-Dichloropropane	23.6	5	23.2	0	102	70	130	0		
1,3,5-Trimethylbenzene	20.63	5	23.2	0	88.9	70	130	0		
1,3-Dichlorobenzene	21.88	5	23.2	0	94.3	70	130	0		
1,3-Dichloropropane	20.99	5	23.2	0	90.5	70	130	0		
1,4-Dichlorobenzene	21.94	5	23.2	0	94.6	70	130	0		
2,2-Dichloropropane	27.15	5	23.2	0	117	70	130	0		
2-Butanone	23.98	15	23.2	0	103	50	150	0		
2-Chloroethylvinylether	20.25	15	23.2	0	87.3	50	150	0		
2-Chlorotoluene	20.47	5	23.2	0	88.2	70	130	0		
2-Hexanone	20.33	15	23.2	0	87.6	50	150	0		
4-Chlorotoluene	20.4	5	23.2	0	87.9	70	130	0		
4-Methyl-2-pentanone	19.56	15	23.2	0	84.3	50	150	0		
Acetone	17.96	50	23.2	0	77.4	50	150	0		
Benzene	23.49	5	23.2	0	101	70	130	0		
Bromobenzene	21.81	5	23.2	0	94	70	130	0		
Bromochloromethane	28.7	5	23.2	0	124	70	130	0		
Bromodichloromethane	25.85	5	23.2	0	111	70	130	0		
Bromoform	24.15	5	23.2	0	104	70	130	0		
Bromomethane	25.08	5	23.2	0	108	70	130	0		
Carbon disulfide	16	15	23.2	0	69	50	150	0		
Carbon tetrachloride	25.69	5	23.2	0	111	70	130	0		
Chlorobenzene	22.17	5	23.2	0	95.6	70	130	0		
Chloroethane	24.87	5	23.2	0	107	70	130	0		
Chloroform	25.03	5	23.2	0	108	70	130	0		
Chloromethane	23.79	5	23.2	0	103	70	130	0		
cis-1,2-Dichloroethene	25.61	5	23.2	0	110	70	130	0		
cis-1,3-Dichloropropene	25.31	5	23.2	0	109	70	130	0		
Dibromochloromethane	24.53	5	23.2	0	106	70	130	0		
Dibromomethane	27.2	5	23.2	0	117	70	130	0		
Dichlorodifluoromethane	25.16	5	23.2	0	108	70	130	0		
Ethylbenzene	20.99	5	23.2	0	90.5	70	130	0		
Hexachlorobutadiene	23.47	5	23.2	0	101	70	130	0		
Iodomethane	19.52	5	23.2	0	84.1	50	150	0		
Isopropylbenzene	21.83	5	23.2	0	94.1	70	130	0		
m,p-Xylene	43.01	5	46.4	0	92.7	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID <b>LCS-18028</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/7/2005 7:28:00 PM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	26.91	5	23.2	0	116	70	130	0		
Methylene chloride	19.35	5	23.2	0	83.4	70	130	0		
n-Butylbenzene	19.66	5	23.2	0	84.7	70	130	0		
n-Propylbenzene	20.3	5	23.2	0	87.5	70	130	0		
Naphthalene	23.39	5	23.2	0	101	70	130	0		
o-Xylene	21.22	5	23.2	0	91.5	70	130	0		
p-Isopropyltoluene	20.95	5	23.2	0	90.3	70	130	0		
sec-Butylbenzene	20.63	5	23.2	0	88.9	70	130	0		
Styrene	22.4	5	23.2	0	96.6	70	130	0		
tert-Butylbenzene	21.67	5	23.2	0	93.4	70	130	0		
Tetrachloroethene	22.2	5	23.2	0	95.7	70	130	0		
Toluene	26.44	5	23.2	0	114	70	130	0		
trans-1,2-Dichloroethene	25.5	5	23.2	0	110	70	130	0		
trans-1,3-Dichloropropene	25.91	5	23.2	0	112	70	130	0		
Trichloroethene	26.58	5	23.2	0	115	70	130	0		
Trichlorofluoromethane	28.59	15	23.2	0	123	70	130	0		
Vinyl chloride	22.57	5	23.2	0	97.3	70	130	0		
Surr: 1,2-Dichloroethane-d4	54.82	0	50	0	110	52	149	0		
Surr: 4-Bromofluorobenzene	47.43	0	50	0	94.9	65	135	0		
Surr: Dibromofluoromethane	55.12	0	50	0	110	65	135	0		
Surr: Toluene-d8	45.53	0	50	0	91.1	65	135	0		

Sample ID <b>0501027-03A MS</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg-dry</b>
SampType <b>MS</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/8/2005 2:06:00 AM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	58.82	6.24	62.43	0	94.2	70	130	0		
Benzene	50.42	6.24	62.43	0	80.8	70	130	0		
Chlorobenzene	36.5	6.24	62.43	0	58.5	70	130	0		S
Toluene	46.79	6.24	62.43	0	74.9	70	130	0		
Trichloroethene	54.45	6.24	62.43	0	87.2	70	130	0		
Surr: 1,2-Dichloroethane-d4	71.08	0	62.43	0	114	52	149	0		
Surr: 4-Bromofluorobenzene	58.7	0	62.43	0	94	65	135	0		
Surr: Dibromofluoromethane	68.47	0	62.43	0	110	65	135	0		
Surr: Toluene-d8	55.69	0	62.43	0	89.2	65	135	0		

Sample ID <b>0501027-03A MSD</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg-dry</b>
SampType <b>MSD</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/8/2005 2:40:00 AM</b>	Prep Date: <b>1/7/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	52.95	6.1	61	0	86.8	70	130	10.5	30	
Benzene	43.61	6.1	61	0	71.5	70	130	14.5	30	

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID <b>0501027-03A MSD</b>	Batch ID: <b>18028</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg-dry</b>							
SampType <b>MSD</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/8/2005 2:40:00 AM</b>	Prep Date: <b>1/7/2005</b>							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlorobenzene	26.28	6.1	61	0	43.1	70	130	32.5	30	SR
Toluene	35.7	6.1	61	0	58.5	70	130	26.9	30	S
Trichloroethene	43.95	6.1	61	0	72	70	130	21.4	30	
Surr: 1,2-Dichloroethane-d4	70.64	0	61	0	116	52	149	0	0	
Surr: 4-Bromofluorobenzene	60.11	0	61	0	98.5	65	135	0	0	
Surr: Dibromofluoromethane	67.6	0	61	0	111	65	135	0	0	
Surr: Toluene-d8	55.33	0	61	0	90.7	65	135	0	0	

Sample ID <b>ICV-050107</b>	Batch ID: <b>R20630</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>							
SampType <b>ICV</b>	Run ID: <b>GCMS2_050107B</b>	Analysis Date: <b>1/7/2005 6:23:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	45.82	5	46.4	0	98.8	75	125	0		
1,1,1-Trichloroethane	52.51	5	46.4	0	113	75	125	0		
1,1,2,2-Tetrachloroethane	41.19	5	46.4	0	88.8	75	125	0		
1,1,2-Trichloroethane	51.35	5	46.4	0	111	75	125	0		
1,1-Dichloroethane	46.03	5	46.4	0	99.2	75	125	0		
1,1-Dichloroethene	48.17	5	46.4	0	104	75	125	0		
1,1-Dichloropropene	50.5	5	46.4	0	109	75	125	0		
1,2,3-Trichlorobenzene	46.99	5	46.4	0	101	75	125	0		
1,2,3-Trichloropropane	46.39	5	46.4	0	100	75	125	0		
1,2,4-Trichlorobenzene	46.71	5	46.4	0	101	75	125	0		
1,2,4-Trimethylbenzene	40.68	5	46.4	0	87.7	75	125	0		
1,2-Dibromo-3-chloropropane	48.69	5	46.4	0	105	75	125	0		
1,2-Dibromoethane	45.52	5	46.4	0	98.1	75	125	0		
1,2-Dichlorobenzene	43.83	5	46.4	0	94.5	75	125	0		
1,2-Dichloroethane	52.76	5	46.4	0	114	75	125	0		
1,2-Dichloropropane	45.72	5	46.4	0	98.5	75	125	0		
1,3,5-Trimethylbenzene	40.87	5	46.4	0	88.1	75	125	0		
1,3-Dichlorobenzene	43.81	5	46.4	0	94.4	75	125	0		
1,3-Dichloropropane	42	5	46.4	0	90.5	75	125	0		
1,4-Dichlorobenzene	43.48	5	46.4	0	93.7	75	125	0		
2,2-Dichloropropane	54.02	5	46.4	0	116	75	125	0		
2-Butanone	47.67	15	46.4	0	103	60	140	0		
2-Chloroethylvinylether	42.61	15	46.4	0	91.8	60	140	0		
2-Chlorotoluene	40.31	5	46.4	0	86.9	75	125	0		
2-Hexanone	41.49	15	46.4	0	89.4	60	140	0		
4-Chlorotoluene	40.69	5	46.4	0	87.7	75	125	0		
4-Methyl-2-pentanone	40.02	15	46.4	0	86.2	60	140	0		
Acetone	44.63	50	46.4	0	96.2	60	140	0		
Benzene	45.5	5	46.4	0	98.1	75	125	0		
Bromobenzene	42.73	5	46.4	0	92.1	75	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050107B

