

Weatherford  
on Burlington Location  
May 9, 2005

30-039-29447

Weatherford UBS  
Spill Cleanup Report  
May 5, 2005  
Project #91327-002  
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## INTRODUCTION

Envirotech, Inc. of Farmington, New Mexico, was contracted by Weatherford UBS to clean up a diesel spill at a Burlington Resources well site. Activities included excavation of contaminated soil, confirmation sampling, backfill, and site restoration. The spill was located at the Burlington Resources well site SJ 28-6 No. 101M, Section 14, T28N R06W. This location is approximately four (4) miles south from U.S. Highway 64 off of Mile Marker 96 in Rio Arriba County near Gobernador, New Mexico; see **Figure 1, Vicinity Map**.

## ACTIVITIES PERFORMED

Envirotech, Inc. was contacted on Thursday, April 11, 2005, with a request to respond to an accident involving the Weatherford Bearcat Rig No. 5 that resulted in the release of diesel at the above referenced location. Due to the difficulty of excavation under conditions at that time, the spill cleanup was delayed until the Bearcat Rig No. 5 could be moved. Envirotech Personnel arrived on site at approximately 11:00 am on April 26, 2005 for the initial site assessment. Also on site was Mr. David Phillips, of Weatherford UBS, to assist in locating and assessing the contaminated area. The original contamination zone had been scraped and leveled previous to Envirotech's arrival on site and the contaminants had been spread to create a secondary zone of contamination, see **Figure 2, Site Map**. It was also noted that the excess liner from the temporary pit needed to be moved to facilitate excavation. Approximated areas to be excavated were marked and the site was documented.

On April 27, 2005, Envirotech Personnel returned to the site at 9:15 am to begin excavation and confirmation sampling of the spill area. Excavation was performed in part by a backhoe and in part by hand shovel, due to the proximity of the spill to the liner and fence. Excavated contaminated soil was transported to Envirotech's Landfarm No. 2 Soil Remediation Facility.

Due to the nature of the spilled liquid (refined diesel), it was determined that a standard of 100 ppm for Total Petroleum Hydrocarbons (TPH) would be used for confirmation samples. During the removal of the contaminated soil, field headspace measurements were performed on 14 samples using an organic vapor meter (OVM). After these samples were screened, they were analyzed for Total Petroleum Hydrocarbons (TPH) by USEPA Method 418.1, see **Appendix A, TPH Analysis Documentation**.

To facilitate excavation, the excess liner was rolled up to the fence surrounding the temporary pit. Diesel was present in puddles on top of the soil underneath the liner, see **Appendix C, Site Photography**. Excavation and confirmation sampling began in the primary contamination zone and proceeded to a depth of 24 inches where the odor of the diesel was no longer present. Three (3) samples (S-1, S-2, S-3) were collected and analyzed at this depth. S-2- and S-3 produced results below the established standards at 64 ppm TPH and 12 ppm TPH respectively. S-1 produced a field headspace measurement of 196 ppm (OVM) and excavation then continued in the area of that sample. At 30 inches of depth, the soil was analyzed again (S-8) and passed below the established standard at 16 ppm TPH. A five-point composite sample was then taken of the excavated primary contamination zone (S-9), which also passed the established standards at 96 ppm TPH, see **Table 1, Results of TPH Analysis**. The final dimensions of the primary contamination excavation were 47 feet by 48 feet to a maximum depth of 30 inches.

Excavation then focused on the secondary contamination. Seven (7) samples of the surface were collected and analyzed to establish the extent of the contamination spread across the pad (S-4, S-5, S-6, S-7, S-11, S-12, S-13), see **Figure 2, Site Map**. The surface of the contaminated area was removed to three (3) inches of depth and a five point composite sample (S-10) was collected of this area of the excavation. This sample did not pass established standards, with a result of 444 ppm TPH. Excavation continued to a depth of six (6) inches and was analyzed again in the same area. This sample (S-14) passed the established 100 ppm standard at 72 ppm TPH. The final dimensions of the secondary contamination excavation were 110 feet by 30 feet to a maximum depth of six (6) inches.

