2025 Updated Phase I Environmental Site Assessment

Tucumcari Truck Terminal
3700 W. Tucumcari Boulevard
Tucumcari, New Mexico

Prepared for

Remediation Oversight Section
New Mexico Environment Department
Ground Water Quality Bureau
Santa Fe, New Mexico

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Table of Contents

Executive Summary ES-1

1. Introduction 1
   - 1.1 Purpose of Assignment 1
   - 1.2 Scope of Work 2
   - 1.3 Significant Assumptions 2
   - 1.4 Limitations and Exceptions of Assessment 3
   - 1.5 Special Terms and Conditions 4
   - 1.6 All Appropriate Inquiries Requirements 4
   - 1.7 User Reliance 4
2. Site Description 5
   - 2.1 Site Location 5
   - 2.2 Site Land Use and Description 5
   - 2.3 Legal Description 5
3. User-Provided Information 5
   - 3.1 Title Records 5
   - 3.2 Environmental Liens or Activity and Use Limitations 5
   - 3.3 Specialized Knowledge 6
   - 3.4 Valuation Reduction for Environmental Issues 6
   - 3.5 Owner, Property Manager, and Occupant Information 6
   - 3.6 Reason for Performing Updated Phase I ESA 6
4. Records Review 7
   - 4.1 Physical Setting Sources 7
     - 4.1.1 Geology 7
     - 4.1.2 USGS 7.5-Minute Topographic Map 7
     - 4.1.3 Hydrology 7
     - 4.1.4 Flood Insurance Rate Map 8
     - 4.1.5 National Wetlands Inventory 8
   - 4.2 Historical Use Information 9
     - 4.2.1 Aerial Photographs 9
     - 4.2.2 Fire Insurance Maps 11
     - 4.2.3 Historical Topographic Maps 11
     - 4.2.4 Land Title Records 12
     - 4.2.5 Zoning/Land Use Records 12
     - 4.2.6 Local City Directories 12

4.2.7 Other Historical Records....12
4.3 Regulatory Record Sources: Federal, State, and Tribal....13
5. Site Reconnaissance....13
5.1 Site Inspection....13
5.2 Methodology....14
5.2.1 Limitations....15
5.2.2 Frequency....15
5.3 Uses and Conditions....15
5.4 General Site Setting....15
5.4.1 Current Use of the Subject Property....15
5.4.2 Current Uses of Adjoining Properties....15
5.4.3 Current Uses in the Surrounding Area....16
5.4.4 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions....16
5.4.5 Potable Water Supply....16
5.4.6 Sewage Disposal System....16
5.4.7 Hazardous Substances and Petroleum Products Found in Connection with Identified Current Use(s) of Property....16
5.4.8 Hazardous Substances and Petroleum Products Found in Connection with Identified Past Use(s) of the Property....16
5.4.9 Odors....17
5.4.10 Pools of Liquid....17
5.4.11 Drums, Containers, and Unidentified Substance Containers....17
5.4.12 Underground Storage Tanks....17
5.4.13 Aboveground Storage Tanks....17
5.4.14 Polychlorinated Biphenyls....18
5.4.15 Stains or Corrosion....18
5.4.16 Drains and Sumps....18
5.4.17 Heating/Cooling....18
5.4.18 Pits, Ponds, and Lagoons....18
5.4.19 Stressed Vegetation....18
5.4.20 Fill Dirt....18
5.4.21 Solid Waste....19
5.4.22 Wastewater....19
5.4.23 Wells, Septic Systems, and Pipelines....19
5.5 Asbestos-Containing Materials....19
5.6 Lead-Based Paint....19
5.7 Radon....19
6. Interviews....20
6.1 Richard Primrose, Former Employee....20

6.2 Paula Chacon, Tucumcari City Manager 21
6.3 Tayseer "Sammy" Asaad, Potential Purchaser 21
7. Findings with Opinions 22
8. Data Gaps 24
9. Conclusions and Recommendations 24
10. Deviations 25
10.1 Scope of Services 25
10.2 Client Constraints 25
11. Qualifications 25
12. Environmental Professional Statement 26
References 26

List of Figures

1 Area Map
2 Site Map
3 Topographic Map
4 1937 Aerial Photograph
5 1952 Aerial Photograph
6 1969 Aerial Photograph
7 1979 Aerial Photograph
8 1991 Aerial Photograph
9 1997 Aerial Photograph
10 2005 Aerial Photograph
11 2018 Aerial Photograph
12 2022 Aerial Photograph
13 Site Features

List of Tables

1 Historical Use of Subject Property and Surrounding Area 10
2 Interview Summary 20

List of Appendices

A EDR Reports
B Historical Documentation
C Photographs
D Interviews
E Statement of Qualifications

Executive Summary

Daniel B. Stephens & Associates, Inc. (DBS&A) was retained by the City of Tucumcari (the City) and the New Mexico Environment Department (NMED) (the user) to conduct an updated Phase I environmental site assessment (ESA) for the Tucumcari Truck Terminal, located at 3700 West Tucumcari Blvd in Tucumcari, New Mexico (the subject property). The parcel of land has a total area of approximately 28 acres. The subject property is currently not in use, but was formerly used as a retail petroleum facility with convenience store and truck maintenance terminal. The 2025 Updated Phase I ESA was performed in accordance with the July 3, 2025 scope of services and cost estimate prepared for the user and approved by NMED, and conformed to ASTM International (ASTM) Standard Practice E 1527-21. Known or suspected recognized environmental conditions (RECs) associated with the subject property and adjacent properties were evaluated per ASTM E 1527-21. Conclusions are based on a review of regulatory files related to these sites, as well as observations made by the environmental professionals and interviews of agencies and individuals with knowledge of the subject property and surrounding area.

Findings and Opinions

This assessment resulted in the identification of eight RECs and three findings for the subject property. The following are identified RECs:

- The subject property is currently listed in the NMED Petroleum Storage Tank Bureau (PSTB) leaking underground storage tank (LUST) database (Release ID 730, Facility ID 31248). There are currently no activities being performed at the subject property for remediation or monitoring purposes related to this release. There do not appear to be any control limitations on the property. It is therefore DBS&A's opinion that the finding is an REC.
- According to one interview and a previous site investigation, there was previous diesel truck rollover at the subject property, as well as a truck accident involving one of the fuel dispensing pumps. The nature and extent of the resulting contamination has not been evaluated; however, according to the interviewee, the incident involving the pump was remediated by excavation at the cost of an unidentified insurance company. Based on the direction of surface drainage and groundwater flow, there is potential for contamination from the diesel rollover. The interviewee stated that the rollover occurred near the Conchas Canal. It is therefore DBS&A's opinion that the finding is an REC.

- There is a large area of staining associated with two used oil tanks, approximately 1,500 gallons each, that extends from the east-central side of the historical service center to the generator building. There are pooled hydrocarbons near the aboveground storage tanks (ASTs). NMED investigated the soil staining on September 20, 2023, and it was determined that pipes had been cut and a valve at the base of one of the tanks had been forcibly separated from the tank wall, allowing the used oil to drain out. The oil flowed approximately 235 feet across the property and a further 30 feet parallel to the highway, where it flowed into a culvert and under the roadway. The oil flowed out of the culvert and into a surface water drainage between the highway and the railroad tracks, terminating in a vegetated area. During the investigation by NMED, actions were taken to clear the pools of oil and impacted soil, and to block the culvert. NMED's remediation contractor completed a cleanup of the spill on November 17, 2023; however, stained soil is still present at the subject property along with pooled hydrocarbons near the ASTs. It is therefore DBS&A's opinion that the finding remains an REC.
- Based on observations outlined in a previous Phase I and one subsequent site inspection conducted by the U.S. Army Corps of Engineers, several findings are related to fuel and oil spills and operation of the maintenance center. These findings are considered part of the active monitoring and potential remediation at the subject property. Most recently in April 2022, approximately 1 foot of free-phase hydrocarbons was observed in monitor well MW-14. There do not appear to be any control limitations on the property. It is therefore DBS&A's opinion that the finding is an REC.
- There are two large bulk storage tanks on the southern portion of the property. Identification plates of the tanks show a capacity of 860,000 gallons. The closure and status of these tanks is unknown. There is potential for free-phase hydrocarbons and contaminated water to be in place in the tanks; however, no indication of release of hydrocarbons to the environment was observed. It is therefore DBS&A's opinion that the finding is an REC.
- A release was confirmed during closure of the four ASTs located in a concrete vault and removal of the associated piping at the subject property (Release ID #730, Facility #31248). It is therefore DBS&A's opinion that the finding is an REC.
- Steel drums and 5-gallon buckets are present at the subject property. The contents of these containers are unknown. The containers appear to be sealed and staged on concrete throughout the property. It is therefore DBS&A's opinion that the finding is an REC.

- There is a potential for lead-based paint and asbestos-containing materials in the abandoned buildings on the subject property. It is therefore DBS&A's opinion that the finding is an REC.

The following findings are not considered RECs:

- Multiple areas of staining are present around the subject property. Aside from the staining that corresponds to what appears to be a new release of hydrocarbons, these areas of staining are a de minimis condition. It is therefore DBS&A's opinion that the finding is not an REC.
- One interviewee mentioned two separate locations of unregistered USTs placed on the property at an unknown date. The interviewee believes the tanks to have been removed, but could not confirm a date. One area is on the southern central portion of the subject property, east of the current bulk tanks. The other area is east of the historical cafe. If USTs are present, these areas present a potential for soil and groundwater contamination. No indication of release of hydrocarbons to the environment was observed. It is therefore DBS&A's opinion that the finding is not an REC.

Environmental Data Resources, Inc. (EDR) identified a total of seven sites. Of these seven listings, five were for the subject property. The remaining two sites were determined to not be located on or near the subject property.

No other potential RECs were identified through inspection of any of the other standard historical documentation, including aerial photographs and historical topographic maps.

Conclusions and Recommendations

DBS&A recommends conducting a targeted investigation to confirm the horizontal and vertical extents of petroleum-impacted soil and groundwater at the site and, if necessary, the surrounding areas.

1. Introduction

Daniel B. Stephens & Associates, Inc. (DBS&A) was retained by the City of Tucumcari (the City) and the New Mexico Environment Department (NMED) (the user) to conduct an updated Phase I environmental site assessment (ESA) for the Tucumcari Truck Terminal, located at 3700 West Tucumcari Blvd in Tucumcari, New Mexico (the subject property) (Figures 1 and 2). The parcel of land has a total area of approximately 28 acres. The subject property is currently not in use, but was formerly used as a retail petroleum facility with convenience store and truck maintenance terminal. The updated Phase I ESA was performed in accordance with the July 3, 2025 scope of services and cost estimate prepared for the user (DBS&A, 2025) and approved by NMED (NMED, 2025a), and conformed to ASTM International (ASTM) Standard Practice E 1527-21 (ASTM, 2021).

1.1 Purpose of Assignment

The purpose of this assignment was to complete the following activities:

- Prepare an updated Phase I ESA report for the subject property.
- Conduct "all appropriate inquiry" (AAI) as defined by the U.S. Environmental Protection Agency (EPA) (40 CFR Part 312).
- Permit the user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 as amended in 2002.
- Identify, to the extent feasible pursuant to the process prescribed in ASTM E 1527-21, recognized environmental conditions (RECs) associated with the subject property. The identification of RECs in connection with the subject property may impose an environmental liability on owners or operators of the subject property, reduce the value of the subject property, or restrict the use or marketability of the subject property; therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

1.2 Scope of Work

Based on the environmental professional's analysis of need, subject to the limitations of ASTM E 1527-21, and within any additional limitations and deviations noted in this report, the ESA included the following scope of work:

- A review of records of federal, state, and local agencies, in accordance with ASTM E 1527-21, that might indicate RECs in connection with the subject property.
- A review of the physical setting sources for information about the geologic, hydrogeologic, hydrologic, or topographic characteristics with respect to the migration of hazardous substances or petroleum products to the property or from or within the property into the groundwater or soil.
- A review of historical sources to develop a history of previous uses of the property and surrounding area in order to help identify the likelihood of past uses having led to RECs in connection with the property.
- A site reconnaissance to visually and/or physically observe the property and any structures located on the property to obtain information indicating the likelihood of identifying RECs in connections with the property.
- Interviews with past and present owners or owner representatives, operators, and occupants of the property to obtain information indicating RECs in connection with the property.
- Preparation of a report documenting findings, opinions, and conclusions.

1.3 Significant Assumptions

DBS&A assumes that there are no hidden or unapparent environmental conditions of the site, subsoil, groundwater, structures, or surroundings that would have an adverse effect on the property. DBS&A assumes no responsibility for such conditions or for engineering or inspections that might be required to discover such conditions.

Record and interview information furnished to DBS&A and contained in the report was obtained from sources assumed to be reliable and believed to be true and correct. However, DBS&A assumes no responsibility for any inaccuracies in such items that may be revealed as a result of subsequent action, either by DBS&A or others. Accuracy and completeness of record information vary among information sources, including governmental sources. Addresses may have changed over time or may be inaccurately described. Record information is often

inaccurate or incomplete. DBS&A is not obligated to identify mistakes or insufficiencies in information provided. DBS&A will make a reasonable effort to compensate for mistakes or insufficiencies in the information reviewed that are obvious in light of other information of which DBS&A has actual knowledge at the time of report preparation.

Groundwater flow is assumed to be in the direction of surface topography unless otherwise noted in the report.

1.4 Limitations and Exceptions of Assessment

This report was prepared in general accordance with ASTM E 1527-21. No items outside the scope of the ASTM standards of practice have been taken into consideration, except as noted.

The ESA reported herein was performed by or conducted under the supervision or responsible charge of the environmental professionals signing this report.

No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of the ESA in accordance with ASTM E 1527-21 is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a property, and the practice recognizes reasonable limits of time and cost.

AAI does not mean an exhaustive assessment of a property. There is a point at which the cost of information obtained or the time required to gather it outweighs the usefulness of the information and, in fact, may be a material detriment to the orderly completion of the transaction.

This report is to be limited to information concerning observed physical characteristics of the property and adjacent properties, standard environmental and historical record sources, and interviews with owners, operators, occupants, and governmental agency personnel.

The time and cost constraints as agreed to by the user or their representative as noted in the fully executed contract between DBS&A and the user may deem certain information common to the ASTM Updated Phase I ESA process to not be reasonably ascertainable or practically reviewable.

Any sketches in the report may show approximate dimensions and are included to assist the reader in visualizing the property. DBS&A has made no survey of the site.

Except as noted in the report, DBS&A has conducted no off-site tests of materials or substances found on the site for the purpose of assessing the presence of RECs not readily apparent during a visual inspection.

DBS&A is not required to give testimony or appear in court or in other hearings or formal discussions regarding the subject property of this report as part of this updated Phase I ESA.

DBS&A has estimated neither the cost of the impact on the property nor the costs necessary to eliminate the RECs.

In accordance with ASTM E 1527-21, this report is presumed to be valid for a period of 180 days from the date of the report. If the user desires to qualify for the landowner liability protections under CERCLA, certain components of the report must be conducted or updated within 180 days of and prior to the date of acquisition of the subject property.

1.5 Special Terms and Conditions

No other special terms or conditions were applicable to this report.

1.6 All Appropriate Inquiries Requirements

The objective of the AAI is to conduct inquiries into past uses and ownerships of a property and visually inspect the property to identify conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property. DBS&A has conducted inquiries into past uses by interviewing persons knowledgeable of properties located within the project corridor, conducting a site reconnaissance on October 21, 2025 , reviewing historical records, reviewing regulatory records, providing a user questionnaire to the user of this ESA, and obtaining commonly known information about the subject property.

The investigation was performed and overseen by environmental professionals meeting the requirements to possess sufficient specific education, training, and experience necessary to exercise professional judgment for developing opinions and conclusions regarding the presence of releases or threatened releases to the surface or subsurface of a property.

1.7 User Reliance

This report is prepared for the sole benefit of the user of this report as defined in Section 3 of this report and may not be relied upon by any other person or entity without the written authorization of DBS&A.

2. Site Description

2.1 Site Location

The subject property is located at 3700 W Tucumcari Blvd in Tucumcari, New Mexico (latitude/ longitude: 35.1587130/103.7710300) (Figure 1). The subject property is within the SE ¼ of Section 20, SW ¼ of Section 21, NW 1/4 of Section 28, and NE 1/4 of Section 29, Township (T) 11N, Range (R) 30E (Figure 3). The parcel of land has a total area of approximately 28 acres.

2.2 Site Land Use and Description

The subject property is currently not in use, but was formerly used as a retail petroleum facility with convenience store and truck maintenance terminal.

2.3 Legal Description

The subject property is within the SE ¼ of Section 20, SW ¼ of Section 21, NW ¼ of Section 28, and NE ¼ of Section 29, T11N, R30E (Figure 3).

3. User-Provided Information

The user of this updated Phase I ESA is NMED. The types of information provided to DBS&A by the user are outlined in Sections 3.1 through 3.6.

3.1 Title Records

In accordance with ASTM E 1527-21, it is the user's responsibility to provide a chain-of-title search on the subject property to the environmental professionals conducting this ESA if the users determine that such information is required in the conduct of this assessment. A chain of title was not provided by the user.

3.2 Environmental Liens or Activity and Use Limitations

In accordance with ASTM E 1527-21, it is the user's responsibility to check recorded land title records to identify to the environmental professionals conducting this ESA any recorded environmental liens and/or activity and use limitations (AULs). The user reported no environmental liens and/or AULs.

3.3 Specialized Knowledge

In accordance with ASTM E 1527-21, it is the user's responsibility to communicate any information based on specialized knowledge or experience that is material to RECs in connection with this property. Ms. Paula Chacon provided a contact for the subject property, Mr. Richard Primrose, who provided specialized knowledge.

3.4 Valuation Reduction for Environmental Issues

In accordance with ASTM E 1527-21, it is the user's responsibility to report actual knowledge that the purchase price of the property is significantly less than the purchase price of comparable properties, to try to identify an explanation for the lower price, and to make a written record of such explanation. The user did not report a significantly reduced purchase price.

3.5 Owner, Property Manager, and Occupant Information

The user provided the following information concerning the owner:

- Mr. Tayseer Asaad is the current owner of the property.
- The previous owner of the subject property is a Mr. Ortega, who is presumed deceased and could not be contacted.

3.6 Reason for Performing Updated Phase I ESA

In accordance with ASTM E 1527-21, it is the user's responsibility to identify the reason for performing the ESA, which may include (1) the intention to satisfy one of the requirements to qualify for one of the landowner liability protections under CERCLA (i.e., innocent landowner, bona fide purchaser, or contiguous property owner) or (2) the need to understand any potential environmental liabilities that could materially impact the operation of the business associated with the parcel of commercial real estate. This updated Phase I was requested by NMED and contracted to DBS&A through a work plan dated July 3, 2025 (DBS&A, 2025).

4. Records Review

4.1 Physical Setting Sources

The physical setting sources detailed in the remainder of this section were researched in relation to the subject property. No environmental problems due to geologic, hydrogeologic, hydrologic, or topographic characteristics of the subject property were noted. Petroleum products have been documented in the groundwater and on the surface at the site.

4.1.1 Geology

Tucumcari is located in a region known as the "Canadian Breaks," where the Canadian River broke through the Ogallala Formation during the Pliocene (Chronic, 1987). The subject property lies on the western edge of Tucumcari with bedrock of Cretaceous to Jurassic age (Chronic, 1987).

Soils in the area of the subject property are classified as Quay, a loam, Class B with moderate infiltration rates. This soil type consists of deep and moderately deep, moderately well- and well-drained soils with moderately coarse textures (EDR, 2025a).

4.1.2 USGS 7.5-Minute Topographic Map

The U.S. Geological Survey (USGS) 7.5-minute quadrangle for Liberty Mesa, New Mexico and adjacent to the east, Tucumcari, New Mexico (Figure 3) indicates that the subject property is located in a valley adjacent to the north of Conchas Canal. The slope direction through the subject property is to the north, and the gradient is gently sloping, increasing in gradient to the north. The surface elevation is approximately 4,100 feet above mean sea level (feet msl).

4.1.3 Hydrology

Based on the surface topography as interpreted from the USGS 7.5-minute quadrangle for Liberty Mesa, New Mexico (Figure 3), regional groundwater in the vicinity of the subject property is anticipated to flow to the north; however, Conchas Canal is adjacent to the subject property.

Actual groundwater flow direction can be locally influenced by many factors, including underground structures, seasonal fluctuations, local variations in soil and geology, and production wells, among others. The actual groundwater flow direction under the subject property can only be accurately determined by installing groundwater monitor wells, which was beyond the scope of this project. No documentation was found that directly indicated

groundwater flow direction at the subject property. Groundwater monitor wells at the subject property indicate groundwater depth at approximately 25 feet below ground surface (feet bgs) (NMED, 2022). The nearest documented depth to groundwater for domestic wells located between ½ and 1 mile north and north-northwest of the subject property, with depths to water ranging from 140 to 150 feet bgs (EDR, 2025a).

Based on the site reconnaissance and topographical maps, stormwater runoff is to the west and north.

4.1.4 Flood Insurance Rate Map

The Federal Emergency Management Agency (FEMA) flood zone map does not show the subject property to be located in an area of flood hazard (EDR, 2025a). The FEMA Flood Map Service shows the subject property without base flood elevation (FEMA, 2023).

4.1.5 National Wetlands Inventory

Based on information from the National Wetlands Inventory (NWI) presented by the U.S. Fish and Wildlife Service (USFWS), there are no wetland classifications for the subject property; however, there is a wetland adjacent and south of the property with the classification code R2UB3Hx (USFWS, 2025), which is defined as follows:

- System riverine (R): The riverine system includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergent, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 parts per thousand (ppt) or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water.
- Subsystem intermittent (2): This subsystem is characterized by a low gradient. There is no tidal influence, and some water flows all year, except during years of extreme drought. The substrate consists mainly of sand and mud. Oxygen deficits may sometimes occur. The fauna is composed mostly of species that reach their maximum abundance in still water, and true planktonic organisms are common. The gradient is lower than that of the Upper Perennial Subsystem and the floodplain is well developed.
- Class Unconsolidated Bottom (UB): Includes all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6 to 7 centimeters [cm]), and a vegetative cover of less than 30 percent.

- Subclass Mud (3): The unconsolidated particles smaller than stones are predominantly silt and clay, although coarser sediments or organic material may be intermixed.
- Water Regime Permanently Flooded (H): Water covers the substrate throughout the year in all years.
- Special modifier excavated (x): This modifier is used to identify wetland basins or channels that were excavated by humans.

4.2 Historical Use Information

Historical sources were consulted to develop a history of the previous uses of the property and the surrounding area to help identify the likelihood of past uses having led to RECs in connection with the subject property. All obvious uses of the subject property were identified from the present back to the first developed obvious use of the subject property from reasonably ascertainable sources, in accordance with ASTM E 1527-21, Section 8.1.4.

Findings for all historical record sources, including descriptions and interpretations of the subject property and surrounding area, are summarized in Table 1.

4.2.1 Aerial Photographs

DBS&A obtained copies of aerial photographs from the Earth Data Analysis Center (EDAC) and Earth Explorer (https://earthexplorer.usgs.gov/). DBS&A reviewed aerial photographs of the subject property from 1937, 1952, 1969, 1979, 1991, 1997, 2005, 2018, and 2022 (Figures 4 through 12).

Historical aerial photographs show the subject property as vacant and undeveloped in 1937 (Figure 4), except for a portion of the southwestern part of the property. In the farthest southwest portion of the property, the land appears to have been cleared, possibly for agricultural purposes. A possible fence line cuts across the property from west to east just north of the cleared portion in the southwest. The surrounding area is vacant and undeveloped with the exception of the railroad, visible adjacent to the subject property to the north.

In the 1952 aerial photograph (Figure 5), the subject property appears to have a drive-in movie theater with what appear to be five on-site buildings. The nature of these buildings is unknown. The surrounding area is more developed with agricultural and industrial properties. The Conchas Canal is visible adjacent to the south of the subject property and New Mexico

Table 1. Historical Use of Subject Property and Surrounding Area

Period	Source(s)	Subject Property	Surrounding Area
1935–1952	Aerial photographs, topographic map	Property is mostly vacant undeveloped land in the 1935 photograph. Some possible agricultural development can be seen in the southwest. There are no photographs between 1935 and 1952.	Majority of area is undeveloped rangeland.
1952–1979	Aerial photographs, topographic map	Property is developed with a drive-in movie theater with what appear to be four small buildings of unknown use.	Increased ranch and agricultural development are visible to the north along NM 54 in the 1952 and 1969 photographs. Conchas Canal is visible on the 1954 topographic map and the 1952 and 1969 photographs adjacent south of the property.
1979–1991	Aerial photographs	The Tucumcari Truck Terminal is visible in the 1979 photograph. The Truck Terminal consists of two fuel canopies, a service center, a convenience store, and a cafe. Two buildings that appear to be residences are visible on the east portion of the property. On the south portion of the property, there appears to be a bulk storage tank and several smaller aboveground storage tanks (ASTs).	The surrounding area appears to have increased in industrial and agricultural development. I-40 is visible in the 1979 photograph to the south of the property.
1991–2018	Aerial photographs	The property appears similar to the 1979 and 1986 photographs. The original fuel canopy and convenience store appear to have been replaced and two bulk tanks are visible on the southern portion of the property. The easternmost residence appears to have been removed and a new building on the southeastern boundary appears in the 1991 photograph.	Surrounding area appears similar to the 1979 photograph.
2018–2024	Aerial photographs and site visit	The property appears to be vacant with all of the same structures in place as the 1991 photograph.	Surrounding area appears similar to the 1991 photograph.

Highway 54 (NM 54) adjacent to the north. The 1969 aerial photograph is similar to the 1952 aerial photograph (Figure 6).

In the 1979 photograph, the subject property has been developed as the Tucumcari Truck Terminal. There appear to be two fuel canopies, one convenience store, the historical cafe, the historical service center, one bulk aboveground storage tank (AST), and several smaller ASTs. The tanks are located on the southwestern portion of the subject property. There appear to be two residential buildings located on the eastern portion of the property. The surrounding areas appear to have been further developed for agricultural and industrial use (Figure 7).

The 1991 aerial photograph is similar to the 1979 photograph; however, the two bulk ASTs are visible, and the fuel canopies at both the historical service center and the Food Mart have been updated. The canopy at the service center and the Food Mart appear to have been expanded (Figure 8).

The 1997 aerial photograph shows the replacement of one of the fuel canopies and the convenience store on the western portion of the property. The easternmost residential building appears to have been removed. One additional building appears on the southeastern property boundary. Two bulk storage tanks appear on the southwestern portion of the subject property. The historical service center and historical cafe appear to be unchanged. The surrounding properties appear similar to the 1979 aerial photograph (Figure 9). The 2005 aerial photograph appears similar to the 1997 aerial photograph (Figure 10).

The 2018 aerial photograph shows the subject property as it appears in the 2005 aerial photograph; however, it appears to be abandoned and the building on the southeastern border appears to have been removed (Figure 11). The 2022 aerial photograph appears similar to the 2018 aerial photograph with more vegetation, indicating abandoned conditions (Figure 12).

4.2.2 Fire Insurance Maps

The Environmental Data Resources, Inc. (EDR) search identified no Sanborn fire insurance maps for the area of the subject property (EDR, 2025b) (Appendix A).

4.2.3 Historical Topographic Maps

Historical topographic maps were obtained online from the USGS for the years 1930, 1954, 1958, 1967, 2010, 2020, and 2023 (USGS, 2025). The 1930 map shows the subject property as undeveloped land south of a railroad with the City to the northeast. The 1954 map shows

increased development with the construction of I-40, the Conchas Canal, and the surrounding areas. The 1967 map shows the subject property as developed with multiple buildings and one building listed as "Drive-in Theater." The 2010 and 2020 maps show less detail, but the subject property appears relatively unchanged from the 1967 map.

4.2.4 Land Title Records

A title search was not conducted for this assessment.

4.2.5 Zoning/Land Use Records

There were no zoning records identified during this investigation.

4.2.6 Local City Directories

City directories have been compiled for larger metropolitan areas since the 1880s, primarily as a method of contacting individuals for marketing purposes. These directories provide cross-referenced information, indexed by property owner's name, street address, telephone number, and often business name. These resources are useful in determining dates and types of businesses by using either the address or the business name index. Similar to the aerial photograph review, a review of city directories provides insight as to business operations that may have adversely impacted the subject property in the past.

DBS&A subcontracted with EDR to research city directories for the subject property (EDR, 2025c) (Appendix A). The site address was listed in the city directories for 2000 (Ray's Truck Service at 3900 W Tucumcari Blvd), and Smith, Vertie (1995). In the 1991 directory businesses associated with the property are listed with no address, including Tucumcari Truck Terminal Inc, Ray's Truck Service, and Tucumcari Truck Terminal Cafe Inc. Tucumcari Truck Terminal Inc and Tucumcari Truck Terminal Cafe Inc were listed again with no address in 1986, 1979, and 1974. In 1970, 1969, 1967, and 1963, the Tucumcari Truck Terminal Inc and Canal Drive In Theatre are listed with no addresses. Area properties identified were a mix of residential and commercial.

4.2.7 Other Historical Records

A Phase II ESA conducted by Innovar Environmental, Inc. in 2010 identified several generations of USTs that were removed from the property in the years 1975, 1985, and 1991 (Appendix B). Other NMED records show that the site had widespread contamination and underwent remediation in the mid-1990s (NMED, 2025b).

Four ASTs were permanently closed and removed from the site on February 27 and 28, 2025 (Appendix B). The NMED Petroleum Storage Tank Bureau (PSTB) confirmed a release in a letter dated July 9, 2025 related to the samples collected during the tank closure (Appendix B).

4.3 Regulatory Record Sources: Federal, State, and Tribal

Federal, state, and tribal environmental records were searched for known and suspected sites of environmental contamination. DBS&A contracted with EDR to perform a search of all existing databases to evaluate the proximity of potential RECs relative to the subject property (EDR, 2025a) (Appendix A). A total of seven sites were identified. Of these seven identified sites, five were determined to be the subject property. One of the remaining two sites (NMDOT Patrol Yard) was determined to be located more than 5 miles to the northeast. An Inspection of Public Records Act (IPRA) request was made for PSTB records regarding the Bryant Abandoned Station to confirm the location of the site. A response has not been received to date.

The information provided by EDR is subject to EDR's data disclaimer. Copies of the EDR research data and a description of the databases are provided in Appendix A.

DBS&A also researched records using the online mapper service (NMED, 2025b). The subject property was listed as an active leaking underground storage tank (LUST) facility. Additional historical documentation from the investigation is provided in Appendix B.

5. Site Reconnaissance

This section summarizes visual and/or physical observations of the subject property on the day of the site visit. Photographs taken during the site reconnaissance are provided in Appendix C. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying RECs in connection with the subject property.

5.1 Site Inspection

The site reconnaissance was conducted on October 21, 2025 by Mr. John Bunch of DBS&A. Mr. Asaad and a representative from the GWQB were also on-site. Weather conditions at the time of the site reconnaissance were clear, with a temperature of about 70°F. The visual reconnaissance consisted of walking and driving through the subject property.

The subject property is developed with a convenience store (Food Mart), two fuel canopies, a historical service center, a historical cafe, one residential building, a generator building, a former AST vault, and two bulk ASTs. The subject property was observed to be vacant and not in use.

The two bulk ASTs are on the southern portion of the subject property. One additional AST was also located in the secondary containment with the two bulk ASTs. Two additional ASTs were located adjacent and to the east of the historical service center. During the previous site reconnaissance in 2024, an area of staining was observed where these two ASTs were leaking oil and a manhole was opened to allow visual inspection of a lift station vault. Used oil and water were observed in the vault. During the current site reconnaissance, the vault was confirmed to still contain used oil and water.

Evidence of vagrancy was observed throughout the property. Doors and windows of all buildings on the subject property were broken, and graffiti, broken bottles, and garbage were observed. The generator building appears to have been destroyed.

Plastic containers, 5-gallon buckets, paint cans, and steel drums were observed. The contents of these items were not identified.

Fuel dispensers appear to have been removed; however, several dismantled fuel dispensers were located near the historical service center.

The Food Mart appears to be constructed of concrete blocks; it was not entered. The historical service center appears to be constructed of steel beams with steel sheeting. The steel sheeting on the southern portion of the building has been removed, and the interior of the building shows signs of vagrancy. The cafe appears to be constructed of brick, and was not entered. The residence on the east portion of the property appears to be constructed of brick, and was not entered.

The surrounding areas consist of partially developed rangeland, agricultural land, and light industrial land.

The subject property is bounded on the north by NM 54 and to the south by the Conchas Canal. Vacant properties bound the property to the east and west.

5.2 Methodology

The method used to observe the subject property was visual inspection while walking through the property.

5.2.1 Limitations

General limitations included those imposed by physical obstructions such as restrictions for access to the site. Limitations included locked or blocked doors and unsafe access that impeded inspection of the interior of the buildings.

No tanks were opened. No vaults were entered.

5.2.2 Frequency

For the purpose of report preparation, a visit to the subject property was conducted on October 21, 2025. All observations were made at the time of the site visit.

5.3 Uses and Conditions

The subject property is currently not in use. The environmental professional conducting the reconnaissance noted the uses and conditions specified in Sections 5.4.1 through 5.4.23 to the extent visually or physically observed during the visit. The uses and conditions specified were also the subject of questions asked as part of the interviews discussed in Section 6. The historical documents obtained are consistent with other records and site observations. The environmental professionals performing the updated Phase I ESA identified uses and conditions only to the extent that they could be visually and physically observed on a site visit, as described in ASTM E 1527-21, or to the extent that they were identified by the interviews or record review processes described in ASTM E 1527-21. Interview documentation for this update and the previous Phase I ESA and 2024 update are provided in Appendix D.

5.4 General Site Setting

5.4.1 Current Use of the Subject Property

The subject property is currently not in use.

5.4.2 Current Uses of Adjoining Properties

Appendix C provides photographs of the subject property and surrounding area. The current uses of adjoining properties are as follows:

- To the north: NM 54 and vacant land beyond
- To the south: Conchas Canal, vacant lot and I-40 beyond
- To the west: Vacant land and NM 54

- To the east: Vacant land

5.4.3 Current Uses in the Surrounding Area

The surrounding area consists primarily of rangeland, with scattered residential and light industrial development beyond to the north and south along NM 54.

No RECs were identified based on the surrounding area.

5.4.4 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

The general topography of the subject property is sloping to the west and north. No surface water was observed on the subject property. Depth to groundwater is approximately 25 feet bgs (Appendix A), with groundwater flow likely to the west and north.

5.4.5 Potable Water Supply

The subject property contains no potable water supply. An agricultural well is located west of the subject property across Conchas Canal.

5.4.6 Sewage Disposal System

No septic system was observed. The subject property appears to use municipal water and sewage services.

5.4.7 Hazardous Substances and Petroleum Products Found in Connection with Identified Current Use(s) of Property

The subject property is currently vacant. Evidence of petroleum contamination was observed during the site reconnaissance and historical records review.

5.4.8 Hazardous Substances and Petroleum Products Found in Connection with Identified Past Use(s) of the Property

The subject property was formerly used as an automotive refueling and service facility and a residence. Evidence of petroleum impact was observed during the site reconnaissance.

5.4.9 Odors

A petroleum odor was observed in the area of the historical service center, as well as the northern property boundary in areas of soil staining. A strong petroleum odor was observed around the UST vault, just north of the AST secondary containment.

5.4.10 Pools of Liquid

During the previous site reconnaissance, pools of free-phase hydrocarbons, most likely used oil, were observed near the smaller ASTs near the historical service center, as well as inside a lift station vault. The hydrocarbons in the vault appeared to be floating on top of the water in the lift station vault.

5.4.11 Drums, Containers, and Unidentified Substance Containers

No containers or sacks of chemicals were observed on the subject property during the site reconnaissance. Metal drums and 5-gallon buckets were observed at the subject property. The contents and conditions of these items were not identified.

5.4.12 Underground Storage Tanks

No USTs were identified during the site reconnaissance.

5.4.13 Aboveground Storage Tanks

Five ASTs were observed on the subject property. Three were on the southern portion of the property in a secondary containment boundary. Two of the ASTs in secondary containment appear to be large bulk storage tanks. The third AST in secondary containment is suspected of containing diesel and/or solvent. The conditions of the tanks and their contents could not be identified during this investigation. The remaining two ASTs are suspected of containing used oil and appear to be leaking. Staining appears on the subject property from these ASTs to the north near the generator building.

Four ASTs were permanently closed and removed from the site on February 27 and 28, 2025. The PSTB inspector noted that used motor oil and water was flowing out of fuel conveyance lines, which were then removed; some soil and contaminated water was contained and removed by the contractor. The inspector also noted multiple areas of strong petroleum odor and staining associated with the conveyance lines and transition sumps. During the tank closure, 22 samples were collected within the AST containment, beneath the conveyance lines, and beneath the dispensers. Samples collected at the time of the tank and conveyance line removal

had detections of petroleum contaminants. Most of the contaminants were associated with the conveyance lines from the former AST vault and the dispensers (Appendix B). NMED PSTB confirmed a release in a letter dated July 9, 2025 related to the samples collected during the tank closure (Appendix B). There is no documentation of site work related to the 2025 confirmed release.

5.4.14 Polychlorinated Biphenyls

On the northern portion of the subject property, a generator building is present with what appears to be an area to house transformers. The building has been vandalized and is nearly destroyed; no transformers could be located. No other transformers or other structures were observed that would have the potential for containing polychlorinated biphenyls (PCBs).

5.4.15 Stains or Corrosion

Soil staining was observed on the subject property emanating from two used oil tanks located adjacent to the east of the historical service center. The staining was observed from the historical service center to near the generator building.

Soil staining was also observed on the southern portion of the convenience store (Food Mart).

5.4.16 Drains and Sumps

Floor drains were observed in the historical service center.

5.4.17 Heating/Cooling

The subject property is not in use, therefore there is no heating or cooling.

5.4.18 Pits, Ponds, and Lagoons

No pits, ponds, or lagoons were observed on the subject property during the site reconnaissance.

5.4.19 Stressed Vegetation

No stressed vegetation was observed.

5.4.20 Fill Dirt

No fill dirt was observed on the subject property.

5.4.21 Solid Waste

The subject property is currently abandoned and has been since approximately 2005. There are parts of vehicles, used tires, old appliances, and other miscellaneous trash on the subject property.

5.4.22 Wastewater

Wastewater is water that has been used in an industrial or manufacturing process, conveys or has conveyed sewage, or is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water passing through or originating at an adjacent site, such as stormwater flows, that has not been previously described. No wastewater is currently discharged from the subject property.

5.4.23 Wells, Septic Systems, and Pipelines

An agricultural water well is located west of the subject property, but does not appear to be in use, as the property is vacant.

A lift station and vault were observed on the northern portion of the site near the generator building. This vault appeared to contain water and free-phase hydrocarbons (most likely used oil from the leaking ASTs).

5.5 Asbestos-Containing Materials

There is one convenience store (the Food Mart) that was built in approximately 1986. The historical service center, the historical cafe, and the residential building were built prior to 1979. These buildings could contain asbestos-containing materials (ACM).

5.6 Lead-Based Paint

Due to the age and materials of the structures, there is a potential for lead-based paint (LBP) to be present.

5.7 Radon

Radon is a naturally occurring colorless, odorless gas that is a byproduct of the decay of radioactive materials potentially present in the bedrock and soil. Radon gas may enter the lowest level of a building through floor cracks, structural joints, or plumbing conduits. The EPA guidance action level for annual residential exposure to radon is 4.0 picocuries per liter (pCi/L).

According to the EPA's map of radon zones (U.S. EPA, 2023), Quay County is considered a Zone 2 county, which has a predicted average screening level of 2 to 4 pCi/L.

DBS&A did not perform radon sampling on the subject property as part of this investigation.

6. Interviews

Interviews with the current owner representative for the property were not obtained. The current owner could not be contacted. Attempts were made to contact local officials and other people of interest to obtain information indicating RECs in connection with the subject property and surrounding area. The results are summarized in Table 2. Interview documentation is provided in Appendix D.

Table 2. Interview Summary

Date	Name	Company/Relationship to Subject Property	Response Received/ Pending	Method of Contact
6/13/2024	Richard Primrose	Former employee; worked at subject property for approximately 26 years	Received	In-person interview
6/17/2024	Paula Chacon	Tucumcari City Manager	Received	Phone, e-mail, in person
11/20/2025	Tayseer "Sammy" Asaad	Potential purchaser	Received	Phone, e-mail

6.1 Richard Primrose, Former Employee

DBS&A interviewed Mr. Richard Primrose, former employee, on June 13, 2024 regarding the subject property history and land use. Mr. Primrose stated that he worked at the Tucumcari Truck Terminal for approximately 26 years. He left his position on December 31, 1999.

Mr. Primrose stated that the original fuel canopies and convenience store were removed sometime in the 1970s, and the new convenience store and fuel canopy was installed in approximately the 1980s. During the construction and removal activities, the former USTs located on the western portion of the site were removed and free-phase hydrocarbons were observed. Mr. Primrose stated that remediation activities were conducted for an unknown

period of time, but he had no knowledge of results or the current status of the efforts. Mr. Primrose stated that the new USTs were installed in a concrete bunker.

Mr. Primrose accompanied DBS&A to the subject property on June 13, 2024. The following statements were made during the interview:

- A fuel spill occurred when a truck struck a fuel dispenser. The insurance company covered the remediation activities that consisted of excavation of impacted soils.
- A fuel spill occurred on the southern portion of the subject property, east of the bulk storage tanks, when a refueling truck rolled over as a result of a UST losing ballast and "floating" up. No remediation activities were documented for this potential release.
- USTs were installed on the southern portion of the property, east of the bulk storage tanks.
- USTs were installed east of the historical cafe and removed during the 1970s and 1980s.
- Used oil was stored in tanks adjacent to the east wall of the historical service center.

6.2 Paula Chacon, Tucumcari City Manager

Ms. Paula Chacon, Tucumcari City Manager, was contacted by phone, e-mail, and in person for information regarding the subject property and surrounding areas. Ms. Chacon stated that she has no knowledge of potential RECs or other items of concern. Ms. Chacon mentioned that the subject property was once a drive-in movie theater. Ms. Chacon mentioned that the current property owner is deceased.

During the site visit, Ms. Chacon attributed the damage to the generator building to vandalism and theft. She also mentioned that the generator was stolen, likely to be sold for scrap material. In addition, Ms. Chacon mentioned that there is a substantial volume of oil in a lift station vault, most likely from the September 2023 used oil spill.

6.3 Tayseer "Sammy" Asaad, Potential Purchaser

During a discussion with Mr. Asaad on June 19, 2024, he explained that the City is aware of the oil in the lift station vault and will clean it up. Mr. Assad mentioned that he would be repairing the lift station once the oil has been removed. During a phone interview on November 20, 2025, Mr. Asaad also advised that the ASTs, fuel lines, and dispensers had been removed. The diesel lines were not removed and remain on the site. He advised that there are no other changes since the previous Phase I update in 2024.

7. Findings with Opinions

This section identifies known or suspected environmental conditions associated with the subject property and the environmental professional's opinions of the impact on the property of known or suspected environmental conditions. Any features of note are indicated on Figure 13.

This assessment resulted in the identification of eight RECs and three findings for the subject property. The following are identified RECs:

- The subject property is currently listed in the NMED PSTB LUST database (Release ID 730, Facility ID 31248). There are currently no activities being performed at the subject property for remediation or monitoring purposes related to this release. There do not appear to be any control limitations on the property. It is therefore DBS&A's opinion that the finding is an REC.
- According to one interview and a previous site investigation, there was previous diesel truck rollover at the subject property, as well as a truck accident involving one of the fuel dispensing pumps. The nature and extent of the resulting contamination has not been evaluated; however, according to the interviewee, the incident involving the pump was remediated by excavation at the cost of an unidentified insurance company. Based on the direction of surface drainage and groundwater flow, there is potential for contamination from the diesel rollover. The interviewee stated that the rollover occurred near the Conchas Canal. It is therefore DBS&A's opinion that the finding is an REC.
- There is a large area of staining associated with two used oil tanks, approximately 1,500 gallons each, that extends from the east-central side of the historical service center to the generator building. There are pooled hydrocarbons near the ASTs. NMED investigated the soil staining on September 20, 2023, and it was determined that pipes had been cut and a valve at the base of one of the tanks had been forcibly separated from the tank wall, allowing the used oil to drain out. The oil flowed approximately 235 feet across the property and a further 30 feet parallel to the highway, where it flowed into a culvert and under the roadway. The oil flowed out of the culvert and into a surface water drainage between the highway and the railroad tracks, terminating in a vegetated area. During the investigation by NMED, actions were taken to clear the pools of oil and impacted soil, and to block the culvert. NMED's remediation contractor completed a cleanup of the spill on November 17, 2023; however, stained soil is still present at the subject property along with pooled

hydrocarbons near the ASTs. It is therefore DBS&A's opinion that the finding remains an REC.