Sample ID	ICV-050107	Batch ID:	R20630	TestNo:	SW8260B	Units:	µg/Kg
SampType	ICV	Run ID:	GCMS2_050107B	Analysis Date:	1/7/2005 6:23:00 PM	Prep Date:	

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Bromochloromethane	55.95	5	46.4	0	121	75	125	0		
Bromodichloromethane	51.7	5	46.4	0	111	75	125	0		
Bromoform	49.94	5	46.4	0	108	75	125	0		
Bromomethane	45.05	5	46.4	0	97.1	75	125	0		
Carbon disulfide	33.75	15	46.4	0	72.7	60	140	0		
Carbon tetrachloride	50.49	5	46.4	0	109	75	125	0		
Chlorobenzene	43.84	5	46.4	0	94.5	75	125	0		
Chloroethane	46.14	5	46.4	0	99.4	75	125	0		
Chloroform	48.53	5	46.4	0	105	75	125	0		
Chloromethane	46.22	5	46.4	0	99.6	75	125	0		
cis-1,2-Dichloroethene	49.16	5	46.4	0	106	75	125	0		
cis-1,3-Dichloropropene	51.68	5	46.4	0	111	75	125	0		
Dibromochloromethane	50.26	5	46.4	0	108	75	125	0		
Dibromomethane	55.25	5	46.4	0	119	75	125	0		
Dichlorodifluoromethane	49.5	5	46.4	0	107	75	125	0		
Ethylbenzene	41.74	5	46.4	0	90	75	125	0		
Hexachlorobutadiene	47.87	5	46.4	0	103	75	125	0		
Iodomethane	38.03	5	46.4	0	82	60	140	0		
Isopropylbenzene	42.67	5	46.4	0	92	75	125	0		
m,p-Xylene	84.65	5	92.8	0	91.2	75	125	0		
Methyl tert-butyl ether	52.69	5	46.4	0	114	75	125	0		
Methylene chloride	43.35	5	46.4	0	93.4	75	125	0		
n-Butylbenzene	39.96	5	46.4	0	86.1	75	125	0		
n-Propylbenzene	40.12	5	46.4	0	86.5	75	125	0		
Naphthalene	45.56	5	46.4	0	98.2	75	125	0		
o-Xylene	42.46	5	46.4	0	91.5	75	125	0		
p-Isopropyltoluene	41.85	5	46.4	0	90.2	75	125	0		
sec-Butylbenzene	40.34	5	46.4	0	86.9	75	125	0		
Styrene	44.23	5	46.4	0	95.3	75	125	0		
tert-Butylbenzene	42.46	5	46.4	0	91.5	75	125	0		
Tetrachloroethene	45.86	5	46.4	0	98.8	75	125	0		
Toluene	49.4	5	46.4	0	106	75	125	0		
trans-1,2-Dichloroethene	50.49	5	46.4	0	109	75	125	0		
trans-1,3-Dichloropropene	53.15	5	46.4	0	115	75	125	0		
Trichloroethene	52.12	5	46.4	0	112	75	125	0		
Trichlorofluoromethane	56.33	15	46.4	0	121	75	125	0		
Vinyl chloride	43.17	5	46.4	0	93	75	125	0		
Surr: 1,2-Dichloroethane-d4	53.25	0	50	0	106	52	149	0		
Surr: 4-Bromofluorobenzene	47.93	0	50	0	95.9	65	135	0		
Surr: Dibromofluoromethane	55.14	0	50	0	110	65	135	0		
Surr: Toluene-d8	46.53	0	50	0	93.1	65	135	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID <b>MB-18072</b>	Batch ID: <b>18072</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 5:07:00 PM</b>	Prep Date: <b>1/13/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	5								
1,1,1-Trichloroethane	ND	5								
1,1,2,2-Tetrachloroethane	ND	5								
1,1,2-Trichloroethane	ND	5								
1,1-Dichloroethane	ND	5								
1,1-Dichloroethene	ND	5								
1,1-Dichloropropene	ND	5								
1,2,3-Trichlorobenzene	ND	5								
1,2,3-Trichloropropane	ND	5								
1,2,4-Trichlorobenzene	ND	5								
1,2,4-Trimethylbenzene	ND	5								
1,2-Dibromo-3-chloropropane	ND	5								
1,2-Dibromoethane	ND	5								
1,2-Dichlorobenzene	ND	5								
1,2-Dichloroethane	ND	5								
1,2-Dichloropropane	ND	5								
1,3,5-Trimethylbenzene	ND	5								
1,3-Dichlorobenzene	ND	5								
1,3-Dichloropropane	ND	5								
1,4-Dichlorobenzene	ND	5								
2,2-Dichloropropane	ND	5								
2-Butanone	ND	15								
2-Chloroethylvinylether	ND	15								
2-Chlorotoluene	ND	5								
2-Hexanone	ND	15								
4-Chlorotoluene	ND	5								
4-Methyl-2-pentanone	ND	15								
Acetone	ND	50								
Benzene	ND	5								
Bromobenzene	ND	5								
Bromochloromethane	ND	5								
Bromodichloromethane	ND	5								
Bromoform	ND	5								
Bromomethane	ND	5								
Carbon disulfide	ND	15								
Carbon tetrachloride	ND	5								
Chlorobenzene	ND	5								
Chloroethane	ND	5								
Chloroform	ND	5								
Chloromethane	ND	5								
cis-1,2-Dichloroethene	ND	5								
cis-1,3-Dichloropropene	ND	5								

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 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID <b>MB-18072</b>	Batch ID: <b>18072</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>MBLK</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 5:07:00 PM</b>	Prep Date: <b>1/13/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	5								
Dibromomethane	ND	5								
Dichlorodifluoromethane	ND	5								
Ethylbenzene	ND	5								
Hexachlorobutadiene	ND	5								
Iodomethane	ND	5								
Isopropylbenzene	ND	5								
m,p-Xylene	ND	5								
Methyl tert-butyl ether	ND	5								
Methylene chloride	ND	5								
n-Butylbenzene	ND	5								
n-Propylbenzene	ND	5								
Naphthalene	ND	5								
o-Xylene	ND	5								
p-Isopropyltoluene	ND	5								
sec-Butylbenzene	ND	5								
Styrene	ND	5								
tert-Butylbenzene	ND	5								
Tetrachloroethene	ND	5								
Toluene	ND	5								
trans-1,2-Dichloroethene	ND	5								
trans-1,3-Dichloropropene	ND	5								
Trichloroethene	ND	5								
Trichlorofluoromethane	ND	15								
Vinyl chloride	ND	5								
Surr: 1,2-Dichloroethane-d4	55.15	0	50	0	110	52	149	0		
Surr: 4-Bromofluorobenzene	46.45	0	50	0	92.9	65	135	0		
Surr: Dibromofluoromethane	56.79	0	50	0	114	65	135	0		
Surr: Toluene-d8	43.84	0	50	0	87.7	65	135	0		

Sample ID <b>LCS-18072</b>	Batch ID: <b>18072</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 4:03:00 PM</b>	Prep Date: <b>1/13/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.19	5	23.2	0	100	70	130	0		
1,1,1-Trichloroethane	27.28	5	23.2	0	118	70	130	0		
1,1,2,2-Tetrachloroethane	19.65	5	23.2	0	84.7	70	130	0		
1,1,2-Trichloroethane	26.46	5	23.2	0	114	70	130	0		
1,1-Dichloroethane	23.13	5	23.2	0	99.7	70	130	0		
1,1-Dichloroethene	24.02	5	23.2	0	104	70	130	0		
1,1-Dichloropropene	25.45	5	23.2	0	110	70	130	0		
1,2,3-Trichlorobenzene	25.33	5	23.2	0	109	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits



CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID <b>LCS-18072</b>	Batch ID: <b>18072</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>LCS</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 4:03:00 PM</b>	Prep Date: <b>1/13/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	21.68	5	23.2	0	93.4	70	130	0		
1,2,4-Trichlorobenzene	25.03	5	23.2	0	108	70	130	0		
1,2,4-Trimethylbenzene	20.16	5	23.2	0	86.9	70	130	0		
1,2-Dibromo-3-chloropropane	21.96	5	23.2	0	94.7	70	130	0		
1,2-Dibromoethane	22.2	5	23.2	0	95.7	70	130	0		
1,2-Dichlorobenzene	22.06	5	23.2	0	95.1	70	130	0		
1,2-Dichloroethane	27.42	5	23.2	0	118	70	130	0		
1,2-Dichloropropane	23.47	5	23.2	0	101	70	130	0		
1,3,5-Trimethylbenzene	20.16	5	23.2	0	86.9	70	130	0		
1,3-Dichlorobenzene	21.87	5	23.2	0	94.3	70	130	0		
1,3-Dichloropropane	20.54	5	23.2	0	88.5	70	130	0		
1,4-Dichlorobenzene	21.94	5	23.2	0	94.6	70	130	0		
2,2-Dichloropropane	28.48	5	23.2	0	123	70	130	0		
2-Butanone	23.02	15	23.2	0	99.2	50	150	0		
2-Chloroethylvinylether	21.79	15	23.2	0	93.9	50	150	0		
2-Chlorotoluene	19.58	5	23.2	0	84.4	70	130	0		
2-Hexanone	19.24	15	23.2	0	82.9	50	150	0		
4-Chlorotoluene	19.88	5	23.2	0	85.7	70	130	0		
4-Methyl-2-pentanone	18.9	15	23.2	0	81.5	50	150	0		
Acetone	23.06	50	23.2	0	99.4	50	150	0		
Benzene	23.55	5	23.2	0	102	70	130	0		
Bromobenzene	21.12	5	23.2	0	91	70	130	0		
Bromochloromethane	28.84	5	23.2	0	124	70	130	0		
Bromodichloromethane	26.77	5	23.2	0	115	70	130	0		
Bromoform	24.15	5	23.2	0	104	70	130	0		
Bromomethane	22.78	5	23.2	0	98.2	70	130	0		
Carbon disulfide	15.31	15	23.2	0	66	50	150	0		
Carbon tetrachloride	26.22	5	23.2	0	113	70	130	0		
Chlorobenzene	22.1	5	23.2	0	95.3	70	130	0		
Chloroethane	24.25	5	23.2	0	105	70	130	0		
Chloroform	24.97	5	23.2	0	108	70	130	0		
Chloromethane	23.33	5	23.2	0	101	70	130	0		
cis-1,2-Dichloroethene	25.7	5	23.2	0	111	70	130	0		
cis-1,3-Dichloropropene	26.35	5	23.2	0	114	70	130	0		
Dibromochloromethane	24.64	5	23.2	0	106	70	130	0		
Dibromomethane	27.95	5	23.2	0	120	70	130	0		
Dichlorodifluoromethane	24.47	5	23.2	0	105	70	130	0		
Ethylbenzene	21.19	5	23.2	0	91.3	70	130	0		
Hexachlorobutadiene	25.11	5	23.2	0	108	70	130	0		
Iodomethane	16.61	5	23.2	0	71.6	50	150	0		
Isopropylbenzene	21.88	5	23.2	0	94.3	70	130	0		
m,p-Xylene	42.67	5	46.4	0	92	70	130	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID	Batch ID:	TestNo:	Units:							
LCS-18072	18072	SW8260B	µg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
LCS	GCMS2_050113A	1/13/2005 4:03:00 PM	1/13/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	27.1	5	23.2	0	117	70	130	0		
Methylene chloride	19.87	5	23.2	0	85.6	70	130	0		
n-Butylbenzene	19.71	5	23.2	0	85	70	130	0		
n-Propylbenzene	19.6	5	23.2	0	84.5	70	130	0		
Naphthalene	24.36	5	23.2	0	105	70	130	0		
o-Xylene	21.38	5	23.2	0	92.2	70	130	0		
p-Isopropyltoluene	20.92	5	23.2	0	90.2	70	130	0		
sec-Butylbenzene	20	5	23.2	0	86.2	70	130	0		
Styrene	22.02	5	23.2	0	94.9	70	130	0		
tert-Butylbenzene	20.79	5	23.2	0	89.6	70	130	0		
Tetrachloroethene	22.55	5	23.2	0	97.2	70	130	0		
Toluene	25.36	5	23.2	0	109	70	130	0		
trans-1,2-Dichloroethene	25.82	5	23.2	0	111	70	130	0		
trans-1,3-Dichloropropene	26.84	5	23.2	0	116	70	130	0		
Trichloroethene	27.62	5	23.2	0	119	70	130	0		
Trichlorofluoromethane	28.99	15	23.2	0	125	70	130	0		
Vinyl chloride	21.86	5	23.2	0	94.2	70	130	0		
Surr: 1,2-Dichloroethane-d4	54.45	0	50	0	109	52	149	0		
Surr: 4-Bromofluorobenzene	46.19	0	50	0	92.4	65	135	0		
Surr: Dibromofluoromethane	56.35	0	50	0	113	65	135	0		
Surr: Toluene-d8	44.61	0	50	0	89.2	65	135	0		

Sample ID	Batch ID:	TestNo:	Units:							
LCSD-18072	18072	SW8260B	µg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
LCSD	GCMS2_050113A	1/13/2005 4:35:00 PM	1/13/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	23.55	5	23.2	0	102	70	130	1.54	30	
1,1,1-Trichloroethane	28.13	5	23.2	0	121	70	130	3.07	30	
1,1,2,2-Tetrachloroethane	20.1	5	23.2	0	86.6	70	130	2.26	30	
1,1,2-Trichloroethane	26.29	5	23.2	0	113	70	130	0.645	30	
1,1-Dichloroethane	23.67	5	23.2	0	102	70	130	2.31	30	
1,1-Dichloroethene	25.06	5	23.2	0	108	70	130	4.24	30	
1,1-Dichloropropene	25.82	5	23.2	0	111	70	130	1.44	30	
1,2,3-Trichlorobenzene	24.86	5	23.2	0	107	70	130	1.87	30	
1,2,3-Trichloropropane	22.81	5	23.2	0	98.3	70	130	5.08	30	
1,2,4-Trichlorobenzene	24.25	5	23.2	0	105	70	130	3.17	30	
1,2,4-Trimethylbenzene	20.7	5	23.2	0	89.2	70	130	2.64	30	
1,2-Dibromo-3-chloropropane	23.06	5	23.2	0	99.4	70	130	4.89	30	
1,2-Dibromoethane	22.73	5	23.2	0	98	70	130	2.36	30	
1,2-Dichlorobenzene	22.4	5	23.2	0	96.6	70	130	1.53	30	
1,2-Dichloroethane	27.6	5	23.2	0	119	70	130	0.654	30	
1,2-Dichloropropane	23.79	5	23.2	0	103	70	130	1.35	30	