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The excavated area was backfilled using a backhoe and restored to the original grade, see *Appendix C, Site Photography*. Approximately 186 cubic yards of contaminated material were removed and transported to Envirotech Landfarm No. 2 and 150 cubic yards of clean virgin fill were delivered to the site from the same facility, see *Appendix B, Bills of Lading*.

#### RECOMMENDATIONS

The grade leveling activities at the location of the spill contributed to the spread of contamination, creating an extended spill area. Contaminated soil was excavated to the extents of the primary and secondary contamination zones and the site was restored to pre-accident grade and conditions. Envirotech recommends that no further action be taken with regard to this incident.

#### STATEMENT OF LIMITATIONS

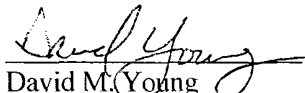
Envirotech has excavated soil impacted by diesel at the Burlington resources well site SJ 28-6 No. 101M, Section 14, T 28N R 06W in Rio Arriba County near Gobernador, New Mexico. The work and services provided by Envirotech were in accordance with New Mexico Oil Conservation Division guidelines. All observations and conclusions provided here are based on the information and current site conditions found during this investigation.

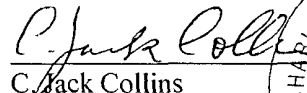
The undersigned has conducted this service at the above referenced site. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

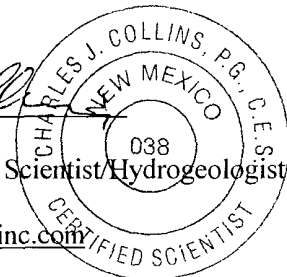
We appreciate the opportunity to be of service, if you have any questions or require any additional information, please contact our office at 505-632-0615.

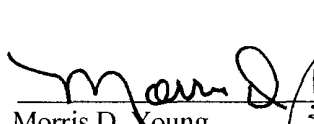
Respectfully Submitted,  
ENVIROTECH, INC.