- Based on observations outlined in a previous Phase I and one subsequent site inspection conducted by the U.S. Army Corps of Engineers, several findings are related to fuel and oil spills and operation of the maintenance center. These findings are considered part of the active monitoring and potential remediation at the subject property. Most recently in April 2022, approximately 1 foot of free-phase hydrocarbons was observed in monitor well MW-14. There do not appear to be any control limitations on the property. It is therefore DBS&A's opinion that the finding is an REC.
- There are two large bulk storage tanks on the southern portion of the property. Identification plates of the tanks show a capacity of 860,000 gallons. The closure and status of these tanks is unknown. There is potential for free-phase hydrocarbons and contaminated water to be in place in the tanks; however, no indication of release of hydrocarbons to the environment was observed. It is therefore DBS&A's opinion that the finding is an REC.
- A release was confirmed during closure of the four ASTs located in a concrete vault and removal of the associated piping at the subject property (Release ID #730, Facility #31248). It is therefore DBS&A's opinion that the finding is an REC.
- Steel drums and 5-gallon buckets are present at the subject property. The contents of these containers are unknown. The containers appear to be sealed and staged on concrete throughout the property. It is therefore DBS&A's opinion that the finding is an REC.
- There is a potential for lead-based paint and asbestos-containing materials in the abandoned buildings on the subject property. It is therefore DBS&A's opinion that the finding is an REC.

The following findings are not considered RECs:

- Multiple areas of staining are present around the subject property. Aside from the staining that corresponds to what appears to be a new release of hydrocarbons, these areas of staining are a de minimis condition. It is therefore DBS&A's opinion that the finding is not an REC.
- One interviewee mentioned two separate locations of unregistered USTs placed on the property at an unknown date. The interviewee believes the tanks to have been removed, but could not confirm a date. One area is on the southern central portion of the subject

property, east of the current bulk tanks. The other area is east of the historical cafe. If USTs are present, these areas present a potential for soil and groundwater contamination. No indication of release of hydrocarbons to the environment was observed. It is therefore DBS&A's opinion that the finding is not an REC.

EDR identified a total of seven sites. Of these seven listings, five were for the subject property. The remaining two sites were determined to not be located on or near the subject property.

No other potential RECs were identified through inspection of any of the other standard historical documentation, including aerial photographs and historical topographic maps.

8. Data Gaps

The interiors of the three buildings on the property were not accessible during the site reconnaissance: the historical cafe, the convenience store (Food Mart), and the residential building. The current owner could not be contacted. Based on historical aerial photographs, interviews, and the site reconnaissance, there was no evidence during this investigation that activities were conducted in the buildings that would be considered RECs. Therefore, there were no significant data gaps that affected the ability of the environmental professionals to identify RECs. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap.

9. Conclusions and Recommendations

An REC is defined by ASTM E 1527-21 as the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, migration of hazardous or petroleum substances, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products, even under conditions in compliance with the laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to the public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. DBS&A performed a updated Phase I ESA for the subject property in conformance with the scope and

limitations of ASTM E 1527-21. Exceptions to or deletions from this practice are described in Section 1 of this report.

This assessment resulted in the identification of eight RECs for the subject property. The property is currently listed in the LUST database (Release ID 730, Facility ID 31248), and no controls appear to be in place for the property. A second release was confirmed during closure of four of the ASTs (Release ID 5009, Facility ID 31248), but site investigation related to this release has not begun to date. At least one unreported release of hydrocarbons appears to have occurred during a truck rollover incident at an unknown date. A release of hydrocarbons (used oil) appears to have occurred within the past 2 years. There appear to be free-phase hydrocarbons in the subsurface at the subject property with no controls or active monitoring in place. There are two bulk storage tanks on the subject property with unknown contents and closure status. There are five remaining ASTs located on the site with unknown contents and closure status. There are 5-gallon buckets and steel drums on the site with unknown contents.

This assessment did not result in identification of any RECs for the surrounding area.

DBS&A recommends conducting a targeted investigation to confirm the horizontal and vertical extents of petroleum-impacted soil and groundwater at the site and, if necessary, the surrounding areas. DBS&A also recommends conducting remediation activities as directed by NMED.

10. Deviations

10.1 Scope of Services

There were no significant deletions or deviations from the ASTM E 1527-21 scope of services.

10.2 Client Constraints

There were no client- and/or user-imposed constraints for this assessment.

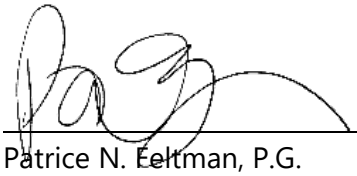
11. Qualifications

The statement of qualifications of the environmental professionals responsible for the Updated Phase I ESA is included in Appendix E.

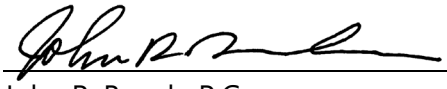
12. Environmental Professional Statement

I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



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Figures

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Base image source: ESRI et al.

Figure 1

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
Area Map

DBS&A
a Geo-Logic Company

6/26/2024
DB24.1236

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Base image source: ESRI et al.

Explanation

Approximate site boundary

Figure 2

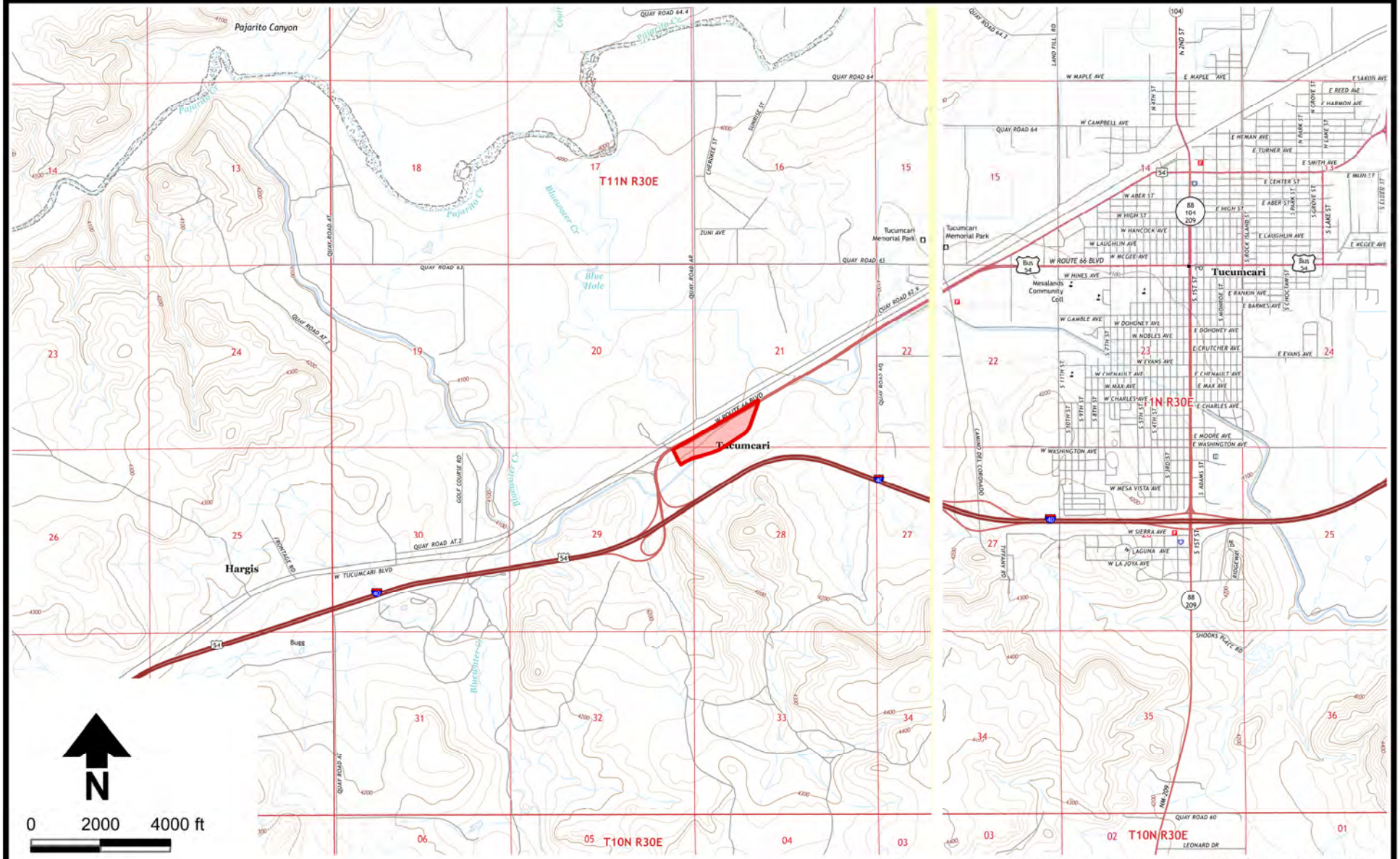
DBS&A
a Geo-Logic Company

6/26/2024

DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
Site Map

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Explanation

Approximate site boundary

Topographic map: U.S. Geological Survey 7.5 Minute Quadrangle Map
NM Liberty Mesa, NM Tucumcari
http://rgis.unm.edu/ Accessed September 18, 2023

PHASE I ESA

TUCUMCARI TRUCK TERMINAL

Topographic Map

Figure 3

DBS&A
a Geo-Logic Company

6/20/2024 DB24.1236

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

Figure 4

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1937 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Historical Photograph: United States Geological Survey(USGS)

Figure 5

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1952 Historical Photograph

DBS&A
a Geo-Logic Company

6/26/2024
DB24.1236

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

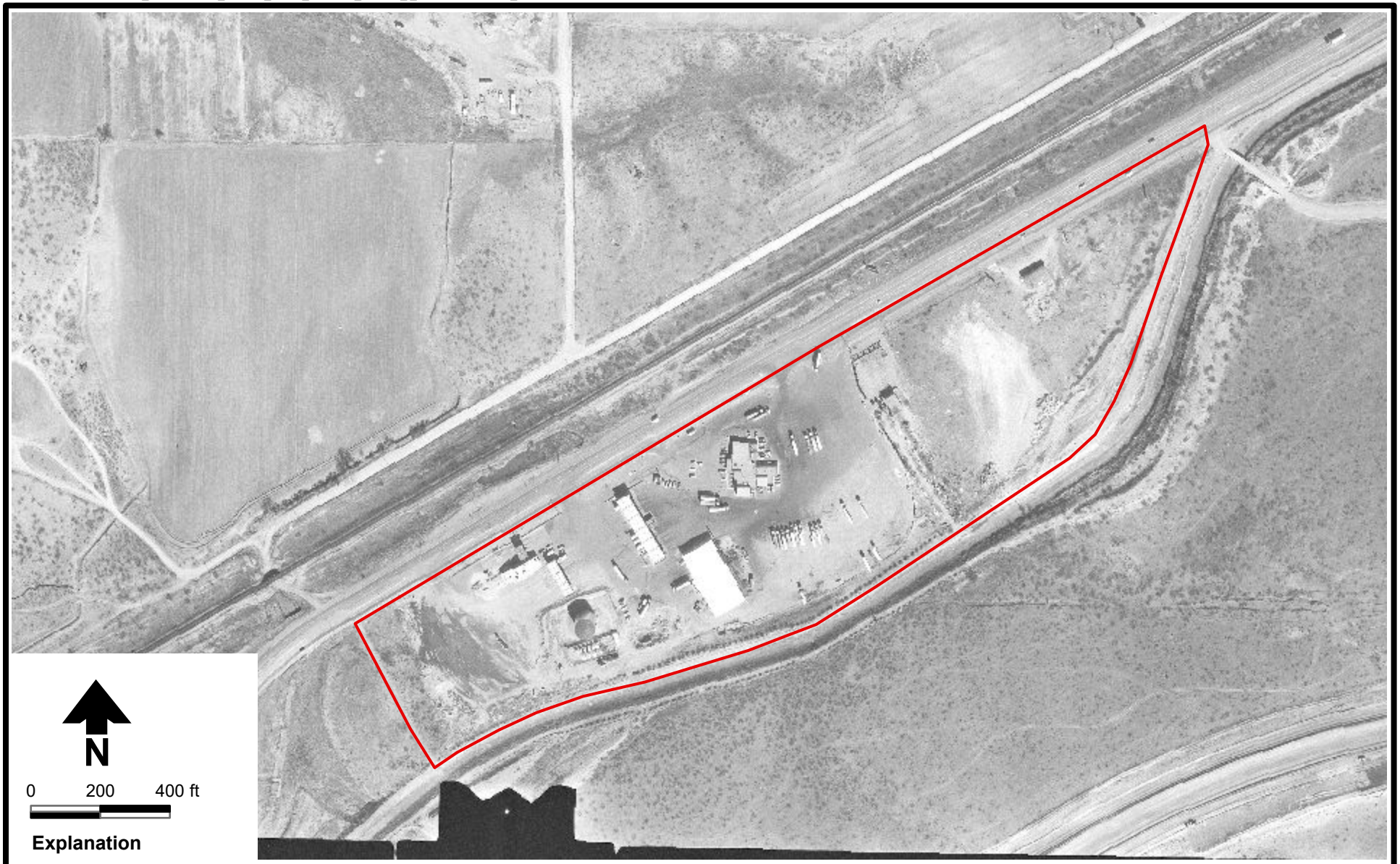
Figure 6

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1969 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

Figure 7

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1979 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

Figure 8

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1991 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

Figure 9

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
1997 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



N

0 200 400 ft

Explanation

Approximate site boundary

Historical Photograph: United States Geological Survey(USGS)

Figure 10

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
2005 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Historical Photograph: United States Geological Survey(USGS)

Figure 11

DBS&A
a Geo-Logic Company

6/26/2024
DB24.1236

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
2018 Historical Photograph

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Historical Photograph: United States Geological Survey(USGS)

Figure 12

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
2022 Historical Photograph

DBS&A
a Geo-Logic Company

6/26/2024
DB24.1236

S:\PROJECTS\DB24.1236_TUCUMCARI_TRUCK_STOP_UPDATE_PHASE_I_ESA\GIS\ARCGIS_PRO\TUCUMCARI TRUCK TERMINAL PHASE 1 ESA DB24.1236.APRX



Base image source: ESRI et al.

Figure 13

PHASE I ESA
TUCUMCARI TRUCK TERMINAL
Site Features

DBS&A
a Geo-Logic Company

6/26/2024 DB24.1236

Appendix A

EDR Reports

DBS&A
a Geo-Logic Company

Tucumcari Truck Stop
3700 W Tucumcari Blvd
Tucumcari, NM 88401

Inquiry Number: 8167002.2s
November 07, 2025

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

LIGHTBOX LIVE

Open LightBox Live to access data, tools, and advanced analytics in one online platform.

http://www.web.edrnet.com/ordering/switchboard/login.aspx?s=goto_lightbox&pguid=1247A827-17BA-4E70-9E43-89C36AA0BD29

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	13
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-13
Physical Setting Source Records Searched	PSGR-1

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 23), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3700 W TUCUMCARI BLVD
TUCUMCARI, NM 88401

COORDINATES

Latitude (North):	35.1591400 - 35° 9' 32.90''
Longitude (West):	103.7696580 - 103° 46' 10.76''
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	612058.5
UTM Y (Meters):	3891186.2
Elevation:	4103 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	14553126 LIBERTY MESA, NM
Version Date:	2020
Northeast Map:	14553168 TUCUMCARI, NM
Version Date:	2020

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20220526
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
3700 W TUCUMCARI BLVD
TUCUMCARI, NM 88401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	SHELL TRUCK STOP (AS	EASTERN I-40 TUCUMCA	SCS		TP
2	TUCUMCARI TRUCK TERM	EXIT 329 I 40	FINDS		TP
A3	ORTEGA SHELL PLAZA I	3300 W TUCUMCARI BLV	EDR Hist Auto		TP
A4	NMDOT TUCUMCARI PATR	US HWY 54 MILE POST	LTANKS, UST, TANKS	Lower	125, 0.024, WSW
5	BRYANT ABANDONED STA	W HWY 66	UST	Higher	607, 0.115, SW
6	TUCUMCARI TRUCK	3900 W TUCUMCARI BLV	LTANKS, TANKS	Lower	987, 0.187, WSW
7	TUCUMCARI TRUCK TERM	EXIT 329 I 40	LUST, UST	Higher	1825, 0.346, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SHELL TRUCK STOP (AS EASTERN I-40 TUCUMCA TUCUMCARI, NM	SCS	N/A
TUCUMCARI TRUCK TERM EXIT 329 I 40 TUCUMCARI, NM 88401	FINDS Registry ID:: 110022686315	N/A
ORTEGA SHELL PLAZA I 3300 W TUCUMCARI BLV TUCUMCARI, NM 88401	EDR Hist Auto	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

EXECUTIVE SUMMARY

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

Federal ERNS list

ERNS ---------- Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS ---------- This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF ---------- Solid Waste Facilities

Lists of state and tribal leaking storage tanks

LAST ---------- Leaking Aboveground Storage Tank Sites
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ---------- Underground Storage Tank Listing
AST ---------- Aboveground Storage Tanks List
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Sites with Institutional Controls

Lists of state and tribal voluntary cleanup sites

VCP ---------- Voluntary Remediation Program Sites
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

BROWNFIELDS ---------- Brownfields Site Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY	Recycling Facility Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS	Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
CDL	Clandestine Drug Laboratory Listing
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
SPILLS	Spill Data

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites

LEAD SMELTERS ---- Lead Smelter Sites
US AIRS ---- Aerometric Information Retrieval System Facility Subsystem
US MINES ---- Mines Master Index File
MINES MRDS ---- Mineral Resources Data System
ABANDONED MINES ---- Abandoned Mines
UXO ---- Unexploded Ordnance Sites
DOCKET HWC ---- Hazardous Waste Compliance Docket Listing
ECHO ---- Enforcement & Compliance History Information
FUELS PROGRAM ---- EPA Fuels Program Registered Listing
PFAS NPL ---- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---- Federal Sites PFAS Information
PFAS TRIS ---- List of PFAS Added to the TRI
PFAS TSCA ---- PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST ---- PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ---- PFAS Contamination Site Location Listing
PFAS WQP ---- Ambient Environmental Sampling for PFAS
PFAS PROJECT ---- NORTHEASTERN UNIVERSITY PFAS PROJECT
PFAS NPDES ---- Clean Water Act Discharge Monitoring Information
PFAS ECHO ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAIN ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 139 AIRPORT ---- All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ---- Aqueous Foam Related Incidents Listing
BIOSOLIDS ---- ICIS-NPDES Biosolids Facility Data
UST FINDER RELEASE ---- UST Finder Releases Database
UST FINDER ---- UST Finder Database
E MANIFEST ---- Hazardous Waste Electronic Manifest System
PFAS ---- Per- and Polyfluoroalkyl Substances (PFAS) Data
AIRS ---- Airs Information
ASBESTOS ---- List of Asbestos Demolition and Renovations Jobs
DRYCLEANERS ---- Drycleaner Facility Listing
Financial Assurance ---- Financial Assurance Information
MINES ---- Coal Mine Permits Database
NPDES ---- List of Discharge Permits
UIC ---- Underground Injection Control Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---- EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner ---- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

EXECUTIVE SUMMARY

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Lists of state and tribal leaking storage tanks

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the New Mexico Environmental Department's List of Past & Current Leak Sites by Location.

A review of the LUST list, as provided by EDR, and dated 08/01/2006 has revealed that there is 1 LUST site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TUCUMCARI TRUCK TERM Facility Id: 31248 Facility Status: Cleanup, Responsible Party	***EXIT 329 I 40***	***SW 1/4 - 1/2 (0.346 mi.)***	***7***	***11***

LTANKS: A listing of leaking storage tank site locations.

A review of the LTANKS list, as provided by EDR, and dated 05/14/2025 has revealed that there are 2 LTANKS sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
NMDOT TUCUMCARI PATR Status: Aggr Cleanup Completed, Resp Party Facility Id: 31249	***US HWY 54 MILE POST***	***WSW 0 - 1/8 (0.024 mi.)***	***A4***	***9***
TUCUMCARI TRUCK Status: Cleanup, Responsible Party Facility Id: 31248	***3900 W TUCUMCARI BLV***	***WSW 1/8 - 1/4 (0.187 mi.)***	***6***	***10***

Lists of state and tribal registered storage tanks

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the New Mexico Environmental Department's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 08/01/2006 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BRYANT ABANDONED STA	W HWY 66	SW 0 - 1/8 (0.115 mi.)	5	10

Facility Id: 27065
Tank Status: REMOVED

Lower Elevation	Address	Direction / Distance	Map ID	Page
NMDOT TUCUMCARI PATR	***US HWY 54 MILE POST***	***WSW 0 - 1/8 (0.024 mi.)***	***A4***	***9***
Facility Id: 31249 Tank Status: REMOVED				

TANKS: A listing of aboveground and underground storage tank site locations.

A review of the TANKS list, as provided by EDR, and dated 05/19/2025 has revealed that there are 2 TANKS sites within approximately 0.25 miles of the target property.

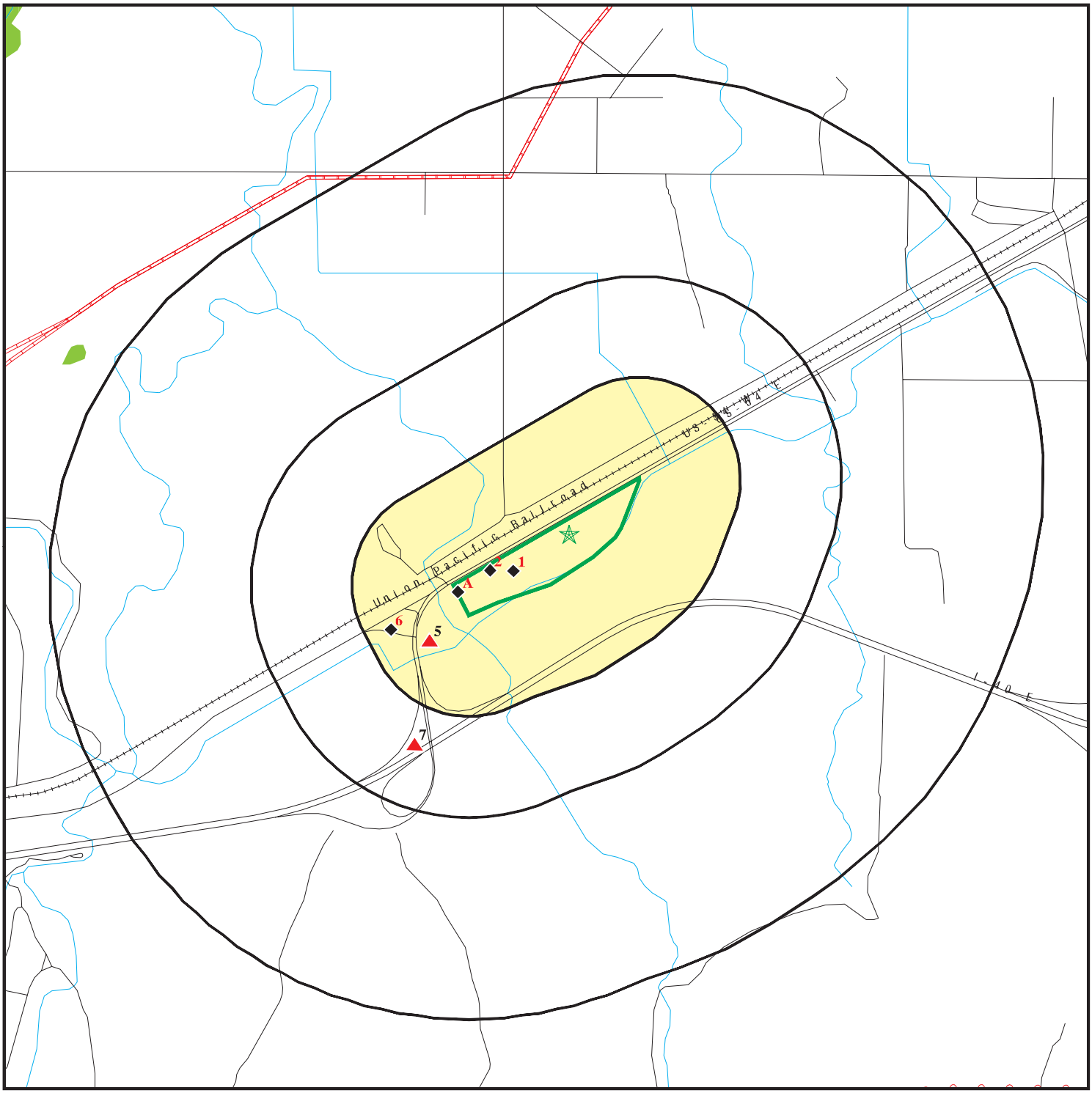
Lower Elevation	Address	Direction / Distance	Map ID	Page
NMDOT TUCUMCARI PATR Facility Id: 31249	***US HWY 54 MILE POST***	***WSW 0 - 1/8 (0.024 mi.)***	***A4***	***9***
TUCUMCARI TRUCK Facility Id: 31248	***3900 W TUCUMCARI BLV***	***WSW 1/8 - 1/4 (0.187 mi.)***	***6***	***10***

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
NMARNG TUCUMCARI TRAINING AREA MRS	SCS
SWIFT TRANSPORTATION	SCS

OVERVIEW MAP - 8167002.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

National Wetland Inventory

State Wetlands

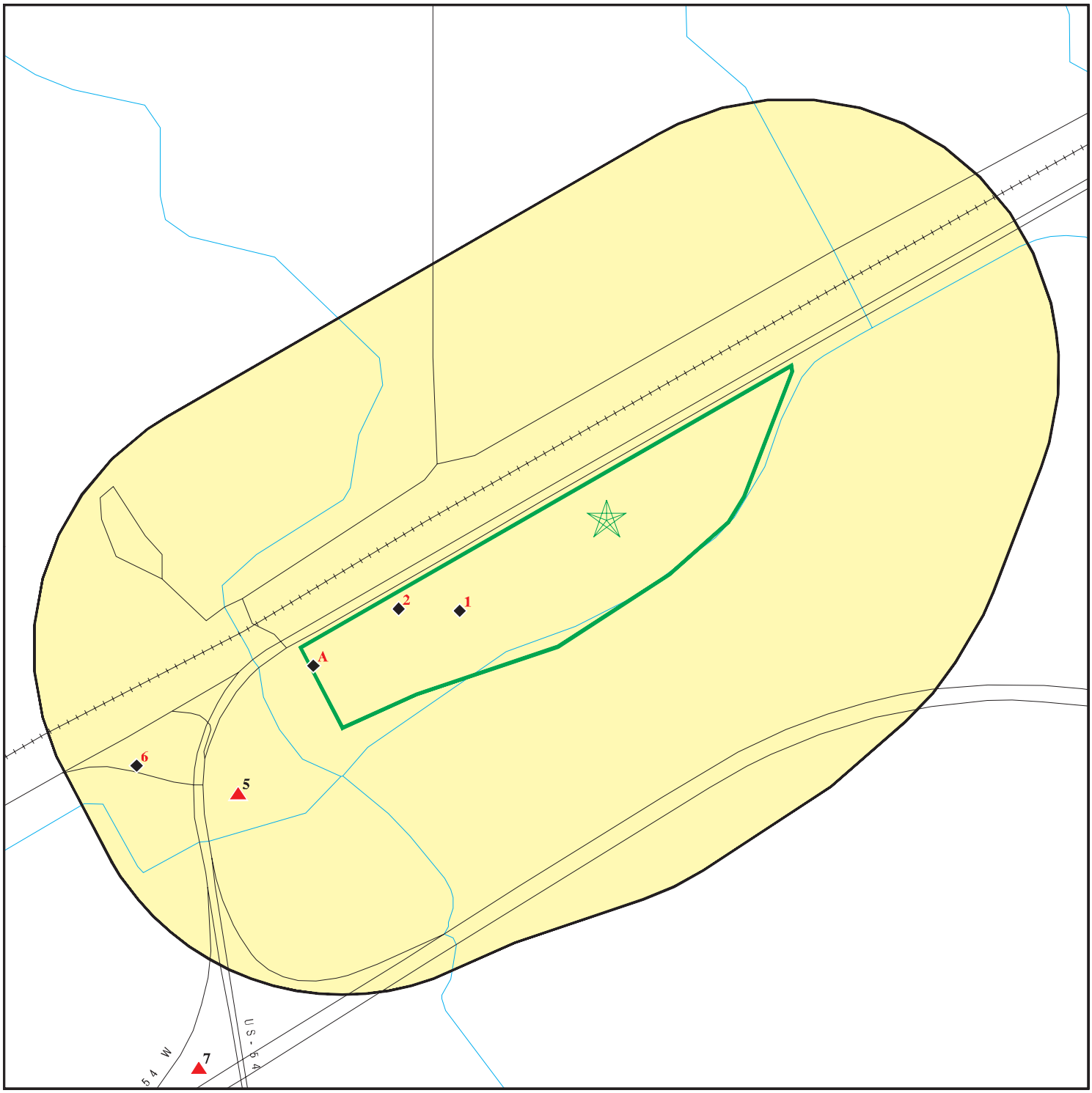
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Tucumcari Truck Stop	CLIENT:	Daniel B. Stephens Assoc. Inc.
ADDRESS:	3700 W Tucumcari Blvd Tucumcari NM 88401	CONTACT:	Patrice Feltman
		INQUIRY #:	8167002.2s
LAT/LONG:	35.15914 / 103.769658	DATE:	November 07, 2025 4:51 pm

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DETAIL MAP - 8167002.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

0 1/8 1/4 1/2 Miles

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Tucumcari Truck Stop	CLIENT:	Daniel B. Stephens Assoc. Inc.
ADDRESS:	3700 W Tucumcari Blvd Tucumcari NM 88401	CONTACT:	Patrice Feltman
		INQUIRY #:	8167002.2s
LAT/LONG:	35.15914 / 103.769658	DATE:	November 07, 2025 4:51 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SCS	1.000	1	0	0	0	0	NR	1
SHWS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
LUST	0.500		0	0	1	NR	NR	1

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
LTANKS	0.500		1	1	0	NR	NR	2
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	0	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
TANKS	0.250		1	1	NR	NR	NR	2
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	0.001	1	0	NR	NR	NR	NR	1
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0
AIRS	0.001		0	NR	NR	NR	NR	0
ASBESTOS	0.001		0	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125	1	0	NR	NR	NR	NR	1
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		3	4	2	1	0	0	10

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

1
Target Property
Actual: 4100 ft.

SHELL TRUCK STOP (AST) TUCUMCARI
EASTERN I-40 TUCUMCARI EXIT
TUCUMCARI, NM

SCS **S108954102**
N/A

SCS:

Name:	SHELL TRUCK STOP (AST) TUCUMCARI
Address:	EASTERN I-40 TUCUMCARI EXIT
City,State,Zip:	TUCUMCARI, NM
Latitude:	35.15787222
Longitude:	-103.77209167
Size(Acres):	unknown
Contaminate Of Concern:	LNAPL, petroleum hydrocarbons
Depth To Water(Ft):	20
Flow Direction:	NE
Media Impacted:	soil and GW
Regulatory Status:	INACTIVE ORPHAN SITE - No viable RP
Event:	Not reported
Discharge Date:	Not reported
Actions Taken:	Not reported
GWWB Status:	Not reported
Closed Date:	Not reported

2
Target Property
Actual: 4095 ft.

TUCUMCARI TRUCK TERMINAL A
EXIT 329 I 40
TUCUMCARI, NM 88401

FINDS **1009423666**
N/A

FINDS:
Registry ID: 110022686315

Click Here for FRS Facility Detail Report:

Environmental Interest/Information System:
New Mexico's -Tools For Environmental Management and Protection Organizations (NM-TEMPO) is New Mexico's integrated environmental management system.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

A3
Target Property
Actual: 4095 ft.

ORTEGA SHELL PLAZA INC
3300 W TUCUMCARI BLVD
TUCUMCARI, NM 88401

EDR Hist Auto **1020208764**
N/A

Site 1 of 2 in cluster A

EDR Hist Auto

Year:	Name:	Type:
2003	ORTEGA SHELL PLAZA INC	Gasoline Service Stations
2004	ORTEGA SHELL PLAZA INC	Gasoline Service Stations
2005	ORTEGA SHELL PLAZA INC	Gasoline Service Stations
2006	ORTEGA SHELL PLAZA INC	Gasoline Service Stations
2007	ORTEGA SHELL PLAZA INC	Gasoline Service Stations
2008	ORTEGA SHELL PLAZA INC	Gasoline Service Stations

A4
WSW
< 1/8
0.024 mi.
125 ft.

NMDOT TUCUMCARI PATROL YARD 44 42
US HWY 54 MILE POST 305
TUCUMCARI, NM 88401

Site 2 of 2 in cluster A

LTANKS
UST
TANKS

U003193382
N/A

Relative:
Lower

Actual:
4095 ft.

LTANKS:

Name:	NMSHTD TUCUMCARI
Address:	US HWY 54 MILE POST 305
City,State,Zip:	TUCUMCARI, NM 88401
Facility Id:	31249
Release Id Number:	738
Project Manager:	Kirk Rothemund
Status:	Aggr Cleanup Completed, Resp Party
NFA Date:	Not reported
Priority:	3

UST:

Facility ID:	31249
Secondary Address:	Not reported
Owner ID:	15789
Owner Name:	NEW MEXICO (STATE OF) NMSHD DISTRICT IV
Owner Address:	PO BOX 10
Owner Address 2:	Not reported
Owner City,St,Zip:	LAS VEGAS, NM 87701
Owner Telephone:	505-454-3620

Tank ID:	31949
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	1000
Tank Substance:	DIESEL

Tank ID:	31950
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	1000
Tank Substance:	GASOLINE UNKNOWN TYPE

TANKS:

Name:	NMDOT TUCUMCARI PATROL YARD 44 42
Address:	US HWY 54 MILE POST 305
City,State,Zip:	TUCUMCARI, NM 88401
Facility Id:	31249
Owner Id Number:	15789
Owner Name:	NEW MEXICO (STATE OF) NMDOT DIST 4
In Use AST:	1
In Use UST:	0
Temp Out AST:	0
Temp Out UST:	0
Sold AST:	0
Sold UST:	0
Removed AST:	0
Removed UST:	2
No Data AST:	0
No Data UST:	0
Exempt AST:	0

NMDOT TUCUMCARI PATROL YARD 44 42 (Continued) **U003193382**

Exempt UST: 0

5
SW
< 1/8
0.115 mi.
607 ft.

BRYANT ABANDONED STATION **UST** **U003193331**
W HWY 66 **N/A**
TUCUMCARI, NM 88401

Relative:
Higher

Actual:
4105 ft.

UST:

Facility ID:	27065
Secondary Address:	Not reported
Owner ID:	17041
Owner Name:	BRYANT LEWIS ELDEN
Owner Address:	4477 QUAY RD 63
Owner Address 2:	Not reported
Owner City,St,Zip:	TUCUMCARI, NM 88401
Owner Telephone:	505-461-0267
Tank ID:	22246
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	3000
Tank Substance:	LEADED GASOLINE
Tank ID:	22247
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	6000
Tank Substance:	LEADED GASOLINE
Tank ID:	22248
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	8000
Tank Substance:	LEADED GASOLINE
Tank ID:	22249
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	10000
Tank Substance:	LEADED GASOLINE

6
WSW
1/8-1/4
0.187 mi.
987 ft.

TUCUMCARI TRUCK **LTANKS** **S131731090**
3900 W TUCUMCARI BLVD **TANKS** **N/A**
TUCUMCARI, NM 88401

Relative:
Lower

Actual:
4098 ft.

LTANKS:

Name:	TUCUMCARI TRUCK
Address:	3900 W TUCUMCARI BLVD
City,State,Zip:	TUCUMCARI, NM 88401
Facility Id:	31248

TUCUMCARI TRUCK (Continued) **S131731090**

Release Id Number: 730
Project Manager: Dulce (Renee) Romero
Status: Cleanup, Responsible Party
NFA Date: Not reported
Priority: 2

TANKS:
Name: TUCUMCARI TRUCK TERMINAL A
Address: 3900 W TUCUMCARI BLVD
City,State,Zip: TUCUMCARI, NM 88401
Facility Id: 31248
Owner Id Number: 76592
Owner Name: HANA TRUCK SPORT TUCUMCARI LLC
In Use AST: 0
In Use UST: 0
Temp Out AST: 7
Temp Out UST: 0
Sold AST: 0
Sold UST: 0
Removed AST: 0
Removed UST: 8
No Data AST: 0
No Data UST: 0
Exempt AST: 0
Exempt UST: 0

---

7 **TUCUMCARI TRUCK TERMINAL A** **LUST U003193381**
SW **EXIT 329 I 40** **UST N/A**
1/4-1/2 **TUCUMCARI, NM 88401**
0.346 mi.
1825 ft.

Relative:
Higher

Actual:
4118 ft.

LUST:
Facility ID: 31248
Status: **Cleanup, Responsible Party**
Status Date: 07/08/1993
Release ID: 730
Date Release Reported: 06/05/1991
Priority Rank: 180
Mitigating Factor Score: 2
Total Score To Assign Relative Rank: 2353
Project Manager: George Beaumont

UST:
Facility ID: 31248
Secondary Address: Not reported
Owner ID: 15102
Owner Name: SHIPLEY PHILLIPS INC
Owner Address: EXIT 329 I 40
Owner Address 2: Not reported
Owner City,St,Zip: TUCUMCARI, NM 88401
Owner Telephone: 505-461-1730

Tank ID: 31941
Tank Status: **REMOVED**
Tank Type: Underground
Tank Capacity: 10000

TUCUMCARI TRUCK TERMINAL A (Continued) **U003193381**

Tank Substance: UNLEADED GASOLINE

Tank ID: 31942
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 10000
Tank Substance: UNLEADED GASOLINE

Tank ID: 31943
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 10000
Tank Substance: UNLEADED GASOLINE

Tank ID: 31944
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 4000
Tank Substance: UNLEADED GASOLINE

Tank ID: 31945
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 6000
Tank Substance: USED OIL

Tank ID: 31946
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 1000
Tank Substance: USED OIL

Tank ID: 31947
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 2000
Tank Substance: LUBRICATING OIL

Tank ID: 31948
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 2000
Tank Substance: LUBRICATING OIL

Count: 2 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TUCUMCARI	S126112657	NMARNG TUCUMCARI TRAINING AREA MRS	5 MILES NORTHWEST OF TUCUMCARI		SCS
TUCUMCARI	S122978909	SWIFT TRANSPORTATION	I-40, MM310		SCS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/05/2025
Date Data Arrived at EDR: 06/20/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 03/11/2025
Date Data Arrived at EDR: 04/02/2025
Date Made Active in Reports: 06/24/2025
Number of Days to Update: 83

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 10/28/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/02/2024
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/10/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SCS: State Cleanup Sites Listing

State cleanup sites that fall under the state's Water Quality Control Commission Regulations.

Date of Government Version: 02/04/2025
Date Data Arrived at EDR: 04/08/2025
Date Made Active in Reports: 06/26/2025
Number of Days to Update: 79

Source: Environment Department
Telephone: 505-827-2855
Last EDR Contact: 10/09/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of the Environment
Telephone: 505-827-2918
Last EDR Contact: 09/10/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: N/A

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/30/2025
Date Data Arrived at EDR: 07/28/2025
Date Made Active in Reports: 10/20/2025
Number of Days to Update: 84

Source: New Mexico Environment Department
Telephone: 505-827-0347
Last EDR Contact: 10/30/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Annually

Lists of state and tribal leaking storage tanks

LUST: Leaking Underground Storage Tank Priorization Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 10/06/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 33

Source: New Mexico Environment Department
Telephone: 505-476-4397
Last EDR Contact: 09/10/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: No Update Planned

LAST: Leaking Aboveground Storage Tank Sites
A listing of leaking aboveground storage tank sites.

Date of Government Version: 05/01/2006
Date Data Arrived at EDR: 05/01/2006
Date Made Active in Reports: 06/05/2006
Number of Days to Update: 35
Source: Environment Department
Telephone: 505-476-4397
Last EDR Contact: 09/10/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: No Update Planned

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/27/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

LTANKS: Leaking Storage Tank Listing
A listing of leaking storage tank site locations.

Date of Government Version: 05/14/2025
Date Data Arrived at EDR: 06/23/2025
Date Made Active in Reports: 09/17/2025
Number of Days to Update: 86
Source: Environment Department
Telephone: 505-476-4390
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Annually

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 04/23/2025
Date Made Active in Reports: 04/24/2025
Number of Days to Update: 1
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 11/06/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

UST: Listing of Underground Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/23/2006
Number of Days to Update: 26
Source: New Mexico Environment Department
Telephone: 505-476-4397
Last EDR Contact: 05/14/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: No Update Planned

AST: Aboveground Storage Tanks List
Aboveground tanks that have been inspected by the State Fire Marshal.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/20/2006
Number of Days to Update: 23
Source: Environment Department
Telephone: 505-476-4397
Last EDR Contact: 05/14/2025
Next Scheduled EDR Contact: 06/02/2025
Data Release Frequency: No Update Planned

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/27/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/21/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/22/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

TANKS: Storage Tank Facility Listing

A listing of aboveground and underground storage tank site locations.

Date of Government Version: 05/19/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/14/2025
Number of Days to Update: 86

Source: Environment Department
Telephone: 505-476-4390
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

State and tribal institutional control / engineering control registries

INST CONTROL: Sites with Institutional Controls

Sites included in the Voluntary Cleanup listing that have Institutional Controls in place.

Date of Government Version: 04/30/2025
Date Data Arrived at EDR: 07/07/2025
Date Made Active in Reports: 09/26/2025
Number of Days to Update: 81

Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 10/09/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Semi-Annually

Lists of state and tribal voluntary cleanup sites

VCP: Voluntary Remediation Program Sites

Sites involved in the Voluntary Remediation Program.

Date of Government Version: 04/30/2025
Date Data Arrived at EDR: 07/07/2025
Date Made Active in Reports: 09/26/2025
Number of Days to Update: 81

Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 10/09/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Semi-Annually

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Brownfields Site Listing
A listing of targeted brownfields assessment.

Date of Government Version: 04/03/2025
Date Data Arrived at EDR: 07/28/2025
Date Made Active in Reports: 10/20/2025
Number of Days to Update: 84

Source: New Mexico Environment
Telephone: 505-827-0171
Last EDR Contact: 10/27/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/09/2024
Date Data Arrived at EDR: 09/11/2024
Date Made Active in Reports: 12/06/2024
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facility Listing
A listing of recycling facility locations.

Date of Government Version: 09/21/2022
Date Data Arrived at EDR: 10/31/2022
Date Made Active in Reports: 01/19/2023
Number of Days to Update: 80

Source: Environment Department
Telephone: 505-827-0197
Last EDR Contact: 10/30/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 02/07/2024
Date Data Arrived at EDR: 11/13/2024
Date Made Active in Reports: 11/19/2024
Number of Days to Update: 6

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Laboratory Listing

A listing of clandestine drug labs, such as illegal methamphetamine labs.

Date of Government Version: 05/17/2018
Date Data Arrived at EDR: 07/18/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 27

Source: Environment Department
Telephone: 505-476-6000
Last EDR Contact: 10/09/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 04/04/2025
Date Data Arrived at EDR: 06/02/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 71

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/11/2025
Date Data Arrived at EDR: 06/12/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 4

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

SPILLS: Spill Data

Hazardous materials spills data.