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
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CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID	LCSD-18072	Batch ID:	18072	TestNo:	SW8260B	Units:	µg/Kg
SampType	LCSD	Run ID:	GCMS2_050113A	Analysis Date:	1/13/2005 4:35:00 PM	Prep Date:	1/13/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	20.75	5	23.2	0	89.4	70	130	2.88	30	
1,3-Dichlorobenzene	22.17	5	23.2	0	95.6	70	130	1.36	30	
1,3-Dichloropropane	20.57	5	23.2	0	88.7	70	130	0.146	30	
1,4-Dichlorobenzene	22.21	5	23.2	0	95.7	70	130	1.22	30	
2,2-Dichloropropane	28.36	5	23.2	0	122	70	130	0.422	30	
2-Butanone	22.93	15	23.2	0	98.8	50	150	0.392	30	
2-Chloroethylvinylether	21.45	15	23.2	0	92.5	50	150	1.57	30	
2-Chlorotoluene	20	5	23.2	0	86.2	70	130	2.12	30	
2-Hexanone	19.5	15	23.2	0	84.1	50	150	1.34	30	
4-Chlorotoluene	20.31	5	23.2	0	87.5	70	130	2.14	30	
4-Methyl-2-pentanone	19.14	15	23.2	0	82.5	50	150	1.26	30	
Acetone	21.47	50	23.2	0	92.5	50	150	0	30	
Benzene	23.98	5	23.2	0	103	70	130	1.81	30	
Bromobenzene	21.48	5	23.2	0	92.6	70	130	1.69	30	
Bromochloromethane	29.37	5	23.2	0	127	70	130	1.82	30	
Bromodichloromethane	26.95	5	23.2	0	116	70	130	0.670	30	
Bromoform	24.11	5	23.2	0	104	70	130	0.166	30	
Bromomethane	24.02	5	23.2	0	104	70	130	5.30	30	
Carbon disulfide	15.6	15	23.2	0	67.2	50	150	1.88	30	
Carbon tetrachloride	26.73	5	23.2	0	115	70	130	1.93	30	
Chlorobenzene	22.34	5	23.2	0	96.3	70	130	1.08	30	
Chloroethane	24.88	5	23.2	0	107	70	130	2.56	30	
Chloroform	25.72	5	23.2	0	111	70	130	2.96	30	
Chloromethane	23.82	5	23.2	0	103	70	130	2.08	30	
cis-1,2-Dichloroethene	26.23	5	23.2	0	113	70	130	2.04	30	
cis-1,3-Dichloropropene	26.33	5	23.2	0	113	70	130	0.0759	30	
Dibromochloromethane	24.84	5	23.2	0	107	70	130	0.808	30	
Dibromomethane	28.68	5	23.2	0	124	70	130	2.58	30	
Dichlorodifluoromethane	25.18	5	23.2	0	109	70	130	2.86	30	
Ethylbenzene	21.31	5	23.2	0	91.9	70	130	0.565	30	
Hexachlorobutadiene	24.64	5	23.2	0	106	70	130	1.89	30	
Iodomethane	16.72	5	23.2	0	72.1	50	150	0.660	30	
Isopropylbenzene	22.04	5	23.2	0	95	70	130	0.729	30	
m,p-Xylene	43.44	5	46.4	0	93.6	70	130	1.79	30	
Methyl tert-butyl ether	27.22	5	23.2	0	117	70	130	0.442	30	
Methylene chloride	20.49	5	23.2	0	88.3	70	130	3.07	30	
n-Butylbenzene	20.09	5	23.2	0	86.6	70	130	1.91	30	
n-Propylbenzene	20.15	5	23.2	0	86.9	70	130	2.77	30	
Naphthalene	23.85	5	23.2	0	103	70	130	2.12	30	
o-Xylene	21.83	5	23.2	0	94.1	70	130	2.08	30	
p-Isopropyltoluene	21.26	5	23.2	0	91.6	70	130	1.61	30	
sec-Butylbenzene	20.5	5	23.2	0	88.4	70	130	2.47	30	

Qualifiers: ND - Not Detected at the Method Detection Limit  
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 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID	Batch ID:	TestNo:	Units:							
LCSD-18072	18072	SW8260B	µg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
LCSD	GCMS2_050113A	1/13/2005 4:35:00 PM	1/13/2005							
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Styrene	22.38	5	23.2	0	96.5	70	130	1.62	30	
tert-Butylbenzene	21.54	5	23.2	0	92.8	70	130	3.54	30	
Tetrachloroethene	22.62	5	23.2	0	97.5	70	130	0.310	30	
Toluene	25.64	5	23.2	0	111	70	130	1.10	30	
trans-1,2-Dichloroethene	25.81	5	23.2	0	111	70	130	0.0387	30	
trans-1,3-Dichloropropene	26.59	5	23.2	0	115	70	130	0.936	30	
Trichloroethene	28.05	5	23.2	0	121	70	130	1.54	30	
Trichlorofluoromethane	29.67	15	23.2	0	128	70	130	2.32	30	
Vinyl chloride	22.88	5	23.2	0	98.6	70	130	4.56	30	
Surr: 1,2-Dichloroethane-d4	53.98	0	50	0	108	52	149	0	0	
Surr: 4-Bromofluorobenzene	47.22	0	50	0	94.4	65	135	0	0	
Surr: Dibromofluoromethane	56.6	0	50	0	113	65	135	0	0	
Surr: Toluene-d8	44.82	0	50	0	89.6	65	135	0	0	

Sample ID	Batch ID:	TestNo:	Units:							
ICV-050113	R20675	SW8260B	µg/Kg							
SampType	Run ID:	Analysis Date:	Prep Date:							
ICV	GCMS2_050113A	1/13/2005 2:42:00 PM								
Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	44.75	5	46.4	0	96.4	75	125	0		
1,1,1-Trichloroethane	52.69	5	46.4	0	114	75	125	0		
1,1,2,2-Tetrachloroethane	37.21	5	46.4	0	80.2	75	125	0		
1,1,2-Trichloroethane	49.67	5	46.4	0	107	75	125	0		
1,1-Dichloroethane	43.71	5	46.4	0	94.2	75	125	0		
1,1-Dichloroethene	47.43	5	46.4	0	102	75	125	0		
1,1-Dichloropropene	48.53	5	46.4	0	105	75	125	0		
1,2,3-Trichlorobenzene	45.32	5	46.4	0	97.7	75	125	0		
1,2,3-Trichloropropane	42.9	5	46.4	0	92.5	75	125	0		
1,2,4-Trichlorobenzene	45.88	5	46.4	0	98.9	75	125	0		
1,2,4-Trimethylbenzene	39.2	5	46.4	0	84.5	75	125	0		
1,2-Dibromo-3-chloropropane	43.29	5	46.4	0	93.3	75	125	0		
1,2-Dibromoethane	42.55	5	46.4	0	91.7	75	125	0		
1,2-Dichlorobenzene	42.99	5	46.4	0	92.7	75	125	0		
1,2-Dichloroethane	51.66	5	46.4	0	111	75	125	0		
1,2-Dichloropropane	43.51	5	46.4	0	93.8	75	125	0		
1,3,5-Trimethylbenzene	38.93	5	46.4	0	83.9	75	125	0		
1,3-Dichlorobenzene	42.06	5	46.4	0	90.6	75	125	0		
1,3-Dichloropropane	38.61	5	46.4	0	83.2	75	125	0		
1,4-Dichlorobenzene	42.24	5	46.4	0	91	75	125	0		
2,2-Dichloropropane	54.82	5	46.4	0	118	75	125	0		
2-Butanone	42.44	15	46.4	0	91.5	60	140	0		
2-Chloroethylvinylether	40.68	15	46.4	0	87.7	60	140	0		
2-Chlorotoluene	38.01	5	46.4	0	81.9	75	125	0		

Qualifiers: ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501027  
 Project: Sii Smith Services Hobbs NM

# ANALYTICAL QC SUMMARY REPORT

RunID: GCMS2\_050113A

Sample ID: <b>ICV-050113</b>	Batch ID: <b>R20675</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType: <b>ICV</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 2:42:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	High Limit	%RPD	RPDLimit	Qual
2-Hexanone	35.73	15	46.4	0	77	60	140	0		
4-Chlorotoluene	38.33	5	46.4	0	82.6	75	125	0		
4-Methyl-2-pentanone	35.3	15	46.4	0	76.1	60	140	0		
Acetone	45.02	50	46.4	0	97	60	140	0		
Benzene	44.34	5	46.4	0	95.6	75	125	0		
Bromobenzene	40.89	5	46.4	0	88.1	75	125	0		
Bromochloromethane	55.56	5	46.4	0	120	75	125	0		
Bromodichloromethane	51.17	5	46.4	0	110	75	125	0		
Bromoform	46.02	5	46.4	0	99.2	75	125	0		
Bromomethane	40.27	5	46.4	0	86.8	75	125	0		
Carbon disulfide	31.5	15	46.4	0	67.9	60	140	0		
Carbon tetrachloride	51.34	5	46.4	0	111	75	125	0		
Chlorobenzene	41.77	5	46.4	0	90	75	125	0		
Chloroethane	43.57	5	46.4	0	93.9	75	125	0		
Chloroform	47.83	5	46.4	0	103	75	125	0		
Chloromethane	43.84	5	46.4	0	94.5	75	125	0		
cis-1,2-Dichloroethene	48.53	5	46.4	0	105	75	125	0		
cis-1,3-Dichloropropene	50.47	5	46.4	0	109	75	125	0		
Dibromochloromethane	47.88	5	46.4	0	103	75	125	0		
Dibromomethane	55.03	5	46.4	0	119	75	125	0		
Dichlorodifluoromethane	46.5	5	46.4	0	100	75	125	0		
Ethylbenzene	40.02	5	46.4	0	86.2	75	125	0		
Hexachlorobutadiene	47.56	5	46.4	0	102	75	125	0		
Iodomethane	32.38	5	46.4	0	69.8	60	140	0		
Isopropylbenzene	41.09	5	46.4	0	88.6	75	125	0		
m,p-Xylene	80.63	5	92.8	0	86.9	75	125	0		
Methyl tert-butyl ether	49.8	5	46.4	0	107	75	125	0		
Methylene chloride	43.18	5	46.4	0	93.1	75	125	0		
n-Butylbenzene	38.39	5	46.4	0	82.7	75	125	0		
n-Propylbenzene	38.06	5	46.4	0	82	75	125	0		
Naphthalene	42.43	5	46.4	0	91.4	75	125	0		
o-Xylene	41	5	46.4	0	88.4	75	125	0		
p-Isopropyltoluene	40.67	5	46.4	0	87.7	75	125	0		
sec-Butylbenzene	38.59	5	46.4	0	83.2	75	125	0		
Styrene	41.53	5	46.4	0	89.5	75	125	0		
tert-Butylbenzene	41.33	5	46.4	0	89.1	75	125	0		
Tetrachloroethene	43.52	5	46.4	0	93.8	75	125	0		
Toluene	46.99	5	46.4	0	101	75	125	0		
trans-1,2-Dichloroethene	48.68	5	46.4	0	105	75	125	0		
trans-1,3-Dichloropropene	51.19	5	46.4	0	110	75	125	0		
Trichloroethene	53.01	5	46.4	0	114	75	125	0		
Trichlorofluoromethane	56.16	15	46.4	0	121	75	125	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