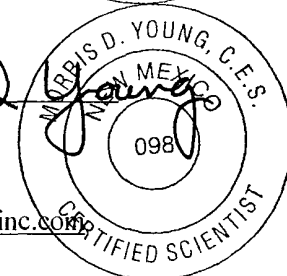
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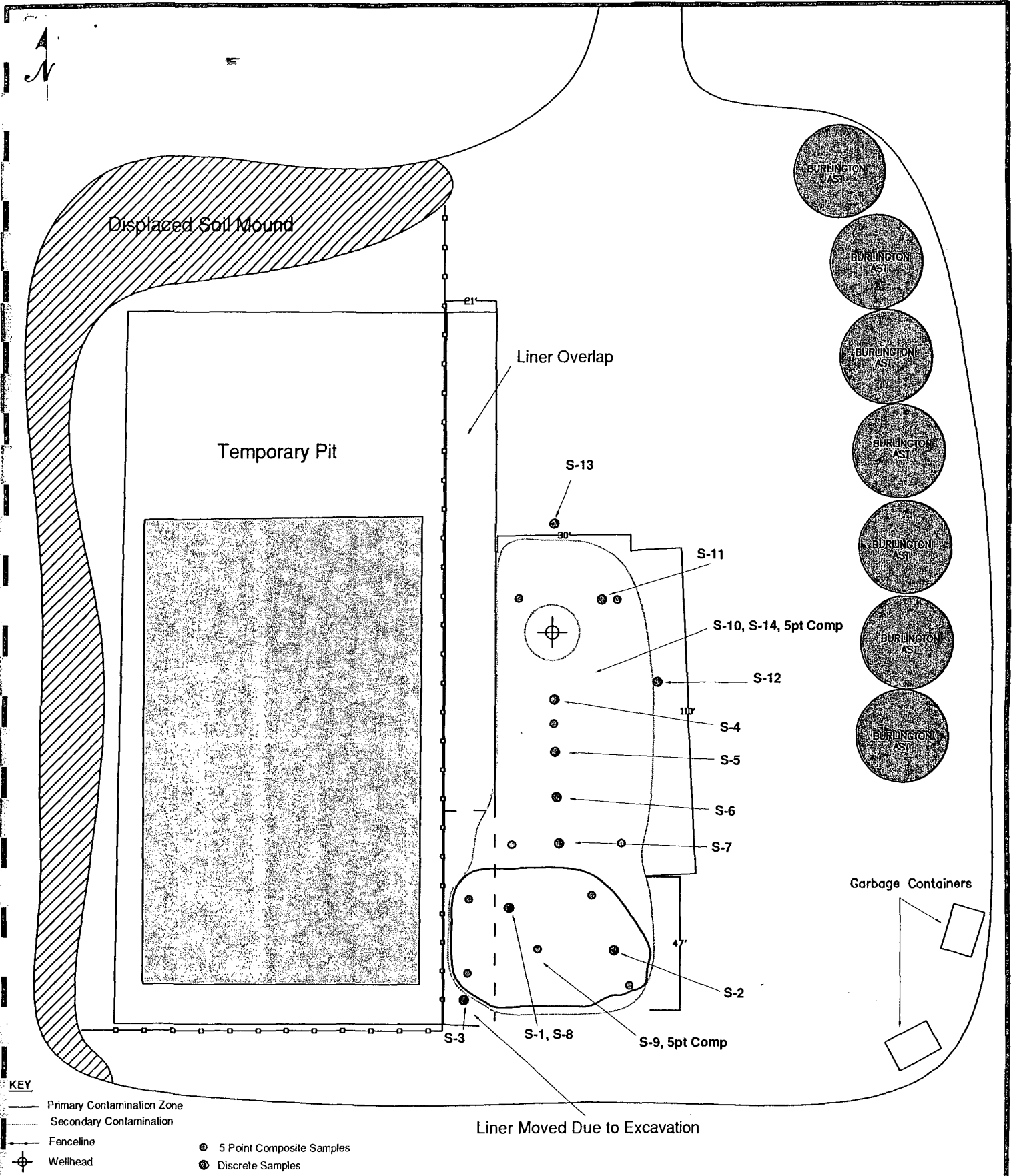
  
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# Site Map

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SJ 28-6 #101M  
Sec 14, T28N, R6W

REVISIONS  
BY DATE  
BY DATE

Project No.  
91327-002

DATE 05/02/05

DRAWN DMY

FIGURE

SCALE NTS

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Table 1					
Results of TPH Analysis: USEPA Method 418.1					
Sample #	S Date	Description	S Depth	OVM (ppm)	TPH (ppm)
S-1	04/27/05	Discrete, 22' east of fence	24"	192	
S-2	04/27/05	Discrete, 42' east of fence	24"	21	64
S-3	04/27/05	Discrete, 1' east of fence	24"	11	12
S-4	04/27/05	Discrete, 20' south of wellhead	1"	10	604
S-5	04/27/05	Discrete, 40' south of wellhead	1"	9	396
S-6	04/27/05	Discrete, 60' south of wellhead	1"	13	1084
S-7	04/27/05	Discrete, 80' south of wellhead	1"	18	480
S-8	04/27/05	Repeat S-1	30"	6	16
S-9	04/27/05	5 point comp, primary zone	30"	20	96
S-10	04/27/05	5 point comp, secondary zone	3"	20	444
S-11	04/27/05	Discrete, 10' NE of wellhead	1"	31	808
S-12	04/27/05	Discrete, 16' east of wellhead	1"	2	40
S-13	04/27/05	Discrete, 30' north of wellhead	1"	7	24
S-14	04/27/05	Repeat S-10	6"	11	72