Date of Government Version: 05/31/2025
Date Data Arrived at EDR: 06/13/2025
Date Made Active in Reports: 09/09/2025
Number of Days to Update: 88

Source: Environment Department
Telephone: 505-827-0166
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 07/23/2025
Date Data Arrived at EDR: 07/23/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 6

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/06/2025
Next Scheduled EDR Contact: 02/23/2026
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239
Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574
Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/02/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7
Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/03/2025
Date Made Active in Reports: 06/16/2025
Number of Days to Update: 13
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA Watch List

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/22/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: No Update Planned

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 10/30/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/11/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/11/2025
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 7

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/14/2025
Date Data Arrived at EDR: 07/14/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 91

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/14/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2025
Date Data Arrived at EDR: 08/04/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 07/01/2025
Date Data Arrived at EDR: 07/29/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/08/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 06/26/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 28

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2024
Date Data Arrived at EDR: 10/02/2024
Date Made Active in Reports: 01/10/2025
Number of Days to Update: 100

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 09/30/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/11/2025
Date Data Arrived at EDR: 08/12/2025
Date Made Active in Reports: 11/04/2025
Number of Days to Update: 84
Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 10/16/2024
Date Made Active in Reports: 01/14/2025
Number of Days to Update: 90
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 08/28/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/30/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/17/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/17/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 88

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/20/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2025
Date Data Arrived at EDR: 07/29/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 91

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/23/2025
Next Scheduled EDR Contact: 01/13/2026
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 02/19/2025
Date Made Active in Reports: 03/07/2025
Number of Days to Update: 16

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 09/29/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/22/2025
Next Scheduled EDR Contact: 02/09/2026
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 05/15/2025
Date Data Arrived at EDR: 05/15/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 75

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/11/2025
Next Scheduled EDR Contact: 11/24/2025
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/29/2025
Date Data Arrived at EDR: 10/01/2025
Date Made Active in Reports: 10/28/2025
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/03/2025
Next Scheduled EDR Contact: 01/05/2026
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/01/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 07/29/2025
Number of Days to Update: 70

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/18/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 07/01/2025
Date Data Arrived at EDR: 07/01/2025
Date Made Active in Reports: 09/24/2025
Number of Days to Update: 85

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 07/01/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 04/08/2025
Date Data Arrived at EDR: 05/20/2025
Date Made Active in Reports: 08/12/2025
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 05/28/2025
Date Data Arrived at EDR: 05/28/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 6

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/09/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 06/04/2024
Date Data Arrived at EDR: 11/22/2024
Date Made Active in Reports: 02/18/2025
Number of Days to Update: 88

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/21/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/22/2025
Date Data Arrived at EDR: 05/05/2025
Date Made Active in Reports: 05/21/2025
Number of Days to Update: 16

Source: EPA
Telephone: (214) 665-2200
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/08/2025
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites
A listing of unexploded ordnance site locations

Date of Government Version: 07/31/2025
Date Data Arrived at EDR: 08/14/2025
Date Made Active in Reports: 11/04/2025
Number of Days to Update: 82

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/29/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/12/2025
Next Scheduled EDR Contact: 12/01/2025
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/22/2025
Date Data Arrived at EDR: 06/25/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/07/2025
Date Data Arrived at EDR: 08/07/2025
Date Made Active in Reports: 11/04/2025
Number of Days to Update: 89

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/06/2025
Next Scheduled EDR Contact: 02/23/2026
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 09/24/2025
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 11/12/2024
Date Data Arrived at EDR: 07/21/2025
Date Made Active in Reports: 10/13/2025
Number of Days to Update: 84

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/15/2024
Date Data Arrived at EDR: 03/06/2025
Date Made Active in Reports: 06/03/2025
Number of Days to Update: 89

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 09/02/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PFAS PT 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 06/23/2025
Date Data Arrived at EDR: 06/26/2025
Date Made Active in Reports: 08/27/2025
Number of Days to Update: 62

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 09/26/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/24/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/24/2025
Next Scheduled EDR Contact: 01/12/2026
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 07/06/2025
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/02/2025
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 11/06/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Semi-Annually

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 11/06/2025
Next Scheduled EDR Contact: 02/16/2026
Data Release Frequency: Varies

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 06/02/2025
Date Data Arrived at EDR: 06/04/2025
Date Made Active in Reports: 08/13/2025
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: Varies

PFAS: Per- and Polyfluoroalkyl Substances (PFAS) Data

Site locations where Per- and Polyfluoroalkyl Substances (PFAS) contamination has been detected.

Date of Government Version: 12/31/2024
Date Data Arrived at EDR: 04/17/2025
Date Made Active in Reports: 04/23/2025
Number of Days to Update: 6

Source: New Mexico Environment Department
Telephone: 505-827-2919
Last EDR Contact: 10/01/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

AIRS: Airs Information

A listing of facilities with Air Quality Bureau permits.

Date of Government Version: 07/15/2025
Date Data Arrived at EDR: 07/16/2025
Date Made Active in Reports: 10/08/2025
Number of Days to Update: 84

Source: New Mexico Environment Department
Telephone: 505-476-4339
Last EDR Contact: 10/08/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Annually

ASBESTOS: List of Asbestos Demolition and Renovations Jobs

Asbestos is a common fibrous rock found worldwide which has been used in various products for over 4500 years. It has been used in over 3000 different products such as textiles, paper, ropes, wicks, stoves, filters, floor tiles, roofing shingles, clutch facings, water pipe, cements, fillers, felt, fireproof clothing, gaskets, battery boxes, clapboard, wallboard, fire doors, fire curtains, insulation, brake linings, etc.

Date of Government Version: 07/16/2025
Date Data Arrived at EDR: 07/16/2025
Date Made Active in Reports: 10/08/2025
Number of Days to Update: 84

Source: New Mexico Environment Department
Telephone: 505-827-1494
Last EDR Contact: 10/08/2025
Next Scheduled EDR Contact: 01/26/2026
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaner Facility Listing

A listing of drycleaner facility locations. The listing may contain facilities that are no longer there, or under different management.

Date of Government Version: 01/06/2010
Date Data Arrived at EDR: 01/07/2010
Date Made Active in Reports: 02/04/2010
Number of Days to Update: 28

Source: Environment Department
Telephone: 505-222-9507
Last EDR Contact: 09/10/2025
Next Scheduled EDR Contact: 12/29/2025
Data Release Frequency: No Update Planned

FIN ASSURANCE 1: Financial Assurance Information

Information for underground solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/03/2012
Date Data Arrived at EDR: 01/04/2013
Date Made Active in Reports: 01/10/2013
Number of Days to Update: 6

Source: Environment Department
Telephone: 505-827-0197
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Varies

FIN ASSURANCE 2: Financial Assurance Information

Information for underground hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 07/18/2025
Date Data Arrived at EDR: 07/22/2025
Date Made Active in Reports: 10/14/2025
Number of Days to Update: 84

Source: Environment Department
Telephone: 505-476-6018
Last EDR Contact: 10/15/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Annually

COAL MINES: Coal Mine Permits Database

New Mexico coal mines permitted under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), by either the NM Mining & Minerals Division (MMD), or by the federal DOI Office of Surface Mining, Reclamation & Enforcement.

Date of Government Version: 06/09/2025
Date Data Arrived at EDR: 06/10/2025
Date Made Active in Reports: 08/29/2025
Number of Days to Update: 80

Source: Bureau of Geology and Mineral Resources
Telephone: 505-476-3402
Last EDR Contact: 09/08/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Varies

COAL MINES 2: Coal Permit Boundaries

ESRI ArcView shapefile depicting New Mexico coal mines permitted under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), by either the NM Mining & Minerals Division (MMD), or by the federal DOI Office of Surface Mining, Reclamation & Enforcement.

Date of Government Version: 06/09/2025
Date Data Arrived at EDR: 06/10/2025
Date Made Active in Reports: 08/29/2025
Number of Days to Update: 80

Source: Mining & Minerals Division
Telephone: 505-476-3417
Last EDR Contact: 09/08/2025
Next Scheduled EDR Contact: 12/22/2025
Data Release Frequency: Varies

NPDES: List of Discharge Permits

General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 12/30/2024
Date Data Arrived at EDR: 07/10/2025
Date Made Active in Reports: 10/06/2025
Number of Days to Update: 88

Source: Environment Department
Telephone: 505-827-2918
Last EDR Contact: 10/09/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Semi-Annually

UIC: Underground Injection Control Listing

The listing includes Discharge Permits (DP) with Underground Injection Control Wells, located in New Mexico.

Date of Government Version: 06/25/2025
Date Data Arrived at EDR: 07/07/2025
Date Made Active in Reports: 09/26/2025
Number of Days to Update: 81

Source: New Mexico Environment Department
Telephone: 505-827-2936
Last EDR Contact: 10/07/2025
Next Scheduled EDR Contact: 01/19/2026
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the New Mexico Environment Department in New Mexico.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/16/2014
Number of Days to Update: 199

Source: New Mexico Environment Department
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the New Mexico Environment Department in New Mexico.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: New Mexico Environment Department
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/23/2025
Next Scheduled EDR Contact: 02/02/2026
Data Release Frequency: Quarterly

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 08/27/2025
Next Scheduled EDR Contact: 12/15/2025
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Providers
Source: Office of Child Development
Telephone: 505-827-7946

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 505-248-6660

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TUCUMCARI TRUCK STOP
3700 W TUCUMCARI BLVD
TUCUMCARI, NM 88401

TARGET PROPERTY COORDINATES

Latitude (North):	35.15914 - 35° 9' 32.90''
Longitude (West):	103.769658 - 103° 46' 10.77''
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	612058.5
UTM Y (Meters):	3891186.2
Elevation:	4103 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	14553126 LIBERTY MESA, NM
Version Date:	2020
Northeast Map:	14553168 TUCUMCARI, NM
Version Date:	2020

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

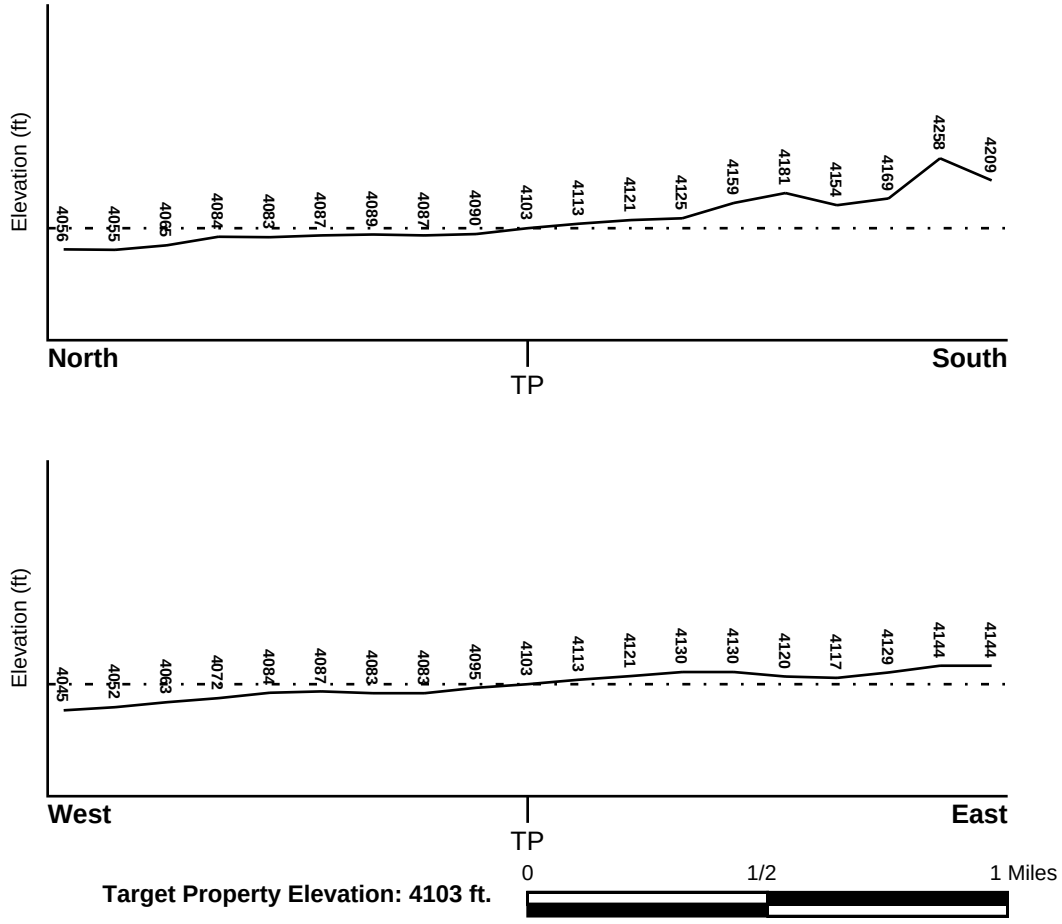
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 4103 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
Not Reported	

Additional Panels in search area:	FEMA Source Type
Not Reported	

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LIBERTY MESA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

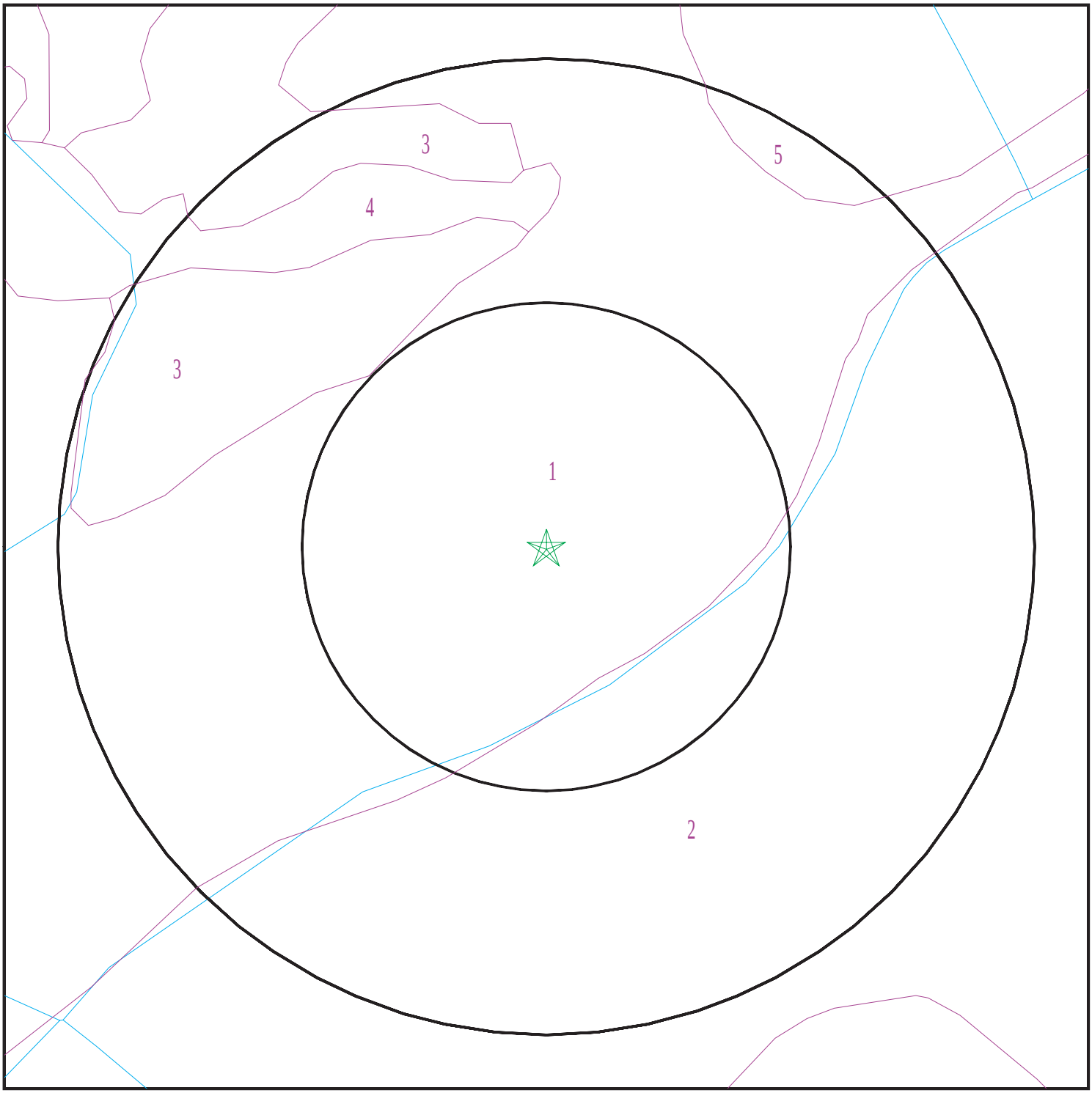
Era:	Mesozoic
System:	Jurassic
Series:	Jurassic
Code:	J *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 8167002.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Tucumcari Truck Stop	CLIENT:	Daniel B. Stephens Assoc. Inc.
ADDRESS:	3700 W Tucumcari Blvd Tucumcari NM 88401	CONTACT:	Patrice Feltman
LAT/LONG:	35.15914 / 103.769658	INQUIRY #:	8167002.2s
		DATE:	November 07, 2025 4:51 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Quay

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	7 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
3	25 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: Quay

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	9 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
3	25 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: Gallegos

Soil Surface Texture: very gravelly loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	very gravelly loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42.34 Min: 14.11	Max: 8.4 Min: 7.4
2	5 inches	59 inches	extremely gravelly clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42.34 Min: 14.11	Max: 8.4 Min: 7.4

Soil Map ID: 4

Soil Component Name: Toyah

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	9 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: Quay

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
3	25 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

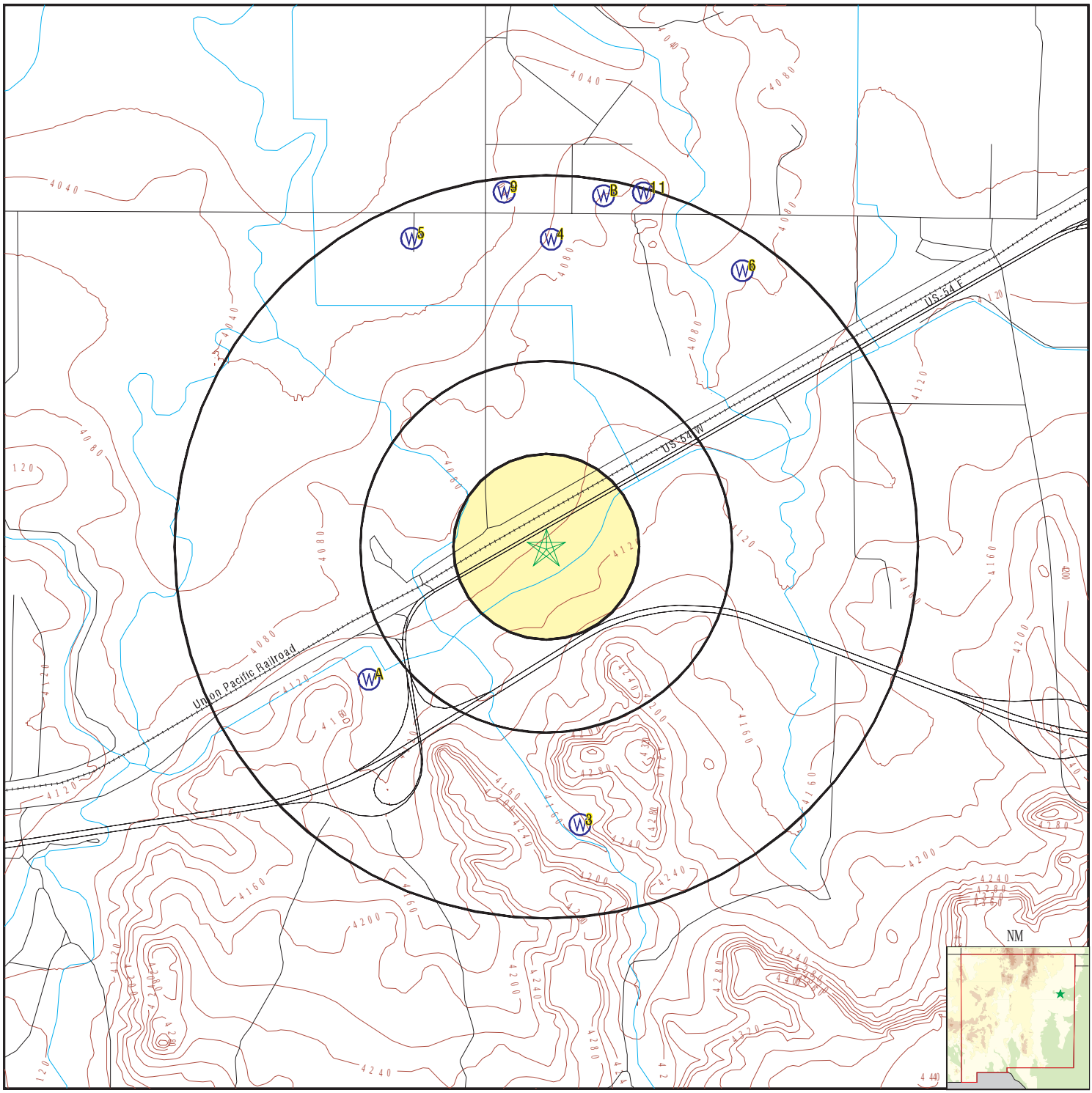
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	NM7000000253021	1/2 - 1 Mile SW
A2	NM7000000252981	1/2 - 1 Mile SW
3	NM7000000242488	1/2 - 1 Mile South
4	NM7000000099563	1/2 - 1 Mile North
5	NM7000000084630	1/2 - 1 Mile NNW
6	NM7000000161423	1/2 - 1 Mile NE
B7	NM7000000190283	1/2 - 1 Mile North
B8	NM7000000190284	1/2 - 1 Mile North
9	NM7000000084672	1/2 - 1 Mile North
B10	NM7000000141222	1/2 - 1 Mile North
11	NM7000000084645	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 8167002.2s



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Tucumcari Truck Stop	CLIENT:	Daniel B. Stephens Assoc. Inc.
ADDRESS:	3700 W Tucumcari Blvd Tucumcari NM 88401	CONTACT:	Patrice Feltman
		INQUIRY #:	8167002.2s
LAT/LONG:	35.15914 / 103.769658	DATE:	November 07, 2025 4:51 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
SW
1/2 - 1 Mile
Higher

NM WELLS **NM7000000253021**

WELLS:

Well Name:	Not Reported		
Well Use:	Non 72-12-1 domestic and livestock watering		
Water Rights Status:	Declaration	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	02369
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	0
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Pending	OSE Well Tag:	NA
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=02369&suffix=		

A2
SW
1/2 - 1 Mile
Higher

NM WELLS **NM7000000252981**

WELLS:

Well Name:	Not Reported		
Well Use:	Non 72-12-1 livestock watering		
Water Rights Status:	Declaration	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	02367
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	0
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Not Reported	OSE Well Tag:	NA
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=02367&suffix=		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

3
South
1/2 - 1 Mile
Higher

NM WELLS **NM7000000242488**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 livestock watering		
Water Rights Status:	Permit	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	02335
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	20-JUN-19	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	145
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Active	OSE Well Tag:	70205
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	0
Well Completed:	13-JUL-19	Completion Proved:	Not Reported
Groundwater Source:	Shallow	% Shallow:	100
Depth to Water (ft):	100	OSE Filing Date:	16-JUL-19
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	20	Casing Size (in):	6
POD Sub Basin:	Tucumcari	Static Level:	98
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=02335&suffix=		

4
North
1/2 - 1 Mile
Lower

NM WELLS **NM7000000099563**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic one household		
Water Rights Status:	Permit	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	00199
POD Suffix:	Not Reported	Land Grant:	Not Reported
Drilling Started:	17-APR-99	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	140
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Active	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	3
Well Completed:	19-APR-99	Completion Proved:	11-MAY-99
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	36	OSE Filing Date:	11-MAY-99
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	5
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=00199&suffix=		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

5
NNW | **NM WELLS** | **NM7000000084630**
1/2 - 1 Mile
Lower

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 livestock watering		
Water Rights Status:	Permit	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	00066
POD Suffix:	Not Reported	Land Grant:	Not Reported
Drilling Started:	01-MAR-88	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	150
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Not Reported	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	0
Well Completed:	14-MAR-88	Completion Proved:	Not Reported
Groundwater Source:	Shallow	% Shallow:	100
Depth to Water (ft):	10	OSE Filing Date:	18-APR-88
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=00066&suffix=		

6
NE | **NM WELLS** | **NM7000000161423**
1/2 - 1 Mile
Lower

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic one household		
Water Rights Status:	Permit	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	01613
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	12-JUN-07	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	307
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Active	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	1	Max Diversion Allowed:	0
Well Completed:	20-JUN-07	Completion Proved:	Not Reported
Groundwater Source:	Shallow	% Shallow:	100
Depth to Water (ft):	130	OSE Filing Date:	12-JUL-07
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	10	Casing Size (in):	5
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=01613&suffix=		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B7
North
1/2 - 1 Mile
Lower

NM WELLS **NM7000000190283**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic and livestock watering		
Water Rights Status:	Not Reported	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	01944
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	250
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Pending	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	0	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	6.63
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=01944&suffix=		

B8
North
1/2 - 1 Mile
Lower

NM WELLS **NM7000000190284**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic and livestock watering		
Water Rights Status:	Expired	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	01413
POD Suffix:	POD1	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	250
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Pending	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	0	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	6.63
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=01413&suffix=		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

9
North
1/2 - 1 Mile
Lower

NM WELLS **NM7000000084672**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic one household		
Water Rights Status:	Expired	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	00095
POD Suffix:	EXP	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	0
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Not Reported	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	0	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	100
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=00095&suffix=		

B10
North
1/2 - 1 Mile
Lower

NM WELLS **NM7000000141222**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic and livestock watering		
Water Rights Status:	Expired	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	01413
POD Suffix:	Not Reported	Land Grant:	Not Reported
Drilling Started:	Not Reported	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	0
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Pending	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	0	Max Diversion Allowed:	0
Well Completed:	Not Reported	Completion Proved:	Not Reported
Groundwater Source:	Not Reported	% Shallow:	0
Depth to Water (ft):	0	OSE Filing Date:	Not Reported
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=01413&suffix=		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

11
NNE
1/2 - 1 Mile
Lower | **NM WELLS** | **NM7000000084645**

WELLS:

Well Name:	Not Reported		
Well Use:	72-12-1 domestic one household		
Water Rights Status:	Permit	Water Rights Use:	Not Reported
POD Basin:	Tucumcari	POD #:	00106
POD Suffix:	Not Reported	Land Grant:	Not Reported
Drilling Started:	10-MAY-93	Plug Date:	Not Reported
Elevation:	0	Well Depth (ft):	120
Well Schedule Date:	Not Reported	Pump Type:	Not Reported
Discharge Pipe Size:	Not Reported	Aquifer:	Not Reported
POD Status:	Not Reported	OSE Well Tag:	Not Reported
Basin:	Tucumcari	Sub Basin:	Tucumcari
Diversion Amt Allowed (acre-ft):	3	Max Diversion Allowed:	0
Well Completed:	10-MAY-93	Completion Proved:	Not Reported
Groundwater Source:	Dry	% Shallow:	100
Depth to Water (ft):	34	OSE Filing Date:	17-MAY-93
Pump Serial #:	Not Reported	Surface Water Diversion:	0
Estimated Yield:	0	Casing Size (in):	0
POD Sub Basin:	Tucumcari	Static Level:	0
Water Rights Summary URL:	http://nmwrrs.ose.state.nm.us/ReportDispatcher?type=WRHTML&name=WaterRightSummaryHTML.jrxml&basin=TU&nbr=00106&suffix=		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: NM Radon

Radon Test Results

Zip	Total Sites	Pct. < 4 Pci/L	4 < 10 Pci/L	10 < 20 Pci/L	> 20 Pci/L
88401	8	50.0	50.0	0.0	0.0

Federal EPA Radon Zone for QUAY County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 88401

Number of sites tested: 6

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	3.567 pCi/L	67%	33%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	6.000 pCi/L	0%	100%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 505-248-6660

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Office of the State Engineer
Telephone: 505-827-6175

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Locations
Source: New Mexico Institute of Mining and Technology
Telephone: 505-835-5142

RADON

State Database: NM Radon
Source: Environment Department
Telephone: 505-827-1093
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Tucumcari Truck Stop
3700 W Tucumcari Blvd
Tucumcari, NM 88401

Inquiry Number: 8167002.3
November 07, 2025

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

11/07/25

Site Name:

Tucumcari Truck Stop
3700 W Tucumcari Blvd
Tucumcari, NM 88401
EDR Inquiry # 8167002.3

Client Name:

Daniel B. Stephens Assoc. Inc.
6020 Academy NE
Albuquerque, NM 87109
Contact: Patrice Feltman

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Daniel B. Stephens Assoc. Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # FB37-4E96-BD93

PO # DB24.1236.00.2.1

Project Tucumcari Truck Stop Update

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: FB37-4E96-BD93

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Tucumcari Truck Stop
3700 W Tucumcari Blvd
Tucumcari, NM 88401

Inquiry Number: 8167002.5
November 11, 2025

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2022	☑	☐	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information
2000	☑	☐	Cole Information
1995	☑	☐	Cole Information
1992	☑	☐	Cole Information
1986	☑	☐	Polk's City Directory
1979	☑	☐	Polk's City Directory
1974	☑	☐	Polk's City Directory
1969	☑	☐	Polk's City Directory
1963	☑	☐	Polk's City Directory
1948	☑	☐	Hudspeth's City Directory

FINDINGS

TARGET PROPERTY STREET

3700 W Tucumcari Blvd
Tucumcari, NM 88401

Year	*CD Image*	*Source*	
HIGHWAY 66 W			
1969	pg A20	Polk's City Directory	
1963	pg A22	Polk's City Directory	
1948	-	Hudspeth's City Directory	Street not listed in Source
W ROUTE 66 BLVD			
2022	pg A2	EDR Digital Archive	
2017	pg A4	Cole Information	
2014	pg A5	Cole Information	
2010	pg A6	Cole Information	
2005	pg A7	Cole Information	
2000	-	Cole Information	Street not listed in Source
1995	-	Cole Information	Street not listed in Source
1992	-	Cole Information	Street not listed in Source
1986	-	Polk's City Directory	Street not listed in Source
1979	-	Polk's City Directory	Street not listed in Source
1974	-	Polk's City Directory	Street not listed in Source
1969	-	Polk's City Directory	Street not listed in Source
1963	-	Polk's City Directory	Street not listed in Source
1948	-	Hudspeth's City Directory	Street not listed in Source
W TUCUMCARI BLVD			
2022	-	EDR Digital Archive	Street not listed in Source
2017	-	Cole Information	Street not listed in Source
2014	-	Cole Information	Street not listed in Source
2010	-	Cole Information	Street not listed in Source
2005	-	Cole Information	Street not listed in Source

FINDINGS

Year	***CD Image***	***Source***
2000	pg A8	Cole Information
1995	pg A9	Cole Information
1992	pg A11	Cole Information
1986	pg A13	Polk's City Directory
1986	pg A14	Polk's City Directory
1979	pg A15	Polk's City Directory
1979	pg A16	Polk's City Directory
1974	pg A17	Polk's City Directory
1974	pg A18	Polk's City Directory
1974	pg A19	Polk's City Directory

W TUCUMCARI BLVD (W GAYNELL AVE)

1969	pg A21	Polk's City Directory
1963	pg A23	Polk's City Directory
1948	pg A24	Hudspeth's City Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W ROUTE 66 BLVD 2022

112	FAMILY DOLLAR
	STACEI LECERO
201	GALE BROWN
202	ACQUA MIST CAR WASH
	PATTY FUENTES
	ROUTE 66 SMOKE SHOP
212	JEFFREY KNOETTNER
	KAREN KNOETTNER
214	DOLLAR GENERAL
	LINDA APODACA
223	MARK PRECIADO
	VIRGINIA PRECIADO
302	LEIF GRAY
	QUALITY LUBE & TIRE LLC
404	CHAMBERS
	TUCUMARI CHAMBER OF COMMERCE
	VIRGINIA WRIGHT
421	INCOME SUPPORT DIVISION
605	LORETTAS BURRITOS HUT
714	K-BEE HOMECARE
	K-BEE HOMECARE SERVICES
	KERRY HARMAN
	KRYSTAL GONZALES
	LARRY BOND
	RUBEES TO GO
	RUBY HENDREN
801	BEST WESTERN POW WOW INN
	JERRY MARES
802	LARRY BOND
824	BUDGET INNS
	KAY BHAKTA
901	ALCO DISCOUNT STORE
1001	SAMANTHA REUTER
1301	DICKINSON IMPLEMENT CO
	JAMES HALLER
	PAM HALLER
1302	BILL FERRENCE
	CAREER SERVICES INC
	COUNTRY INN MOTEL
	MIKE AWAIS
	TANYA DANGELO
	TRISTAR INN XPRESS
1305	BRANDON GOLDSTON
	DAVID L GOLDSTON
	GOLD STAR FREIGHT SERVICE
	GOLD STAR MAIL SERVICE
1315	BUCKAROO MOTEL
	DAVE MAGUIRE
1500	CONVENTION CENTER
	JESSICA ELBARIO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W ROUTE 66 BLVD 2022 (Cont'd)

1500	ROUTE 66 MONUMENT
	TUCUMCARI CITY ECONOMIC DEVELOPMENT
	TUCUMCARI CONVENTION CENTER
1502	THE REDWOOD LODGE
1900	BRODERICK BANNER
	GARY CARDWELL
	KAYLA MCKAGAN
	TIMELESS TREASURES
	TRISTAN LEGER
	VICKI DAVIS
2000	DENNIS UNDERWOOD
	GEORGE KILGORE
	GEORGE LEMOS
	GEORGE RODLIN
	JO HANCOCK
	KIRIT BHATT
	NAVIN BHATT
2202	JOHN CULLUM

Target Street	Cross Street	Source
✓	-	Cole Information

W ROUTE 66 BLVD 2017

102	FAMILY DOLLAR
	SNAP FITNESS
105	LOWES
112	FAMILY DOLLAR
202	ROUTE 66 SMOKE SHOP
214	CASH CORRALTUCUMCARI
	DOLLAR GENERAL STORE
224	WILD AT HEART FLORAL
302	QUALITY LUBE & TIRE LLC
404	TUCUMCARI QUAY COUNTY CHAMBER OF COM
421	STATE OF NEW MEXICO
615	NEW MEXICO PROPERTY GROUP
714	KBEE HOMECARE SERVICES
	RUBEES TO GO
801	HISTORIC POW WOW INN
	POW WOW RESTAURANT & LIZARD LOUNGE
1016	COCHRAN, JIMMIE S
	MACS FOUR SEASON PEST CONTROL
1301	DICKINSON IMPLEMENT CO
1302	TRISTAR INN XPRESS & RESTAURANT
1305	GOLD STAR MAIL SERVICE INC
1315	BUCKAROO MOTEL
1324	RADIOSHACK SHIPLEY SYSTEMS
1500	CITY OF TUCUMCARI
	COMMUNITY HOME CARE
	GREATER TUCUMCARI ECONOMIC DEVELOPME

Target Street	Cross Street	Source
✓	-	Cole Information

W ROUTE 66 BLVD 2014

102	FAMILY DOLLAR
105	LOWES
202	ROUTE 66 SMOKE SHOP
214	DOLLAR GENERAL STORE
224	WILD AT HEART FLORAL
301	CASH CORRALTUCUMCARI
	NA HEATING AIR & ELECTRIC
302	QUALITY LUBE & TIRE
	TEAMBUILDERS CHILD DEVELOPMENT CENTE
404	CONGRESSMAN BEN RAY LUJAN
	TUCUMCARI QUAY COUNTY CHAMBER OF COM
421	NEW MEXICO STATE GOVERNMENT
510	BNB ENTERPRISES
615	NEW MEXICO PROPERTY GROUP
714	KBEE HOMECARE SERVICES
801	HISTORIC POW WOW INN
	POW WOW RESTAURANT & LOUNGE
802	TRAVELERS MOTOR INN
824	BUDGET INNS
901	ALCO
920	THINGS
924	MESALANDS COMMUNITY COLLEGE
1016	COCHRAN, JIMMIE S
	MACS FOUR SEASON PEST CONTROL
1301	DICKINSON IMPLEMENT CO
1302	TRISTAR INN XPRESS
1305	GOLD STAR MAIL SERVICE INC
1315	BUCKAROO MOTEL
	CAUDLE, DON
1324	SHIPLEYSYSTEMS LLC
1500	CITY OF TUCUMCARI
	COMMUNITY HOME CARE
	GREATER TUCUMCARI ECONOMIC DEVELOPME
	TUCUMCARI CONVENTION CENTER
1724	JEHOVAHS WITNESS
1900	ERICKSON, CHAD A
	HICKMAN, DAVID A
	TUCUMCARI TRADING POST

Target Street	Cross Street	Source
✓	-	Cole Information

W ROUTE 66 BLVD 2010

102	MOVIE GALLERY
112	FAMILY DOLLAR STORE
202	SMOKERS DISCOUNT LLC
206	STEEL HEATING COOLING & ELECT
214	CASH CORRAL TUCUMCARI
	DOLLAR GENERAL
224	HIGH DESERT
301	J C HEATING & AIR CONDITIONING
302	QUALITY LUBE & TIRE
404	CHAMBER OF COMMERCE
421	DEPT WORKFORCE SOLUTIONS
	INCOME SUPPORT DIV
605	RUBEES DINER
801	HISTORIC POW WOW INN
	NEW MEXICO PROPERTY GROUP
	POW WOW RESTAURANT & LOUNGE
802	TRAVELERS MOTOR INN
824	BUDGET INN
901	ALCO DISCOUNT STORE
920	THINGS
1015	PIZZA KING
1016	COCHRAN, JIMMIE S
1023	S & L CUSTOM CABINETS & DESIGN
1302	TRISTAR INN XPRESS
1305	GOLD STAR MAIL SVC
1315	BUCKAROO MOTEL
	CAUDLE, DON
1324	RADIO SHACK
1500	TUCUMCARI CITY ECONOMIC DEV
	TUCUMCARI CONVENTION CTR
1502	REDWOOD LODGE
1900	CAULFIELD, MICHELE
	NADEAU, OLLIE
	PERCHES, SOCORRO
	THOMPSON, W

Target Street	Cross Street	Source
✓	-	Cole Information

W ROUTE 66 BLVD 2005

102	MOVIES GALLERY
105	KROGERS
	LOWES
112	FAMILY DOLLAR
214	CASH CORRAL
	CASH CORRAL TUCUMCARI
300	RAYS TRUCK SERVICE
404	CHAMBER OF COMMERCE
421	LABOR NEW MEXICO DEPARTMENT
	TUCUMCARI HUMAN SERVICES DEPARTMENT
510	NEW LIFE AUTO DETAIL
514	COYOTE MOON DESIGNS
602	SONIC DRIVE IN
605	RUBEES DINER
615	NEW MEXICO PROPERTY GROUP
701	OGLESBY, SANDRA M
801	POW WOW EAST APARTMENTS
	POW WOW RESTAURANT & LOUNGE
802	RANDLEE INC
824	BUDGET INNS
908	AUTOSMITH
920	THINGS
1001	SWEET STOP
1016	COCHRAN, JIMMIE S
1302	COUNTRY INN
1315	BRASHEAR, G
1324	SHIPLEYSYSTEMS LLC
1500	TUCUMCARI CONVENTION CENTER
1900	GARCIA, MARY S
	THEIBAR, ROBERT
	THOMPSON, W
	WILLIAMS, MISTY
2000	PAYLESS INN
2002	PARADISE MOTEL

Target Street	Cross Street	Source
✓	-	Cole Information

W TUCUMCARI BLVD 2000

102	SMOKERS DISCOUNT LLC
105	FURRS SUPERMARKETS INCORPORATED NO 901
214	SIGNS BY RUDY
223	ACE SIGN CO
302	QUALITY LUBE & TIRE
404	CHAMDER OF COMMERCE
	CITY OF TUCUMCARI ECONOMIC DEVELOPMENT CORPORATION
	CONWAY OIL COMPANY
	ECONOMIC DEVELOPMENT CORPORATION
421	NEW MEXICO STAT GOVERNMENT HMN SERVICES DEPARTMENT
500	SECURITY FINANCE CORPORATION
	ZIA FINANCE
602	SONIC DRIVE IN
605	COCINA, DE M
	CONCINA DEMARTINEZ
714	SERVE RIGHT SERVICE STATION
801	BEST WESTERN POW WOW INN
	POW WOW INDUSTRIES
	POW WOW RESTAURANT & LOUNGE
	POW WOW WEST APARTMENT
802	BOND, LARRY
	TRAVELERS MOTOR INN
824	BUDGET INNS
899	PETROLANE GAS SERVICE
901	ALCO DISCOUNT STORES INCORPORATED
902	FLOWERS PLUS
908	MESA MOTORS
915	SIX SHOOTERS SIDING SALOON
920	THINGS
924	TUCUMCARI AUTO SALES
1001	WESTERNER DRIVE IN
1016	FOUR SEASON SERVICES
1023	RAYS UPHOLSTERY & TRIM
1124	T & L CLASSICS
1302	CHAND, MARINA
	PINON TREE RESTAURANT & LOUNGE
	RODEWAY INN WEST
1305	GOLD STAR MAIL SERVICE
	GOLDSTAR FREIGHT SERVICE
1315	BRASHEAR, G
	BUCKAROO MOTEL
	LIGNEEL, R
	STENZ, KENNETH J
1500	TUCUMCARI CONVENTION CENTER
1502	REDWOOD LODGE
1724	THOMAS, O
2000	TUCUMCARI INN
3100	PARADISE HOTEL
3900	RAYS TRUCK SERVICE

Target Street	Cross Street	Source
✓	-	Cole Information

W TUCUMCARI BLVD 1995

105	FURRS BAKERY
	FURRS DELI
	FURRS SUPERMARKET
214	SIGNS BY RUBY
223	CASA DE FLORES
	DANIEL CONSTRUCTION CO
224	YOUNG INSURANCE
301	HITCHING POST LOUNGE
302	GREENWOOD SERVICES
	MESA MOTORS
	U HAUL CO
323	DICKS AUTO SVC
404	CHAMBER OF COMMERCE
	CONWAY OIL CO
	TRAVEL CENTER
501	GAMBREL, BRIAN J
	OGAN, HAROLD
510	NEW LIFE AUTO DETAIL
602	SONIC DRIVE IN
605	NUTHINFANCY
714	SERVE RIGHT SVC STA
800	OCCUPANT UNKNOWNN
801	ART GALLERY & GIFTS
	BEST WESTERN INN
	FREEDLE, SHANNON
	GARCIA, D A
	HINKLE, KURT
	POW WOW APARTMENTS
	POW WOW INDUSTRIES
	POW WOW RESTAURANT & LOUNGE
	REAMES, PAUL
	SAYRE, DON
	SWINNEY, RAY
802	BOND, LARRY
	BUDGET LODGING
824	SCOTTISH INN MOTEL
901	ALCO DISCOUNT STORE
908	BAUM MOTORS
915	SIX SHOOTER SIDING
	SIX SHOOTER SIDING SALOON
920	THINGS
1001	WESTERNER DRIVE IN
1015	PIZZA KING
1023	RAYS UPHOLSTERY
1124	J & L TRANSMISSION
1302	RODEWAY INN
1315	BUCKAROO MOTEL
1324	GOLDEN CORRAL FAMILY STEAK HSE
1404	CITY RECREATION BLD
	FAMILIES IN ACTION

Target Street	Cross Street	Source
✓	-	Cole Information

W TUCUMCARI BLVD 1995 (Cont'd)

1502	REDWOOD LODGE
1700	EAGLE BUILDERS
1900	ELLIOT, JOE
	ROUTH, THELMA W
	TIPTON, WILLIAM
2202	PARADISE MOTEL
2224	MORRIS, THOMAS G
3900	SMITH, VERTIE

Target Street	Cross Street	Source
✓	-	Cole Information

W TUCUMCARI BLVD 1992

102	TASTEE FREEZ
105	FURRS STORE NO 375
108	EL SOMBRERO
216	SOUTHWEST LASER
223	DANIEL CONSTRUCTION
224	YOUNG INS AGENCY
300	CHEVRON AUTOMOTIVE
302	MESA MOTORS
315	TOWN & CNTRY BEAUTY
319	HOBBY SHOP
	SHIRTS & MORE
323	DICK'S AUTO SERVICE
324	CASA DE FLORES
401	GARMON ENTERPRISES
	GARMON ONE DIAMOND
404	CHAMBER OF COMMERCE
	TRAVEL CENTER
501	FITZGERALD, JIM
	LOWMAN, GARY P
514	HESED COUNTRY
602	SONIC DRIVE-IN
604	A E I-KERR MCGEE
605	OLE TACO HUT
617	GEORGE REAL ESTATE
801	BESTWESTN POWWOWINN
	DITTO, BETTIE
	LACKEY, MICHAEL
	LINS, AGNES
	LOCKHART, GARREN
	MATHIS, JIM
	MURPHY, ERROL
	POW WOW APTS
	POW WOW INN RESTRNT
	POW WOW LOUNGE
	POW WOW REST&LOUNGE
	SANCHEZ, SEG
	SHIPLET, BRICE
	SPRY, E
802	RAFTER'S MOTEL
824	EURASIA RESTAURANT
	GOLDEN W MOTEL
901	ALCO DISCOUNT STORE
908	BAUM MOTORS
915	SIX SHOOTER SIDING
920	THINGS
1001	WESTERNER DRIVE-IN
1002	PATS AUTO SERVICE
1010	BULLET HOLE THE
	THE BULLET HOLE
1016	K C MUFFLERS & MFG

Target Street	Cross Street	Source
✓	-	Cole Information

W TUCUMCARI BLVD 1992 (Cont'd)

1016 MUFFLERS
1023 PETE'S UPHOLSTERY
1124 CONWAY OIL CO EXXON
EXXON-CONWAY OIL CO
1305 REMUDA TRAILR SALES
1315 BROWN, RUBY M
BUCKAROO MOTEL
MOBLEY, LESTER S
1324 GOLDEN CORRAL STEAK
1404 CITY RECREATION
FAMILIES IN ACTION
1502 REDWOOD LODGE

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1986



49

1

TUCUMCARI BLVD W (US HWY 66)—FROM 800 S 2D ST WEST

ZIP CODE 88401
102 Tastee Freez 461-3880
105 Safeway Stores Inc
108 El Sombrero gift shop 461-1464
123 Fina gas 461-4516
128 Vacant
200 Chevron Auto Cntr 461-4303
216 Vacant
223 Pot's-A-Plenty gifts
224 Young Insurance Agcy ins sls 461-3156
S 4TH ST INTERSECTS
301 Vacant
302 Adcock's Sixty-Six Service gas sta 461-2670
305 Rusty Sun Deli health food restr-store 461-4492
313 Town & Country Beauty Salon (Stge)
315 Town & Country Beauty Salon 461-1716
317 Hobby Shop (SHOP)
319 Hobby Shop toys 461-1418
322 Car Wash
323 Dick's Auto Serv repr 461-3560
REAR Bills Radiator Shop 461-2706
324 Tucumcari Trim upholstering
S 5TH ST INTERSECTS
401 Shamrock Station No 13 461-9889
404 Tucumcari-Quay County Chamber Of Commerce 461-1694
City Park
421 Vacant
423 Vacant
S 6TH ST INTERSECTS
501 Hunt's Trailer Park 461-0071
502 No Return
514 No Return

7

S 7TH INTERSECTS
602 Sonic Drive In restr 461-1922
605 Taco Hut 461-2388
714 K M Service Sta 461-2999
715 M & M Video video rentals 461-4833
S 8TH INTERSECTS
801 Best Western Pow Wow Inn motel 461-0500
Best Western Pow Wow Restr & Lounge 461-2587
802 Rafter S Motel 461-9917
Quigley Charlene M Mrs

115 S. 3rd MONUMENTS TEL. 461-3815

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1986

Nix Security Services
BURGLAR ALARMS - LOCKS - TELEPHONES
TEL. 461-1062
105 S. 1st ST.