**CLIENT:** SMITH INTERNATIONAL  
**Work Order:** 0501027  
**Project:** Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

**RunID:** GCMS2\_050113A

Sample ID <b>ICV-050113</b>	Batch ID: <b>R20675</b>	TestNo: <b>SW8260B</b>	Units: <b>µg/Kg</b>
SampType <b>ICV</b>	Run ID: <b>GCMS2_050113A</b>	Analysis Date: <b>1/13/2005 2:42:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	42.34	5	46.4	0	91.2	75	125	0		
Surr: 1,2-Dichloroethane-d4	54.24	0	50	0	108	52	149	0		
Surr: 4-Bromofluorobenzene	47.84	0	50	0	95.7	65	135	0		
Surr: Dibromofluoromethane	57.57	0	50	0	115	65	135	0		
Surr: Toluene-d8	44.49	0	50	0	89	65	135	0		

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits

**CLIENT:** SMITH INTERNATIONAL  
**Work Order:** 0501027  
**Project:** Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

**RunID:** PMOIST\_050110A

Sample ID <b>0501026-10B DUP</b>	Batch ID: <b>PMOIST-01/10/05</b>	TestNo: <b>D2216</b>	Units: <b>WT%</b>
SampType <b>DUP</b>	Run ID: <b>PMOIST_050110A</b>	Analysis Date: <b>1/10/2005 3:00:00 PM</b>	Prep Date: <b>1/10/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture	6.18	0	0	0	0	0	0	6.16	30	

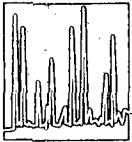
Sample ID <b>0501034-01A DUP</b>	Batch ID: <b>PMOIST-01/10/05</b>	TestNo: <b>D2216</b>	Units: <b>WT%</b>
SampType <b>DUP</b>	Run ID: <b>PMOIST_050110A</b>	Analysis Date: <b>1/10/2005 3:00:00 PM</b>	Prep Date: <b>1/10/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	Low Limit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture	10.32	0	0	0	0	0	0	2.88	30	

**Qualifiers:** ND - Not Detected at the Method Detection Limit      R - RPD outside accepted recovery limits  
 J - Analyte detected below quantitation limits                      B - Analyte detected in the associated Method Blank  
 S - Spike Recovery outside accepted recovery limits







**DHL**  
ANALYTICAL

January 19, 2005

Lee Davis/Kurt Lampi  
SMITH INTERNATIONAL  
P.O. Box 60068  
Houston, Texas 77205-0068

TEL: (281) 233-5401  
FAX (281) 233-5620

RE: Sii Smith Services Hobbs NM

Order No.: 0501091

Dear Lee Davis/Kurt Lampi:

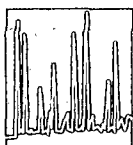
DHL Analytical received 1 sample on 1/18/2005 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont  
General Manager



**DHL**  
ANALYTICAL

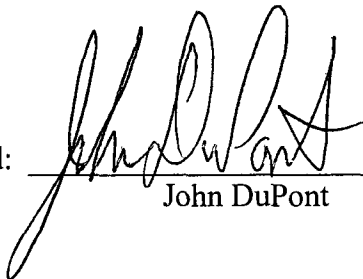
## TABLE OF CONTENTS

This report for SMITH INTERNATIONAL: Sii Smith Services Hobbs NM (DHL Work Order 0501027) contains the following information:

ITEM	Page
• Cover Page	1
• Table of Contents	2
• Original chain of custody, fedex slip (if used), log-in checklist	3-4
• Case Narrative	5
• Work Order Sample Summary	6
• Preparation Dates Report	7
• Analytical Dates Report	8
• Sample Results	9
• QC Summary Report	10-11
• Total Number of Pages	11

January 19, 2005

Approved: \_\_\_\_\_



John DuPont

0501090  
No 22361

2300 Double Creek Drive • Round Rock, TX 78664  
Phone (512) 388-8222 • FAX (512) 388-8229

# DHL ANALYTICAL

CLIENT: Smith International, Inc.  
ADDRESS: P.O. Box 6068, Houston, TX 77205-0668  
PHONE: 281-233-5461 FAX 281-233-5620  
DATA REPORTED TO: Mr. Lee Davis  
ADDITIONAL REPORT COPIES TO: K. Lampi email: Klampi@cov.net

## CHAIN-OF-CUSTODY

DATE: 01/06/05 PAGE 1 OF 1  
DHL WORK ORDER #: 0501090  
PROJECT LOCATION OR NAME: Sri. Smith Services Drisco - Hobbs, NM ESA  
CLIENT PROJECT #: Drisco Hobbs - 10103 COLLECTOR: K. Lampi

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION				ANALYSES	FIELD NOTES	
							H <sub>2</sub> O	H <sub>2</sub> SO <sub>4</sub> / NaOH	ICE	UNPRESERVED			
1-7	67	01/06	0930	S	P.G	8			X				
1-8	67	01/06	0940	S	P.G	8			X				
1-9	63	01/06	0950	S	P.G	20			X				
1-10	64	01/06	1000	S	G	1			X				
3-1	65	01/06	1010	S	P.G	8			X				
3-2	66	01/06	1020	S	P.G	5			X				
4-1	67	01/06	1030	S	P.G	5			X				

YES  NO  
 Authorize 5% surcharge for TRRP report?  
 Sample Matrix: NM-HS-DRIL

ANALYSES: TRP, METALS, TOXIC, PCB, PAH, HCB, DDT, DIOXIN, FURAN, CHLORIDE, AMMONIA, ALKALINITY  
 PRESERVATION: ICE  
 CONTAINER TYPE: P-Glass  
 DATE/TIME: 01/06/05 1200  
 RECEIVED BY: (Signature) [Signature]  
 DATE/TIME: 01/06/05 1200  
 RELINQUISHED BY: (Signature) [Signature]  
 DATE/TIME: 01/06/05 175  
 RECEIVED BY: (Signature) [Signature]  
 DATE/TIME: 01/06/05 175  
 RELINQUISHED BY: (Signature) [Signature]  
 DATE/TIME: 01/06/05 175  
 RECEIVED BY: (Signature) [Signature]  
 DATE/TIME: 01/06/05 175

LABORATORY USE ONLY  
 RECEIVING TEMP: 37 THERM #: 42  
 CUSTODY SEALS -  BROKEN  INTACT  NOT USED  
 CARRIER BILL #  APC DELIVERY  HAND DELIVERED

# DHL Analytical

## Sample Receipt Checklist

Client Name **SMITH INTERNATIONAL**

Date Received: **1/18/05**

Work Order Number **0501091**

Received by **MKS**

Checklist completed by \_\_\_\_\_

Signature

Date

Reviewed by **(JD)**

Initials

Date

Carrier name: FedEx 2day

- |   |  |                              |   |
|---|--|------------------------------|---|
| Shipping container/cooler in good condition?            | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  | Not Present <input type="checkbox"/>              |
| Custody seals intact on shipping container/cooler?      | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  | Not Present <input type="checkbox"/>              |
| Custody seals intact on sample bottles?                 | Yes <input type="checkbox"/>                               | No <input type="checkbox"/>  | Not Present <input checked="" type="checkbox"/>   |
| Chain of custody present?                               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Chain of custody agrees with sample labels?             | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Samples in proper container/bottle?                     | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Sample containers intact?                               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Sufficient sample volume for indicated test?            | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| All samples received within holding time?               | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Container/Temp Blank temperature in compliance?         | Yes <input checked="" type="checkbox"/>                    | No <input type="checkbox"/>  |   |
| Water - VOA vials have zero headspace?                  | No VOA vials submitted <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> | No <input type="checkbox"/>                       |
| Water - pH acceptable upon receipt?                     | Yes <input type="checkbox"/>                               | No <input type="checkbox"/>  | NotApplicable <input checked="" type="checkbox"/> |

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Any No response must be detailed in the comments section below.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

CLIENT: SMITH INTERNATIONAL  
Project: Sii Smith Services Hobbs NM  
Lab Order: 0501091

**CASE NARRATIVE**

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Method SW8270C - PAH Analysis  
Method D2216 - Percent Moisture

**LOG IN**

Samples were received and log-in performed on 1/18/05. A total of 1 sample was received. The sample was added on from a previous DHL work order (0501027).