W TUCUMCARI BLVD—Contd
824 Golden W Motel 461-1431
Bhakta S M ◎ 461-1431
826 Eurasia' Restaurant 461-4620
S 9TH ST INTERSECTS
901 T G & Y variety store 461-0735
908 Baum Motors autos 461-1683
915 Six Shooter Siding Saloon 461-9827
Six Shooter Siding Package Store liquor & wine 461-9827
920 Vacant
924 K & C Texaco Serv No 2 461-2426
S 10TH ST INTERSECTS
1001 Westerner Drive-In restr 461-2470
1004 K C Mufflers & Mfg auto repr 461-4219
1005 Vacant
1006 El Patio Bar & Liquor 461-9977
1009 Vacant (1009-1023)
S 11TH ST INTERSECTS
S 12TH ST INTERSECTS
1201 Tony's Gulf 461-9841
1300 Schlientz Exxon Serv 461-3570
1302 Ramada Inn & Restaurant 461-3140
Pinon Tree Restr 461-3140
1305 Remuda Trailer Sales 461-1962
1315 Buckaroo Motel 461-1650
1324 Golden Corral restr 461-0299
S 14TH ST INTERSECTS
1404 Vacant
1430 Fair Grounds
County Sheriff's Posse Stadium
W RAILROAD AV ENDS
1502 Redwood Lodge motel 461-3635
Patel Kirti A
1510 Vacant
1900 Thelma's Antiques antiques 461-4962
(THE FOLLOWING ARE NOT NUMBERED OCCUPANTS ARE LISTED IN ALPHABETICAL ORDER)
★Carter W E 461-3007
Boatman James A 461-3218
Bryant Lewis E ◎ 461-0267
Burns John P ◎ 461-3500
★Coffey Eileen Mrs ◎ 461-2363
Creighton James O ◎ 461-2459
Davis Lawrence ◎ 461-4049
Fields Virginia K ◎ 461-3058
★Frasier Doyle ◎ 461-3715
Foote Stephen ◎ 461-2911
Foster L Wayne ◎ 461-0423
Frost Stanley F ◎ 461-1972
Garcia Adela ◎ 461-3549
★Gaines Alexis R ◎ 461-4391
Haller James E ◎ 461-0274
★House Gene ◎ 461-2327
★Howard Tom Jr ◎ 461-1109
Hoover Thos B ◎ 461-1571
Huntley John C ◎ 461-2449
★Liles Wayne J ◎ 461-3321
Lopez Alfonso ◎ 461-2559
Maddaford Rex ◎ 461-1913
★Massey Curtis ◎ 461-4496
Meier Nick A Jr ◎ 461-2543
Naranjo Nasario 461-3424
Nelson Bailey W ◎ 461-1943
Newman Carl E ◎ 461-0169
Paradise Motel 461-2531
Powers Phillip D ◎ 461-1802
Tucumcari Inn 461-2625
Shipley-Phillips Tucumcari Truck Terminal Inc 461-1730
Sollberger Franklin B ◎ 461-1869
Teakell Paul ◎ 461-2738
Tucumcari Memorial Park Cemetery 461-3985
Tucumcari Truck Terminal Cafe Inc 461-9649
Wright Leonard D ◎ 461-0711
Wright W Vernon ◎ 461-0102
end Tucumcari Country Club 461-1849
Pro Shop 461-1849
Apache Well Lions Club Swimming Pool

TURNER AV E —FROM 300 N 2D EAST

ZIP CODE 88401
207 Langley Grain & Feed Co (Whse)
N ADAMS ST INTERSECTS
306★Sandoval Isabel Mrs ◎
310★Hernoon Doris J Mrs ◎ 461-0599
311 Vacant
312 Vacant
314★Roybal Jessie
323 Vacant
N MONROE ST INTERSECTS
403★Blea Bonnie Mrs ◎
406★Digby Florence C Mrs ◎ 461-4528
408★Garcia Laudenta Mrs ◎ 461-1081

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1979

E TUCUMCARI BLVD—Contd
★Carver Jake 461-3959
Flea Market 461-2528
★Owen Harold
★Malone Rayma F Mrs 461-3981
★Carlson H J 461-3724
★Pinkston Gordon M ◎ 461-2584
★Waterfield W H ◎ 461-0762
★Strand Darvan F ◎ 461-1947
★Speed Jimmy
★Darnell Leslie R 461-1059
★Janssen Dorell 461-0488
★Ennis Cloyd 461-0096

1

TUCUMCARI BLVD W (US HWY 66)—FROM 800 S 2D ST WEST

ZIP CODE 88401
102 Tastee Freez 461-3880
105 Safeway Stores Inc
108 El Sombrero gift shop 461-1464
123 Malco Number Two gas 461-9913
128 Vacant
200 Waterfield Chevron Service Station 461-2040
216 Aztec Music & Vending
223 Pot World gifts 461-2008
228 Lins Restaurant 461-2530
S 4TH ST INTERSECTS
301 Hitching Post Cocktail Lounge & Package Store 461-0750
302 Adcock's Sixty-Six Service gas sta 461-2670
305 Vacant
313 No Return
315 Juanita's Town & Country Beauty Salon 461-1716
317 Hobby Shop (SHOP)
319 Hobby Shop toys 461-1418
322 Malco Service Station 461-2063
323 Bill's & Dick's Auto Service repr 461-3560
Rear Walt's Radiator Shop 461-2706
S 5TH ST INTERSECTS
401 Shamrock Station No 13 461-9889
404 Tucumcari-Quay County Chamber Of Commerce 461-1694
City Park
421 S & P Ranch Motel 461-2716
Patterson C C ◎ 461-2716
Patterson Motors
423 Vacant
S 6TH ST INTERSECTS
501 Hunt's Trailer Park 461-0071
502 I-Forty Chevron Service Station 461-9995
514 Allsup's Convenience Store gro 461-9978

7

S 7TH INTERSECTS
601 Vacant
602 Sonic Drive In restr 461-1922
605 Vacant
715 Indian Art Center 461-1755
717 Roadrunner Launderette
718 Vacant
S 8TH INTERSECTS
801 Best Western Pow Wow Inn motel 461-0500
Best Western Pow Wow Restr & Lounge 461-2587
802 Rafter S Motel 461-9917
★Quigley Geo D ◎ 461-1938
824 Golden W Motel 461-1431
★Bhakta S M ◎ 461-1431
826 Vacant
S 9TH ST INTERSECTS
901 Pow Wow West (Stge)
908 Baum Motors autos 461-1683
915 Six Shooter Siding Saloon
Six Shooter Siding Package Store liquor & wine
917 T G & Y Parking Lot
920 Country Hut Restaurant 461-2302
Rear Hunter Dora
923 T G & Y (Parking Lot)
924 Jim's Texaco Service No 2 461-9844
S 10TH ST INTERSECTS
1001 Westerner Drive-In restr 461-2470
1004 Vacant
1005 Lee's Car Sales 461-0723
1006 El Patio Bar & Liquor 461-9977
1009 Vacant (1009-1023)
S 11TH ST INTERSECTS
S 12TH ST INTERSECTS
1201 Tony's Gulf 461-9864
1300 Rigdon Exxon Service 461-3570
1302 Ramada Inn 461-3140
Ramada Restaurant 461-3140
1305 Remuda Trailer Sales 461-1962
1315 Buckaroo Motel 461-1650
1324 Sirloin Stockade 461-0299
S 14TH ST INTERSECTS
1404 State Police 461-3300
Motor Vehicle Dept License (Plate Div) 461-3451
1430 Fair Grounds

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1979

YOUR Independent Insurance AGENT SERVES YOU FIRST
QUAY COUNTY REALTY AND INSURANCE CO.
215 S. 2nd Tel. 461-2410

W TUCUMCARI BLVD—Contd
County Sheriff's Posse Stadium
W RAILROAD AV ENDS
1502 Redwood Lodge motel 461-3635
Gaintner Geo W ◎ 461-3635
1510 Vacant
(THE FOLLOWING ARE NOT NUMBERED OCCUPANTS ARE LISTED IN ALPHABETICAL ORDER-
★Allison John C 461-1677
★Altenberger Aileen Mrs
★Boatman James A 461-3218
Bryant Lewis E ◎ 461-0267
★Burns John P ◎ 461-3500
★Carter Coy ◎ 461-9698
★Coles Hilda
Creighton James O ◎ 461-2459
★Davis J O ◎ 461-0467
Fields Virginia K ◎ 461-3058
★Fleming Aubrey L ◎ 461-3252
★Foote Stephen ◎
★Foster L Wayne ◎ 461-0423
★Frost Stanley F ◎ 461-1972
Garcia Adela ◎ 461-3549
Garcia Jose
★Garcia Pat ◎
Griggs Garland M ◎ 461-3376
★Griggs Phillip R ◎ 461-2990
★Haller James E ◎ 461-0274
★Helker Beatrice L ◎ 461-3321
★Hodges Dale B ◎ 461-0791
Hoover Thos B ◎ 461-1571
Huntley John C ◎ 461-2449
★Johnson James T ◎ 461-1312
Laredo Bertha
Lopez Alfonso ◎ 461-2559
Louvorn Johnny ◎ 461-9608
Maddaford Rex ◎ 461-1913
★Mc Murphy Mickey R ◎ 461-2194
★Meier Wm L ◎
★Meier Nick A Jr ◎ 461-2543
Mowles James ◎ 461-3006
★Naranjo Nasario
★Nelson Bailey W ◎ 461-1943
★Newman Carl E ◎ 461-0169
Paradise Motel 461-2531
★Powers Phillip D ◎ 461-1802
★Quintana Fidelia C Mrs ◎ 461-3101
★Rea Delbert L 461-0157
Sherwood Motor Inn 461-0350
Shipley-Phillips Tucumcari Truck Terminal Inc 461-1730
★Smith Virgil J
★Sollberger Franklin B ◎ 461-1869
★Sollberger Oscar L ◎
★Tatom Bill
★Teakell Paul ◎ 461-2738
Tucumcari Industries Inc 461-3513
Tucumcari Memorial Park Cemetery 461-3985
Tucumcari Truck Terminal Cafe Inc 461-9649
★Wright Leonard D ◎ 461-0711
★Wright W Vernon ◎ 461-0102
end Tucumcari Country Club 461-1849
Pro Shop 461-1849
Apache Well Lions Club Swimming Pool

10

TURNER AV E —FROM 300 N 2D EAST

ZIP CODE 88401
207 Langley Grain & Feed Co (Whse)
N ADAMS ST INTERSECTS
306 Martinez Cirilio A ◎ 461-9651
310 No Return
311 Vacant
312 Coleman Hortense ◎
314 No Return
323 Arias Joseph 461-1286
N MONROE ST INTERSECTS
403 Campos Victoria Mrs ◎ 461-1362
406 Vacant

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1974

461-9963
Wieland Oil Co gas whol
461-1350
Wieland Oil Co Station
461-1350

1

TUCUMCARI BLVD W (US HWY 66)-FROM 800 S 2D ST WEST

ZIP CODE 88401
102 Tastee Freez
105 Safeway Stores Inc 461-3795
108 El Sombrero gift shop
461-1464
123 Abel's Arco 461-9885
124 Shamrock Court

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1974

The First National Bank
QUAY COUNTY'S OLDEST AND LARGEST BANK
MEMBER FDIC

W TUCUMCARI BLVD—Contd

128 Vacant
S 3D ST INTERSECTS
200 Waterfield Chevron Service 461-2020
216 Gold Star Mail Service 461-1899
227 Shipley Phillips Service Station 461-9911
Fast Automatic Car Wash 461-9911
228 Lins Restaurant 461-2530
S 4TH ST INTERSECTS
301 Hitching Post Cocktail Lounge & Package Store 461-0750
Rear Vourazeris Geo
302 Adcock's Sixty-Six Service 461-2670
305 Vacant
313 Vacant
315 Juanita's Town & Country Beauty Salon 461-1716
317 Radio Communications 461-0742
319 Malt Shop The restr 461-9822
322 Malco Service Station 461-2063
323 Bill's & Dick's Auto Service repr 461-3560
Rear Walt's Radiator Shop 461-2706
S 5TH ST INTERSECTS
401 Fink's Shamrock Station 461-9889
404 Tucumcari-Quay County Chamber Of Commerce 461-1694
City Park
419 S & P Ranch Motel (Ofc)
421 S & P Ranch Motel 461-2716
Patterson C C © 461-2716
423 Vacant
S 6TH ST INTERSECTS
501 Hunt's Trailer Park 461-2455
502 Graham M D Chevron Service Station 461-9936
514 Morning Glory Market 461-1438

7

S 7TH INTERSECTS
601 Buddy's Drive-Inn restr
602 Vacant
715 New Mexico Tourist Information Center 461-0255
717 Roadrunner Launderette
718 Gray's Deep Rock Service
S 8TH INTERSECTS
801 Pow Wow Inn motel 461-0500
Pow Wow Restaurant & Lounge 461-2587
Rotary International 461-0500
802 Rafter S Motel 461-9917
Marcott Edw J © 461-3113
824 Golden W Motel 461-1431
Miller Belva H Jr © 461-0465
826 Vacant
S 9TH ST INTERSECTS
901 Pow Wow West (Stge)
908 Baum Motors autos 461-1683
915 Alex's Lounge 461-1110
Alex Package Store 461-1110
917 A & W Root Beer 461-1585
920 Baum Mobil Station 461-9938
Samboy Restaurant 461-9986
Rear Prado Joe
923 Baum Motors (Body Shop)
924 Jim's Texaco Service No 2 461-9844
S 10TH ST INTERSECTS
1003 Westerner Drive-In restr 461-2470
1005 Vacant
1006 El Patio Bar & Liquor 461-9977
1009 Vacant
1010 Vacant
1016 Sandoval's Shell Service Station 461-2906
1023 Atex Service Station 461-9966
S 11TH ST INTERSECTS
S 12TH ST INTERSECTS
1201 Mc Ada's Gulf Service 461-3580
S 13TH ST INTERSECTS
1300 Rigdon Darryl Humble Service 461-3570
1302 Ramada Inn 461-3140
Ramada Restaurant 461-3140
1305 Remuda Trailer Sales 461-1962
1315 Buckaroo Motel 461-1650
Mc Cauley R C © 461-1650
S 14TH ST INTERSECTS
1402 La Kay Lodge motel 461-1630
Ward Velma M Mrs 461-1630
1404 State Police 461-3300
Motor Vehicle Dept License (Plate Div)

Member
THE ORDER OF THE GOLDEN RULE
DUNN FUNERAL HOME
SERVING THE COMMUNITY FOR 55 YEARS
MONUMENTS
115 S. 3rd
TEL. 461-3815

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD 1974

W TUCUMCARI BLVD—Contd
1430 Fair Grounds
County Sheriff's Posse Stadium
W RAILROAD AV ENDS
1502 Redwood Lodge motel 461-3635
Gaintner Geo W ◎ 461-3635
1510 Redwood Cafe 461-1315
(THE FOLLOWING ARE NOT NUMBERED OCCUPANTS ARE LISTED IN ALPHABETICAL ORDER–
Baca Edwin ◎ 461-0109
Boswell Wm G ◎ 461-0259
Bryant L E ◎ 461-2851
Coronado Court motel 461-1406
Creighton James W ◎ 461-2459
Fields Fred ◎ 461-3058
Garcia Cecil M ◎ 461-3549
Garcia Jose
Griggs Garland M ◎ 461-3376
Hoover Thos B ◎ 461-1571
Hubbard Alex ◎ 461-2249
Huntley John C ◎ 461-2449
Justus Guy ◎ 461-1153
Lopez Alfonso ◎ 461-2559
Louvorn Johnny ◎ 461-9608
No Return
Mowles James ◎
Nelson B W Constn Co (Whse)
Nelson Bailey ◎ 461-1943
Paradise Cafe
Paradise Motel 461-2531
Sheraton Motor Inn motel 461-0350
Sheraton Motor Inn Package Store 461-0350
Sheraton Motor Inn Restaurant & Lounge 461-0350
Scott Bill H ◎ 461-0270
Shipley-Phillips Tucumcari Truck Terminal Inc 461-1730
Tucumcari Industries Inc 461-3513
Tucumcari Memorial Park Cemetery 461-3985
Tucumcari Truck Terminal 461-1730
Wright Vernon W ◎ 461-0102
Y Cafe 461-9898
Y Truck Stop gas sta 461-9932
end Tucumcari Country Club 461-1849
Pro Shop 461-1849

Municipal Swimming Pool

TURNER AV E —FROM 300 N 2D EAST

ZIP CODE 88401
207 Langley Grain & Feed Co (Whse)
N ADAMS ST INTERSECTS
306 Martinez Cirilio A ◎ 461-9651
311 Langley Grain & Feed Co (Whse)
312 ★ Coleman Hortense ◎
314 Vacant
315 ★ Roybal Eug 461-3118
316 ★ Mathis Mary J 461-3569
317 Montano Nick ◎ 461-0588
Rear ★ Jimenez G L
318 ★ Waits Bernice Mrs 461-3188
320 ★ Horton Mable 461-3223
323 ★ Arias Joseph 461-1286
N MONROE ST INTERSECTS
403 Campos Victoria Mrs ◎ 461-1362
406 No Return
408 ★ Rowland Blanch Mrs 461-1766
410 ★ Murphy Nora B Mrs 461-2382
411 Baca Juan A ◎
414 Murray Archie ◎ 461-3956
418 ★ Chavez Mike
419 ★ Oretega Jose
421 Vacant
423 Ruiz Ramon Jr ◎ 461-2772
424 Ernest Mable Mrs ◎ 461-2982
N JACKSON ST INTERSECTS
501 Ortega Tony J ◎ 461-2857
502 Shockley Erna Mrs ◎
505 Vance Fred R ◎ 461-2886
506 ★ Woodring Bertha Mrs
514 Stewart Leroy ◎ 461-2266
515 Rodewald Mary Mrs ◎ 461-1148
517 Dimas Joe D ◎
518 No Return
521 Serna Mary ◎ 461-3964
524 Vacant
N ROCK ISLAND ST INTERSECTS
601 Vacant
605 ★ Elebario Anthony E
606 Pearson Cecil L
610 Shephard Frances R Mrs ◎ 461-0454
614 Kelly Dan ◎ 461-1317
615 Morgan Joe C ◎ 461-3242
620 Vacant
623 Vacant
624 Vacant
N COLLEGE ST INTERSECTS

Target Street	Cross Street	Source
✓	-	Polk's City Directory

HIGHWAY 66 W 1969

3

7

HIGHWAY 66 W
—CONTINUATION OF W GAYNELL AV

(THE FOLLOWING ARE NOT NUMBERED OCCUPANTS ARE LISTED IN ALPHABETICAL ORDER–

Boyd Bill L W 461-2531
Canal Drive In Theatre 461-0541
Conorado Court motel 461-1406
Goodyear Tire Store (Whse)
Mantura Geo © 461-0350
Paradise Cafe 461-9981
Paradise Motel 461-2531
Paradise Texaco Service Station
Richards W Dale 461-0541
Royal George Inn motels 461-0350
Tucumcari Memorial Park cemetery 461-3985
Shipley-Phillips Inc 461-1730
Tucumcari Industries Inc 461-3513
Tucumcari Truck Terminal Cafe 461-9894
Y Cafe restr 461-9898
900 Baum Motors 461-1683
Y Truck Stop No 1 gas sta

6

HINES AV E —FROM 900 S 2D EAST TO S 13TH

ZIP CODE 88401

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD (W GAYNELL AVE) 1969

DOUGHTY FUNERAL HOME
LICENSED EMBALMERS
461-2704
IRENE E. DOUGLASS
HAZEL E. DOUGHTY
JAMES E. DOUGLASS
MARVIN DOUGHTY
FUNERAL DIRECTORS
1701 S. Fourth St.

W GAYNELL AV—Contd
Pow Wow Restaurant 461-2587
Rotary International
802 Rafter S Motel
Marcott Edw J ◎ 461-3113
824 Golden W Motel 461-1431
Miller B H ◎ 461-3995
826 Uncle Joe's Pancake House 461-2979
S 9TH INTERSECTS
906 Tucumcari Automotive Parts 461-1683
908 Baum Cushman Service motor scooters 461-1683
Baum Pontiac autos 461-1683
915 Alex's Lounge 461-1110
Alex Package Store
917 A & W Root Beer restr 461-1585
Rear Berg Clyde 461-1585
920 Carlos Shamrock Service gas sta 461-0301
Samboy Restaurant 461-1290
923 Vacant
924 Jim's Texaco Service No 2 gas sta 461-3121
S 10TH INTERSECTS
1003 Westerner Drive-In restr 461-2470
1005 Frontier Truck Stop gas sta 461-9801
1006 El Patio Bar & Liquor 461-0277
1009 Ranch House Cafe 461-9984
1010 Vacant
1016 Gene's Shell Service Station gas sta 461-2906
1016½ Vacant
1021 Vacant
1023 Vacant
S 11TH INTERSECTS
S 12TH INTERSECTS
1201 Mc Ada's Gulf Service No 2 461-3580
S 13TH INTERSECTS
1300 Rigdon Darryl Humble Service gas sta 461-3570
1302 Ramada Inn 461-3140
Ramada Pancake House & Restaurant
1305 Byrd's Chevron Station gas 461-1570
Steere Tank Lines Inc (Br Ofc) trucking 461-2371
1315 Buckaroo Motel 461-1650
Brown E J ◎ 461-1650
S 14TH INTERSECTS
1402 La Kay Lodge motels 461-1630
Neff Lillian Mrs ◎ 461-1630
Neff Realty 461-1630
1404 State Highway Patrol 461-3300
1430 Fair Grounds
County Sheriff's Posse Stadium
W RAILROAD AV INTERSECTS
1502 Redwood Lodge motel 461-3635
Gaintner Geo W ◎ 461-3635

8

GRAPE AV E —FROM 1400 N COLLEGE EAST CRI&P RY

ZIP CODE 88401
N 1ST ST INTERSECTS
(NOT OPEN BETWEEN N 1ST
ST AND N COLLEGE–
N COLLEGE INTERSECTS
N CHOCTAW INTERSECTS
N PARK INTERSECTS
515 Benavidez Pablo ◎ 461-3680
517 Vacant
600 Moya Joe L ◎ 461-2039
N GROVE INTERSECTS
N LAKE INTERSECTS

10

GROVE ST N —FROM 110 E MAIN NORTH TO OAK

ZIP CODE 88401
105 Sewell Machine Shop 461-2014
114 Allenberg Ernest E ◎ 461-2761
E SMITH AV INTERSECTS
E TURNER AV INTERSECTS
E HERMAN AV INTERSECTS
E WHITMORE AV INTERSECTS
E HARMON AV INTERSECTS
E REED AV INTERSECTS

8

ZIP CODE 88401
C R I & P RY CROSSES
EL PASO INTERSECTS
E ROCK ISLAND AV INTERSECTS
E LOCUST AV INTERSECTS
E OAK AV INTERSECTS
E CHERRY AV INTERSECTS
E GRAPE AV INTERSECTS
E MAGNOLIA AV INTERSECTS
E PEAR AV INTERSECTS
E LIVE OAK AV INTERSECTS
E MAPLE AV INTERSECTS
NO HOUSES

4

GROVE ST S —FROM 1100 E MAIN SOUTH TO CHARLES AV

ZIP CODE 88401

27

7

HIGHWAY 66 W — Continuation of W Gaynell av (The following houses are not numbered; occupants are listed in alphabetical order)

Best Teddy 461-0350
Canal Drive In Theatre 461-0541
Coronado Court Motel 461-1406
Famalia Motel Inc 461-0350
Gardner Nellie Mrs © 461-1406
Goodyear Tire Store (whse)
Gray A J © 461-3314
Jackson John J 461-0350
McAbee Josephine Mrs © 461-1406
Paradise Cafe
Paradise Motel 461-2531
Paradise Texaco Serv Sta
Tucumcari Truck Terminal serv sta 461-1730
Tucumcari Truck Terminal Cafe
Y Truck Stop No 1 serv sta
Van Dolah Richd 461-0363
Y Truck Stop Luncheonette

10 N. 10th

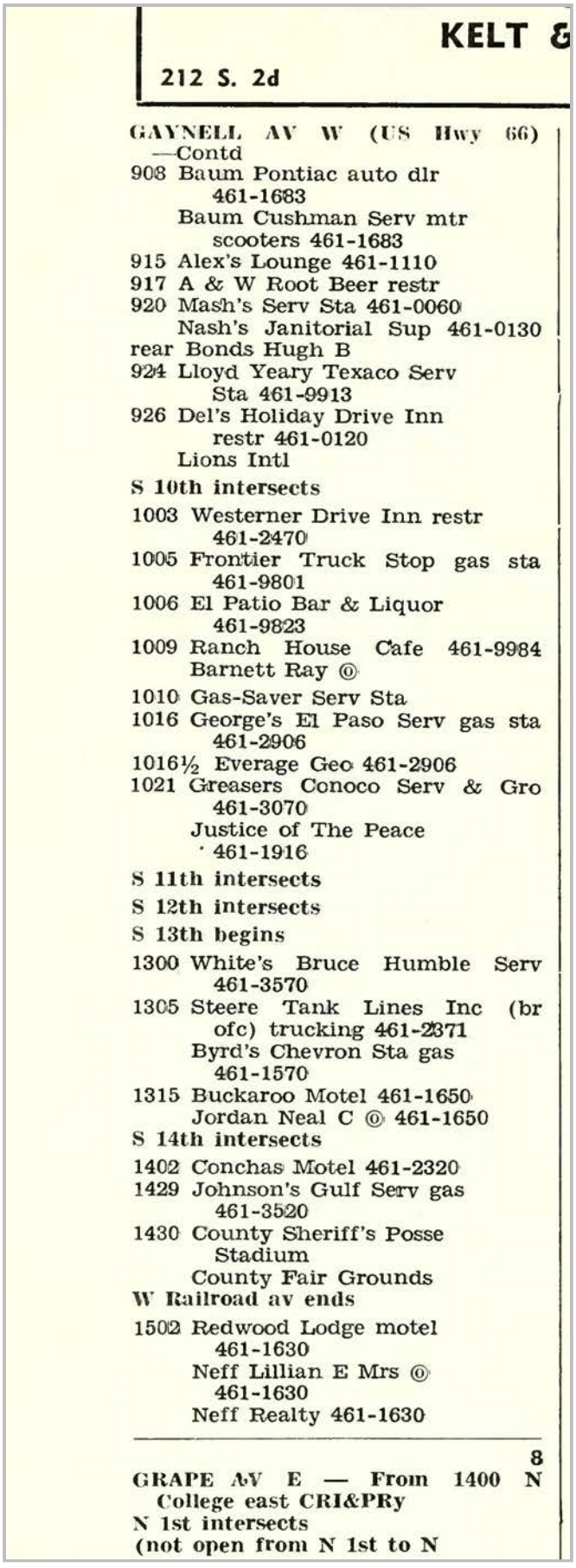
6

HINES AV E — From 900 S 2d east to S 13th

109 Murphy Nora B Mrs
111 Sims Louis A 461-3524

Target Street	Cross Street	Source
✓	-	Polk's City Directory

W TUCUMCARI BLVD (W GAYNELL AVE) 1963



KELT &

212 S. 2d

GAYNELL AV W (US Hwy 66) —Contd

908 Baum Pontiac auto dlr 461-1683
Baum Cushman Serv mtr scooters 461-1683
915 Alex's Lounge 461-1110
917 A & W Root Beer restr
920 Mash's Serv Sta 461-0060
Nash's Janitorial Sup 461-0130
rear Bonds Hugh B
924 Lloyd Yeary Texaco Serv Sta 461-9913
926 Del's Holiday Drive Inn restr 461-0120
Lions Intl

S 10th intersects

1003 Westerner Drive Inn restr 461-2470
1005 Frontier Truck Stop gas sta 461-9801
1006 El Patio Bar & Liquor 461-9823
1009 Ranch House Cafe 461-9984
Barnett Ray ⓞ
1010 Gas-Saver Serv Sta
1016 George's El Paso Serv gas sta 461-2906
1016½ Everage Geo 461-2906
1021 Greasers Conoco Serv & Gro 461-3070
Justice of The Peace 461-1916

S 11th intersects

S 12th intersects

S 13th begins

1300 White's Bruce Humble Serv 461-3570
1305 Steere Tank Lines Inc (br ofc) trucking 461-2371
Byrd's Chevron Sta gas 461-1570
1315 Buckaroo Motel 461-1650
Jordan Neal C ⓞ 461-1650

S 14th intersects

1402 Conchas Motel 461-2320
1429 Johnson's Gulf Serv gas 461-3520
1430 County Sheriff's Posse Stadium
County Fair Grounds

W Railroad av ends

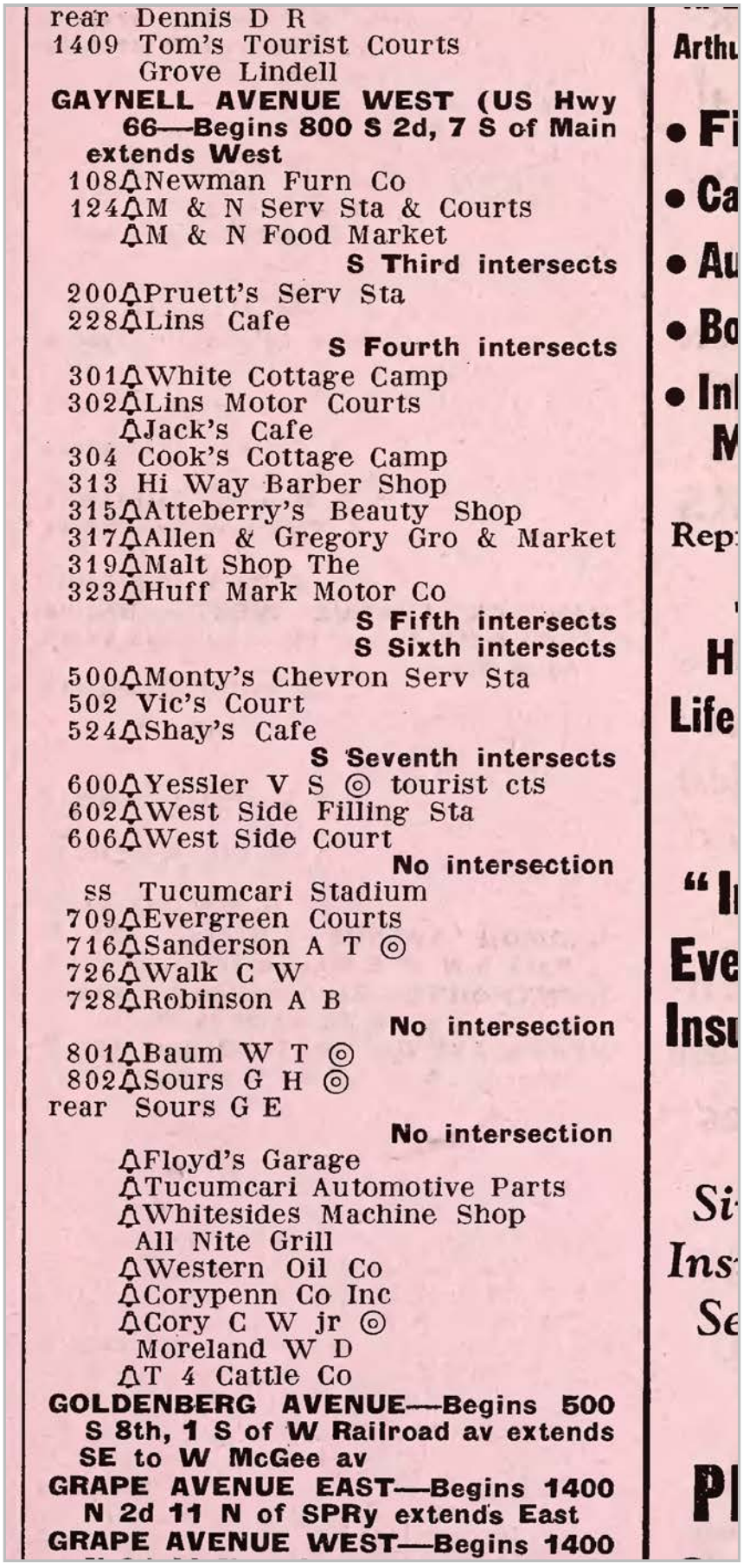
1502 Redwood Lodge motel 461-1630
Neff Lillian E Mrs ⓞ 461-1630
Neff Realty 461-1630

8

GRAPE AV E — From 1400 N College east CRI&PRy
N 1st intersects
(not open from N 1st to N

Target Street	Cross Street	Source
✓	-	Hudspeth's City Directory

W TUCUMCARI BLVD (W GAYNELL AVE) 1948



rear Dennis D R
1409 Tom's Tourist Courts
Grove Lindell

GAYNELL AVENUE WEST (US Hwy 66—Begins 800 S 2d, 7 S of Main extends West

108 Newman Furn Co
124 M & N Serv Sta & Courts
M & N Food Market

S Third intersects

200 Pruett's Serv Sta
228 Lins Cafe

S Fourth intersects

301 White Cottage Camp
302 Lins Motor Courts
Jack's Cafe
304 Cook's Cottage Camp
313 Hi Way Barber Shop
315 Atteberry's Beauty Shop
317 Allen & Gregory Gro & Market
319 Malt Shop The
323 Huff Mark Motor Co

S Fifth intersects
S Sixth intersects

500 Monty's Chevron Serv Sta
502 Vic's Court
524 Shay's Cafe

S Seventh intersects

600 Yessler V S ◎ tourist cts
602 West Side Filling Sta
606 West Side Court

No intersection

ss Tucumcari Stadium
709 Evergreen Courts
716 Sanderson A T ◎
726 Walk C W
728 Robinson A B

No intersection

801 Baum W T ◎
802 Sours G H ◎
rear Sours G E

No intersection

Floyd's Garage
Tucumcari Automotive Parts
Whitesides Machine Shop
All Nite Grill
Western Oil Co
Corypenn Co Inc
Cory C W jr ◎
Moreland W D
T 4 Cattle Co

GOLDENBERG AVENUE—Begins 500 S 8th, 1 S of W Railroad av extends SE to W McGee av

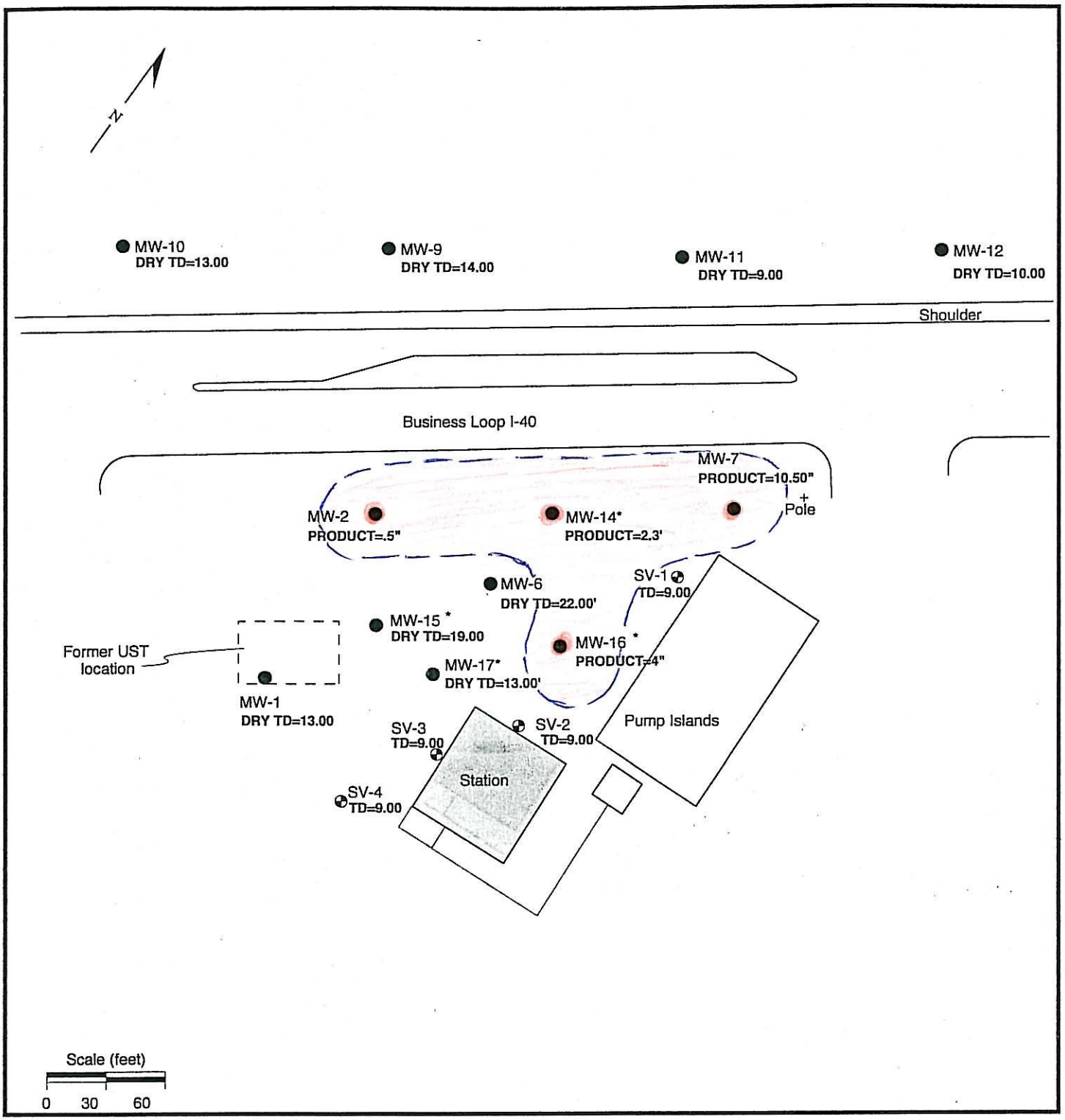
GRAPE AVENUE EAST—Begins 1400 N 2d 11 N of SPRy extends East

GRAPE AVENUE WEST—Begins 1400

Appendix B

Historical Documentation

DBS&A
a Geo-Logic Company



monitor well locations

vadose zone monitoring well

MW-14* installed 9/94

8/2003 data

DRAWN BY: G. Billings	Figure 1	BILLINGS & ASSOCIATES, INC
DATE:8/13/2003	Well Status Map (initial product thickness & dry wells)	
CASE NO:	Site Name: Tucumcari Truck Terminal	
FACILITY NO:4794003	Site Location:Tucumcari, New Mexico	
AST FACILITY NO: N/A	Date: August 3, 2003	

Phase I Environmental Site Assessment for the Tucumcari Truck Terminal Site Located at I-40 Exit 329, Tucumcari, Quay County, New Mexico

FINAL

Prepared by:

US Army Corps of Engineers,
Environmental Engineering Section
4101 Jefferson Plaza NE
Albuquerque, NM 87109

22 May 2009

"We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the Tucumcari Truck Terminal Site located at I-40 Exit 329, Tucumcari, Quay County, New Mexico, the property.
Any exceptions to, or deletions from, this practice are described in Sections 1.3 and 9.0 of this report. This assessment has revealed evidence of recognized environmental conditions in connection with the property."

I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in 312.10 of 40 CFR 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Michael Bone, P.E.



Table of Contents

List of Acronyms iv
Executive Summary 1
1.0 Introduction 3
1.1 Objectives 4
1.2 Scope of Work 4
1.3 Limiting Conditions 5
2.0 Physical Setting 6
2.1 Demography and Physiography 6
3.0 Past and Present Site Conditions 7
3.1 Past Site Conditions 7
3.2 Present Site Conditions 9
3.2.1 Site Description 9
3.3 Site Observations 10
3.3.1 Hazardous Substances 10
3.3.2 Hazardous Wastes 10
3.3.3 Underground/Aboveground Storage Tanks 11
3.3.4 Drums and Containers 11
3.3.5 Polychlorinated Biphenyl-Containing Equipment 11
3.3.6 Asbestos-Containing Material 11
3.3.7 Lead-Based Paint 11
3.3.8 Lead in Drinking Water 11
3.3.9 Radon 12
3.3.10 Utilities 12
3.3.11 Solid Waste 12
3.3.12 Drains and Sumps 12
3.3.13 Wastewater 12
3.3.14 Wells 12
3.3.15 Pits, Ponds, and Lagoons 13
3.3.16 Other Physical Evidence of Contamination 13
3.4 Present Condition of Surrounding Properties 13
4.0 Review of Historical Literature/Information 14
4.1 Aerial Photographs 14
4.2 Sanborn Maps 14
4.3 Chain-of-Title/Environmental Lien 14
4.4 Previous Environmental Reports 14
4.5 Other Documents 15
4.5.1 Interviews 15
5.0 Regulatory Review 16
5.1 National Priorities List 16
5.2 CERCLIS 16
5.3 RCRIS 16
5.4 ERNS 16
5.5 PADS 16
5.6 TRIS 17
5.7 SSTS 17
5.8 TSCA 17
5.9 Leaking Underground Storage Tank (LUST) Report 17

Table of Contents

5.10 UST 17
5.11 Unmappable Sites 17
6.0 Assessment of Risk 19
7.0 Conclusions 21
8.0 Recommendations 22
9.0 Limitations and Warranty of the ESA 23
10.0 References 24

Figures

Figure 1 Location Map
Figure 2 Tucumcari Truck Terminal
Figure 3 Tucumcari Truck Terminal Details
Figure 4 Tucumcari Truck Terminal – Estimated Underground Fuel Piping
Figure 5 Tucumcari Truck Terminal – Estimated Surface Diesel Fuel Spills

Appendices

Attachment A: Interviews
Attachment B: Photographic Log
Attachment C: Consent for Access to Property and Property Survey Description
Attachment D: Previous Site Summary and Environmental Reports
Attachment E: EDR Report
Attachment F: EPA Map of Radon Zones
Attachment G: Environmental Professional Qualifications

List of Acronyms

ACM	Asbestos containing material
AST	Above ground storage tank
ASTM	American Society for Testing and Materials
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
EDR	Environmental Data Resources
EDR Report	Includes the EDR Radius Map™ Report with GeoCheck®, the Certified Sanborn Map Report®, the EDR Aerial Photo Decade Package, The EDR Historical Topographic Map Report, and the EDR Environmental LienSearch™ Report
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
HTRW	Hazardous, Toxic, and Radioactive Waste
LUST	Leaking underground storage tank
NFRAP	No Further Remedial Action Planned
NPL	National Priority List
PADS	PCB Activity Database System
PCB	Polychlorinated biphenyl
pCi/L	Picocuries per liter
RCRIS	Resource Conservation and Recovery Information System
REC	Recognized environmental condition
SSTS	Section Seven Tracking System
SVVS	Subsurface volatilization and ventilation system
SWF	Solid waste facility
TRIS	Toxic Release Inventory System
TSCA	Toxic Substances Control Act Inventory
US	United States
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UST	Underground storage tank

Executive Summary

The United States Army Corps of Engineers (USACE) has completed a Phase I Environmental Site Assessment (ESA) at the Tucumcari Truck Terminal (Subject Site) located at I-40 Exit 329, Tucumcari, Quay County, New Mexico (Figures 1 and 2). This Phase I ESA is funded through the EPA Region 6 Targeted Brownfields Assessments (TBA) program. It is being provided on behalf of the Greater Tucumcari Economic Development Corporation (GTEDC) in response to their request to EPA for assistance. GTEDC proposes to acquire the site for economic redevelopment that will provide jobs and tax base for the community

The Subject Site is approximately 22.0 acres with a variety of buildings and tank structures associated with gas and diesel fueling & storage operations with support facilities. The Subject Site dates to the 1940's and includes a 2-story residence present onsite and a drive-in movie theater that has been removed. The area of investigation included the buildings, the property, and adjoining properties; however, most of the buildings are boarded up and were not accessible. Additionally, there are no adjoining properties that are presently developed. The Subject Site is bounded by West Route 66 Blvd. (NM State Highway 54) on its north side, the Conchas irrigation canal on its south side that intersects with W. Route 66 Blvd to the northeast, I-40 Exit 329 to the southwest, and Interstate I-40 further to the south of the irrigation canal (Figures 1 and 2).

The purpose of performing this ESA is to:

1) Identify and describe any potential current or former recognized environmental conditions (RECs), as defined by American Society for Testing and Materials (ASTM) document, Standard Document Designation: E 1527-05 (ASTM, 2005), involving hazardous, toxic and radioactive wastes (HTRW) present on the Subject Site, and on immediately adjacent properties.
2) Determine, if possible, the nature and extent of potential contamination and provide a qualitative assessment of the impacts of the contamination should the ownership of Subject Site be transferred to another party.
3) Provide a preliminary identification of potential source areas, contaminant release mechanisms, exposure routes, and potentially exposed populations.
4) Determine the environmental consequences of all storage, use, generation, and disposal of HTRW on and adjacent to the site.

This ESA was performed in accordance with the ASTM guidance document, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process
E 1527-05.

The following conclusions are based upon information gained during the site reconnaissance, from interviews of knowledgeable personnel, and from a review of historical usage and technical documents (including readily available aerial photographs):

- The Subject Site was listed as a leaking underground storage tank (LUST) facility in the Environmental Data Resources (EDR) report. This is evidenced by the subsurface volatilization and ventilation system (SVVS) remediation system that was previously operated on the Subject Site. Since operation of this system was terminated before complete remediation of the site, soil and groundwater contamination is still expected to exist in this area. The Phase I Hydrogeologic Investigation Report and the NMED PST Bureau Site Summary contained in Attachment D have figures that indicate the soil and groundwater plume areas of hydrocarbon contamination that existed in 1992. The Product Bail Down Test Report (Attachment D) reported the recovery of hydrocarbon product still existing in 2003. Figure 5 indicates the approximate limits of the 1992 groundwater plume and the 2003 product thickness plume.
- Based on the interviews, the history of diesel spills would indicate that there is soil and groundwater fuel contamination elsewhere within Areas A, B, and C (Figures 3, 4, and 5).
- The content of the remaining underground storage tanks (USTs) and above ground storage tanks (ASTs) onsite is unknown. These tanks and their associated underground fuel lines have the potential of ongoing source contamination of oils and fuels.
- There is a potential of past fuel contamination associated with the UST sites located within ¼-mile to the southwest of the Subject Site.
- The potential that polychlorinated biphenyls (PCBs) may have been present in the transformer associated with the generator building on the Subject Site has been checked by Xcel Energy and it has been determined that It is a “non-PCB” transformer.
- Due to the debris and activities associated with the repair and maintenance shop, there is the potential for oil and solvent contamination.
- There is a potential for lead-based paint and asbestos to be present in the abandoned residence located at the east side of Area C.
- The ongoing activities associated with the existing temporary lease for the highway construction company has the potential for fuel, oil, asphalt, and tar contamination.
- Twenty sites with documented RECs were identified on properties potentially within the ASTM-required search radii, but due to poor or inadequate address information, these sites could not be mapped. Although the exact locations of many of these sites were not determined on the EDR report, several were identified by the environmental professional during the site visit at greater than one mile from the Subject Site. Most of these unmapped sites are expected to be the same distance away from the Subject Site.

1.0 Introduction

The United States Army Corps of Engineers (USACE) has completed a Phase I Environmental Site Assessment (ESA) at the Tucumcari Truck Terminal (Subject Site) located at I-40 Exit 329, Tucumcari, Quay County, New Mexico (Figures 1 and 2). This Phase I ESA is funded through the EPA Region 6 Targeted Brownfields Assessments (TBA) program. It is being provided on behalf of the Greater Tucumcari Economic Development Corporation (GTEDC) in response to their request to EPA for assistance. GTEDC proposes to acquire the site for economic redevelopment that will provide jobs and tax base for the community

The Subject Site is a somewhat rectangular area of approximately 22.0 acres running southwest to northeast. The southwest end of the Subject Site comprises the facilities of the Tucumcari Truck Terminal while the northeast end is undeveloped acreage. For descriptive purposes, the developed truck terminal end of the Subject Site can be divided into zones (west, middle, and east) designated as Areas A, B and C respectfully (Figure 3). The Subject Site comprises the following structures:

Area A:

- Food mart convenience store
- Gas and diesel dispensing island
- An air and water station
- A subsurface volatilization and ventilation system (SVVS)
- Pump house for the SVVS system
- A concrete vault with four gasoline USTs (size unknown)
- Two 860K gallon diesel ASTs
- One approximate 2000 gallon # 3 diesel AST

Area B:

- One warehouse building comprising a warehouse, tire shop, and lubrication maintenance facility
- Two ~2000 gallon waste oil storage tanks (east side of warehouse)
- Two diesel fueling islands
- Oil water separator sump
- Generator building with transformer

Area C:

- Restaurant travel center
- Maintenance and repair shop
- 2-story residential building

The area of investigation included the buildings, the property, and adjoining properties. However, except for the repair shop, generator building and 2-story residence, the other buildings on the Subject

Site were locked or boarded up and not accessible. Also, there are no adjoining properties that presently have any development other than farm acreage. The Subject Site is bounded by West Route 66 Blvd. (NM State Highway 54) on its north side, the Conchas irrigation canal on its south side that intersects with W. Route 66 Blvd to the northeast, I-40 Exit 329 to the southwest, and Interstate I-40 further to the south of the irrigation canal (Figure 2).

The purpose of this ESA is to assess any potential, current, or former recognized environmental conditions (RECs) present on or adjacent to the Subject Site. This ESA was performed in accordance with the American Society for Testing and Materials (ASTM) document, Standard Document Designation E 1527-05 (ASTM, 2005).

1.1 Objectives

The objectives of this ESA are to:

1) Identify and describe any potential current or former RECs, as defined by ASTM (2005), involving HTRW present on or adjacent to the Subject Site.
2) Determine the nature and extent of contamination and provide a qualitative assessment of the impacts of the contamination in the absence of response actions.
3) Provide a preliminary identification of potential source areas, contaminant release mechanisms, and exposure routes.
4) Determine the environmental consequences of all storage, use, generation, and disposal of HTRW on and adjacent to the Subject Site.

According to ASTM guidance (2005), a REC is defined as:

"The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be subject of an enforcement action if brought to the attention of appropriate governmental agencies."

1.2 Scope of Work

In accordance with ASTM-guidance (ASTM, 2005), the scope of work for this project includes:

- performing a site visit comprised of a site reconnaissance (visual survey) of the Subject Site, and a drive-by and walking survey of the area immediately adjacent to the site to observe the

types of land use, and the nature of any businesses or agricultural operations located within ¼-mile of the site,

- conducting a review of historical usage and technical information pertaining to the Subject Site, including all readily-available aerial photographs,
- conducting interviews with key knowledgeable personnel familiar with the Subject Site to determine historical "on-site" and local off-site development and land use (Attachment A),
- performing a photographic log of the site and its features during the site visit (Attachment B),
- conducting a review of readily-available regulatory and environmental information pertaining to any documented RECs that may be or have been located on or adjacent to the Subject Site, and other properties located within one mile of the Subject Site, and
- preparing a summary report that details the findings and recommendations for potential future investigations or restoration work at the Subject Site.

1.3 Limiting Conditions

This ESA involved a walking inspection of the various structures on the Subject Site and a walking and drive-by inspection of the adjacent and nearby (within ¼-mile) properties. Permission to access the property was obtained from the present property owner, Arthur Ortega (Attachment C). The property survey boundary is fully described in Exhibit A of Attachment C. The Subject Site comprises approximately 22 acres and is surrounded by highways, a railroad, farmland, undeveloped acreage, and an irrigation canal. The area comprising the Subject Site of investigation was accessible by vehicle and by walking. However, except for the repair shop, generator building and 2-story residence, all other buildings on the Subject Site were locked or boarded up and not accessible. Although most of the Subject Site facility has not been operational since approximately 2004, it was observed by the environmental professional that the east half of Area C is presently involved in active operations of a contractor performing nearby highway construction work. A superintendent for the contractor indicated that they had temporarily leased the area from the owner, Arthur Ortega. These operations include trailer offices, equipment storage, fuel and oil operations, tar operations, water storage, and soil and asphalt stockpiles.

2.0 Physical Setting

Readily available literature sources were reviewed to assess the demography and physiography of the area.

2.1 Demography and Physiography

The Subject Site is located along historic Route 66 at the west end of Tucumcari, New Mexico (Figure 1). This site occupies approximately 22.0 acres and is located at approximately Latitude 35° 9' 28.4" N and Longitude 103° 46' 22.9" W with an average elevation of 4,095 feet above sea level. The City of Tucumcari is located in Quay County, New Mexico. According to the 2000 Census, the estimated total resident population for Tucumcari, New Mexico was 5,989 (U.S. Census Bureau, 2000) and the 2007 population estimate had declined to 5,123.

3.0 Past and Present Site Conditions

3.1 Past Site Conditions

USACE conducted interviews with key personnel from the Subject Site likely to possess the greatest knowledge regarding the history of the Subject Site. Interviews conducted with key personnel are presented in Attachment A.

The general consensus regarding the environmental history of the Subject Site appears to be that there are several known incidents directly involving the spilling and underground leakage of gasoline and diesel fuels on the Subject Site. The interview with one of the past owners of the Subject Site yielded historical information that the Tucumcari Truck Terminal was operated continuously since construction of the first truck stop structures in 1958 (located in Area A) up until the Terminal's closure in approximately 2004. During the 1950s there was also a drive-in theater located in the vicinity of Areas B and C. The Phillips and Shipley families owned the property as a corporation that they had formed in the mid 1950s. Mr. Shipley was the last Shipley family owner before his interests in the Subject Site were bought by the Phillips family in approximately 1999. Prior to the buy out, Mr. Shipley had been responsible for the active operations at the Subject Site. At the peak of operations, the truck terminal was grossing $1.1 M in revenues and employed over 80 people. After selling out to the Phillips family in approximately 1999, Mr. Shipley still retained ownership to the mortgages on the property. The Phillips family then sold the property to Arthur Ortega in February 2003 according to the EDR LienSearch Report. Mr. Ortega operated the facility for approximately another year before closing the operations.

Previous environmental assessments (Attachment D) concluded that underground storage tank (UST) leaks had occurred with the four gasoline USTs that were associated with the removed building in Area A. These four tanks were removed in June 1991. According to the Environmental Data Resources (EDR) (Attachment E) report the sizes of these tanks were three 10,000 gallon and one 4,000 gallon. The EDR report also noted the removal of two used oil USTs (6,000 and 1,000 gallon) and two lubricating oil USTs (2,000 gallon each). Subsequently, a Phase I hydrogeologic investigation report was conducted by Billings & Associates, Inc. (BAI), in November 1992. The hydrogeologic report (Attachment D) contains figures that indicate the soil and groundwater plume areas of hydrocarbon contamination that existed in 1992. BAI later installed an SVVS remediation system in July 1993. Operation of this system was terminated in April 1996 before completion of remedial efforts due to budget constraints of the New Mexico Environment Department (NMED) through the Underground Storage Tank Bureau, now known as the Petroleum Storage Tank Bureau (PSTB). A product bail down test was conducted by Billings & Associates, Inc. in August 2003 which indicated measurable free product ranging from about one inch to two plus feet in thickness in four of the monitoring wells (MW-2, MW-7, MW-14, and MW-16). Bail down tests on monitor wells MW-7 and MW-14 indicated product

recoveries of 0.31 and 0.96 gallons/day, respectively. Figure 5 of this report indicates the approximate extent of the groundwater plume in 1992 and the product thickness plume in 2003.

It is also possible that leaks could have occurred from the 20,000 gallon diesel UST (and piping) that was removed when the 860K gallon diesel AST was installed in 1975. This removal was based on the interview documentation and is not indicated in the EDR report. Also, leaks could have occurred from the gas and diesel piping associated with the later installed gas and diesel fueling island in Area A (Figures 3 and 4).

Also, it is possible that leaks could have occurred from the four 20,000 gallon diesel USTs (and piping) in Area B that were removed in 1985 as well as the later diesel fuel piping to the diesel fueling islands in Area B. The removal of these four tanks was based on the interview documentation and is not indicated in the EDR report. In this same area indicated on Figure 3 there appears to be a truck parked next to a dark structure that is indeterminate. There is nothing visible there today (as shown by Photo 21) to indicate what had been in this location.

Part of the warehouse located in Area B performed lubrication services. This is evident by the two 2,000 gallon waste oil ASTs located on the northeast side of the building. Also, the repair shop (Area C) could have utilized various cleaning solutions, lubricants, and paints. The restaurant travel center (Area C) would have had to manage waste cooking oils. According to the interviews the abandoned residence (Area C) was utilized by a caretaker during the days when a drive-in theater was operated in the area as seen in the EDR 1954 aerial photo. It is unknown when the residence was last inhabited, but it is presently uninhabitable due to its interior and window damage.

According to the interviews, it was also indicated that during the years of operation at least three fully loaded 10,000 gallon diesel trucks had tipped over at different locations spilling much of their contents (Figure 5). There was also an incident in which one of the fuel dispensing pumps at the diesel fueling islands in Area B was struck by a truck and severed off its foundation. Diesel fuel flowed freely until the main lines to the 860K tanks could be shut off. The diesel fuel flowed into a drainage culvert that runs under W. Route 66 Blvd. to the other side of the road. However, the Chief of the Tucumcari Fire and Rescue could not confirm that they had knowledge or records confirming that these spill accidents had occurred.

The EDR dated April 2009 revealed that there are 2 UST sites within approximately ¼-mile of the Subject Site. These two sites were listed as the NMDOT Tucumcari Patrol Yard 44 and the Bryant abandoned station. The NMDOT site indicated the removal of a 1,000 gallon diesel UST and the removal of a 1,000 gallon gasoline UST. The Bryant abandoned station indicated the removal of four gasoline USTs (3,000, 6,000, 8,000, and 10,000 gallon).

3.2 Present Site Conditions

3.2.1 Site Description

The Subject Site is located on the south side of West Route 66 Blvd. right off I-40 Exit 329 on the west outskirts of Tucumcari, New Mexico. Numerous buildings and structures exist on the site as listed in Section 1.0. The Union Pacific Railroad (originally the Chicago Rock Island and Pacific Railroad) runs just north and parallel to West Route 66 Blvd. Much of the land north of the railroad consists of farming acreage or is undeveloped. Photographs taken during the site reconnaissance are presented as Attachment B.

The Subject Site is relatively flat and at a similar elevation with adjoining properties to the west, east, and north. The south side of the property is bounded by the unlined Conchas irrigation canal that is at a higher elevation (15 to 20 feet) than the Subject Site and is separated by an earthen berm. Between the canal and I-40 (further south of the canal) is principally farmland.

The site geology and hydrology is described in the Phase I Hydrogeologic Investigation Report (Billings and Assoc., Inc., 1992). The site is underlain by alluvium, the Tucumcari Shale and the Morrison Formation. The alluvium at the Subject Site is the product of the erosion of the higher terrains to the south, east, and west which are composed of the Morrison Formation (shales and sandstones), Tucumcari Shale, and the Dakota Sandstone. The groundwater encountered at the site is thought to be a perched system contained in the alluvium.

The Hydrogeologic Report indicates a fluvial depositional environment of low to high energy. This depositional environment has resulted in lenticular deposits with little potential for detailed lateral correlation. The alluvium is composed of sands, silts, clays, and gravels. The gravels range in size from pebbles to cobbles. The cross sections shown in the Hydrogeologic Report indicate that a gravel lens occurs at times within the vadose zone (near MW-4 and the Food Mart) and below the static water level at the MW-11 location.

Additionally, there was an old arroyo (trending southeast to northwest) that flowed west of the Subject Site and bisected the unlined Conchas Canal (see the EDR aerial photos and historical topographic maps). This arroyo also flowed between the locations of previous UST locations identified in the EDR Radius Map and shown on the overview map and the detailed map.

The majority of structures on the Subject Site are locked or boarded up and not accessible. Two exceptions are the abandoned residence and the Repair & Maintenance Shop. The residence is not habitable and is deteriorating. Likewise, a portion of the roof of the repair shop blew off since the facility closed and was not repaired. The interior of this structure is now in an extremely deteriorated condition.

The south side of Area A contains some vehicle and equipment debris. An abandoned vehicle is also parked in this area. A 55-gallon drum half full with trash and debris was noted as well as an empty one turned on its side. The area between the abandoned residence and the repair shop and the east side of the repair shop is littered with all kinds of debris including equipment, fuel pump dispensers, hot water heaters, signage, and construction debris.

As stated previously, the east half of Area C is presently involved in active operations of a contractor performing nearby highway construction work. These operations include trailer offices, equipment storage, fuel and oil operations, tar operations, water storage, and soil and asphalt stockpiles.

3.3 Site Observations

Mr. Michael Bone, P.E., USACE Engineer, conducted the site reconnaissance on 31 March and 4 April 2009. All interpretation and observations presented below pertain to fieldwork conducted on those dates. USACE cannot testify as to the environmental disposition of the reconnaissance prior to or after the dates of the site visits. All observations pertain strictly to the conditions of the property and structures that were observed at the time of the site visits.

3.3.1 Hazardous Substances

The nature of the fueling operations and maintenance operations that occurred at the Subject Site were evident principally by the fueling islands, ASTs, and USTs that are still present but not operational. It is unknown but suspected from the interviews that gasoline and diesel fuels may still be present in the tanks that remain onsite. Minimal and reasonable amounts of cleaning solutions and paints were observed on shelves and floor debris within the maintenance and repair shop building.

3.3.2 Hazardous Wastes

The most obvious indication of spills and hazardous wastes on the subject site stem from the previous environmental reports for the Subject Site as well as the remains of the SVVS remediation system located on the south side of the food mart. The SVVS remediation equipment remains inside the shed (with stack) and will most likely be decommissioned. The most obvious potential of hazardous waste sources were observed to be the fuel ASTs and vaulted USTs that remain on the Subject Site. There are no records to indicate whether the product fuels in any of these tanks was ever thoroughly removed. The interviews also indicated that large diesel spills had occurred from truck rollovers and one accident with a fuel dispensing pump. However, there was no confirmation of these spill accidents with the Chief of the Tucumcari Fire and Rescue.

3.3.3 Underground/Aboveground Storage Tanks

The Subject Site has a history of reported and unreported USTs for fuels, lubricating oils, and waste oils that were removed. The Subject Site presently contains a variety of ASTs and vaulted USTs (Figures 3 and 4) for fuels and waste oils.

3.3.4 Drums and Containers

Of the two drums that were noted in Area A, one was empty and the other appeared to contain mainly trash debris. Minimal and reasonable amounts of cleaning solutions and paints were observed on shelves and floor debris within the maintenance and repair shop building. The containers located in the debris adjacent to the repair shop appear to have been old water heaters.

3.3.5 Polychlorinated Biphenyl-Containing Equipment

Located within Area B there is an existing building containing a generator with a transformer attached to the outside of the building (Photo 45). This structure was built in approximately 1975. PCBs, valued for chemical stability and fire resistance, were manufactured and processed primarily for use as insulating fluids and coolants in electrical equipment and machinery from 1929-1977. There may have been a potential, therefore, that PCBs were present in this equipment on the Subject Site

Xcel Energy was contacted and it was determined that it was their transformer. A technician was sent out to check and it was determined that it was a “non-PCB” transformer.

3.3.6 Asbestos-Containing Material

Except for the residence located in Area C, all other structures on the Subject Site were built after 1975. The steel structure of the warehouse would have predated 1975 since it was purchased elsewhere, relocated to the Subject Site, and the pieces reconstructed. However, the interior construction would have dated to 1975. The residence in Area C, however, may date back to the 1940’s according to interviews. Although no definitive observations of asbestos containing materials were observed during the site visit, there is a possibility that asbestos containing materials may exist in portions of the old residence.

3.3.7 Lead-Based Paint

Although no definitive observations of lead-based paint were observed during the site visit, there is the possibility that lead-based paint could exist in portions of the old residence due to its age.

3.3.8 Lead in Drinking Water

No definitive observations of lead plumbing materials were observed. Even if lead materials existed in the abandoned residence in Area C, the structure is not functional or habitable. Therefore, no potential

exists for current consumption of lead-containing water on the Subject Site. The presence of lead piping or solder would need to be verified for the abandoned residence prior to any rehabilitation and reoccupancy.

3.3.9 Radon

The United States Environmental Protection Agency (USEPA) uses three zone designations, 1 (high), 2 (moderate), and 3 (low) to identify the radon potential in each county of each state. County Radon potentials in the state of New Mexico range from Zone 2 (moderate) to Zone 1 (high). According to the USEPA Map of Radon Zones in New Mexico (Attachment F), Quay County (location of the Subject Site) is designated as a Zone 2 area. Zone 2 areas are predicted to have an average indoor radon screening potential range between 2 and 4 picocuries/liter (pCi/L). The USEPA action level for Radon is 4 pCi/L. At the present, most of the structures on the Subject Site are boarded up or closed off. Under these conditions of no ventilation, Radon has the potential to accumulate. Since no one is working in these structures or living in the residence this does not pose a hazard to anyone.

3.3.10 Utilities

Since the facility is boarded up, there should be no active gas, electric, or water utilities. It is not known whether domestic city sewer service was utilized when the facility was in operation. Evaporative type air conditioning appears to have been used on the warehouse but it is not known what was used for the other buildings.

3.3.11 Solid Waste

No solid waste is presently generated on the Subject Site from the defunct truck terminal operation. The temporary lessee would generate a small amount of trash that would be their responsibility to have removed regularly.

3.3.12 Drains and Sumps

One sump was observed in a concrete pad located at the southeast corner of the food mart in Area A. Its previous function is unknown and the present contents are unknown.

3.3.13 Wastewater

No past or current activities likely to generate uncontrolled wastewater were observed anywhere on the Subject Site.

3.3.14 Wells

No water supply were observed anywhere on the Subject Site. There were numerous monitoring wells located in Area A associated with the known contamination area and the SVVS remediation system.

3.3.15 Pits, Ponds, and Lagoons

No active pits, ponds, or lagoons were observed anywhere on the Subject Site.

3.3.16 Other Physical Evidence of Contamination

At the northeast corner of the generator building a cutoff steel pipe (the remains of a pipe support for signage) has collected water in the bottom of the remaining pipe. There was obvious fuel contamination sheen on the surface of the water.

The current fueling operations located in the temporary highway construction staging area in Area C appear to have the most recent potential for contamination in the area. See the photos in Attachment B.

3.4 Present Condition of Surrounding Properties

The site reconnaissance included a cursory visual walking and drive-by survey of adjoining properties and surrounding area to determine land uses and to identify any potential RECs. During the survey, no potential RECs on adjoining lands were observed. The principal use of adjoining land was farmland or undeveloped.

Finally, a total of 2 sites at equal/higher elevations than the Subject Site are considered a potential concern and were identified within the ¼-mile ASTM search distances in the EDR Radius Map™ Report with GeoCheck® (EDR Report). Additionally, due to poor or inadequate address information, 20 sites potentially in the vicinity of the Subject Site could not be mapped (See Section 5.0 and Attachment E).

4.0 Review of Historical Literature/Information

Readily available sources of public information, field notes, and personal interviews were reviewed to assist in identification of RECs, and to assess current and past usage of the Subject Site and adjacent properties.

4.1 Aerial Photographs

Although the reconnaissance flights are generally flown at medium to high altitudes, they can often be useful in visually comparing historic and current conditions. They may also be helpful in determining whether obvious conditions of apparent environmental concern existed on or near the site at the time they were taken.

All readily available aerial photographs were reviewed to obtain information concerning the history of development on and adjacent to the Subject Site. Resolution of the aerial photograph from 1954 showed the location of the older drive-in theater that was later removed. Resolution of the four aerial photographs from 1983, 1986, 1991, and 1997 was poor and therefore nothing discernable regarding the development of the Subject Site or surrounding area could be determined. Resolution of the aerial photograph from 2006 was sufficient to discern the building development for comparison with what was observed on the ground.

4.2 Sanborn Maps

There were no Sanborn Fire Insurance Rate Maps (Sanborn Maps) that covered the area of the Subject Site.

4.3 Chain-of-Title/Environmental Lien

An environmental lien search was performed by EDR from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls. According to the results of the environmental lien search, there were no environmental liens found to be associated with the Subject Site.

4.4 Previous Environmental Reports

The following previous environmental reports (Attachment D) were made available from the State of New Mexico Environment Department Petroleum Storage Tank Bureau:

- George G. Beaumont, January 20, 2005. NMED PST Bureau Site Summary
- Billings & Associates, Inc., August 2003. Product Bail Down Test Report
- Billings & Associates, Inc., November 1992. Phase I Hydrogeologic Investigation Report.

4.5 Other Documents

4.5.1 Interviews

Interviews with individuals that possess knowledge of the site are provided in Attachment A.

5.0 Regulatory Review

An EDR Report for the site was obtained from Environmental Data Resources, Inc. dated April 2009. The findings of the EDR Report database search were reviewed to assess the potential for RECs that may exist at the Subject Site and/or the adjacent properties. All sections of the EDR report are provided in Attachment E.

5.1 National Priorities List

The National Priorities List (NPL) is the USEPA database of uncontrolled or abandoned hazardous waste facilities identified for priority remedial actions under CERCLA, also known as the Superfund program. No NPL sites were within one mile of the Subject Site.

5.2 CERCLIS

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) lists the facilities that the USEPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act. Facilities removed from the database are known as No Further Remedial Action Planned (NFRAP) facilities. No delisted NFRAP CERCLIS sites were reported within ½-mile of the Subject Site.

5.3 RCRIS

The Resource Conservation and Recovery Information System (RCRIS) is a list of USEPA registered facilities that generate, store, transport, treat, or dispose of hazardous waste. There were no RCRIS sites identified within ¼ -mile of the Subject Site.

5.4 ERNS

The Emergency Response Notification System (ERNS) is a national database of reported oil and hazardous substance releases. The Subject Site was not listed as an ERNS facility.

5.5 PADS

The PCB Activity Database System (PADS) is a database that stores information about facilities which handle PCBs and which have filed USEPA Form #7710-53. The database is divided into storage facilities, disposers, generators, and transporters. The Subject Site was not listed as a PADS facility.

5.6 TRIS

The Toxic Release Inventory System (TRIS) contains information from facilities that manufacture, process, or import any of the listed toxic chemicals, which have reported releasing any chemicals into air, water, or land or which have transported them off-site. The Subject Site was not listed as a TRIS facility.

5.7 SSTS

The Section Seven Tracking System (SSTS) tracks the registration of pesticide producing establishments and tracks the types and amounts of pesticides, active ingredients, and devices that are sold, produced, or distributed annually. The Subject Site was not listed as a TRIS facility.

5.8 TSCA

The Toxic Substances Control Act Inventory (TSCA) includes the locations and chemical production information of more than 7,000 processors and manufacturers of chemicals. The Subject Site was not listed as a TSCA facility.

5.9 Leaking Underground Storage Tank (LUST) Report

The LUST is a summary listing of all reported active and inactive leaking underground storage tanks (LUSTs) located in New Mexico and on the Navajo Nation. The Subject Site was listed as a LUST facility as evidenced by the SVVS remediation system that was previous operated on the Subject Site. There were no other LUST sites reported within ½-mile of the Subject Site.

5.10 UST

The Underground Storage Tank (UST) database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the New Mexico Environmental Department's listing of USTs. There were 2 UST sites reported within approximately 1/4-mile of the Subject Site.

5.11 Unmappable Sites

Twenty sites with documented RECs were identified on properties potentially within the ASTM-required search radii, but due to poor or inadequate address information, these sites could not be mapped. Although the exact locations of many of these sites were not determined on the EDR report, several were identified by the environmental professional during the site visit at greater than one mile from the Subject Site. Most of these unmapped sites are expected to be the same distance away from the Subject Site.

The list of these sites can be found on page 6 of the executive summary of the EDR report provided in Attachment E. These sites include AST, UST, LUST, dry cleaners, and others.

6.0 Assessment of Risk

The following is a summary of contamination risks associated with the Subject Site. However, the determination or estimation of contamination quantities that may or may not be associated with the Subject Site is beyond the scope of this report.

- There is past evidence of fuel spills from LUSTs located in Area A. A remediation system was operated for a few years but was terminated before complete remediation of fuel contamination in the soil and groundwater. Also, a complete understanding of leaks occurring in the area was never fully determined. Multiple fuel lines from active tank operations in the area could have been contributing to the source term contamination even during the remediation activities.
- According to interviews there were additional diesel USTs in Areas A and B that had been removed but there is no State documentation of their removal. There is the potential for contamination in these areas.
- There are diesel ASTs, and gasoline USTs (concrete vaulted) that presently exist on the Subject Site including all the underground piping to the fuel dispensing pumps. There is the potential for contamination associated with both the tanks and the piping.
- There are no records indicating the status of remaining fuels in the existing ASTs and USTs on the Subject Site. If there are remaining fuels and leaks exist in the tanks or fuel lines then there is the potential for ongoing source contamination.
- According to the interviews there were previous diesel truck rollovers as well as a truck accident involving one of the fuel dispensing pumps. The nature and extent of the resulting contamination from these incidents has never been evaluated. Based on the direction of surface drainage as well as groundwater flow, there is the potential for contamination in the drainage area between the railroad and West Route 66 Blvd.
- Section 3.3.16 mentioned the presence of sheen on the surface of water that has collected in a cutoff steel pipe adjacent to the generator building. This location is also adjacent to a diesel truck rollover shown in front of the Restaurant Travel Center (Figure 5). Since part of the pipe sticks above the ground surface, water accumulation would principally collect from direct rain into the pipe or from high groundwater levels. In either case, the presence of fuel contamination sheen is further evidence of soil and groundwater contamination associated with the truck fueling operations that were conducted at the Subject Site.
- There is the potential for oil contamination in the area of the warehouse in Area B due to the lubrication activities as well as the waste oil tanks adjacent to the building.
- The potential that PCBs may have been present in the transformer associated with the generator building on the Subject Site has been checked by Xcel Energy and it has been determined that It is a “non-PCB” transformer.
- There were two UST sites located within ¼-mile to the southwest of the Subject Site. Numerous gasoline, diesel, lubrication oil, and waste oil tanks were removed from these two

sites. There is the potential for contamination associated with these two sites. Given the proximity to the Subject Site and the influence on groundwater from the Conchas Canal, any contamination could have affected the west side of Area A of the Subject Site.

- Lubrication and repair activities were also associated with the repair and maintenance shop in Area C. There is the potential for oil and solvent contamination in the area around this building.
- Due to the diverse amount of equipment debris located close to the repair shop there is also the potential for oil and solvent contamination from the debris.
- The abandoned residence located in Area C dates to the 1940s. There is the potential for the presence of lead-based paint and asbestos.
- The activities associated with the existing temporary lease for the highway construction company has the potential for fuel, oil, asphalt, and tar contamination.

Finally, the 20 unmapped sites with known RECs, identified in the EDR Report (see Section 5.0 and Attachment E) should be noted. Since their locations could not be mapped, evaluation of these potential contaminant sources is beyond the scope of this report.

7.0 Conclusions

The following conclusions are based upon findings of the database searches, interviews of site personnel, and the reconnaissance of the Subject Site and surrounding properties:

- The Subject Site was listed as a LUST facility in the EDR report. This is evidenced by the SVVS remediation system that was previous operated on the Subject Site. Since operation of this system was terminated before complete remediation of the site, soil and groundwater contamination is still expected to exist in this area.
- Based on the interviews and the presence of fuel contamination sheen in the cutoff steel pipe, the history of diesel spills would indicate that there is soil and groundwater fuel contamination elsewhere within Areas A, B, and C.
- The content of the remaining USTs and ASTs onsite is unknown. These tanks with their associated underground fuel lines have the potential of ongoing source contamination of oils and fuels.
- There is a potential of past fuel contamination associated with the UST sites located within ¼-mile to the southwest of the Subject Site.
- The potential that polychlorinated biphenyls (PCBs) may have been present in the transformer associated with the generator building on the Subject Site has been checked by Xcel Energy and it has been determined that It is a “non-PCB” transformer.
- Due to the activities associated with the repair and maintenance shop, there is the potential for oil and solvent contamination.
- The debris associated with the repair and maintenance shop (Photos 79 thru 85) has the potential for environmental contamination as well as being a physical hazard.
- The debris and abandoned mobile fuel tank truck located in Area A (Photos 30, 31 and 32) have the potential for environmental contamination as well as being a physical hazard.
- There is a potential for lead-based paint and asbestos to be present in the abandoned residence located at the east side of Area C.
- The ongoing activities associated with the existing temporary lease for the highway construction company has the potential for fuel, oil, asphalt, and tar contamination.
- Twenty sites with documented RECs were identified on properties potentially within the ASTM-required search radii, but due to poor or inadequate address information, these sites could not be mapped. Although the exact locations of many of these sites were not determined on the EDR report, several were identified by the environmental professional during the site visit at greater than one mile from the Subject Site. Most of these unmapped sites are expected to be the same distance away from the Subject Site.

8.0 Recommendations

USACE recommends addressing the following bulleted items as part of Phase II Environmental Site Assessment activities at the Tucumcari Truck Terminal:

- Resample a select number of monitoring wells (such as MW-2, MW-7, MW-14, and MW-16) in the vicinity of the SVVS remediation system to evaluate the status of remaining contamination.
- Perform 2 to 3 shallow probes along the west side of Area A for soil and groundwater samples to evaluate any potential contamination associated with the UST sites.
- Perform 3 to 4 shallow probes for soil and groundwater samples within Area A between the ASTs and the fueling island, and between the vaulted USTs and the fueling island.
- Perform 2 to 3 shallow probes for soil and groundwater samples within Area B between the warehouse and the 860K diesel tanks.
- Perform 4 to 5 shallow probes for soil and groundwater samples within Area B adjacent to the diesel fuel islands and out to the drainage culvert across W. Route 66 Blvd.
- Perform 1 to 2 shallow probes for soil and groundwater samples in the area between the generator building and the restaurant travel center.
- Perform 3 to 5 shallow probes for soil and groundwater samples in the drainage area adjacent to the railroad tracks on the north side of W. Route 66 Blvd.
- Perform 3 to 4 shallow probes for soil samples in the area adjacent to the repair shop and within the debris area in Area C.
- Verify the contents of all existing ASTs and USTs.
- Test for asbestos containing materials in the abandoned residence
- Test for lead-based paint in the abandoned residence
- Remove solid waste and miscellaneous debris visible around the Subject Site (Areas A and C) including the abandoned mobile fuel tank truck.
- Assess the current fueling and tar operations of the lessee (highway construction contractor) utilizing Area C for the potential of new environmental contamination. Possibly perform 2 to 3 shallow probes for soil and groundwater samples.

The 20 sites with known RECs, identified in the EDR Report (see Section 5.0 and Attachment E) as potentially occurring within the ASTM-recommended search distances, should be noted. Evaluation of these potential contaminant sources is beyond the scope of this report, as their exact locations could not be determined.

9.0 Limitations and Warranty of the ESA

This report is limited to the visual observations of the site and surrounding property conditions on the 2 days of site reconnaissance, the review of readily available and relevant historical and current data, and the statements made, and information provided by, the Subject Site's previous owner, the client and their representatives, outside parties, and regulatory agencies. USACE has exercised due and customary care in the conduct of this assessment but in cases where it was not reasonable ascertainable, information provided by others was not independently verified. The ESA is a limited and non-exhaustive survey that is intended to evaluate whether readily available information indicates that the historic or current use of the site and surrounding property resulted in impacts to the site by hazardous substances or waste. Without a comprehensive sampling and analysis program or implementation of services beyond the original scope of work, certain conditions may not be revealed. It is also important to note that conditions at the Subject Site and that the surrounding properties can change over time.

This report included USACE's professional opinions regarding items that may be identified as an REC. The conclusions and professional opinions provided herein apply to the Subject Site as observed during the site reconnaissance performed by USACE on March 31 and April 4 2009. The qualifications of the environmental professional performing the Phase I ESA are contained in Attachment G. The use of this report by third parties shall be at their own risk. This report should be used in its entirety and expires at 180 days after final submission.

10.0 References

ASTM, see American Standard Testing Method

ASTM, November 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, Designation E 1537-05.

Beaumont, G.G., January, 2005. NMED PST Bureau Site Summary

Billings & Associates, Inc., August 2003. Product Bail Down Test Report

Billings & Associates, Inc., November 1992. Phase I Hydrogeologic Investigation Report.

EDR, see Environmental Data Resources, Inc.

EDR, April 2009a. The EDR Radius Map™ Report with GeoCheck®, Milford, Connecticut 06461, Inquiry Number 02465481.1r

EDR, April 2009b. Certified Sanborn Map Report®, Milford, Connecticut 06461, Inquiry Number 2472006.1

EDR, April 2009c. The EDR Aerial Photo Decade Package, Milford, Connecticut 06461, Inquiry Number 2472006.2

EDR, April 2009d. The EDR Historical Topographic Map Report, Milford, Connecticut 06461, Inquiry Number 2472006.3

EDR, April 2009e. The EDR Environmental LienSearch™ Report, Milford, Connecticut 06461, Inquiry Number 02457636.7

Figures

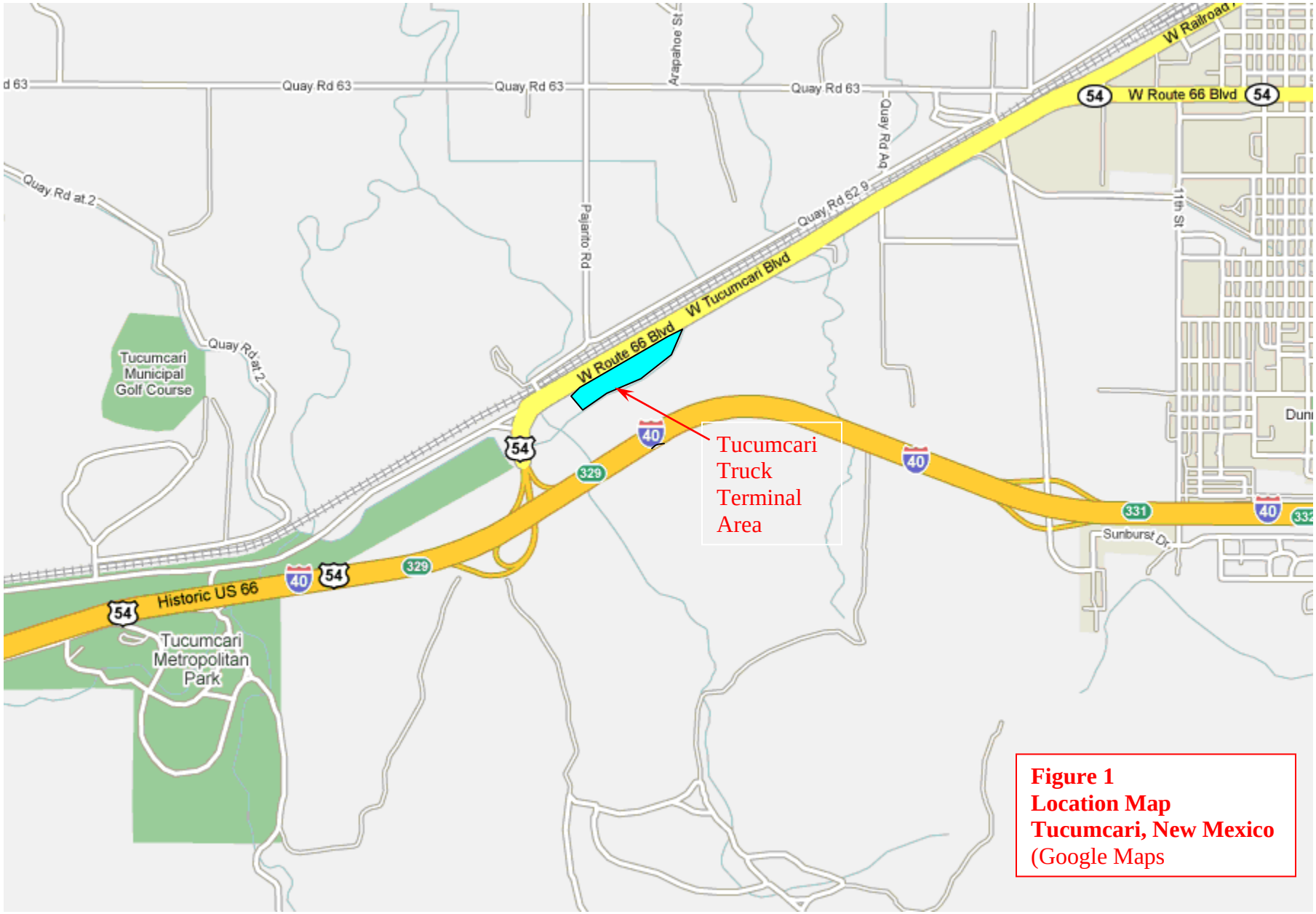


Figure 1
Location Map
Tucumcari, New Mexico
(Google Maps

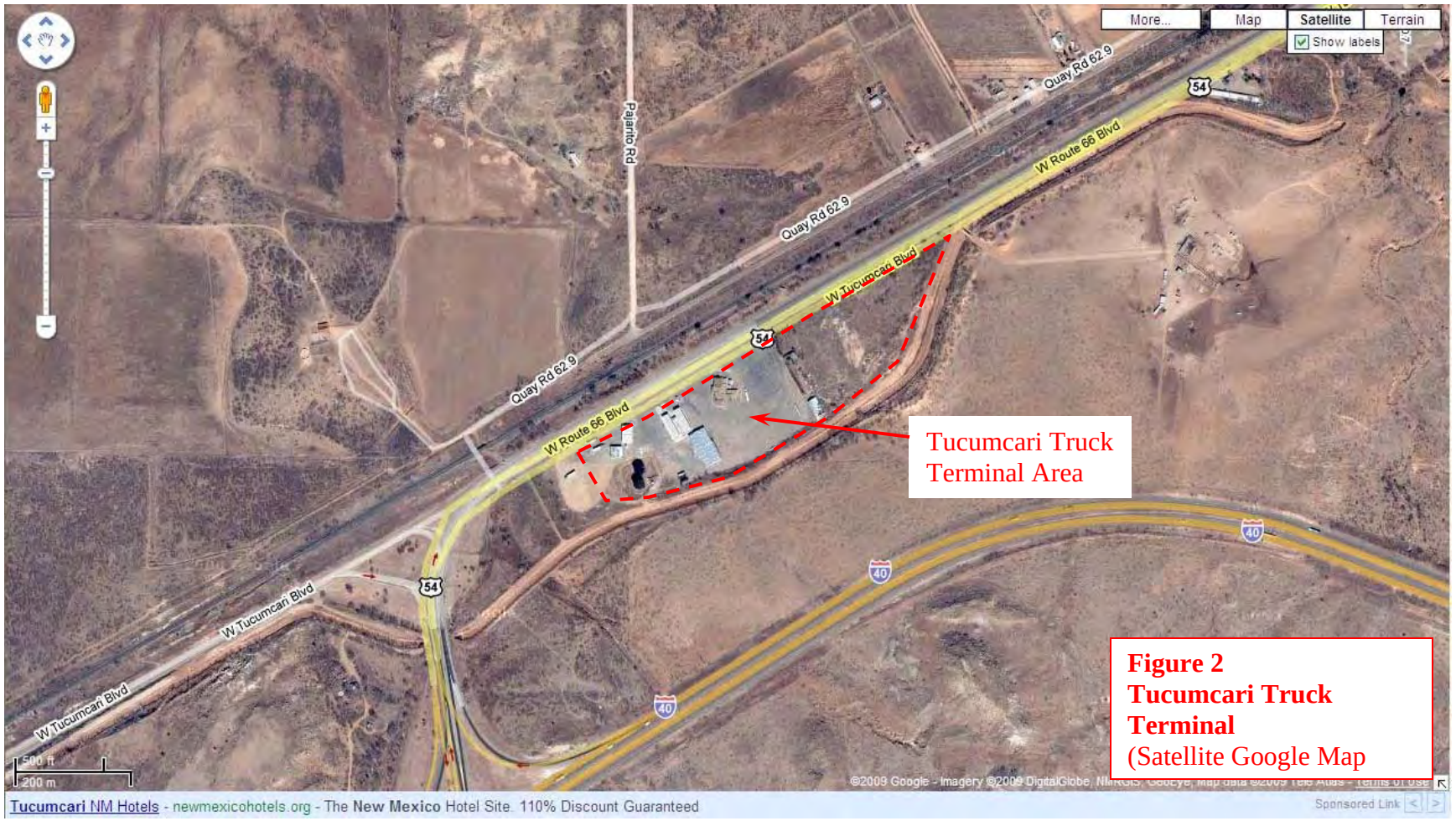


Figure 2
Tucumcari Truck Terminal
(Satellite Google Map



Figure 3
Tucumcari Truck Terminal Details
(Satellite Google Map

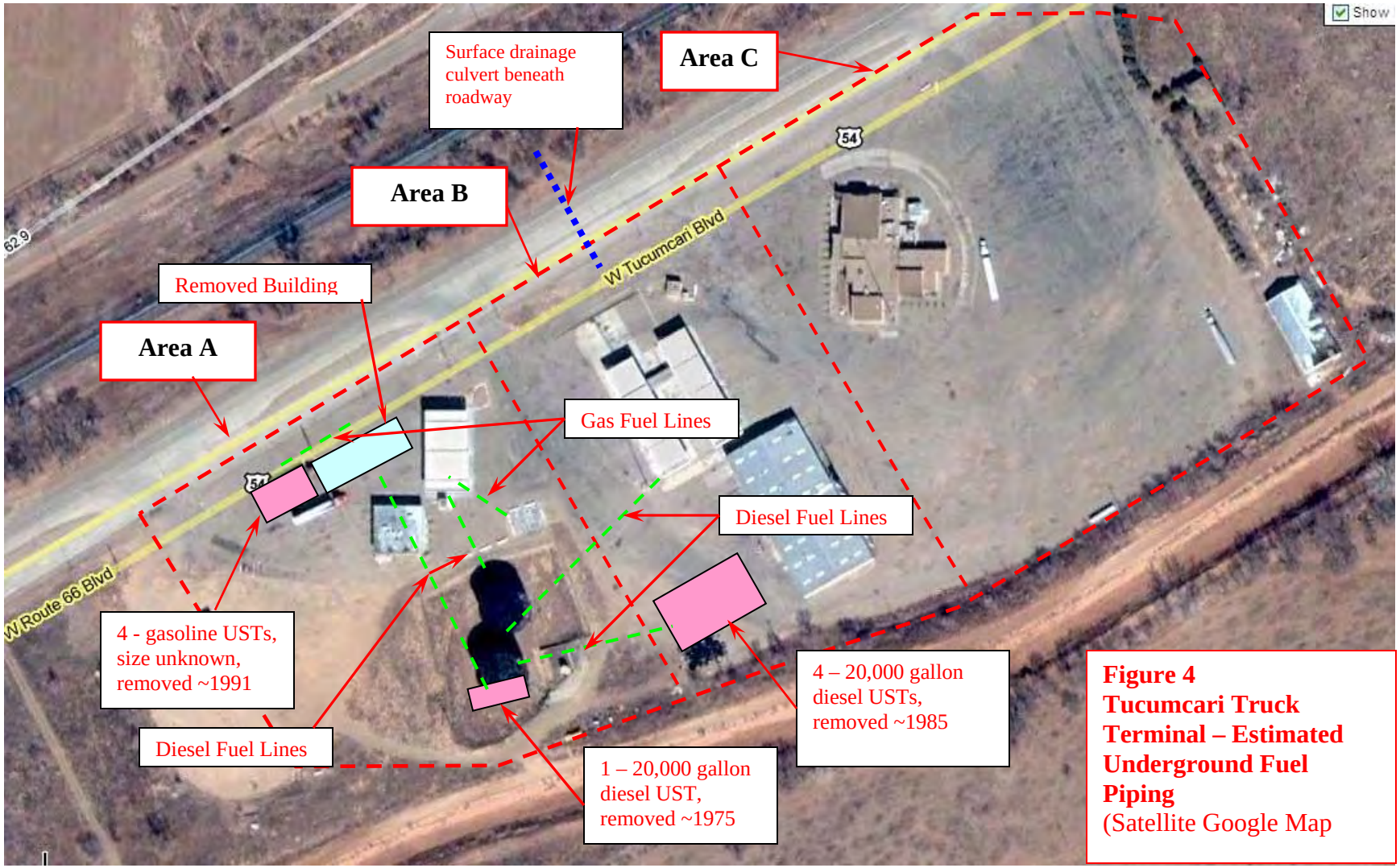


Figure 4
Tucumcari Truck Terminal – Estimated Underground Fuel Piping
(Satellite Google Map