**PAH ANALYSIS**

For PAH analysis, the surrogate recovery for sample NM-HB-DRL-1-7 was above control limits for 4-Terphenyl-d14. This is flagged accordingly. No further corrective actions were taken and the sample was not adversely affected.

For PAH analysis, sample NM-HB-DRL-1-7 was diluted prior to analysis due to the nature of the sample.

For PAH analysis the recovery for the ICV was slightly above control limits for Pyrene. This is flagged accordingly in the QC summary report. No further corrective actions were required and no sample results were adversely affected.

**DATA REPORTING**

Sample reports include the Method Detection Limit (MDL) and the Reporting Limit (RL) for each analyte. The computer system allows for reporting MDL with 2 significant figures and the RL with 3 significant figures. Because of rounding it may sometimes appear that a "J" flagged result is lower than the MDL if the sample result is very near the MDL.

---

**CLIENT:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM  
**Lab Order:** 0501091

---

**Work Order Sample Summary**

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Collection Date</b>	<b>Date Received</b>
0501091-01	NM-HB-DRL-1-7		1/6/2005 9:30:00 AM	1/18/2005

**DHL Analytical**

19-Jan-05

**Lab Order:** 0501091  
**Client:** SMITH INTERNATIONAL  
**Project:** Sii Smith Services Hobbs NM

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
0501091-01A	NM-HB-DR1-1-7	1/6/2005 9:30:00 AM	Soil	SW3550B	Soil Prep Sonication: PAH	1/11/2005 2:54:09 PM	18101

DHL Analytical

19-Jan-05

Lab Order: 0501091  
Client: SMITH INTERNATIONAL  
Project: Sii Smith Services Hobbs NM

### ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
0501091-01A	NM-HB-DRL-1-7	Soil	SW8270C	PAHs: GC/MS	18101	20	1/18/2005 12:06:00 PM	GCMS6_050118A



**DHL Analytical**

Date: 19-Jan-05

CLIENT: SMITH INTERNATIONAL  
 Project Name: Sii Smith Services Hobbs NM  
 Project No: Drilco Hobbs-110403  
 Lab Order: 0501091

Client Sample ID: NM-HB-DRL-1-7  
 Lab ID: 0501091-01  
 Collection Date: 1/6/2005 9:30:00 AM  
 Matrix: SOIL

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>PAH'S (SW8270)</b>		<b>SW8270C</b>					Analyst: RPC
Acenaphthene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Acenaphthylene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Anthracene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Benzo[a]anthracene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Benzo[a]pyrene	ND	0.48	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Benzo[b]fluoranthene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Benzo[g,h,i]perylene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Benzo[k]fluoranthene	ND	0.48	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Chrysene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Dibenz[a,h]anthracene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Fluoranthene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Fluorene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Indeno[1,2,3-cd]pyrene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Naphthalene	ND	0.16	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Phenanthrene	0.26	0.16	0.799	J	mg/Kg-dry	20	1/18/2005 12:06:00 PM
Pyrene	ND	0.32	0.799		mg/Kg-dry	20	1/18/2005 12:06:00 PM
Surr: 2-Fluorobiphenyl	77.9	0	40-140		%REC	20	1/18/2005 12:06:00 PM
Surr: 4-Terphenyl-d14	149	0	40-140	S	%REC	20	1/18/2005 12:06:00 PM
Surr: Nitrobenzene-d5	109	0	40-140		%REC	20	1/18/2005 12:06:00 PM

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected between MDL and RL  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501091  
 Project: Sii Smith Services Hobbs NM

**ANALYTICAL QC SUMMARY REPORT**

RunID: GCMS6\_050118A

Sample ID: MB-18101	Batch ID: 18101	TestNo: SW8270C	Units: mg/Kg
SampType: MBLK	Run ID: GCMS6_050118A	Analysis Date: 1/18/2005 11:39:00 AM	Prep Date: 1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	ND	0.0333								
Acenaphthylene	ND	0.0333								
Anthracene	ND	0.0333								
Benzo[a]anthracene	ND	0.0333								
Benzo[a]pyrene	ND	0.0333								
Benzo[b]fluoranthene	ND	0.0333								
Benzo[g,h,i]perylene	ND	0.0333								
Benzo[k]fluoranthene	ND	0.0333								
Chrysene	ND	0.0333								
Dibenz[a,h]anthracene	ND	0.0333								
Fluoranthene	ND	0.0333								
Fluorene	ND	0.0333								
Indeno[1,2,3-cd]pyrene	ND	0.0333								
Naphthalene	ND	0.0333								
Phenanthrene	ND	0.0333								
Pyrene	ND	0.0333								
Surr: 2-Fluorobiphenyl	2.731	0	2.667	0	102	40	140	0		
Surr: 4-Terphenyl-d14	2.894	0	2.667	0	109	40	140	0		
Surr: Nitrobenzene-d5	3.072	0	2.667	0	115	40	140	0		

Sample ID: LCS-18101	Batch ID: 18101	TestNo: SW8270C	Units: mg/Kg
SampType: LCS	Run ID: GCMS6_050118A	Analysis Date: 1/18/2005 11:12:00 AM	Prep Date: 1/11/2005

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.217	0.0333	1.333	0	91.3	56	114	0		
Acenaphthylene	1.097	0.0333	1.333	0	82.3	56	116	0		
Anthracene	1.177	0.0333	1.333	0	88.3	40	113	0		
Benzo[a]anthracene	1.124	0.0333	1.333	0	84.3	52	108	0		
Benzo[a]pyrene	1.175	0.0333	1.333	0	88.1	48	115	0		
Benzo[b]fluoranthene	1.247	0.0333	1.333	0	93.5	43	115	0		
Benzo[g,h,i]perylene	1.122	0.0333	1.333	0	84.1	47	123	0		
Benzo[k]fluoranthene	1.247	0.0333	1.333	0	93.5	54	118	0		
Chrysene	1.162	0.0333	1.333	0	87.2	56	115	0		
Dibenz[a,h]anthracene	1.168	0.0333	1.333	0	87.6	43	120	0		
Fluoranthene	1.147	0.0333	1.333	0	86	41	108	0		
Fluorene	1.236	0.0333	1.333	0	92.7	47	128	0		
Indeno[1,2,3-cd]pyrene	1.166	0.0333	1.333	0	87.5	46	119	0		
Naphthalene	1.264	0.0333	1.333	0	94.8	55	113	0		
Phenanthrene	1.265	0.0333	1.333	0	94.9	55	114	0		
Pyrene	1.328	0.0333	1.333	0	99.6	42	125	0		

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

CLIENT: SMITH INTERNATIONAL  
 Work Order: 0501091  
 Project: Sii Smith Services Hobbs NM

## ANALYTICAL QC SUMMARY REPORT

RunID: GCMS6\_050118A

Sample ID: <b>LCS-18101</b>	Batch ID: <b>18101</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType: <b>LCS</b>	Run ID: <b>GCMS6_050118A</b>	Analysis Date: <b>1/18/2005 11:12:00 AM</b>	Prep Date: <b>1/11/2005</b>

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 2-Fluorobiphenyl	2.767	0	2.667	0	104	40	140	0		
Surr: 4-Terphenyl-d14	2.795	0	2.667	0	105	40	140	0		
Surr: Nitrobenzene-d5	2.952	0	2.667	0	111	40	140	0		