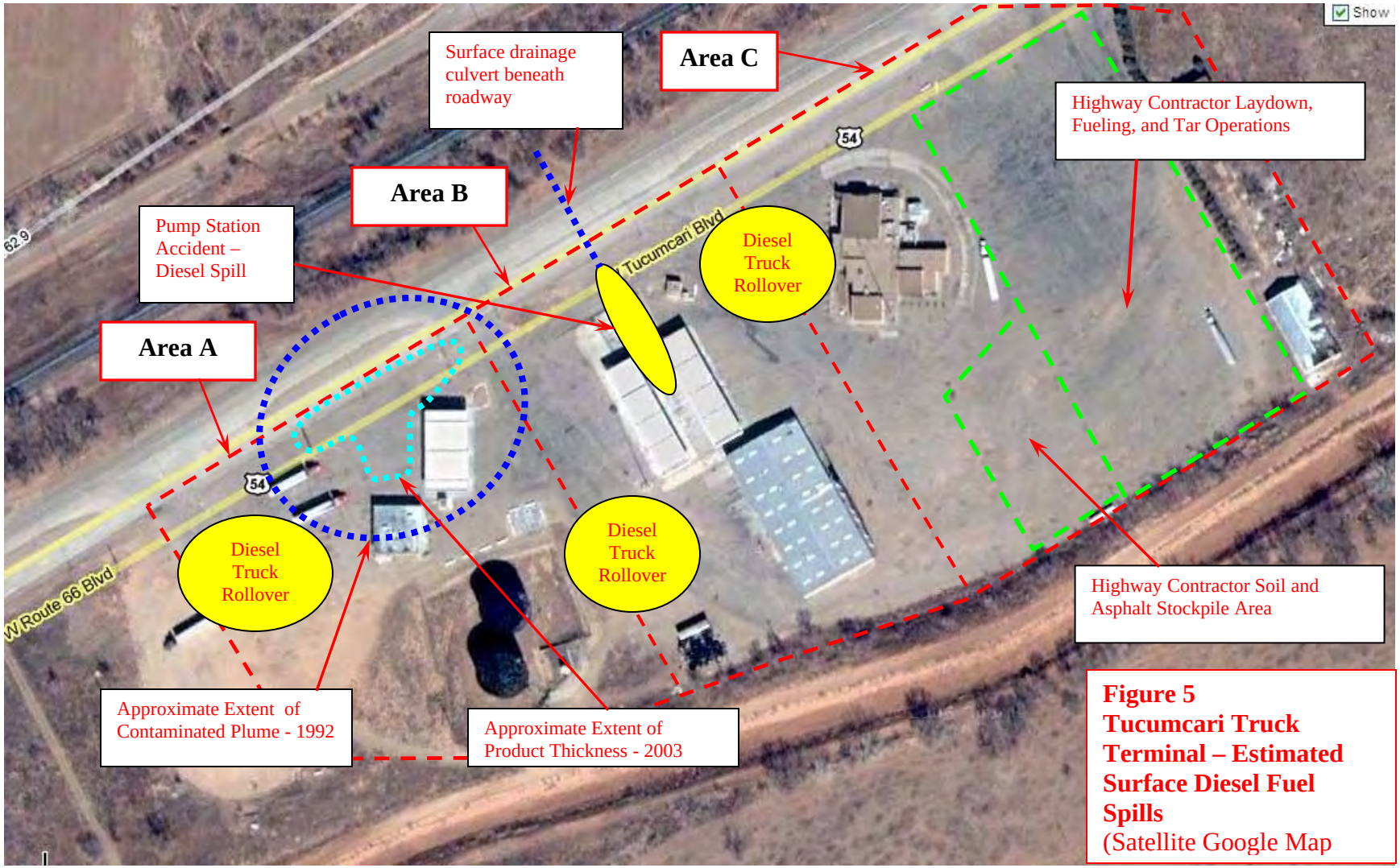


Figure 5
Tucumcari Truck Terminal – Estimated Surface Diesel Fuel Spills
(Satellite Google Map

Attachment A: Interviews

INTERVIEW

Date: 30 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Danielle Lopez
Contact Title: Executive Assistant
Company/Agency: Greater Tucumcari Economic Development Corp.
Address: P.O. Box 1392, Tucumcari, NM 88401
Telephone: 575-461-4079

Conversation:

Mr. Bone informed Ms. Lopez that he would be performing the Phase I ESA site visit the next day on 31 March 2009. He indicated that he would first come to their location and meet with Patrick Vanderpool (Executive Director). She suggested that she would try to get Richard Primrose (previously worked at the truck terminal) and Miguel Cordova (caretaker for the site) to meet at the site.

INTERVIEW

Date: 31 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Patrick Vanderpool
Contact Title: Executive Director
Company/Agency: Greater Tucumcari Economic Development Corp.
Address: P.O. Box 1392, Tucumcari, NM 88401
Telephone: 575-461-4079

Conversation:

Mr. Bone met Mr. Vanderpool at his offices on W. Route 66 Blvd. He was waiting for Richard Primrose to meet us. He explained that the owner of the Subject Site, Arthur Ortega, wanted to donate the property so that it could be developed. Mr. Vanderpool indicated that the Greater Tucumcari Economic Development Corp. had approached the EPA for a Phase I ESA of the approximate 22 acre property. Mr. Vanderpool conveyed that his expectations to the EPA included the entire 22 acres and not just the area located where the SVVS remediation system had operated.

INTERVIEW

Date: 31 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Richard Primrose
Contact Title: Quay County Manager
Company/Agency: Quay County Government
Address: 300 S. 3rd Street, 3rd Floor, Tucumcari, NM 88401
Telephone: 575-461-2112

Conversation:

Mr. Bone met Mr. Primrose initially at the offices of Mr. Vanderpool. The three of them then traveled to the Subject Site. They were met there by Manual Cordova, the caretaker for the Subject Site. Mr. Primrose had worked at the Subject Site for many years when it was part of a corporation owned by the Shipley and Phillips families. The group walked completely around the areas designated as Areas A and B on Figure 3. Mr. Primrose gave a brief history of the site and rough timeframes when tanks and structures were built or removed. The following is a summary of that history:

- Underground storage tank (UST) leaks had occurred with the four gasoline USTs that were associated with the removed building in Area A. These four tanks were removed in June 1991.
- An SVVS remediation system was installed in 1993. Operation of this system was terminated in 1996 before completion of remedial efforts due to budget constraints of the New Mexico Environment Department (NMED) through the Underground Storage Tank Bureau, now known as the Petroleum Storage Tank Bureau (PSTB).
- A 20,000 gallon diesel UST (and piping) was removed when the first 860K gallon diesel AST was installed in 1975.
- Four 20,000 gallon diesel USTs (and piping) in Area B were used for storage capacity in conjunction with the first 860K gallon diesel tank. These four tanks were removed in 1985 when the second 860K gallon diesel tank was installed.
- Part of the warehouse located in Area B performed lubrication services. This is evident by the two 2,000 gallon waste oil ASTs located on the northeast side of the building.
- The warehouse and diesel fueling islands in Area B were installed approximately 1975 along with the restaurant in Area C.
- The food mart and fueling station in Area A was installed about the same time that the old tanks and building were removed about 1991.
- The Maintenance and repair shop was installed later possible in the mid 1990s.

INTERVIEW (cont)

Date: 31 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Richard Primrose
Contact Title: Quay County Manager
Company/Agency: Quay County Government
Address: 300 S. 3rd Street, 3rd Floor, Tucumcari, NM 88401
Telephone: 575-461-2112

- There was an incident in which one of the fuel dispensing pumps at the diesel fueling islands in Area B was struck by a truck and severed off its foundation. Diesel fuel flowed freely until the main lines to the 860K tanks could be shut off. The diesel fuel flowed into a drainage culvert that runs under W. Route 66 Blvd. to the other side of the road.

It is interesting to note the following:

- Installation and removal of the five 20,000 gallon diesel USTs in Areas A and B had no UST or LUST record in the EDR report.
- The NMED PSTB, NMED Ground Water Quality Bureau, and the Tucumcari Fire & Rescue had no records to confirm that the diesel dispensing pump accident that had occurred.

INTERVIEW

Date: 31 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Manuel Cordova
Contact Title: Subject Site Caretaker
Company/Agency: Ortega's Shell Plaza, Inc.
Address: NA
Telephone: NA

Conversation:

Mr. Cordova met Mr. Bone, Mr. Primrose, and Mr. Vanderpool at the Subject Site. Mr. Cordova had worked at the site for many years for Mr. Eddie Shipley during the same time as Mr. Primrose. Mr. Cordova was not talkative unless asked specific questions. He agreed with most of what Mr. Primrose had summarized including the accident with the diesel dispensing pump. Mr. Cordova presently works as the caretaker for the Subject Site for the current owner, Arthur Ortega. His responsibilities include cleaning up trash, checking for vandalism, and making sure that trucks are not using the facility for parking overnight.

INTERVIEW

Date: 31 March 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Eddie Shipley
Contact Title: Co-Owner
Company/Agency: Shipley Systems, LLC (Radio Shack)
Address: 1324 W. Route 66 Blvd., Tucumcari, NM 88401
Telephone: 575-461-6448

Conversation:

After the site visit, Mr. Vanderpool took Mr. Bone to meet Mr. Eddie Shipley who presently owns the local Radio Shack. The Phillips and Shipley families owned the property as a corporation that they had formed in the mid 1950s. Mr. Shipley was the last Shipley family owner before his interests in the Subject Site were bought by the Phillips family in approximately 1999. Prior to the buy out, Mr. Shipley had been responsible for the active operations at the Subject Site. At the peak of operations, the truck terminal was grossing $1.1 M in revenues and employed over 80 people. After selling to the Phillips family in approximately 1999, Mr. Shipley still retained ownership to the mortgages on the property. The Phillips family then sold the property to Arthur Ortega in February 2003 according to the EDR LienSearch Report. Mr. Ortega operated the facility for approximately another year before closing the operations. Mr. Shipley agreed with most of the history given by Mr. Primrose except that he was vague on some of the dates. Mr. Shipley had a longer knowledge of the history of the site going back to the 1950s when there was a drive-in theater located in the vicinity of Areas B and C. The first gas station that was located in Area A dated back to 1958.

INTERVIEW

Date: 1 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: George Beaumont
Contact Title: Project Manager
Company/Agency: NMED Petroleum Storage Tank Bureau
Address: 1301 Silver Rd., Bldg – B, Santa Fe, NM 87607
Telephone: 505-476-4384

Conversation:

Mr. Bone spoke with Mr. Beaumont in a telephone conversation. Mr. Beaumont conveyed what he knew of the facility. His technical memorandum dated 20 January 2005 principally centered about the leaks associated with the original gas station in Area A and the subsequent operation of the SVVS remediation system. He expressed frustration with the refusal of the Phillips family to respond to any communications. This was especially true when the SVVS system was being operated by Billings and Associates. Billings and Associates could not get the Phillips to sign the voucher in order to get paid for their services. When asked, Mr. Beaumont was unaware of the incident involving a diesel spill due to the diesel dispensing pump accident.

INTERVIEW

Date: 1 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Justin D. Ball, P.G.
Contact Title: Project Manager
Company/Agency: NMED Ground Water Quality Bureau
Address: 5500 San Antonio Dr. NE, Albuquerque, NM 87109
Telephone: (505) 222-9522

Conversation:

Mr. Bone spoke with Mr. Ball in a telephone conversation. Mr. Ball was aware of the same information as Mr. Beaumont. When asked, Mr. Ball was also unaware of the diesel dispensing pump accident.

INTERVIEW

Date: 1 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Brad Billings
Contact Title: Owner
Company/Agency: Billings & Associates, Inc.
Address: 332 Las Colinas Ln NE, Albuquerque, NM 87113
Telephone: 505-345-1116

Conversation:

Mr. Bone spoke with Mr. Billings by telephone conversation. Mr. Billings was involved with the Phase I hydrogeologic investigation of November 1992, installation of the SVVS remediation system in July 1993, operation of the SVVS remediation system until April 1996, and performance of a product bail down test in August 2003. During the remediation period, Mr. Billings' opinion was that the original tank leaks on the west side of the remediation area were being cleaned up very well. However, it appeared to him that new leaks from the newer active operations were contributing source product to the contamination zone on the east side of the remediation area.

INTERVIEW

Date: 1 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Arthur Ortega
Contact Title: Subject Site Owner
Company/Agency: Ortega's Shell Plaza, Inc.
Address: 3360 West Highway 66, Gallup, NM 87301
Telephone: 505-8705367

Conversation:

Mr. Bone could not reach Mr. Ortega by telephone and Mr. Ortega did not return the phone message.

INTERVIEW

Date: 3 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Mike Cherry
Contact Title: Chief
Company/Agency: Tucumcari Fire and Rescue
Address: 209 East Center Street, Tucumcari, NM 88401
Telephone: 575-461-4400

Conversation:

Mr. Bone spoke with Mr. Cherry by telephone. Mr. Cherry is the current Chief and has been so since the early 1990s. Mr. Cherry was unaware of any major spills or accidents at the Subject Site. Mr. Cherry said that he would check the files for any record that the Tucumcari Fire and Rescue had responded to the diesel dispensing pump accident. Mr. Cherry could not find any record of the incident.

INTERVIEW

Date: 4 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Eddie Shipley
Contact Title: Co-Owner
Company/Agency: Shipley Systems, LLC (Radio Shack)
Address: 1324 W. Route 66 Blvd., Tucumcari, NM 88401
Telephone: 575-461-6448

Conversation:

Mr. Bone tried to see Mr. Shipley again on 4 April 2009 to clarify the construction dates of some of the structures on the Subject Site. Mr. Shipley was less communicative than the previous meeting because he was busy with customers. Mr. Shipley did indicate the incidents involving the rollover of three 10,000 gallon diesel trucks and the approximate locations. This item of information had not been mentioned previously in the interviews on 31 March 2009.

INTERVIEW

Date: 6 April 2009

Project: Tucumcari Truck Terminal Phase I ESA, Tucumcari, New Mexico

Interviewer: Michael Bone, PE (USACE)
Contact Name: Richard Primrose
Contact Title: Quay County Manager
Company/Agency: Quay County Government
Address: 300 S. 3rd Street, 3rd Floor, Tucumcari, NM 88401
Telephone: 575-461-2112

Conversation:

Mr. Bone spoke to Mr. Primrose several times again by telephone to clarify several of the construction dates. Mr. Primrose also recalled one of the diesel truck rollovers. A truck had parked along the side of the drainage canal between the warehouse and the 860K gallon diesel tanks. Due to soft ground from canal water seepage, one side of the truck sank during the night and the truck rolled over and spilled its contents of diesel fuel.

Attachment B: Photographic Log



Photo 1: Area A – Air & Water Station next to Food Mart



Photo 2: Area A – Air & water station looking south



Photo 3: Area A – Food Mart looking South



Photo 4: Area A – Looking east at 860K gallon diesel ASTs



Photo 5: Area A – Groundwater monitoring well MW-15



Photo 6: Area A – Location where gasoline USTs were removed



Photo 7: Area A - SVVS Remediation system pumphouse looking southeast



Photo 8: Area A - SVVS remediation system pump house



Photo 9: Area A – SVVS piping trench line looking west



Photo 10: Area A - Concrete sump south corner of Food Mart



Photo 11: Area A - East side of Food Mart looking north towards fueling island



Photo 12: Area A – Gas and diesel pumping island looking north



Photo 13: Area A - Concrete vault with four gasoline USTs (looking north)



Photo 14: Area A - Concrete vault with four gasoline USTs



Photo 15: Area A - Concrete vault access ports to gasoline USTs



Photo 16: Diesel fueling islands (Area B) looking northeast



Photo 17: Area B – Diesel fueling islands looking northeast



Photo 18: Area B – Warehouse looking east



Photo 19: Area B - Diesel supply pipeline trench line to diesel pumping islands



Photo 20: Area A - Diesel supply pipeline culvert



Photo 21: Area B – Warehouse looking east



Photo 22:Area A - 860K gallon diesel ASTs looking south



Photo 23: Area A - 860K gallon diesel ASTs looking southwest



Photo 24: Area A - 2000 gallon diesel AST looking west



Photo 25: Area A - 2000 gallon diesel AST looking north



Photo 26: Area A - 860K gallon diesel ASTs looking north



Photo 27: Area A - Pipeline valve network at diesel ASTs



Photo 28: Area A - Barrel with trash debris adjacent to diesel ASTs



Photo 29: Area A - Barrel with trash debris adjacent to diesel ASTs



Photo 30: Area A - Abandoned vehicle and barrel south of diesel ASTs



Photo 31: Area A - Debris next to abandoned vehicle south of diesel ASTs



Photo 32: Area A - Vehicle transmission debris (looking north)



Photo 33: Area B - Southwest side of warehouse looking north



Photo 34: Area B - Waste oil ASTs northeast corner of Warehouse



Photo 35: Area B – Warehouse waste oil tanks



Photo 36: Area C – Soil/asphalt debris piles looking east at Repair Shop



Photo 37: Area B - Northeast corner of Warehouse looking south



Photo 38: Area B - East and north sides of Warehouse looking south



Photo 39: Area C – South side of Restaurant Travel Center



Photo 40: Area C – Restaurant Travel Center (west side)



Photo 41: Area C – Restaurant Travel Center (north side)



Photo 42: Area C – Surface drainage north side of Restaurant Travel Center



Photo 43: Area B – Generator Building looking north



Photo 44: Area B – Transformer attached to Generator Building



Photo 45: Area B – Transformer attached to Generator Building



Photo 46: Generator inside Generator Building



Photo 47: Generator Building interior



Photo 48: Cutoff steel pipe (signage) next to Generator Building – sheen on surface of collected water



Photo 49: Area B – Drain collection trench at diesel fueling island looking southeast



Photo 50: Area B – Drainage grate at culvert beneath W. Route 66 Blvd.



Photo 51: Area B - Drainage culvert beneath W. Route 66 Blvd.



Photo 52: Area B – Diesel pumping islands looking southeast



Photo 53: Area B – Generator Building looking northeast



Photo 54: Area A – Gas & diesel pumping island looking south



Photo 55: Area B – Diesel fueling islands looking east



Photo 56: Area B - Diesel dispensing pump involved in truck accident



Photo 57: Area C – Highway construction contractor fuel tank



Photo 58: Area C – Highway construction contractor fuel tanks



Photo 59: Area C – Highway construction laydown area looking southwest at Warehouse



Photo 60: Area C – Highway construction laydown area looking northeast at Repair Shop



Photo 61: Area C – Highway construction contractor fueling and tar operations



Photo 62: Conchas Canal looking southwest behind Repair Shop



Photo 63: Conchas Canal looking northeast behind Repair Shop



Photo 64: Area C - Southwest corner of Repair Shop



Photo 65: Area C - Southeast end of Repair Shop



Photo 66: Repair Shop access – southeast corner of building



Photo 67: Repair Shop – missing roof



Photo 68: Repair Shop – paint can and shelves with miscellaneous materials



Photo 69: Repair Shop – interior debris



Photo 70: Repair Shop – interior debris



Photo 71: Repair Shop – interior debris



Photo 72: Repair Shop – ceiling



Photo 73: Repair Shop – missing roof



Photo 74: Repair Shop – interior debris

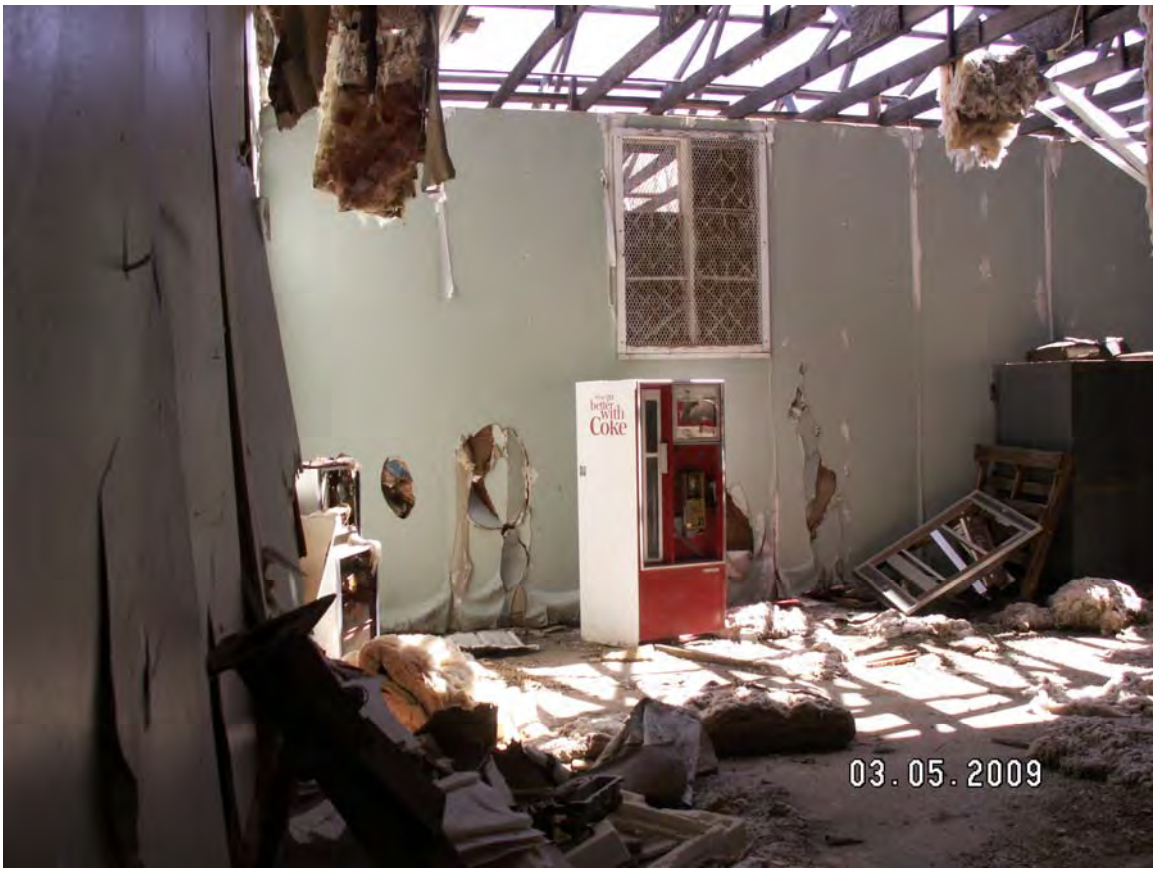


Photo 75: Repair Shop – interior debris



Photo 76: Repair Shop – interior debris



Photo 77: Repair Shop – interior debris



Photo 78: Area C - Northeast side of Repair Shop – fuel dispensing pump debris



Photo 79: Area C - Miscellaneous debris – east side of Repair Shop



Photo 80: Area C - Debris north of Repair Shop looking northwest



Photo 81: Area C - Debris north of Repair Shop looking north



Photo 82: Area C - Debris north of Repair Shop



Photo 83: Area C - Debris north of Repair Shop



Photo 84: Area C - Debris north of Repair Shop



Photo 85: Area C - Debris north of Repair Shop



Photo 86: Area C - Southeast side of abandoned residence



Photo 87: Interior kitchen of abandoned residence



Photo 88: Area C - Northeast side of abandoned residence



Photo 89: Area C - Front of abandoned residence looking northeast



Photo 90: Area C - Looking southeast to Repair Shop from abandoned residence



Photo 91: Area C - Front of abandoned residence looking northeast

Attachment C: Consent for Access to Property and Property Survey Description

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TEXAS 75202-2733

CONSENT FOR ACCESS TO PROPERTY

NAME OF PROPERTY OWNER: Ortega's Shell Plaza, Inc.

DESCRIPTION OF PROPERTY: (Type of property & Address) I-40 Exit 329, Tucumcari, NM 88401
more fully described on Exhibit "A"

I hereby consent to officers, employees, authorized representatives of the United States Environmental Protection Agency (EPA) and their contractors, subcontractors and consultants the right to enter the property and continued access and use of by, through, and on the property for the following purposes:

1. The taking of samples, surface and subsurface, including but not limited to soil, sediments, water, and air, and other solids or liquids stored or disposed of at the property as may be determined to be necessary;

2. The documenting of scientific and engineering observations, including, but not limited to taking notes, recordings, photographs and surveying;

3. The drilling and finishing of boreholes for the purposes of collecting soil and groundwater samples without limitation;

4. Other inquiry actions at the property as may be necessary to determine nature, extent and potential threat to human health and the environment; and

I am the property owner or an individual having the authority or the authorization of the property owner to sign this access agreement. I give this written permission voluntarily with the full knowledge of my right to refuse and without threats or promises of any kind.

Please indicate if you are granting access by signing this document, and providing your address and telephone number(s) so that you may be reached by mail or telephone.

GRANTED: yes

Name (Printed): Arthur Ortega Date: 2-5-09

Name (Signature): [signature]

Address: 3360 West Highway 66, Gallup, NM 87301

Telephone Number(s): Home: _____ Work: _____ Other: 505-870-5167

A certain tract or parcel of land situate in the Southeast Quarter of the Southeast Quarter (SE1/4SE1/4) of Section Twenty (20), the South Half of the Southwest Quarter (S1/2SW1/4) of Section Twenty-One (21), and the Northwest Quarter of the Northwest Quarter (NW1/4NW1/4) of Section Twenty-Eight (28), all in Township Eleven (11) North, Range Thirty (30) East, N.M.P.M., more particularly described as follows:

Beginning at the corner of Sections 20, 21, 28 and 29 marked by a ½ inch rebar cap from whence the 1/4 corner common to Sections 28 and 29 marked by a U.S.G.L.O. brass cap set in a mound of stone bears S00°17'06"W a distance of 2647.76 feet; Thence N0°17'06"E a distance of 225.94 feet; Thence S89°51'00"W a distance of 433.83 feet; Thence N60°19'00"E a distance of 2409.64 feet; Thence S32°38'00"E a distance of 33.26 feet; Thence S17°46'15"W a distance of 503.40 feet to a point of curve; Thence Southwesterly along the arc of a curve to the right of 340.0 feet radius, a distance of 237.36 feet to a point of tangent, long chord is S37°46'15"W, 232.57 feet; Thence S57°46'15"W, 194.60 feet; Thence S32°13'45"E, 60.0 feet; Thence S57°46'15"W, 648.62 feet to a point of curve; Thence Southwesterly along the arc of curve to the right of 400.0 feet radius, a distance of 106.93 feet, long chord is S65°25'59"W, 106.61 feet; Thence S73°05'15"W, 610.49 feet to a point of curve; Thence Southwesterly along the arc of a curve to the right of 1532.5 feet radius, a distance of 19.59 feet, long chord is S75°43'17"W, 19.59 feet to the point of beginning.

Exhibit "A"

Attachment D: Previous Site Summary and Environmental Reports

- George G. Beaumont, 20 January 2005. NMED PST Bureau Site Summary
- Billings & Associates, Inc., August 2003. Product Bail Down Test Report
- Billings & Associates, Inc., November 1992. Phase I Hydrogeologic Investigation Report.

NMED PST Bureau Site Summary

PM: George G. Beaumont

Date Completed: January 20, 2005 (revised)

Site Name/FAC#: Tucumcari Truck Terminal A; Facility # 31248 / 4794003 Release # 730

Site Address: Exit 329, Interstate 40, Tucumcari NM. Located west of Tucumcari.

Responsible Party: Partners: Mark R. Phillips & Edward Shipley - Shipley-Phillips, Inc., P.O. Box 1047, New Mexico 88401 (Ed Shipley bailed out of the partnership agreement years ago and now manages the radio shack down the street just east of the site). Mark Phillips owns some mini marts in the Phoenix area.

Investigation and Reclamation Consultant: Billings & Associates, Inc. for the initial Hydrogeologic Investigation dated August 11, 1992, and the Groundwater Monitoring and SVVS remediation efforts.

Priority and Ranking: N/A

Receptors and hazards: Adjacent to an abandoned truckstop and restaurant. Just north of the unlined Conchas Canal and near the SPTC railroad tracks. The November 1992 soil vapor map shows vapors extending under the Food Mart and north under the I-40 Business Loop (at least @ 100 ppm).

Origin or cause of contamination: Leaking USTs. Four UST tanks (installed in 1977) were removed from the site by Pacheco Trucking through ENRECO Engineering in June 1991. One of the leaking tanks contained diesel. PID readings of 1009 ppm noted in boring B-1 and 47,697 ppm in MW-2. Groundwater was encountered in the tank excavation. Now utilizes a couple of very large black ASTs that may have been shut down in 2004 (ask Bart Farris in the GW Bureau).

Hydrogeologic setting:

1. **Ground water description:** Shallow GW originally estimated at 12 feet bgs. Water levels now appear to have lowered to about 22 feet bgs from surrounding well data. GW flow is north to northwest and away from the unlined Conchas Canal.

2. **Description of vadose zone sediments:** Quaternary alluvium with varied sedimentary units and facies changes. Sediments range from sandy-clay to gravel and cobbles, to fine-grained sand to silty sand and to a middle clay unit. A mid gravel & cobble zone noted in MW-4, MW-5, and V-1, a mid clay lense in MW-12, with sandy clay north in MW-13.

Describe vadose zone contamination:

1. **Estimated area of vadose zone contamination in square feet:** Soil contamination can be estimated at about 64,200 square feet where TPH > 100 ppm, from 1992 map data.

Maximum extent and thickness of phase separated product in monitoring wells: Free product was present in monitor wells MW-2, MW-14, MW-7, and MW-16 in the June 30, 1998 Status Report by Billings and Associates, Inc. Up to 30 inches of PSH was measured in MW-6 and MW-7 in 1993. PSH still present in

recent 2003 monitoring report by Billings & Associates, but surrounding monitor wells are dry.

Describe dissolved phase contamination: Originally, BTEX, Naphthalenes (diesel) and EDC. However, due to the prior SVVS operation, it appears that only diesel contamination & diesel as PSH may remain.

1. **Linear dimensions in feet of dissolved phase contaminant benzene plume in ground water:** In November of 1992, the benzene plume extended over a 69,600 square foot area.

2. **Compare maximum and current extent of plume and indicate whether it is stable, expanding or contracting:** Wait on results of proposed GW monitoring, but the benzene & BTEX plume now likely smaller due to the prior remediation efforts and biodegradation. However, diesel (naphthalenes) may still be present even as free product, see the 1998 data.

Does GW/soil contamination extend beyond site property? Soil and GW contamination extended north and toward the SPTC Railroad tracks in November of 1992.

Name nearby sites with similar hydrogeological setting: Bar F-11, Bar F-13, Chevron 75762, Holiday Conoco, Whiting Brothers, Gasdon-Beacon Truck Stop, Worley Mills, Conway Oil Bulk Plant, and Yocoms Texaco.

Describe reclamation efforts at the site to date: Prior reclamation efforts in 1996. An SVVS system operated at this site from July 21, 1993 through April 1996.

Describe reclamation methods that have proven successful in similar setting: Skimming or bailing off any free product.

Describe unusual site conditions or characteristics that could influence decision on reclamation system or operations: Structural, Lithologic or stratigraphic variations.

What is being proposed in workplan and project manager's justification for recommending approval:

The WP received on December 4, 2002, is for continued GW monitoring (for one sample event) and potential free product (PSH) recovery, and to characterize the current subsurface extent of petroleum contamination. Diesel contamination may remain as a potential problem. Because this site has not been monitored since February 19, 1998, BAI proposes to sample all 21 wells, (monitor wells and SV type wells), if possible. The total cost for one GW monitoring event analysis, free product recovery, and reporting is $11,462.46, including the 5.8125% NMGRT.

Team Considerations:

Eliminate some of the fringe SV wells like SV-2, SV-3, and SV-4. Eliminate some of the fringe monitor wells to the north where the sediments tend toward clay, such as MW-10, MW-9, MW-11 and MW-12.
This could be accomplished after the first monitoring event.

New WP Submission:

A new WP was submitted by Billings & Associates, Inc. on April 16, 2003, in order to conduct a bail down test for future product recovery at this site. The three monitor wells to be employed in this evaluation are MW-7, MW-14, and MW-16. Monitor well MW-2 currently has 1 inch of PSH, MW-7 has 10 inches of PSH, MW-14 has 2.5 feet, and MW-16 has 2 feet, measured February 25, 2003.

The total cost for this test procedure and report is $5,608.06 dollars including the 5.8125 % NMGRT.

Team Considerations:

It may be necessary to install new monitor wells prior to conducting a bail down test since the fringe wells are going dry. However, there is always the danger of driving the PSH downwards and into an underlying GW zone. Uppermost water levels may be dependent upon the adjacent unlined Conchas Canal.

Any future GW monitoring events are best conducted in September or October when the water levels seem to rise, see the historical graph of the WL data.

There may be a current piping connection leak that has contributed to the recent accumulation of free product at this site. The USTs were converted to ASTs in 1993. Brad Billings recommends that a fuel system tightness test be performed. I have discussed the recommended tightness test with inspector Bill Bryant. **This site has recently passed a system tightness test, but the ASTs were not fully tested.**

Team Decision: 4/24/2003

Proceed with the bail down tests and do not install new deeper wells. (May even get better product recovery with the water level drop).

Results: 8/19/2003

Bail down tests on monitor wells MW-7 and MW-14 show recoveries of 0.31 gallons / day and 0.96 gallons / day respectively. The test of MW-16 exhibited a return insufficient for accurate calculations. This site may be a good candidate for passive recovery efforts such as passive canisters or hand bailing. Additional monitor wells may need to be installed to assist in product recovery and to monitor lowering GW levels in the area surrounding the free product zone.

Team Decision: 8/26/2003

Submit a WP to employ a hand bailing technique twice a month for each quarter or 6 times per quarter. Note the free product recovery rates. May have to adjust the frequency of product recovery depending upon existing recovery rates, or cancel the WP if too low PSH recovery. May have to install deeper monitor wells in the future especially for the surrounding fringe wells.

Current Developments: 1/20/2005

The Workplan was approved on October 2, 2003, for free product recovery (NAPL) through hand bailing techniques. However, this WP was never carried out because the owner- operator, Mark R. Phillips would not sign the pay packet affidavit agreement with Billings & Associates in spite of NOV letters. The workplan dated September 11, 2003, for a total cost of $14,250.41, was rescinded in January 2005, and the funds disencumbered. A new workplan for product recovery is needed if the RP will proceed and sign the required consulting agreement with Brad or another consultant. This site has not been monitored since August 2003.

New Developments:

V-1

Mid. Gravel Zone

Billings & Associates, Inc.

BORING LOG

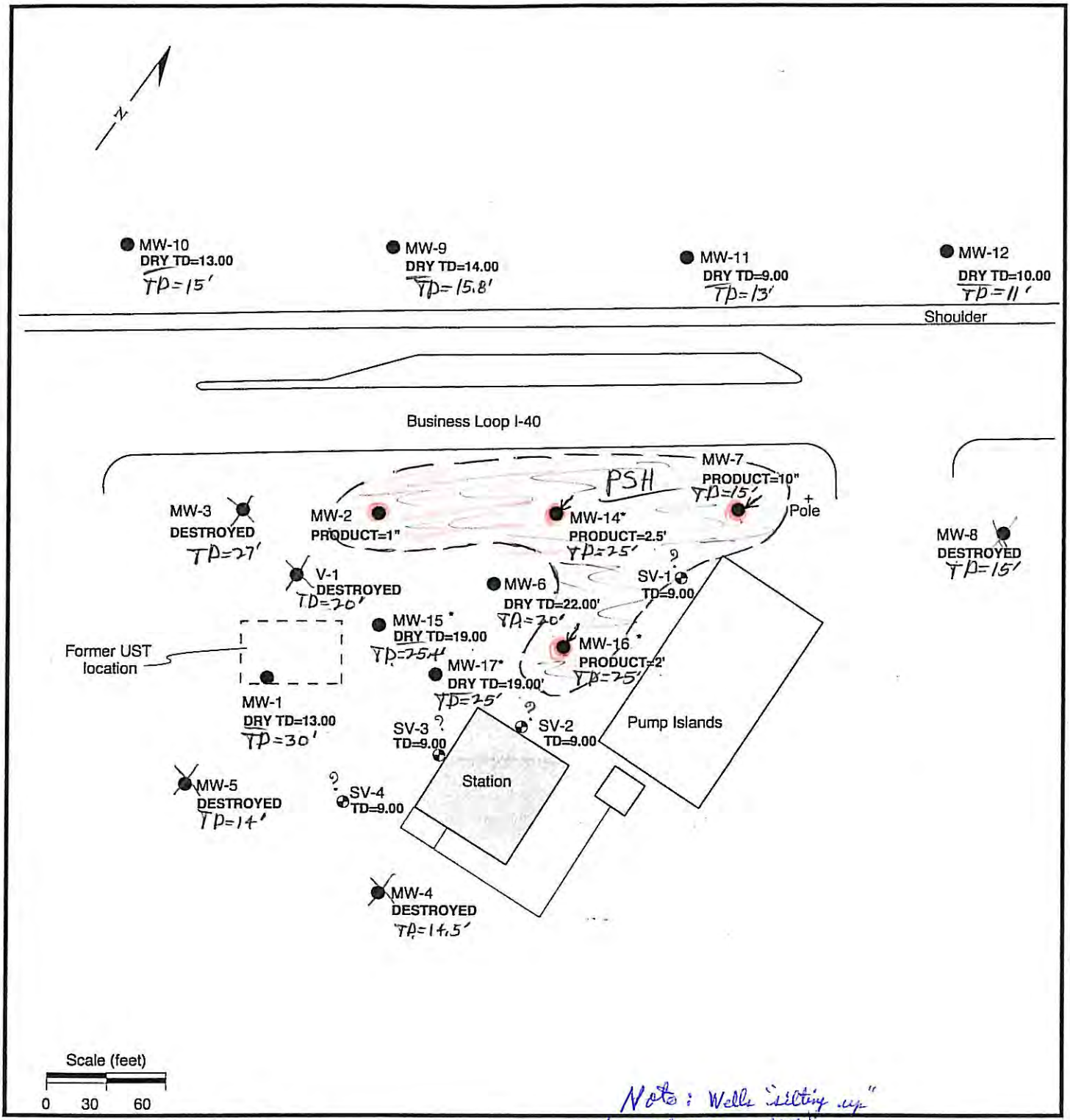
Project: Shipley Phillips
Boring No: V-1
Location: Tucumcari Truck Terminal

Installation Date: 10/29/92
Completion Depth: 19.6 ft.
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					ASPHALT - 0.5' thick
2					SANDY CLAY - Approx. 25% sand, sand is very fine-grained, moderately sorted, subrounded, clay is soft, plastic, very moist, moderate hydrocarbon odor, brown 7.5 YR 5/4.
3					
4		Y			
5			15.1		
6					GRAVEL/COBBLE - No cuttings return.
7					
8					
9					
10					SAND- Fine-to very fine-grained, well to very well sorted, subrounded to rounded, very moist to saturated, strong hydrocarbon odor, pinkish gray 5 YR 7/2.
11			272		
@ 11.71 ft. 10/30/92 12		Y			
13					
14					
WLS dropped 15					
16					
17					
18		Y			SILTY SAND - Approx. 15-20% silt, sand is medium-to fine-grained, moderately sorted, subangular to subrounded, very moist to saturated, moderate to srong hydrocarbon odor, yellowish red 5 YR 4/6.
19					
20					TOTAL DEPTH DRILLED = 20 ft.

* Field Monitoring Point

Water Table:

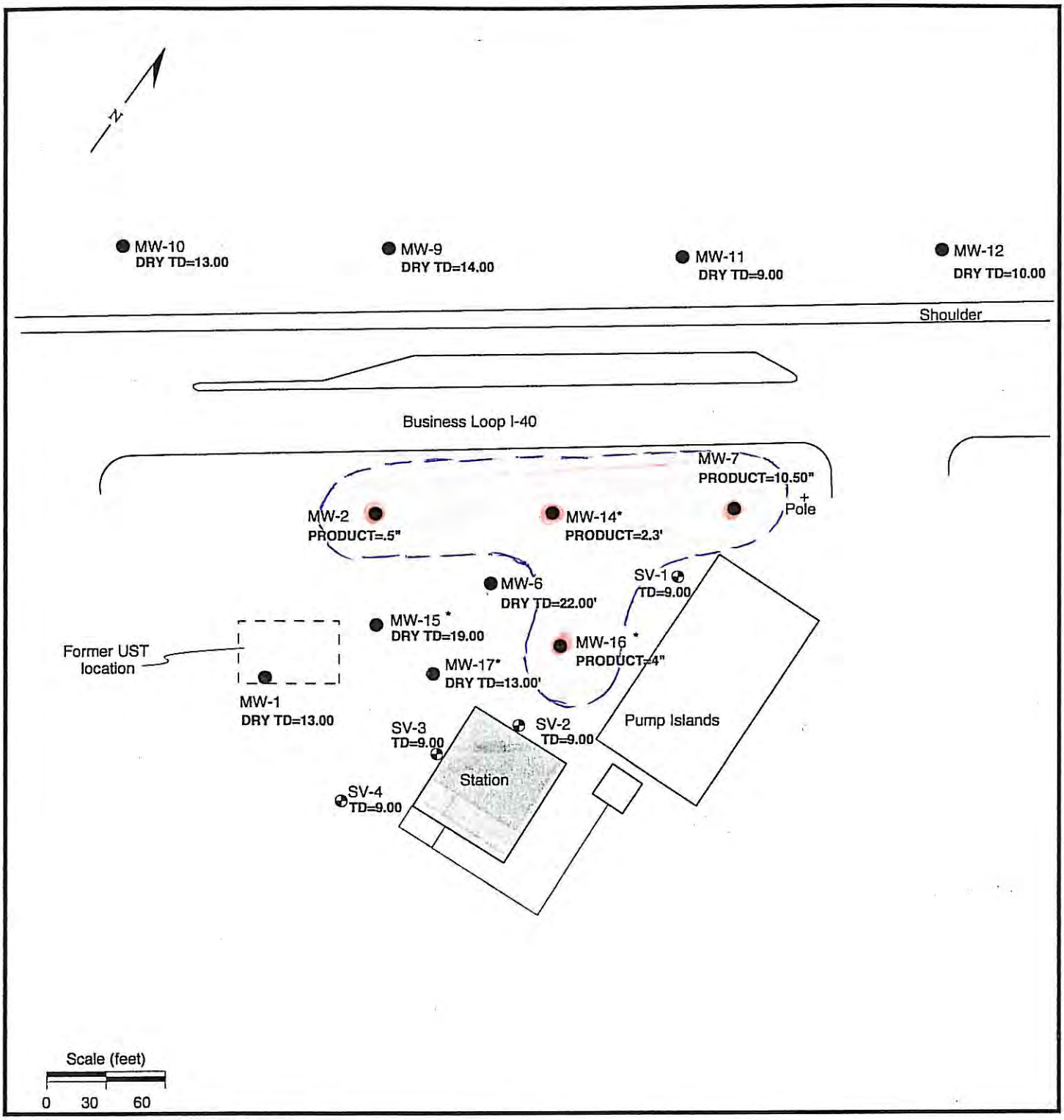


Note: Wells "settling up" (original TPs conflict)

located MW-13? TP=11'

DRAWN BY: G. Billings	Figure 1	BILLINGS & ASSOCIATES, INC
DATE:4/15/2003	Well Status Map	
CASE NO:	Site Name: Tucumcari Truck Terminal	
FACILITY NO:4794003	Site Location:Tucumcari, New Mexico	
AST FACILITY NO: N/A	Date: February 2003	

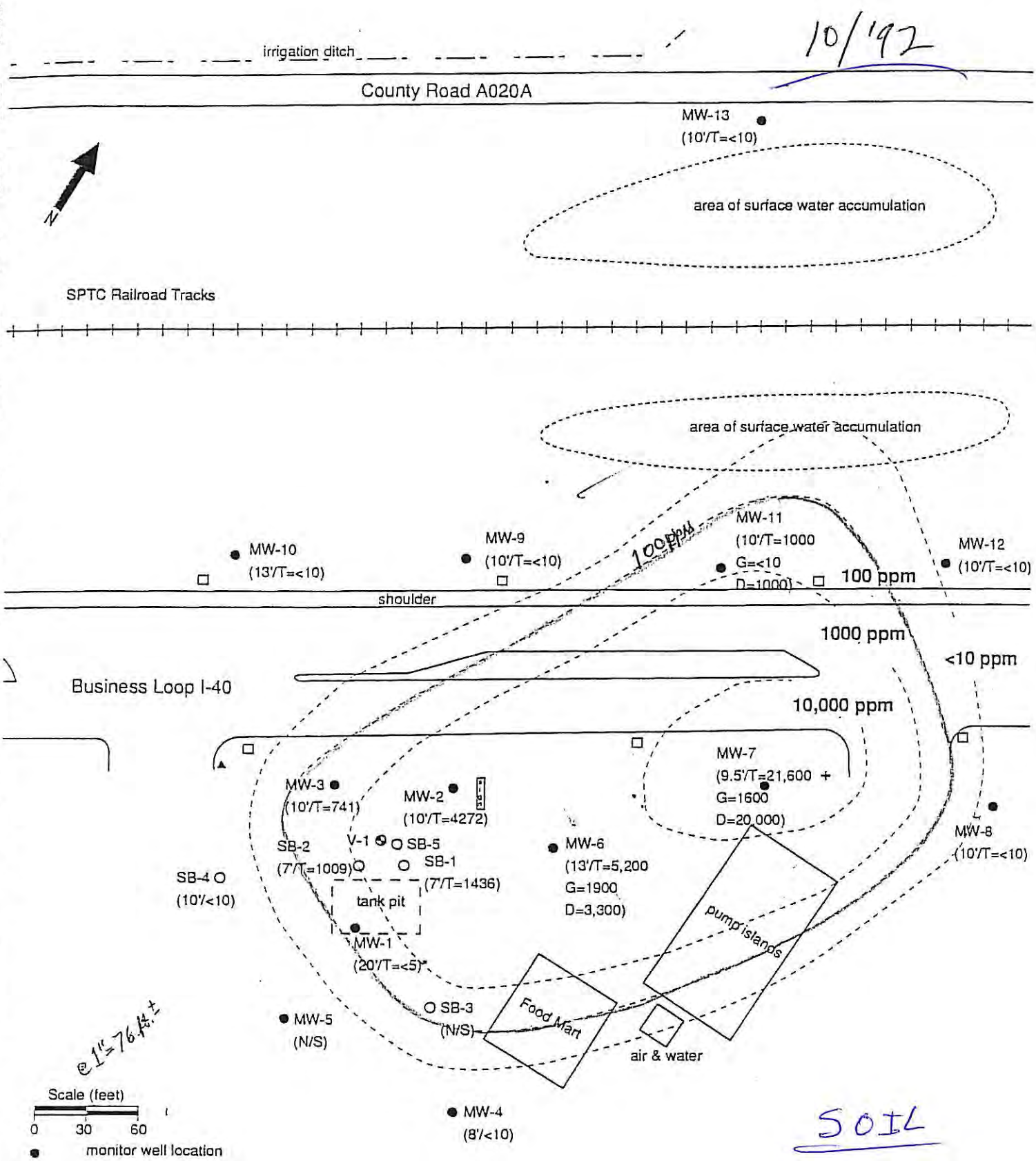
2/2003 data



8/2003 data

DRAWN BY: G. Billings	Figure 1	BILLINGS & ASSOCIATES, INC
DATE:8/13/2003	Well Status Map (initial product thickness & dry wells)	
CASE NO:	Site Name: Tucumcari Truck Terminal	
FACILITY NO:4794003	Site Location:Tucumcari, New Mexico	
AST FACILITY NO: N/A	Date: August 3, 2003	

10/'92



SOIL

FIGURE 10

TPH (Soil) Map 10/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

State of New Mexico
ENVIRONMENT DEPARTMENT
Petroleum Storage Tank Bureau
1301 Siler Rd. Building - B
Santa Fe, New Mexico 87507
Telephone (505) 476-4397
Fax (505) 476-4374

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Deputy Secretary

JIM NORTON
Director

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To: Jonita Brooks From: G. Bayerwork PSTB.

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Phone: 476-4384 Date: 3/11/09

Re: Tucumcari Truck Terminal "A" CC

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• Comments: Just Report from Billings & Associates, Inc.

Prepared by
BILLINGS & ASSOCIATES, INC
6808 Academy Parkway E. N. E.
Albuquerque, NM 87109
505.345.1116

Shipley Phillips
Tucumcari Truck Terminal
Tucumcari, New Mexico

August 2003

Product Bail Down Test REPORT

Prepared for
New Mexico Enviroment Department
Petroleum Storage Tank Bureau
and
Mr.Mark Phillips
Shipley-Phillips, Inc.

Product Recovery Report
Tucumcari Truck Terminal
Tucumcari, New Mexico
Fac# (old/new): 4794003/31248 SID#: 730 WPID#: 8697
Continued Phase V
August 13, 2003

TABLE OF CONTENTS

Text.....pages 1 thru 4

Figures

Figure 1 Base Map of Site (indicates initial product thickness & dry wells)
Figure 2 Mapped Product Recovery Rates by Well

Appendices

Appendix A: Field Data (plus hand calcuations)
Appendix B: Graphs of Recovery Rates
Appendix C: Copy of Calculations page from EPA Document

Product Recovery Report
Tucumcari Truck Terminal
Tucumcari, New Mexico
Fac# (old/new): 4794003/31248 SID#: 730 WPID#: 8697
Continued Phase V
August 13, 2003

1.0
Introduction

Site identified above is an operational fuel dispensing station. In the early-mid 1990's Billings & Associates, Inc. (BAI) installed an SVVS® remedial system on site. System is generically known as an air sparge/vacuum extraction remedial method.

During the course of operations, significant reductions in ground water contamination were noted, and product plume was reduced to a small area around one well. System was terminated before completion of remedial efforts due to budget constraints of the New Mexico Environment Department (NMED) through the, then, Underground Storage Tank Bureau, now known as the Petroleum Storage Tank Bureau (PSTB).

Subsequent monitoring of the site earlier this year, revealed that all but a few monitor wells had gone dry. Of those with fluid in well (four in number), all had measurable free product (ranging from about one inch to two plus feet in thickness. Additionally, only one well at that time (MW-2) contained any ground water.

A decision was made to perform a product bail-down test on wells MW-7, MW-14 and MW-16 in order to estimate potential rates of product recovery on site. These data were deemed necessary to evaluate use of potential product recovery system(s)/method(s) for continued site remediation.

Monitor well MW-2 was not used in bail-down testing as initial product thickness was not adequate.

Product Recovery Report
Tucumcari Truck Terminal
Tucumcari, New Mexico
Fac# (old/new): 4794003/31248 SID#: 730 WPID#: 8697
Continued Phase V
August 13, 2003

2.0
List of Figures

Figure 1 : Base Map of Site (indicates initial product thickness and dry wells)
Figure 2 : Mapped Product Recovery Rates by Well

3.0
List of Appendices

Appendix A : Field Data (plus hand calculations)
Appendix B : Graphs of Recovery Rates
Appendix C : Copy of Calculations page from EPA Document

4.0
Field Plan

As per the Approved Work Plan dated May 12, 2003 the following field methodology was applied:

1) Evaluate initial product thickness (used oil/water interface probe).
2) Bail out by hand and record product removal volume until 1/4 inch or less of product remained in well.
3) On five minute interval evaluate product recovery by assessing increased product thickness in well. Record these data.
4) Run recovery evaluations for two consecutive hours or until product thickness had returned to within 1/4 inch of initial thickness.
5) Evaluate and record product thickness at the final measurement interval.
6) Assess if any ground water, was available below the product.
7) Store recovered product in approved containers in safe area. Final disposition of this product will be made/included in work plan for product recovery system.

Product Recovery Report
Tucumcari Truck Terminal
Tucumcari, New Mexico
Fac# (old/new): 4794003/31248 SID#: 730 WPID#: 8697
Continued Phase V
August 13, 2003

5.0
Field Data

Initial product thickness' assessed in wells are as follows: MW-7: 10.50 inches. MW-14: 2.30 feet. MW-16: 4.0 inches. Again, although not used in bail-down testing, MW-2 had a product thickness of 0.5 inch.

All other available wells found on site were checked and found to be dry.

Appendix A contains the accumulated field data from the bail-down tests for all three wells. Graphing of available data for recovery versus time and extrapolated 80% recovery are found in **Appendix B**.

General calculations for estimating potential product recovery rates are based on document EPA 510-R-96-001,titled : How To Effectively Recover Free Product At Leaking Underground Storage Tank Sites, (A Guide For State Regulators). Specifically the equations and techniques are described on Exhibit IV-12 on page IV - 29, Method 1.

Monitor well MW-16 did not have appropriate return of product in well following bail-down to generate estimates of potential product recovery. Graphing would indicate a trend towards loss of product as opposed to increasing product thickness necessary to apply EPA calculations.

Monitor well MW-7 calculated to an estimated return of approximately 0.31 gallons per day (gal/day).

Monitor well MW-14 was estimated to have a product recovery rate of 0.96 gal/day.

It is important to note that all wells containing free product were found to have groundwater located beneath the identified product. This indicates a probable ground water impact on site.

Product Recovery Report
Tucumcari Truck Terminal
Tucumcari, New Mexico
Fac# (old/new): 4794003/31248 SID#: 730 WPID#: 8697
Continued Phase V
August 13, 2003

6.0
Recommendations Regarding Product Recovery

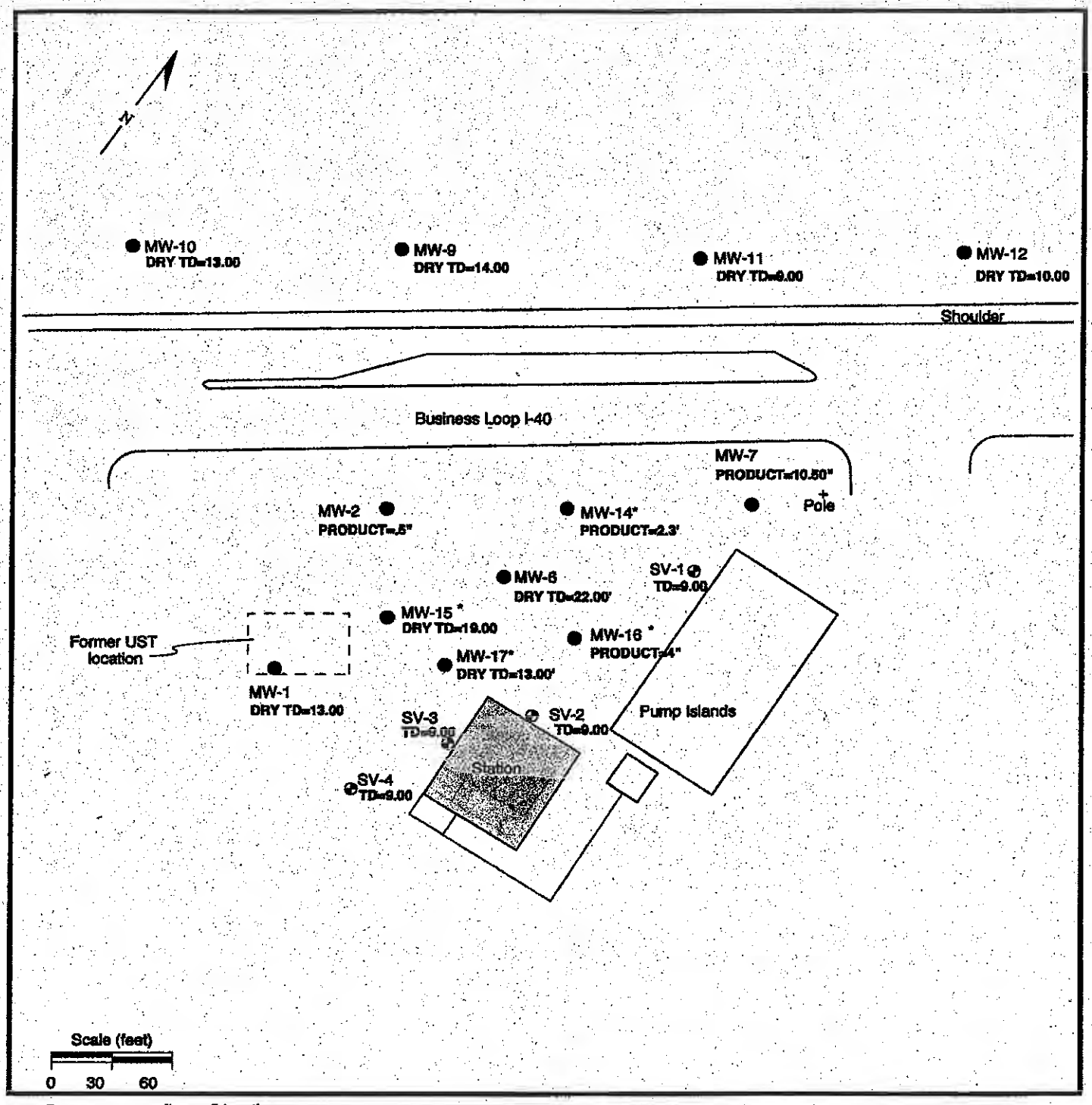
•It is BAI's opinion this site is a reasonably good candidate for a passive recovery effort, but to be more economical with recovery efforts, BAI believes some additional wells be placed near the well identified as MW-14. These aspects would be covered in more detail with some review of technologies available if the State requests said effort and work plan.

If there are any questions or comments please do not hesitate to contact this office.

Sincerely,

Brad Billings
President
Billings & Associates, Inc.

cc: Mark Phillips
File

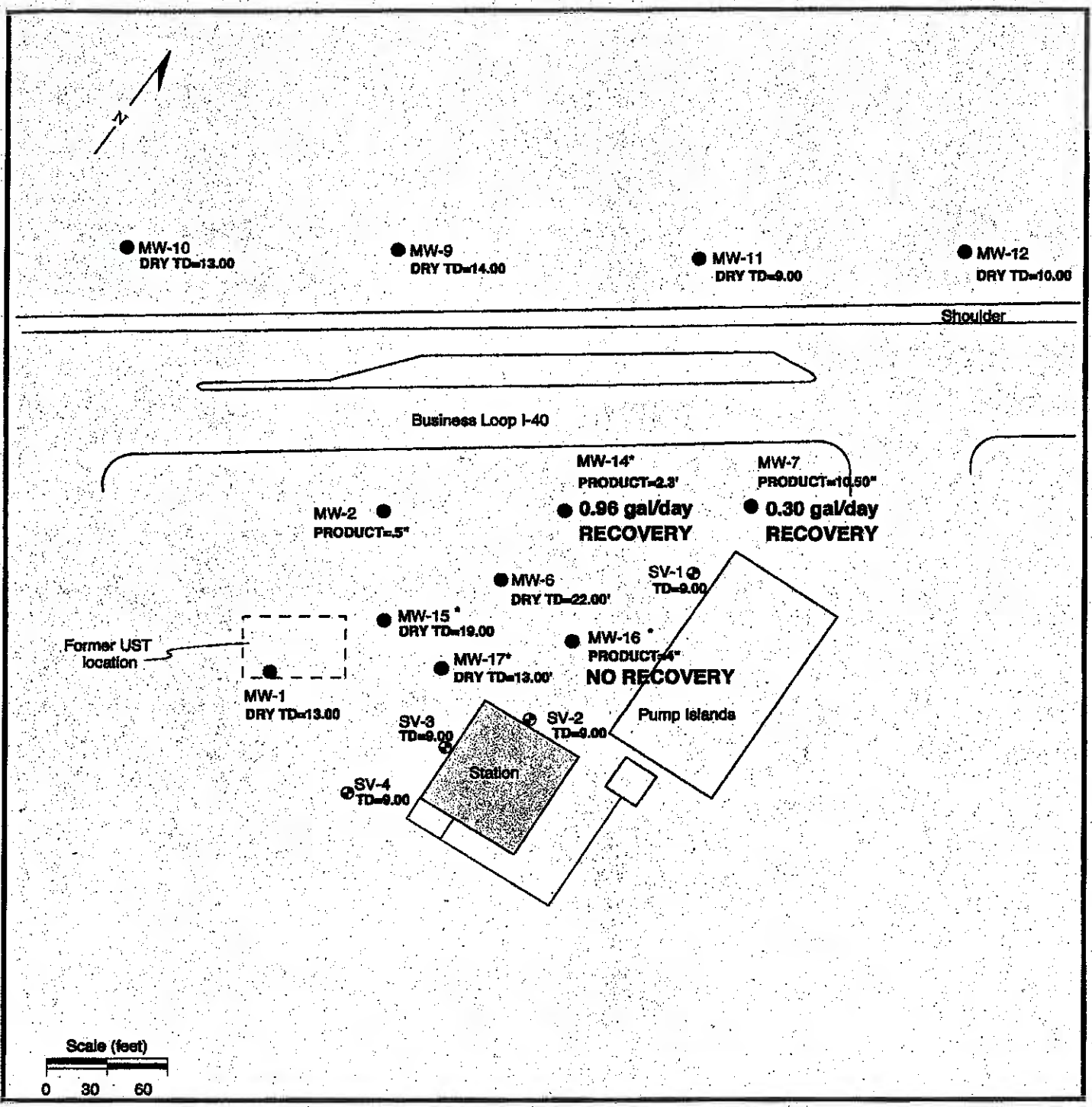


monitor well locations

vadose zone monitoring well

MW-14* installed 9/94

DRAWN BY: G. Billings	Figure 1	BILLINGS & ASSOCIATES, INC.
DATE:8/13/2003	Well Status Map (initial product thickness & dry wells)	
CASE NO:	Site Name: Tucumcari Truck Terminal	
FACILITY NO:4794003	Site Location:Tucumcari, New Mexico	
AST FACILITY NO: N/A	Date: August 3, 2003	



DRAWN BY: G. Billings	Figure 2	BILLINGS & ASSOCIATES, INC
DATE:8/13/2003	Mapped Product Recovery Rates by Well	
CASE NO:	Site Name: Tucumcari Truck Terminal	
FACILITY NO:4794003	Site Location:Tucumcari, New Mexico	
AST FACILITY NO: N/A	Date: August 3, 2003	

PG

August 3, 2003

Shipley-Phillips Tucumcari Truck Terminal

MW-7
Depth to Product - 18.36'
Depth to Water - 19.24'
Total Depth - 19.50'
Initial Product Thickness - 10.50"
Initial Product Removed - 25 ounces

Time Interval (minutes)	Depth to Product
0	19.16'
5	19.09'
10	19.03'
15	19.01'
20	18.99'
25	18.98'
30	18.97'
35	18.96'
40	18.96'
45	18.95'
50	18.95'
55	18.95'
60	18.95'
65	18.95'
70	18.95'
75	18.95'
80	18.95'
85	18.95'
90	18.95'
95	18.95'
100	18.95'
105	18.95'
110	18.95'
115	18.95'
120	18.95'

Product thickness after 2 hours - 2.50"

product 0.88'
80% = 0.704'

540 min

$$\frac{0.16319 \times 0.704}{540}$$

$$= 2.1 \times 10^{-4} \text{ gal/min}$$

$$= 0.31 \text{ gal/day}$$

August 3, 2003

Shipley-Phillips Tucumcari Truck Terminal

MW-14
Depth to Product - 21.65'
Depth to Water - 23.95'
Total Depth - 24.50'
Initial Product Thickness - 2.30'
Initial Product Removed - 124 ounces

Time Interval (minutes)	Depth to Product
0	24.10'
5	23.93'
10	23.71'
15	23.68'
20	23.64'
25	23.61'
30	23.59'
35	23.57'
40	23.55'
45	23.54'
50	23.52'
55	23.51'
60	23.50'
65	23.50'
70	23.49'
75	23.48'
80	23.46'
85	23.45'
90	23.44'
95	23.44'
100	23.43'
105	23.43'
110	23.42'
115	23.41'
120	23.40'

Product thickness after 2 hours - 7.10"

$r = 1'' = 0.083'$

$r^2 = .00694$

Max thickness 2.3'

80% 1.84'

t to 80% 450 min

4. $\pi \times (0.00694) \times 7.48 = 0.16319$

5. $\frac{0.16319 \times 1.84 \text{ gal}}{450 \text{ min}} = 6.7 \times 10^{-4} \text{ gal/min}$

$\approx 0.96 \text{ gal/day}$

PG

August 3, 2003

Shipley-Phillips Tucumcari Truck Terminal

MW-16
Depth to Product - 23.27'
Depth to Water - 23.60'
Total Depth - 24.00'
Initial Product Thickness - 4.00"
Initial Product Removed - 10 ounces

Time Interval (minutes)	Depth to Product
0	23.71'
5	23.69'
10	23.69'
15	23.68'
20	23.67'
25	23.65'
30	23.64'
35	23.63'
40	23.63'
45	23.62'
50	23.62'
55	23.61'
60	23.61'
65	23.60'
70	23.60'
75	23.60'
80	23.60'
85	23.60'
90	23.60'
95	23.60'
100	23.60'
105	23.60'
110	23.60'
115	23.60'
120	23.60'

insufficient return for calculations

Product thickness after 2 hours - 1.75"

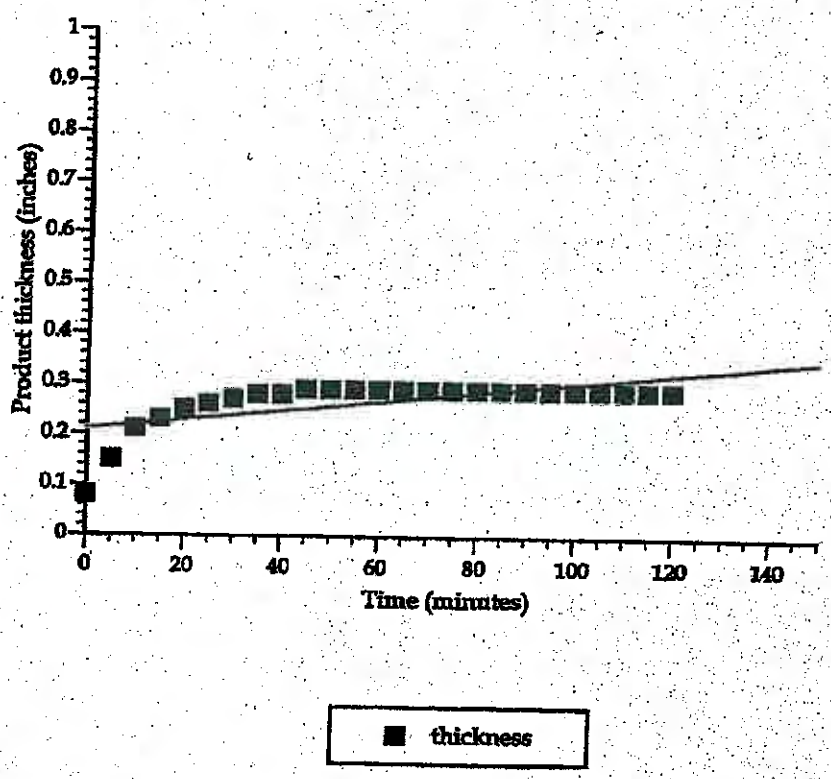
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August 3, 2003

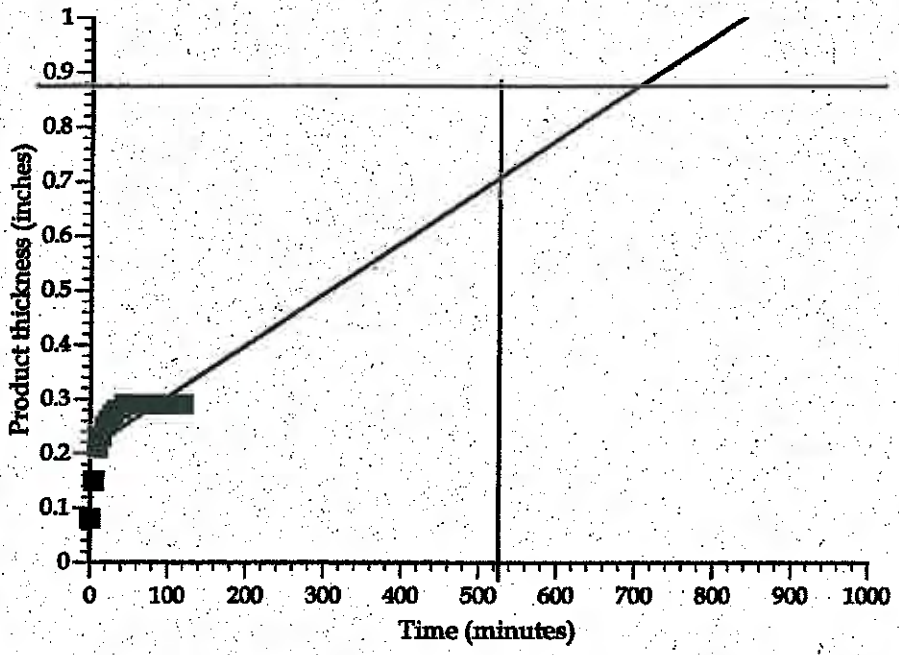
Shipley-Phillips Tucumcari Truck Terminal

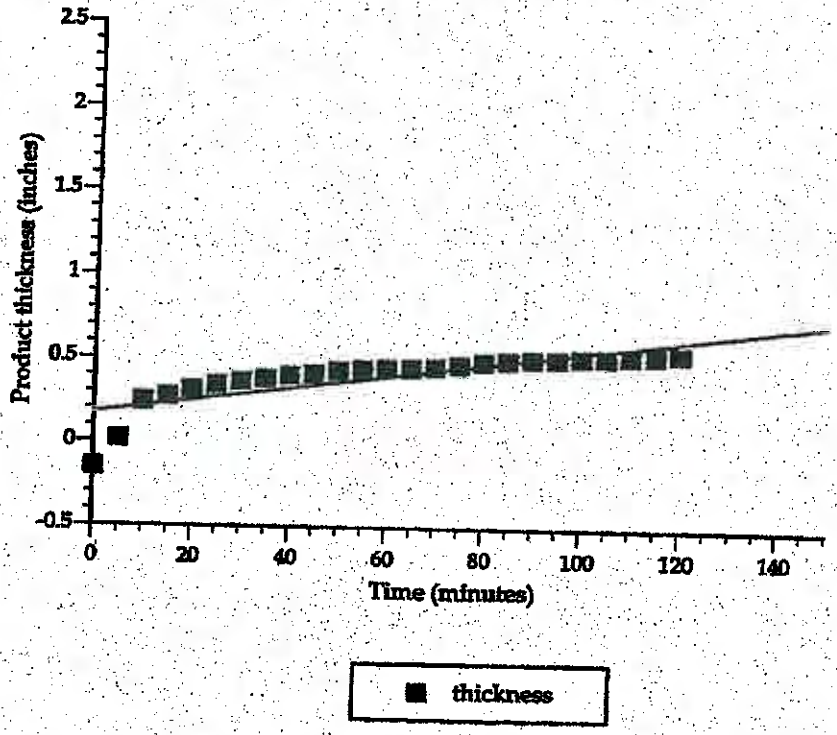
MW-6	Depth to Water - Dry Total Depth - 22.00'
MW-15	Depth to Water - Dry Total Depth - 19.00'
MW-17	Depth to Water - Dry Total Depth - 13.00'
MW-2	Depth to Product - 25.95' Product Thickness - 1/2" Total Depth - 27.50' Product Removed - 12 ounces
MW-12	Depth to Water - Dry Total Depth - 10.00'
MW-11	Depth to Water - Dry Total Depth - 9.00'
MW-9	Depth to Water - Dry Total Depth - 14.00'
MW-10	Depth to Water - Dry Total Depth - 13.00'

MW-7
Product Recovery

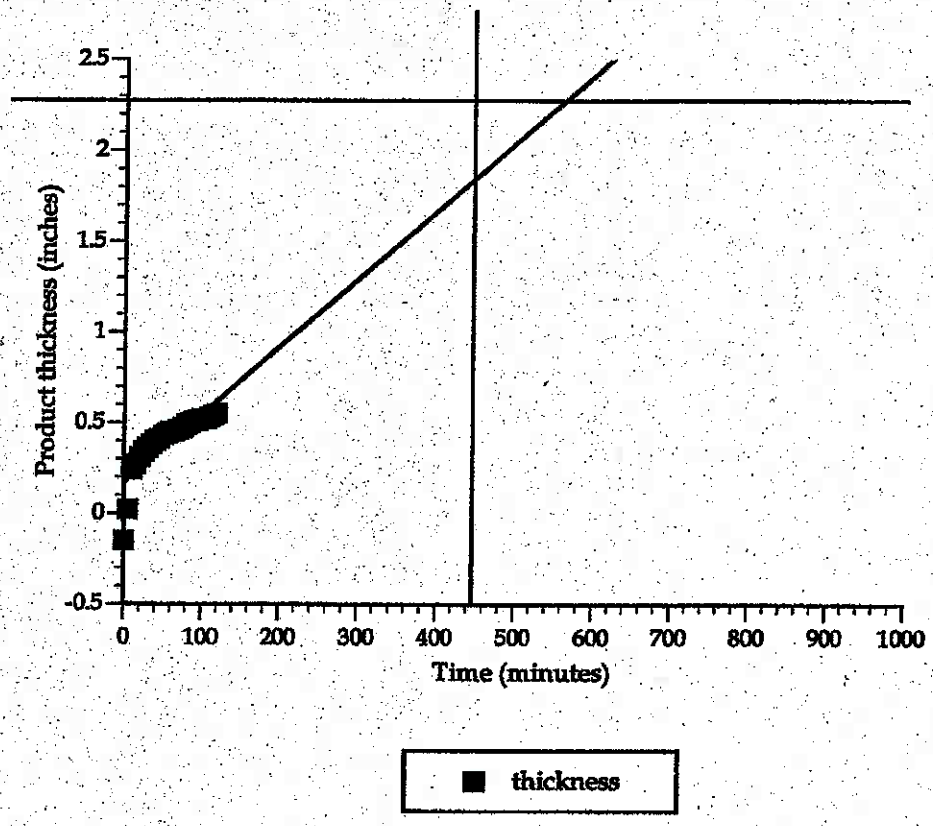


MW-7
Product Recovery




MW-14
Product Recovery
Product thickness (inches)
2.5
2
1.5
1
0.5
0
-0.5
0
20
40
60
80
100
120
140
Time (minutes)
thickness

MW-14
Product Recovery



Example

Exhibit IV-12

Sample Calculations For Estimating Initial Free Product Recovery Rates

Method 1. Bail down testing (Applicable to skimming-type recovery systems).

Inside Diameter of Well Screen = 4 inches
Radius = 2 inches
= 0.166 foot

1. Maximum thickness from table. = 1.15 feet

2. 80% x maximum thickness recovery.
(0.8 x 1.15) = 0.92 foot

3. Time corresponding to 80% of recovery interpolated from table.
3 hours 24 min = 204 min

4. Compute gallons per foot of oil thickness in well screen.
π x (well radius in ft)^2 x (conversion factor in gal/ft^3) = gal/ft
π x (0.166)^2 ft^2 x 7.48 gal/ft^3 = 0.65 gal/ft

5. Compute average recovery rate to 80% recovery.
0.65 gal/ft x 0.92 ft/204 min = 0.003 gal/min = 4.2 gal/day

Field Data

Recovery Time	Free Product Thickness (ft)
2 min	0.01
4 min	0.03
10 min	0.12
30 min	0.30
1 hour	0.51
2 hours	0.85
4 hours	0.95
8 hours	0.98
24 hours	1.15
48 hours	1.10

Method 2. Constant rate pump test (Applicable to free product recovery with water level depression).

Pumping Rate = 10 gal/min

1. Compute average hydrocarbon recovery rate from table for 24 hours.

52.1 gal/24 hours = 2.17 gal/hour
= 0.0361 gal/min

2. Compute

$$\text{Hydrocarbon Recovery Ratio} = \frac{\text{Hydrocarbon Recovery Rate}}{\text{Total Pumping Rate}}$$

$$\frac{0.0361 \text{ gal/min}}{10 \text{ gal/min}} = 0.00361 = 0.361\%$$

Field Data

Time Since Pumping Started	Cumulative Hydrocarbons Collected
10 min	0.0 gal
20 min	0.3 gal
40 min	0.8 gal
1 hour	2.5 gal
2 hours	5.8 gal
4 hours	14.6 gal
8 hours	23.8 gal
24 hours	52.1 gal

State of New Mexico
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Petroleum Storage Tank
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Fax (505) 476-4374

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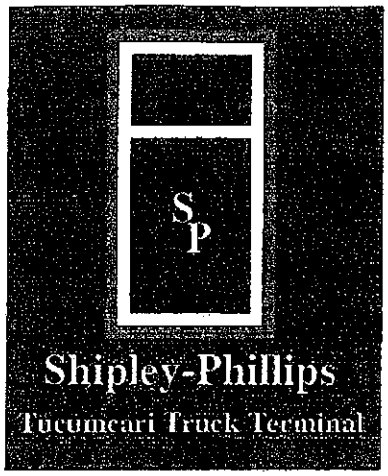
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• Comments: Original Site Investigation 11/'92 - (excerpts from)

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Phase I
Hydrogeologic Investigation Report

for

Shipley-Phillips, Inc.
dba
Tucumcari Truck Terminal

by

Billings & Associates, Inc.
November, 1992

PHASE I

Hydrogeologic Investigation Report

Tucumcari Truck Terminal

Leaking Underground Storage Tank Site

for
Shipley-Phillips, Inc.
dba
Tucumcari Truck Terminal

by
Billings & Associates, Inc.
November 12, 1992

Tucumcari Truck Terminal
PHASE I - Hydrogeologic Investigation Report

Pursuant to Part XII, §1210 D. of the Corrective Action Regulations of the New Mexico Environment Department, the undersigned individual has prepared this report and is personally familiar with the information submitted.

Gale K. Billings

Dr. Gale Billings
Operations Manager
Billings & Associates, Inc.

Tucumcari Truck Terminal

PHASE I - Hydrogeologic Investigation Report

1.0
Introduction

This report presents the methods used and the results of a Phase I hydrogeologic investigation conducted for the Shipley-Phillips, Inc. (dba Tucumcari Truck Terminal) site located at Exit 329, Interstate 40, Tucumcari, NM (Figures 1 and 2). This report is submitted per the New Mexico Environment Department - Underground Storage Tank Bureau (NMED-USTB) regulations, Part XII, §1210 and as amended by the NMED USTB Jurisdiction, Soil/Water Sampling & Disposal Guidelines.

2.0
Previous Investigations

A previous consultant retained by Shipley-Phillips, Inc. prepared a series of reports for the site up to and including the equivalent of an initial site assessment report wherein an underground storage tank leak was identified. Four (4) underground storage tanks were removed in June 1991. The reports identified the fuels released as diesel and/or gasoline. Neither the magnitude nor full extent of the release were determined. The soil boring and monitor well locations completed by that consultant are shown in Figure 3. The consultant's reports showed TRPH in soil ranging from 1009 ppm in boring B-1 to 17,697 ppm in MW-2. Water samples from MW-2 and MW-3 indicated approximately 4000 ppb total BTEX, approximately 65 ppb EDC and less than 10 ppm TRPH. MW-1 was set in the former tank pit that had been filled with clean backfill. The ground water was reported as having a TDS content ranging from 1080 mg/l to 1342 mg/l. The consultant's reports did not identify any domestic water wells within 0.5 miles of the site. In November, 1991 the NMED-USTB requested additional work be done at the site, namely the preparation of a hydrogeologic investigation report. Billings and Associates, Inc. (BAI) became involved with the site in August, 1992.

3.0
Data Acquisition Methods

This hydrogeologic investigation was implemented in a series of tasks. Task 1 included the review of the previous consultant's data (summarized in Section 2), a reconnaissance of the site conducted in August, 1992, work plan preparation, soil sampling and monitor well installations and aquifer testing, Task 2 addressed water sampling and Task 3 is the preparation of this report.

After reviewing the previous consultant's data, a site reconnaissance was performed on August 19, 1992. At that time, well inspections indicated that all existing wells were contaminated with fuel hydrocarbons as all emitted strong hydrocarbon odors. Additionally, 1/16" of product was detected in monitoring well MW-2 and a strong sheen was detected in MW-3. The physical characteristics of the product appeared to be consistent with those of diesel fuel. These observations are generally consistent with the prior consultant's findings with the exception that the clean fill in the tank pit was thought to be contaminated with fuel hydrocarbons.

A work plan was prepared and submitted to the NMED-USTB for pre-approval. The work plan addressed monitor well drilling and installation, soil sampling for organic chemistry, well development, surveying, aquifer characterization testing and report preparation. Pre-approval was given by the NMED-USTB on October 14, 1992 (Appendix F).

The soil borings and monitoring wells installed during the hydrogeologic investigation were intended to define the thickness and lateral extent of product accumulation, the extent of ground water contamination on and adjacent to the site, the rate and direction of potential contaminant migration and to provide data pertinent to the selection and design of a remediation system. Three soil borings and ten monitoring wells were installed and their locations as well as those installed by the previous investigator are shown in Figure 3. The well locations were adjusted from those proposed in the work plan to maximize the efficiency of the drilling program as data were acquired.

Underground utilities placed additional restraints on boring locations (Figure 2).

Access for the wells proposed along the Business Loop of I-40 was obtained from the New Mexico State Highway and Transportation Department (NMSHTD), District Four office, Las Vegas, NM. Access to Southern Pacific Transportation Company (SPTC) property north of the site was requested via the NMED-USTB in September, 1992 but has not yet been obtained. Access to the right-of-way along County Road A020A was obtained on October 27, 1992.

The soil borings and monitoring wells were drilled with a back hoe-operated drilling rig using clean 6.25" OD hollow stem augers. The augers were decontaminated by cleaning with a high pressure washer with phosphate-free detergent and high pressure rinsing with City of Tucumcari tap water.

All materials encountered were logged for their characteristics such as overall texture, grain size, sorting, roundness, moisture content, plasticity, color and presence or absence of hydrocarbon odor. All materials encountered were unconsolidated sediments except for asphalt on the south side of the Business Loop of I-40 and a sandstone lense in MW-6. The lithologic logs for all wells and soil borings installed during this investigation are shown in Appendix A.

Soil samples from each boring were taken by hand augering at two- to five-foot intervals from ground surface to the water table. Saturated soils were not analyzed. These soil samples were subjected to heated headspace analysis per the NMED-USTB regulations, Part XII, Appendix C. The headspace readings were made with an Environmental Instruments Model 580 B photoionization meter with a 10.2 e.v. lamp. The meter was calibrated daily against a 100 ppm isobutylene standard. The results of the heated headspace assays are tabulated in Appendix C and the maximum readings from each boring are contoured in Figure 9. Separate soil samples were taken for heated headspace and laboratory analyses.

Soil samples were submitted for laboratory analysis per the NMED-USTB Jurisdiction, Soil/Water Sampling and Disposal Guidelines, III A.and Part XII, §1205 (C) of the NMED-USTB regulations. Soil samples were taken from all soil borings and monitor wells both on and off site except SB-3, SB-5, V-1 and MW-5. Ten soil samples were submitted for EPA Method 8015-volatile and semivolatile TPH analyses. The soil sample analyses were performed by Hall Environmental Analysis Laboratories, Albuquerque, NM. The laboratory analyses reports and summary table for the soil samples are shown in Appendix E.

All soil samples subject to laboratory analyses were taken by hand auger from the target depth and immediately placed in 8-oz. glass jars with Teflon-lined caps provided by the lab. All soil samples were immediately placed on ice until delivered to the lab for analyses. The hand augering equipment was decontaminated using the same methods as for auger cleaning described above, before use in each boring. Decontaminated auger buckets were used to obtain each soil sample. Chain-of-custody documentation was maintained on all samples and are included with the laboratory reports in Appendix E.

All permanent monitoring wells were constructed per the NMED-USTB regulations, Part XII, Appendix E. The monitoring well completion data are shown in Appendix B. The completion data are tabulated in Table 1. The borings were augered to a depth of approximately three feet below the water table when conditions permitted. The wells were cased with 2" Sch 40 PVC with threaded connections. The wells were screened with 5 feet of 0.010"-slot screen of which approximately 3 feet of screen was placed below the level where water was encountered and two feet of screen placed above. Exceptions were in the cases of MW-6 where saturation was not encountered above 17 to 18 ft. and V-1 which was designed to define the vertical gradient component of contamination. As necessary and practical, the 2" PVC screen and casing were driven to the target depth. When conditions permitted, a 10-20 silica sand pack was placed to a point one foot above the top of the screen. A hydrated bentonite pellet seal,

approximately two to three feet thick, was placed over the sand pack. The remaining annular space was backfilled with cement. All surface completions consisted of a 12"X12" steel manway flush-mounted in concrete approximately 1" - 2" above grade.