Sample ID: <b>ICV-050118</b>	Batch ID: <b>R20723</b>	TestNo: <b>SW8270C</b>	Units: <b>mg/Kg</b>
SampType: <b>ICV</b>	Run ID: <b>GCMS6_050118A</b>	Analysis Date: <b>1/18/2005 10:46:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	2.14	0.05	2	0	107	80	120	0		
Acenaphthylene	2.123	0.05	2	0	106	80	120	0		
Anthracene	2.139	0.05	2	0	107	80	120	0		
Benzo[a]anthracene	2.003	0.05	2	0	100	80	120	0		
Benzo[a]pyrene	2.097	0.05	2	0	105	80	120	0		
Benzo[b]fluoranthene	2.112	0.05	2	0	106	80	120	0		
Benzo[g,h,i]perylene	1.939	0.05	2	0	96.9	80	120	0		
Benzo[k]fluoranthene	2.097	0.05	2	0	105	80	120	0		
Chrysene	2.022	0.05	2	0	101	80	120	0		
Dibenz[a,h]anthracene	1.969	0.05	2	0	98.5	80	120	0		
Fluoranthene	2.086	0.05	2	0	104	80	120	0		
Fluorene	2.178	0.05	2	0	109	80	120	0		
Indeno[1,2,3-cd]pyrene	1.934	0.05	2	0	96.7	80	120	0		
Naphthalene	2.189	0.05	2	0	109	80	120	0		
Phenanthrene	2.189	0.05	2	0	109	80	120	0		
Pyrene	2.431	0.05	2	0	122	80	120	0		S
Surr: 2-Fluorobiphenyl	2.06	0	2	0	103	40	140	0		
Surr: 4-Terphenyl-d14	1.998	0	2	0	99.9	40	140	0		
Surr: Nitrobenzene-d5	2.183	0	2	0	109	40	140	0		

Qualifiers: ND - Not Detected at the Method Detection Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

**APPENDIX C**  
**Field Assessment Procedures**

## FIELD ASSESSMENT PROCEDURES

The media of interest and the sampling methods and protocol are described in this attachment.

### A.1 Sampling Equipment

The following is a list of sampling equipment that will be used during field activities:

- A Geoprobe® or similar direct-push type soil sampling system;
- Laboratory-supplied containers (i.e., sample jars) for collection of soil samples targeted for laboratory analyses;
- Quality Assurance/Quality Control (QA/QC) samples (e.g. duplicate sample);
- Phosphate-free soap, potable water and deionized water for equipment decontamination;
- U.S. Oil Co. Inc. "Easydraw" syringe (for volatile organic analysis);
- A polyresin trowel;
- Disposable latex and/or nitrile gloves;
- Sample shipping containers (e.g., coolers)

### A.2 Soil Sampling Procedures

This section outlines soil sampling procedures to be followed.

#### A.2.1 Geoprobe® Sampling Procedures

The Geoprobe® or similar device is a direct-push type sampling machine used to collect soil and/or ground-water samples. The machine advances a soil probe by means of a hydraulic hammer that drives the sampler vertically into the ground. Soil samples will be collected using a 1.5-inch diameter, 36-inch or 48-inch long sampling tube with dedicated, disposable acetate liners. Use of a releasable plunger inside the tube allows the sampler to be advanced to the desired depth and a discrete sample to be collected.

#### A.2.2 Soil Sample Screening and Collection Procedures

After retrieving the sampling tube, the liners are cut open and the soil sample field screened by the geologist. The geologist generally selects a "worst-case" soil sample from each location based on the following criteria:

- (1) appeared to exhibit the most prominent staining,
- (2) exhibited the strongest potential chemical odor (or, in the absence of an apparent chemical odor, the strongest anomalous odor, as observed by the geologist)
- (3) Located at or below the bottom of the below ground tank or vessel of concern,
- (4) Located at a specific soil horizon of interest (for example, a fill and native soil contact).

All soil samples are collected above the water table. After sample collection, the soil is visually classified by the geologist and described on the appropriate field sampling form. The soil samples, submitted to the laboratory for analytical testing, are collected using clean one-use disposal gloves and/or a U.S. Oil Co. Inc. "Easydraw" syringe (for volatile organic analysis). Soil samples are placed in either laboratory supplied jars or vials. A polyresin trowel used to break open the soil core is decontaminated between sample points by using a nonphosphate soap wash, distilled water rinse, and air drying.

### **A.2.3 Boring Abandonment**

Following the advancement of the borings and the collection of soil samples, the borings will be abandoned by backfilling with bentonite chips that are hydrated with clean water. The surface areas at each boring will be patched with concrete or another appropriate surfacing material.

### **A.3 Equipment Decontamination**

Equipment involved in field sampling activities will be decontaminated prior to drilling, sampling or leaving the facility. During soil sampling, decontamination of the sampling equipment includes the following:

- The removal of visible sediment using a brush and non-phosphatic soap and potable water mixture; and,
- Distilled water rinse.

### **A.4 Chain-of-Custody Procedures**

Formal chain-of-custody begins when the pre-cleaned sample containers arrive in the field in the laboratory-supplied and sealed cooler. At the time of sample collection, the labeled samples will be placed into an ice-filled cooler. A line-item chain-of-custody form will be completed by the sampler. After completion of all of the line items, the sampler signs, dates, lists the time, and confirms the completeness of all descriptive information contained on the form. One copy of the completed chain-of-custody will be retained by the sampler. The following items will be included on the chain-of-custody:

- Sample identification
- Signature of sampler,
- Date and time of collection,
- Sample type (i.e., aqueous or soil),
- Number and type of containers,
- Analytical parameters requested,
- Preservative,
- Signatures of personnel involved in the chain-of-custody of possession, and,
- Dates and times of relinquishment and receipt.

### **A.5 QA/QC Samples (Only if requested by client or required by agency)**

A QA/QC sample will be collected to assess the quality and precision of the laboratory data resulting from soil sampling. The QA/QC sample is a duplicate soil sample.

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**APPENDIX D**  
**New Mexico Water Well Database of Nearby Water Wells**

AVERAGE DEPTH OF WATER REPORT 01/31/2005

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
L	18S	38E	21				40	35	140	55

Record Count: 40



WATER COLUMN REPORT 01/31/2005

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

Well Number	Tws	Rng	Sec	q	q	q	Zone	X	Y	Depth Well	Depth Water	Water (in Column)
L 05309	18S	38E	21							100	65	35
L 01120	18S	38E	21							116	36	80
L 01120 APPRO	18S	38E	21							116	36	80
L 07930	18S	38E	21	1	1					120	42	78
L 07848	18S	38E	21	1	1					140	90	50
L 07829	18S	38E	21	1	1					152	80	72
L 07653	18S	38E	21	1	1	1				132	58	74
L 03199 APPRO	18S	38E	21	1	1	2				120	45	75
L 03199	18S	38E	21	1	1	2				120	45	75
L 00220 EXPLORE	18S	38E	21	1	2	2				235		
L 03174 APPRO	18S	38E	21	1	2	3				100	35	65
L 03174	18S	38E	21	1	2	3				100	35	65
L 08668	18S	38E	21	1	3	1				130	58	72
L 08595	18S	38E	21	1	3	1				150	68	82
L 08025	18S	38E	21	1	3	2				135	48	87
L 08687	18S	38E	21	1	3	2				120	58	62
L 03655	18S	38E	21	1	4	3				110	52	58
L 03655 APPRO	18S	38E	21	1	4	3				110	52	58
L 03264 APPRO	18S	38E	21	1	4	4				125	50	75
L 03264	18S	38E	21	1	4	4				125	50	75
L 09422	18S	38E	21	2	2	4				110	60	50
L 03266	18S	38E	21	2	3	3				116	42	74
L 05489	18S	38E	21	3						200	43	157
L 01937	18S	38E	21	3	1	1				213	90	123
L 06499	18S	38E	21	3	1	1				120	78	42
L 02506	18S	38E	21	3	1	3				105	50	55
L 02716 APPRO	18S	38E	21	3	2					81	50	31
L 08190	18S	38E	21	3	2	2				140	140	
L 01937 S	18S	38E	21	3	3	3				202		
L 03651	18S	38E	21	3	4					118	60	58
L 03651 APPRO	18S	38E	21	3	4					118	60	58
L 04477 APPRO	18S	38E	21	4						80	55	25
L 01294 APPRO	18S	38E	21	4	1	1				110	45	65
L 02506 APPRO	18S	38E	21	4	1	3				105	50	55
L 03709	18S	38E	21	4	3					100	38	62
L 03709 APPRO	18S	38E	21	4	3					100	38	62
L 07811	18S	38E	21	4	3	1				150	70	80
L 03266 APPRO	18S	38E	21	4	3	3				116	42	74
L 02769 APPRO	18S	38E	21	4	4					60	35	25
L 02769	18S	38E	21	4	4					60	35	25
L 02186 APPRO	18S	38E	21	4	4	1				106	48	58
L 02186	18S	38E	21	4	4	1				106	48	58

Record Count: 42

WELL / SURFACE DATA REPORT 01/31/2005

DB File Nbr	(acre ft per annum)	Use	Diversion	Owner	Well Number	Source	Tvs	Rng	Sec	q	q	X	Y
(quarters are 1-NW 2-NE 3-SW 4-SE) (quarters are biggest to smallest)													
(quarters are biggest to smallest)													
(quarters are biggest to smallest)													
L 00081 A	IRR	151.17	GRIMES LAND CO., LTD. CO.	L 01937	Shallow	18S	38E	21	3	1	1		
L 00220	DOM	7300	CITY OF HOBBS	L 00220 EXPLORE	Shallow	18S	38E	21	1	2	2		
L 01120	DOM	3	WILLIAM M. JR., BROWN	L 01120	Shallow	18S	38E	21					
L 01266	PRO	0	GULF OIL CORPORATION	L 01120 APPRO	Shallow	18S	38E	21	2	3	2		
L 01294	DOM	3	GEORGE W. SPRANKLE	L 01266	Shallow	18S	38E	21	4	1	1		
L 01362	DOM	3	ABBOTT BROS.	L 01294 APPRO	Shallow	18S	38E	21	3	3			
L 01937	IRR	0	GRIMES LAND COMPANY	L 01362 APPRO	Shallow	18S	38E	21					
L 02186	DOM	3	E. M. BORNWANN	L 01937 S	Shallow	18S	38E	21	3	1	1		
L 02506	DOM	3	WILLIAM CECIL GRIMES	L 02186	Shallow	18S	38E	21	4	1			
L 02716	DOM	3	L. M. KEY	L 02186 APPRO	Shallow	18S	38E	21	4	1			
L 02769	DOM	3	UNION TANK & SUPPLY	L 02506	Shallow	18S	38E	21	3	1	3		
L 02810	DOM	3	CHARLES ELKINS	L 02716 APPRO	Shallow	18S	38E	21	4	1	3		
L 03174	DOM	3	G.D. SHIRLEY	L 02769	Shallow	18S	38E	21	3	2			
L 03199	DOM	3	WESTERN OIL TRANSPORTATION CO.	L 02769 APPRO	Shallow	18S	38E	21	4	4			
L 03264	DOM	3	SIVALIS TANKS INC.	L 02810	Shallow	18S	38E	21	2	1	1		
L 03266	PRO	3	GULF OIL CORPORATION	L 03174	Shallow	18S	38E	21	1	2	3		
L 03651	DOM	3	MR. LEROY SUMRULD	L 03199	Shallow	18S	38E	21	1	2	3		
L 03655	DOM	3	LEACO COMPANY	L 03264	Shallow	18S	38E	21	1	1	2		
L 03709	DOM	3	JAMES I. EVANS	L 03266	Shallow	18S	38E	21	1	4	4		
L 04477	DOM	3	MELDON W. (PETE) ORR	L 03266 APPRO	Shallow	18S	38E	21	2	3	3		
L 04770 DA	IRR	301.584	GRIMES LAND CO., LTD. CO.	L 03651	Shallow	18S	38E	21	4	3			
L 04825	SAN	3	INC. PERMIAN ENTERPRISES	L 03651 APPRO	Shallow	18S	38E	21	3	4			
L 05309	SAN	3	HI-GRADE MECHANICAL	L 03709	Shallow	18S	38E	21	4	3			
L 05477	DOM	0	MONARCH DRILLING COMPANY	L 03709 APPRO	Shallow	18S	38E	21	4	3			
L 05489	DOM	3	CARDINAL CHEM. INC.	L 04477 APPRO	Shallow	18S	38E	21	4				
L 05977	DOM	0	JOHN W. MONTGOMERY	L 01937	Shallow	18S	38E	21	3	1	1		
				L 04825	Shallow	18S	38E	21	1	4	3		
				L 04825 EXP	Shallow	18S	38E	21	1	4	3		
				L 05309	Shallow	18S	38E	21					
				L 05477 APPRO EXP	Shallow	18S	38E	21	4				
				L 05489	Shallow	18S	38E	21	3				
				L 05977 EXP	Shallow	18S	38E	21	4	3			

L	06015	EXP	18S	38E	21	4	3	3
L	06499	EXP	18S	38E	21	3	1	1
L	06787	EXP	18S	38E	21	3	3	3
L	07529	EXP 2	18S	38E	21	3	4	4
L	07653		18S	38E	21	1	1	1
L	07811		18S	38E	21	4	3	1
L	07829		18S	38E	21	1	1	1
L	07848		18S	38E	21	1	3	2
L	07930		18S	38E	21	3	2	2
L	08025		18S	38E	21	1	3	1
L	08190		18S	38E	21	1	3	1
L	08595		18S	38E	21	1	3	2
L	08668		18S	38E	21	1	3	2
L	08687		18S	38E	21	2	2	4
L	09422		18S	38E	21	2	2	4

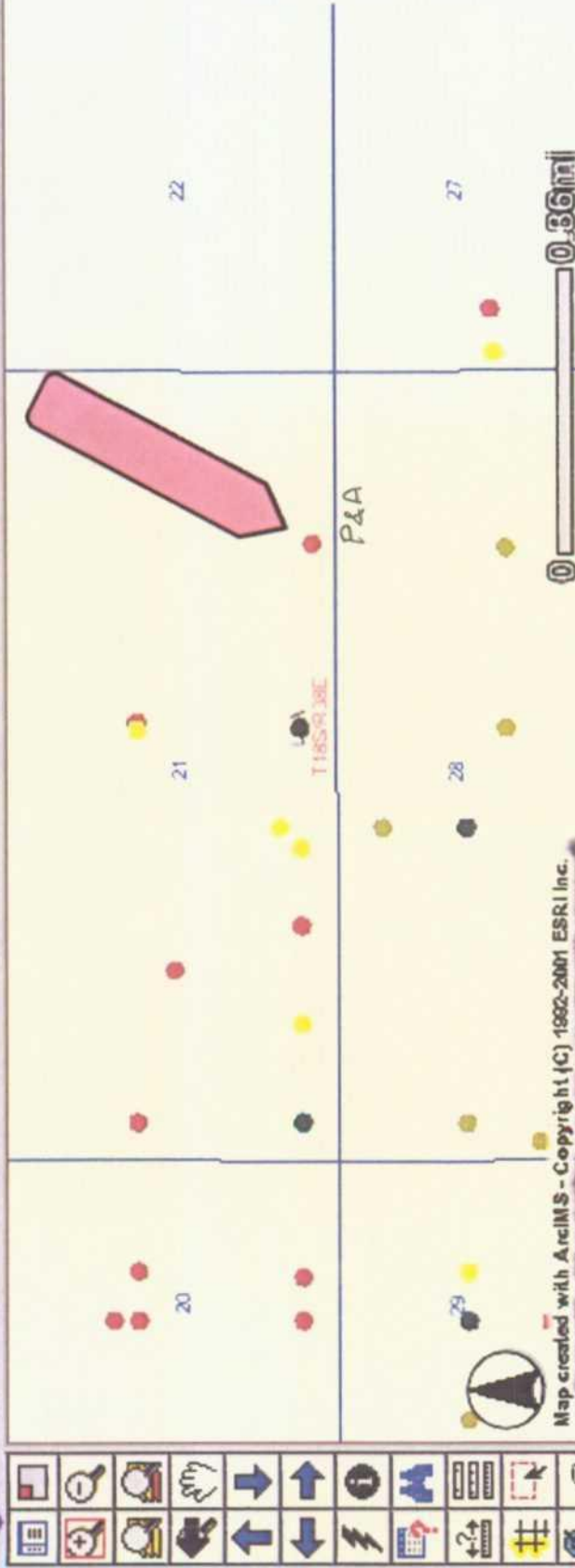
0 W. W. ORR  
 3 W. D. RICHARDS  
 0 PETER PETERS  
 0 PHILLIPS, PETROLEUM COMPANY  
 3 COLONIAL MOBILE HOMES  
 3 MIKE WILLINGHAM  
 3 ERNIE HEGNER  
 3 RAY WALLACH  
 3 EISEL H. CLIFFORD  
 3 STONE INTEREST  
 3 GRANT OIL TOOL  
 3 RICK L. LAYH  
 3 DON KRUPICKA  
 3 ABC CONSTRUCTION CONSULTANTS  
 3 LYNX PETROLEUM CONSULTANTS

DOM  
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1/31/2005

**APPENDIX E**  
**New Mexico Oil and Gas Well Plots**

# New Mexico Oil & Gas Wells



Red Locations - P&A Wells

Black Locations - Temporary P&A Wells

Yellow Locations - Unknown Status

Taken from: New Mexico Tech,  
New Mexico Petroleum Data  
<http://octane.nmt.edu/data/>