Well development was performed by manual inertial hand pumping and bailing. The inertial pump was decontaminated prior to use in a well and new tubing was used in each well. The stainless steel bailer was decontaminated and new cord was attached prior to use in each well. The discharged waters were visually monitored for sand production and turbidity. Development was considered complete when sand production was reduced to trace amounts. All wells were at least slightly turbid at the end of development. Conductivity and pH were not monitored during the initial development as it was anticipated that these parameters would stabilize before sand production was reduced.

Water samples were submitted for analysis per the NMED-USTB Jurisdiction, Soil/Water Sampling and Disposal Guidelines, III B. Water quality samples were taken from all pre-existing and new monitoring wells both on and off site. The water samples were analyzed to determine the presence of both gasoline and diesel fuels and their constituents. Thirteen samples were submitted for analysis by EPA Methods 601 and 602 - BTEX, MTBE, EDB, EPA Method 504.1 - EDC (gasoline-related compounds) and EPA Method 610 - polynuclear aromatic hydrocarbons (PAH - diesel-related compounds). The water sample analyses were performed by Hall Environmental Analysis Laboratories, Albuquerque, NM. The laboratory analyses reports and summary tabulation for the water samples are shown in Appendix E.

All water samples were obtained by purging 3 casing volumes with new disposable polyethylene bailers and cord and placing the sample in the appropriate containers supplied by the lab. The EPA 601, 602 and 504.1 samples were placed in 40-ml VOA's preserved with $HgCl_2$ and the EPA 610 samples were placed in unpreserved, 1-liter amber glass containers. All samples were immediately stored on ice until delivered

to the lab for analyses. Chain-of-custody documentation was maintained on all samples and are included with the laboratory reports in Appendix E.

Liquid level and product thickness measurements were made immediately prior to sampling. Liquid level measurements were made by wetted tape relative to a datum established on the PVC casing. The measuring tape was decontaminated prior to use in each well. All wells were then checked for product by lowering a new clear disposable bailer across the liquid level interface, retrieving it and examining the interface for product prior to purging. Thickness measurements were made on product in the bailer. Product was detected in wells MW-2, MW-6 and MW-7 at thicknesses of 6 5/16", 3/8" and 1", respectively. The liquid level data and product thickness data are shown in Tables 2 and 3, respectively.

On October 30, 1992 product was detected in MW-2, MW-6 and MW-7. On November 4, 1992.wells MW-2, MW-6 and MW-7 were re-examined to verify the product thickness data. The data were obtained as described above. The November 4, 1992 measurements were as follows: MW-2 - 4 1/4", MW-6 - 4 3/4" and MW-7 - 11". These data are shown in Table 3. The November, 1992 product thickness data are shown on a contour map in Figure 8. Single phase product samples were taken from each of the three wells on November 4, 1992 for fuel fingerprinting analyses by EPA Method 8015 - Modified. The product analyses were performed by Hall Environmental Analysis Laboratories, Albuquerque, NM. The product samples were placed in unpreserved 40-ml VOA's and immediately placed on ice until delivered to the lab. Chain-of-custody documentation was maintained on all samples and are included with the laboratory reports in Appendix E.

BAI is in the process of preparing a Phase II - Product Recovery work plan for pre-approval per the NMED-USTB regulations, Part XII, §1208 and the Ground Water Protection Act -Corrective Action Fund Regulations, Part II.

Aquifer characteristics were determined from slug injection testing. Data acquisition was via a pressure transducer and data logger. The details of the aquifer testing program are presented with the test analyses in Appendix D and Section 4.0 below.

All wells were surveyed for horizontal and vertical control relative to a local datum. The reference datum was the sewer manhole cover to which an arbitrary elevation of 100.00 ft. was assigned.

4.0
Site Geology and Hydrology

The site is located on the south slope of the valley of Pajarito Creek. Pajarito Creek is approximately two miles north of the site. The site is underlain by alluvium , the Tucumcari Shale and the Morrison Formation. The alluvium at the site is the product of the erosion of the higher terrains to the south, east and west which are composed of the Morrison Formation (shales and sandstones), Tucumcari Shale and the Dakota Sandstone. The ground water encountered at the site is thought to be a perched system contained in the alluvium.

The alluvium at the site was not fully penetrated by borings drilled during this investigation. The cross sections shown in Figures 5 and 6A and 6B indicate a fluvial depositional environment of low to high energy generally transporting material from the highlands in the south to the valley axis in the northwest. This depositional environment has resulted in lenticular deposits with little potential for detailed lateral correlation. This depositional environment does indicate the lenses will generally be elongated along southeast-northwest axes. The alluvium is composed of sands, silts, clays and gravels. The sands range from very clean, medium- to very fine-grained, well sorted material to clay-rich, fine- to very fine-grained, poorly sorted material. The clays are sandy and plastic and range from dense to soft. The gravels range in size from pebble to cobble. Poor sample recovery and the lack of cuttings returns during drilling precluded more detailed descriptions of the gravels. All materials encountered were unconsolidated. In MW -6, a lense of very hard, calcite-cemented, fine-grained sandstone was encountered. This sandstone is not related to any nearby bedrock occurrences.

In general, the site is bounded by clay-rich materials on the north, east and west sides as evidenced by the logs for SB-4, MW-8, MW-10, MW-12 and MW-13. The central

and south portions of the site contain more gravels, clean sands and sand-rich material. The clay-rich materials are slowing ground water flow and contaminant migration as evidenced by slow rates of recharge observed during development and purging and the lack of detectable petroleum hydrocarbons.

Aquitard-like lithologies were not penetrated in any borings. In MW-11 a clayey zone was encountered between 11 and 13 feet. This clayey zone was sealed with bentonite pellets prior to well construction. In SB-5 a clayey zone was encountered between 11 and 15 feet. This zone was also sealed with bentonite pellets prior to backfilling the bore hole with cuttings. Subsequent drilling at the adjacent V-1 site indicated the clayey zone in SB-5 was not laterally continuous.

There are two surface water courses within 0.5 miles of the site - the Conchas Canal and and irrigation ditch network, both of which are shown on Figure 1. Both are operated by the Arch Hurley Conservancy District. The Conchas Canal lies approximately 15 to 20 feet above the site. The canal typically runs from April to October. It was full until the end of October, 1992 and was dry on November 4, 1992. The irrigation ditches are north of the SPTC railroad tracks and are used on the same schedule as the Conchas Canal. Field observations yielded no surface contaminant migration pathways to the canals from the site. These ditches were also dry on November 4, 1992. Immediately north of the site, on both sides of the SPTC railroad tracks, are closed areas of runoff accumulation (Figure 2). The hydrologic impact of these areas has not been determined as access for drilling and monitor well installation has not been received from SPTC. It is suspected, however, that these basins are underlain by clayey material and that the clayey material and/or the head of the standing water may act to retard ground water flow and contaminant migration.

The Conchas Canal in the vicinity of the site is thought to be a potential seasonal source of recharge to the shallow aquifer at the site. The Conchas Canal was not available for inspection for leakage potential during the investigation. There are unconfirmed reports

that the canal had been lined with bentonite to reduce water loss in sandy material in the vicinity of the site. There are several intermittent streams up- and cross-gradient from the site that may also contribute recharge to the shallow aquifer.

Water level data were taken from all wells at the site on October 30, 1992 and are shown as depths to water and water level elevations in Table 2. These data are shown as a potentiometric surface contour map in Figure 7. The contoured data indicate a ground water mound beneath the site. The ground water gradients range from 0.0209 ft./ft., bearing N 62 W on the west portion of the site, to 0.0221 ft./ft., bearing N 35 W on the central portion of the site, to 0.0178 ft./ft., bearing N 4 W on the east portion of the site. Boring SB-4 did not yield water after standing open for approximately 12 hours after drilling and was backfilled with clayey cuttings. In MW-4, -6, -8, -9 and -10 the water level rose 2 to 10 feet above where it was encountered during drilling.

Slug injection tests were conducted at MW-4, MW-11 and V-1 to determine the aquifer transmissivity and storativity. The tests were conducted as described below. Static water level readings were taken prior to the test. A pressure transducer was set approximately 1 foot above the bottom of the well and allowed to equilibrate. The volumetric equivalent of a column of water approximately 12 ft. long and 2" in diameter was instantaneously applied to the well. The resulting water level decay was monitored by a data logger via the transducer. The tests were repeated in MW-4 and MW-11 with a single test in V-1. The analysis of the slug injection tests are shown in Appendix D. As indicated in Appendix D, MW-4 is considered to be representative of the upper portion of the aquifer and V-1 representative of the lower portion.

The transmissivity of the site as determined from the slug testing ranged from 1 ft./day in V-1 to approximately 14 ft./day in MW-4. The average transmissivities were calculated and range from approximately 70 $ft.^2$/day in MW-4 to 5 $ft.^2$/day in V-1. The storativities were calculated and ranged from 0.01 in MW-4 to 0.1 in V-1. The hydraulic conductivities were calculated to be 14 ft./day in MW-4 to 1 ft./day in V-1.

The ground water gradients are 0.0209 ft./ft. in the vicinity of MW-4 and 0.0178 ft./ft. in the vicinity of V-1.

The rate of ground water flow is derived from the Darcy equation (for laminar flow in a porous media) as follows:

$$V = (K\ dh/dl)/\ \eta_e$$

where:

V = average interstitial velocity of ground water,

K = hydraulic conductivity

dh/dl = gradient and

η_e = effective porosity.

Using the results of the slug tests, an assumed effective porosity of 20% and the Darcy Equation above, the calculated ground water velocity ranges from 1.57 ft./day in the upper portion of the aquifer to 0.11 ft./day in the lower portion of the aquifer.

An alternate approach using field observations and published literature to the determination of the ground water velocity was also considered. If the hydraulic conductivity for a fine-grained sand (the typical material in the saturated portion of the aquifer) is assumed to be approximately 0.046 X 10^{-2} m/sec (Er-Hui, Ground Water,1989; Vol. 27, No. 6) and the effective porosity is assumed to be 0.20, the average interstitial velocity of the ground water is calculated to be 0.137 ft./day which is in close agreement with the V-1 analysis results.

5.0
Geochemical Data Interpretations

The results of product measurements are shown on the contour map in Figure 9. This contour map is based on the November 4, 1992 product thickness data shown in Table 3. The product thickness ranges from 11" in MW-7 to 4 3/4" in MW-6 to 4 1/4" in MW-2. A sheen was detected in MW-3 in August, 1992 but has not been observed since. The product occurs in an area with dimensions of approximately 360 feet in an east-west direction and approximately 200 feet in a north-south direction. The thickness and location of the product layer is changing with time as indicated by the data in Table 3. These changes are thought to be due to the intermittent nature of flow in the Conchas Canal and its influence on the local ground water conditions.

On November 4, 1992 product samples were taken for fuel fingerprint characterization in each of the wells above. The product analyses indicate both gasoline and diesel are present in all product samples. The product in MW-2 is 92% diesel and 8% gasoline, the product in MW-6 is 38% diesel and 62% gasoline and the product in MW-7 is 86% diesel and 14% gasoline.

The results of the heated headspace assays are tabulated and shown as profiles in Appendix C and the maximum readings from each boring are contoured in Figure 9. The soil vapor readings varied from 852 ppm in MW-6 to 0.6 ppm in SB-4. The October, 1991 data were not included in this analysis as the type of PID used by the previous consultant was not specified in their report and the type of metering has a large influence on the magnitude of the resulting data. Figure 9 indicates the drilling and sampling program has defined an area of soil vapor greater than 100 ppm with dimensions of approximately 400 feet in an east-west direction and approximately 240 feet in a north-south direction. An area of soil vapor greater than 5 ppm has been largely defined and has dimensions of approximately 480 feet in an east-west direction and approximately 440 feet in a north-south direction. Closure of the 5 ppm contour is

not precise at the northern boundary due to the lack of SPTC property access. The low PID reading at MW-8 indicates the 5 ppm contour should be within 40 feet of the well. PID readings of 2 ppm or less were considered to be indicative of clean soils. PID readings of 5 ppm or more were considered to be indicative of contaminated soils, especially with diesel fuel being a component of contamination.

The results of the laboratory analysis of soils for TPH are shown in Appendix E and the TPH from each boring are contoured in Figure 10. The reported TPH values ranged from 21,600 ppm in MW-7 to <10 ppm in the outlying samples. The October, 1991 data were included in this analysis as the differences in the TPH analysis methods have low to moderate influence on the magnitude of the resulting data. Figure 10 indicates the drilling and sampling program has defined an area of TPH greater than 100 ppm with dimensions of approximately 400 feet in a north-south direction and approximately 240 feet in an east-west direction. The laboratory results also define the relative amounts of gasoline and diesel fuels within the TPH values. The MW-6 and MW-7 soil samples indicated the presence of both gasoline and diesel in the ratios of 37% gasoline and 63% diesel in MW-6 and 7% gasoline and 93% diesel in MW-7. Fuel type differentiation data were not available for the TRPH analyses from borings installed in October, 1991.

Soil samples were also analyzed to determine the presence of benzene, toluene, ethylbenzene and xylenes in addition to TPH. These data are included in Appendix E. The total BTEX data from each boring are contoured in Figure 11. The reported total BTEX values ranged from 301 ppm in MW-7 to <10 ppm in the outlying samples. The October, 1991 data were included in this analysis as the differences in the BTEX analysis methods have low to moderate influence on the magnitude of the resulting data. Figure 11 indicates the drilling and sampling program has defined an area of total BTEX in soil greater than 100 ppm with dimensions of approximately 240 feet in a north-south direction and approximately 120 feet in an east-west direction. The area of

highest total BTEX occurs in the vicinity of MW-6 and MW-7. MTBE was not detected in any of the soil samples at detection limits ranging from 0.1 ppm to 2.5 ppm.

Water samples from all monitoring wells were analyzed to determine the presence of benzene, toluene, ethylbenzene and xylenes (BTEX), ethylene dibromide (EDB) 1,2-dichloroethane (EDC) and polynuclear aromatic hydrocarbons (PAH). These data are included in Appendix E. The total BTEX data from each well are contoured in Figure 12. The reported total BTEX values ranged from 40,000 ppb in MW-6 to <0.5 ppb in the outlying wells. All wells were sampled on October 30, 1992 except MW-13 which was sampled on November 4, 1992. Figure 12 indicates the drilling and sampling program has defined an area of total BTEX in water greater than 1 ppb with dimensions of approximately 400 feet in a north-south direction and approximately 520 feet in an east-west direction. The area of highest concentration of total BTEX in water occurs in the vicinity of MW-2, MW-6 and MW-7.

EDC was reported in water samples from wells MW-8, MW-11 and MW-12, all of which are on the east side of the area investigated. The reported values range from 26 ppb in MW-8 to 0.4 ppb in MW-11. EDC was not reported in any other samples.

Figure 13 shows a contour map of only benzene in water as derived from the data set above. The reported benzene values ranged from 15,000 ppb in MW-6 to <0.5 ppb in the outlying wells. Figure 13 indicates the drilling and sampling program has defined an area of benzene in water greater than 10 ppb with dimensions of approximately 230 feet in a north-south direction and approximately 440 feet in an east-west direction. The area of highest concentration of benzene in water occurs in the vicinity of MW-2, MW-6, MW-7 and V-1.

Figure 14 shows a contour map of MTBE in water as derived from the data set above. The reported MTBE values ranged from 2,300 ppb in MW-6 to <2.5 ppb in the outlying wells. Figure 14 indicates the drilling and sampling program has defined an

area of MTBE in water greater than 30 ppb with dimensions of approximately 440 feet in a north-south direction and approximately 360 feet in an east-west direction. The area of highest concentration of MTBE in water occurs in the vicinity of MW-2, MW-6, MW-7 and V-1.

Figure 15 shows a contour map of total PAH in water as derived from the data set above. The reported PAH values ranged from 7120 ppb in MW-7 to <0.5 ppb in the outlying wells. Figure 15 indicates the drilling and sampling program has defined an area of total PAH in water greater than 30 ppb with dimensions of approximately 220 feet in a north-south direction and approximately 560 feet in an east-west direction. The area of highest concentration of PAH in water includes wells MW-2, MW-3, MW-6, MW-7 and V-1. The PAH analyses indicate that the major components of the suite are napthalene, 2-methyl napthalene and 1-methyl napthalene. Acenapthene and fluorene were detected at low levels in MW-11 (7.2 ppb and 8.1 ppb respectively), and acenapthylene was detected in MW-9 (1.3 ppb).

Well V-1, intended to assess the vertical extent of ground water contamination, showed the reported levels of dissolved phase contaminants had increased relative to those of nearby water table wells. No wells were installed at depths deeper than that of V-1. The lithologic log for V-1 indicates an increase in silt content over the bottom 3 feet. The boring was terminated at 20 feet as this change in lithology could be indicative of the increasing proximity of the bottom of the perched aquifer. This was not confirmed by additional drilling because of the constraints imposed on the program by the NMED (Appendix F).

6.0
Conclusions

The shallow water zone encountered at the site is a perched aquifer of unknown extent. This water occurs in unconsolidated sands, silts and gravels of young geologic age. The water-bearing materials were deposited in a fluvial environment of low to high energy and the individual units have little lateral continuity. The bottom of the perched aquifer was not encountered during this investigation.

The shallow water generally occurs under water table conditions with localized areas of apparent confinement. The confined areas quickly equilibrate to water table conditions. The water table surface is mounded under the site with gradients ranging from 0.0209 ft./ft., bearing N 62 W on the west portion of the site, to 0.0221 ft./ft., bearing N 35 W on the central portion of the site, to 0.0178 ft./ft., bearing N 4 W on the east portion of the site.

The aquifer test analyses indicate that MW-4 should be considered to be representative of the upper portion of the aquifer and V-1 representative of the lower portion. The transmissivities, as determined from the slug testing were calculated and range from approximately 70 $ft.^2$/day in MW-4 to 5 $ft.^2$/day in V-1. The storativities were also calculated and range from 0.01 in MW-4 to 0.1 in V-1. The hydraulic conductivities were calculated to be 14 ft./day in MW-4 to 1 ft./day in V-1. The ground water gradients are to the northwest at 0.0209 ft./ft. in the vicinity of MW-4 and 0.0178 ft./ft. in the vicinity of V-1. The calculated ground water velocity ranges from 1.57 ft./day in the upper portion of the aquifer to 0.11 ft./day in the lower portion of the aquifer.

The contaminants occurring on the site are both diesel and gasoline fuels and related compounds. Free product was present in three wells, MW-2, MW-6 and MW-7 in thicknesses of four to eleven inches (Figure 8). A sheen was detected in MW-3 in August, 1992 but has not been observed since. The thickness of the product changes with time, possibly in response to water level/gradient changes induced by the seasonal

flow in the Conchas Canal. The EPA Modified Method 8015 product analyses indicate the product in MW-2 is 92% diesel and 8% gasoline, the product in MW-6 is 38% diesel and 62% gasoline and the product in MW-7 is 86% diesel and 14% gasoline.

Soil vapor assays by the heated headspace method define a maximum area of potential soil contamination (< 5 ppm) as well as an area of highly contaminated soils (>100 ppm) as shown in Figure 9. The low cut-off value is used because of the presence of diesel in the contaminant plume and its low response on PID's. TPH values in soil (Figure 10) generally confirm the soil vapor data. The TPH data indicate the fuels are approximately 37% gasoline and 63% diesel in MW-6 and 7% gasoline and 93% diesel in MW-7.

Water samples from all monitor wells were analyzed for BTEX, MTBE, EDB, EDC and the EPA method 610 (PAH) analate list. Benzene, toluene, ethylbenzene, total xylenes, MTBE, total napthalenes and EDC were reported in water at levels in excess of the New Mexico Ground Water Standards. The highest reported levels of these compounds were found in wells with free product phase or hydrocarbon odors (Figures 12 - 15). The exception is EDC which was reported in wells MW-8, MW-11 and MW-12.

Figure 16 shows the extent of product occurrence, extent of soil contamination and extent of ground water contamination. The extent of soil contamination was taken as the extent of soil vapor greater than 5 ppm as determined by a 10.2 e.v. PID. The extent of ground water contamination was taken as the maximum extent of petroleum hydrocarbon plume boundaries that exceeded the New Mexico Ground Water Standards. These and all contours presented in this report represent conservative (worst-case) interpretations of the available data. Based on Figure 16, the area of contamination covers approximately 174,800 square feet of which approximately 136,400 square feet are accessible for remediation.

Well V-1, intended to assess the vertical extent of ground water contamination, showed the reported levels of dissolved phase contaminants had increased relative to those of nearby water table wells. No wells were installed at depths deeper than that of V-1. The lithologic log for V-1 indicates an increase in silt content over the bottom 3 feet. The boring was terminated at 20 feet as this change in lithology could be indicative of the increasing proximity of the bottom of the perched aquifer. This was not confirmed by additional drilling because of the constraints imposed on the program by the NMED (Appendix F).

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Fax

To: David Reed - EPA **From:** G. Bequwoit PSTB.

Fax: **Pages:**

Phone: **Date:**

Re: Tucumcari Tr. Terminal A **CC:**

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:** Original Site Investigation 11/'92 - (excerpts from)

1st part

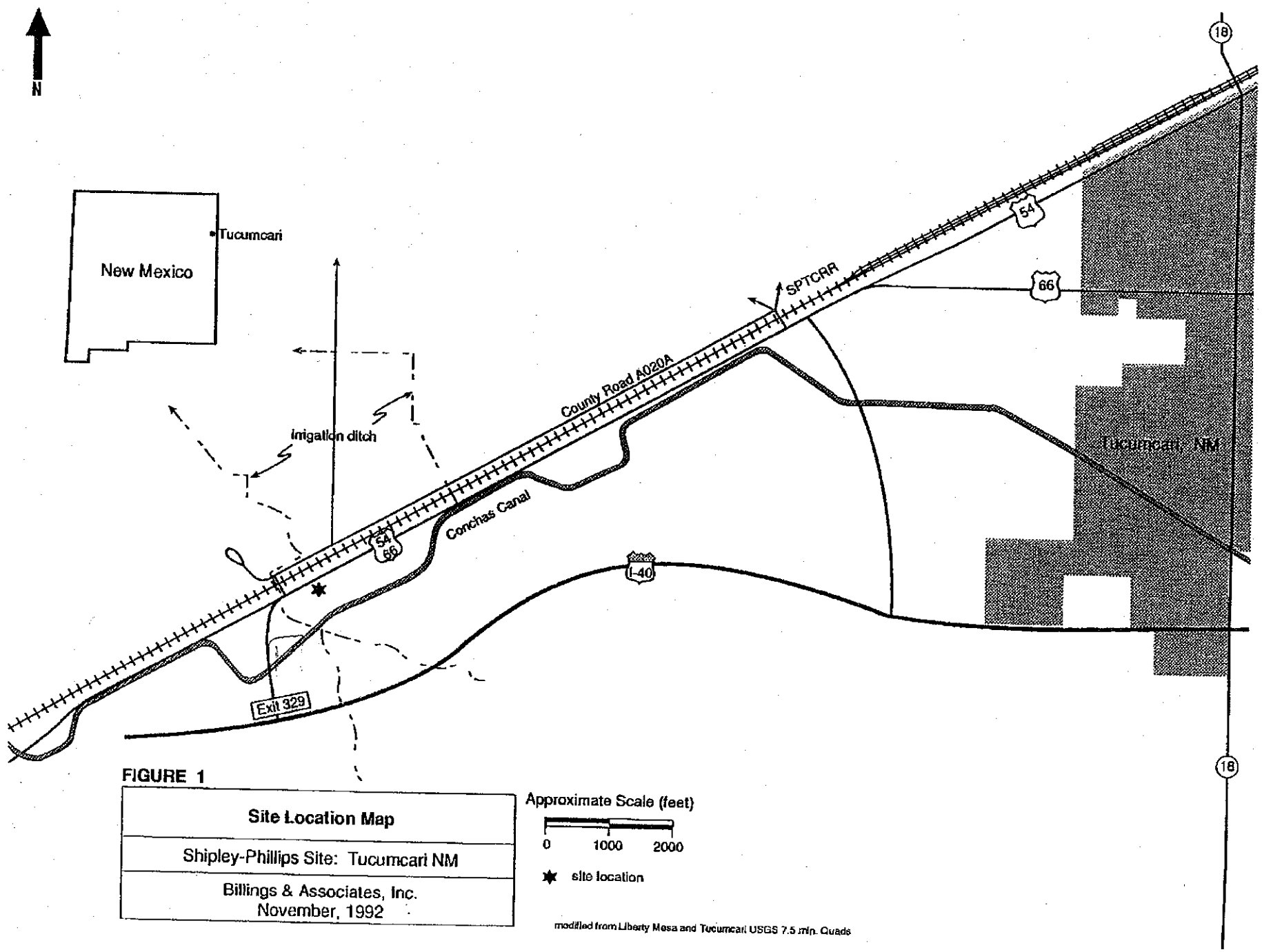


FIGURE 1

Site Location Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

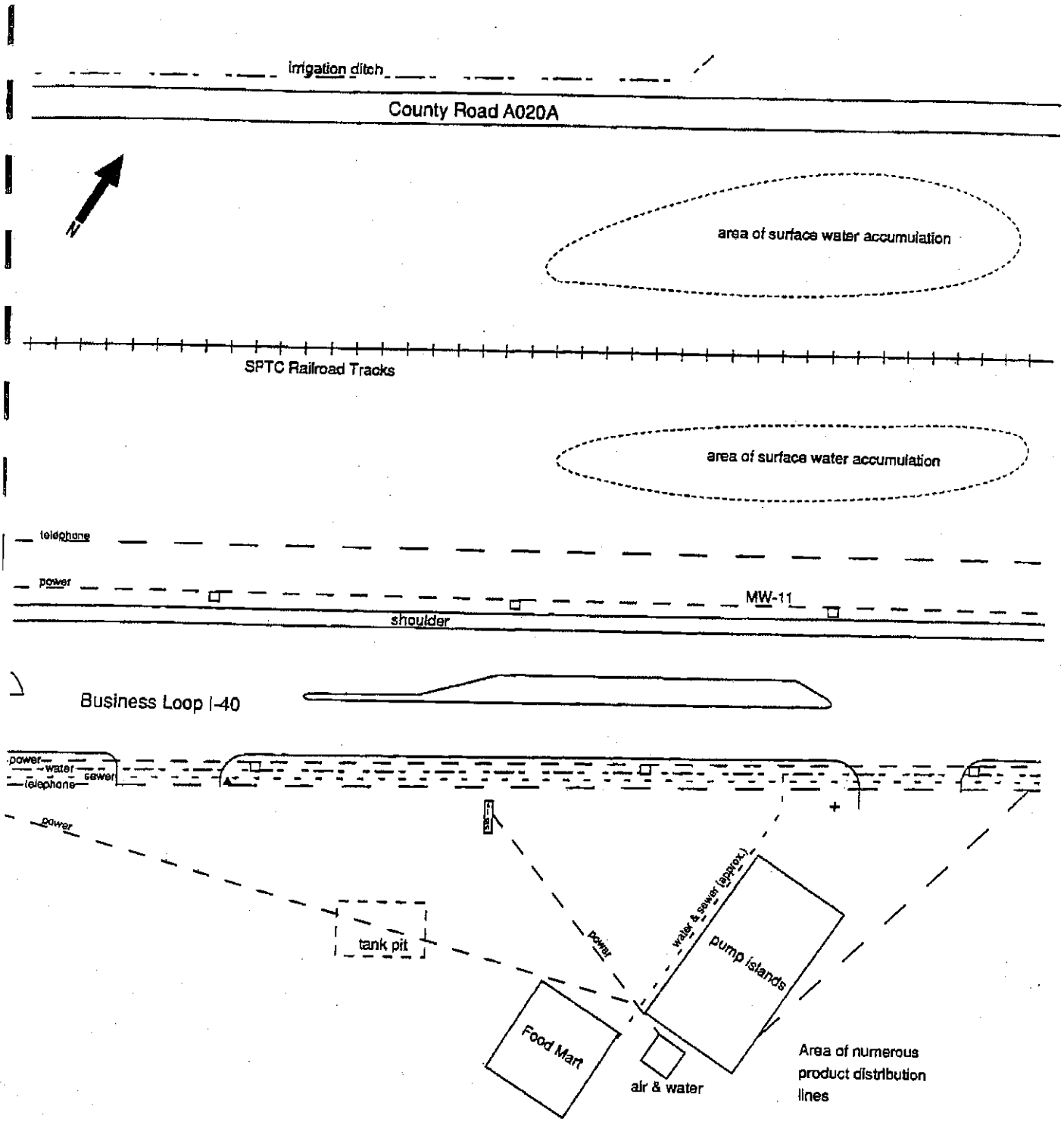
Approximate Scale (feet)

0 1000 2000

site location

modified from Liberty Mesa and Tucumcari USGS 7.5 min. Quads

From:PSTB / NMENV 505 476 4374 03/13/2009 10:04 #786 P.001/039



Scale (feet)
0 30 60

□ light pole location
▲ sewer manhole
+ power pole

FIGURE 2

Site Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

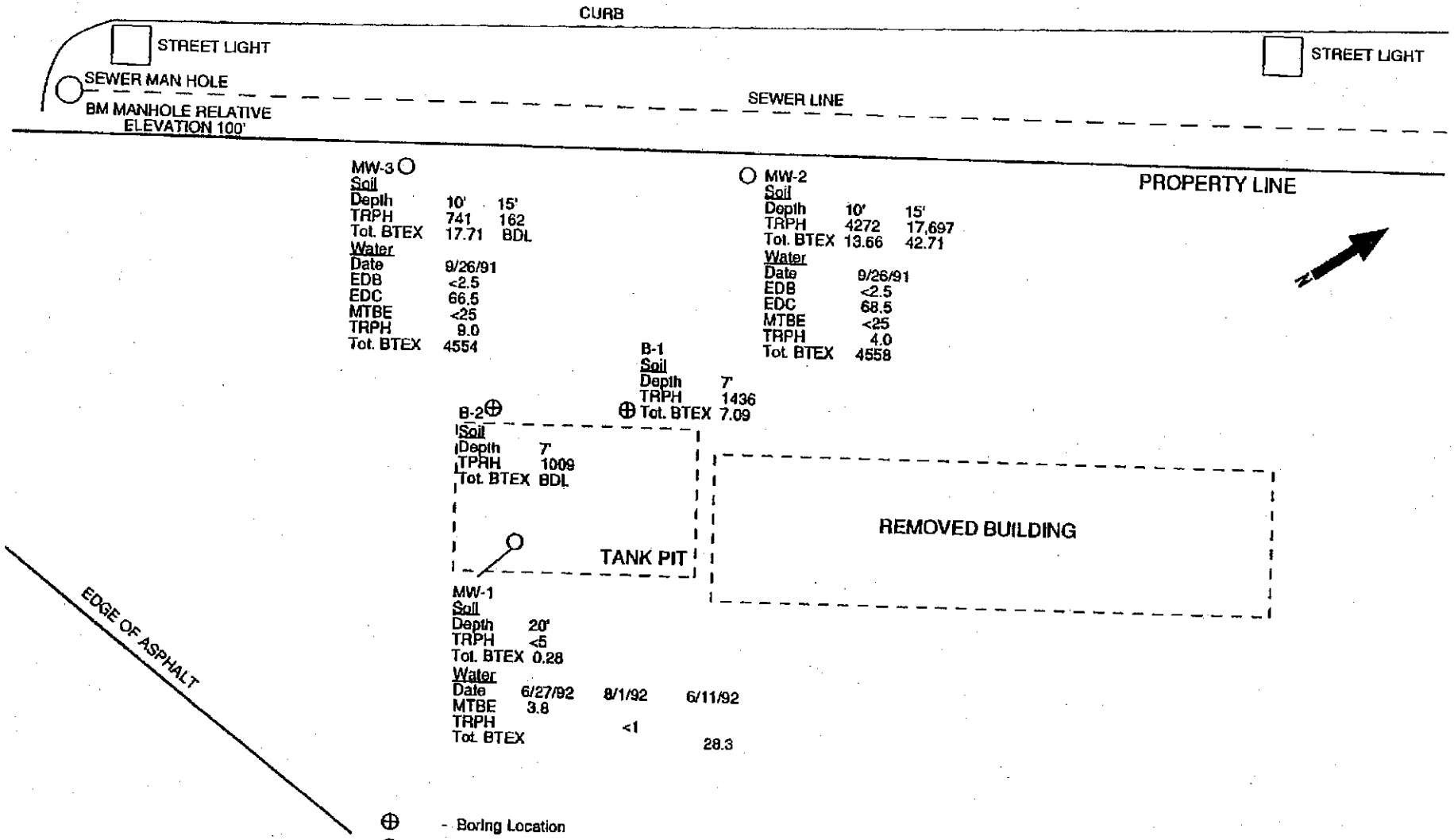
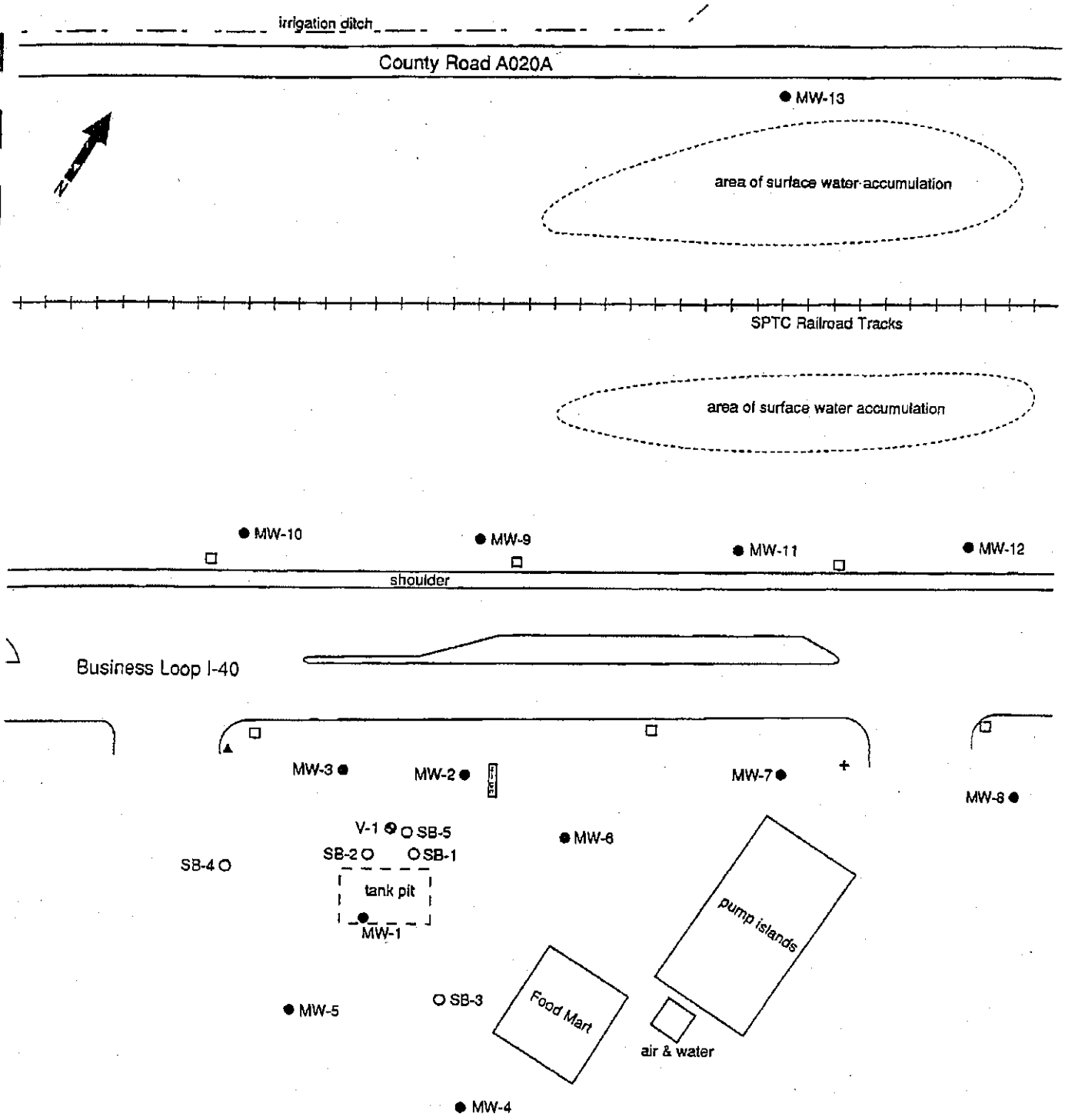


FIGURE 3

Existing Well Locations & Organic Chemistry Map
Shipley-Phillips Site: Tucumcari, NM
Billings & Associates, Inc. November, 1992

From:PSTB / NMENV 505 476 4374 03/13/2009 10:05 #786 P.003/039



Scale (feet)
0 30 60

- monitor well location
- soil boring location
- vertical well location
- light pole location
- sewer manhole
- power pole

prior work

FIGURE 4

Soil Boring and Monitor Well Location Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

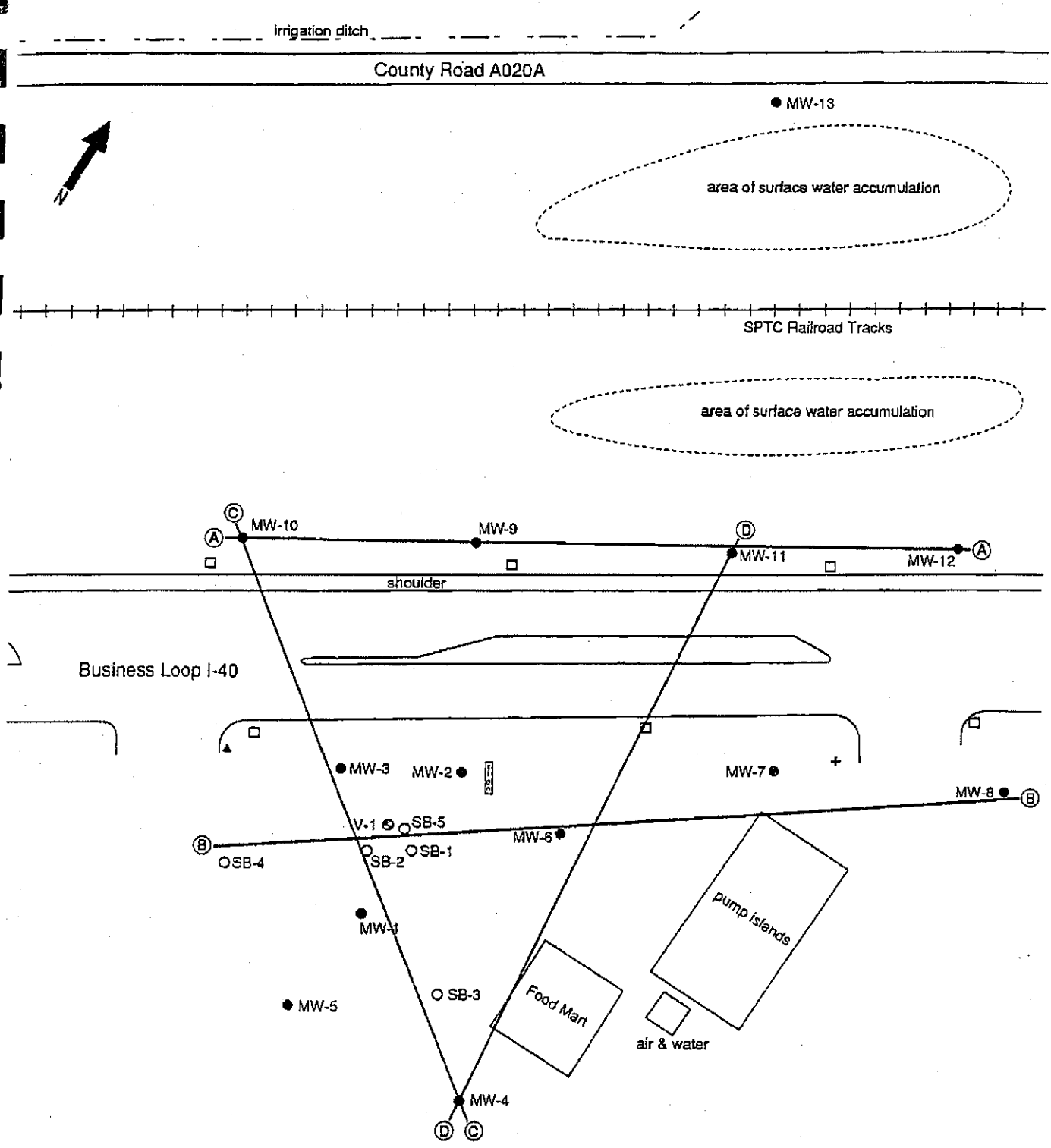


FIGURE 5

Cross Section Location Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

From:PSTB / NMENV 505 476 4374 03/13/2009 10:05 #786 P.006/039

≈ 1" = 10' Vert.

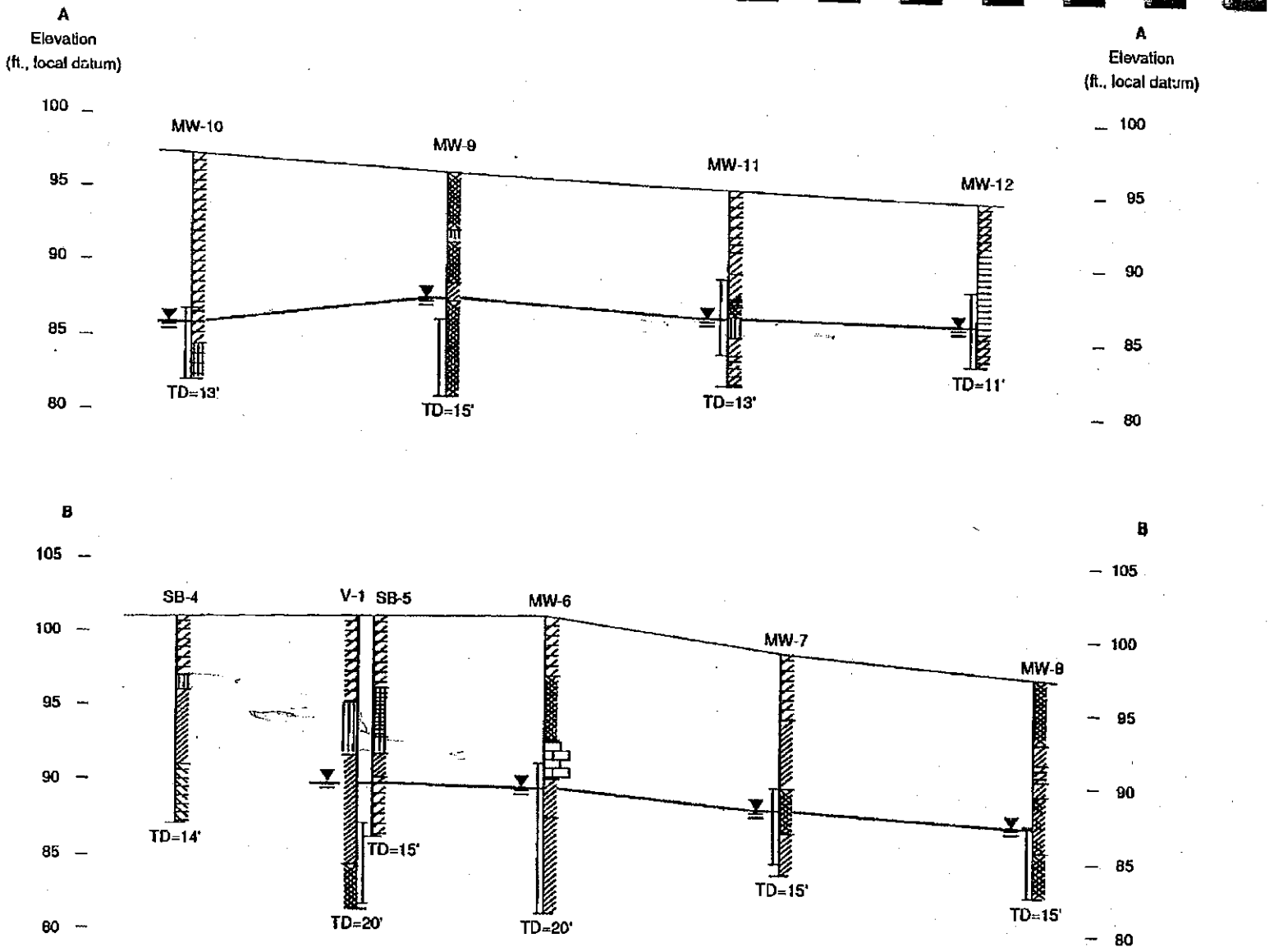
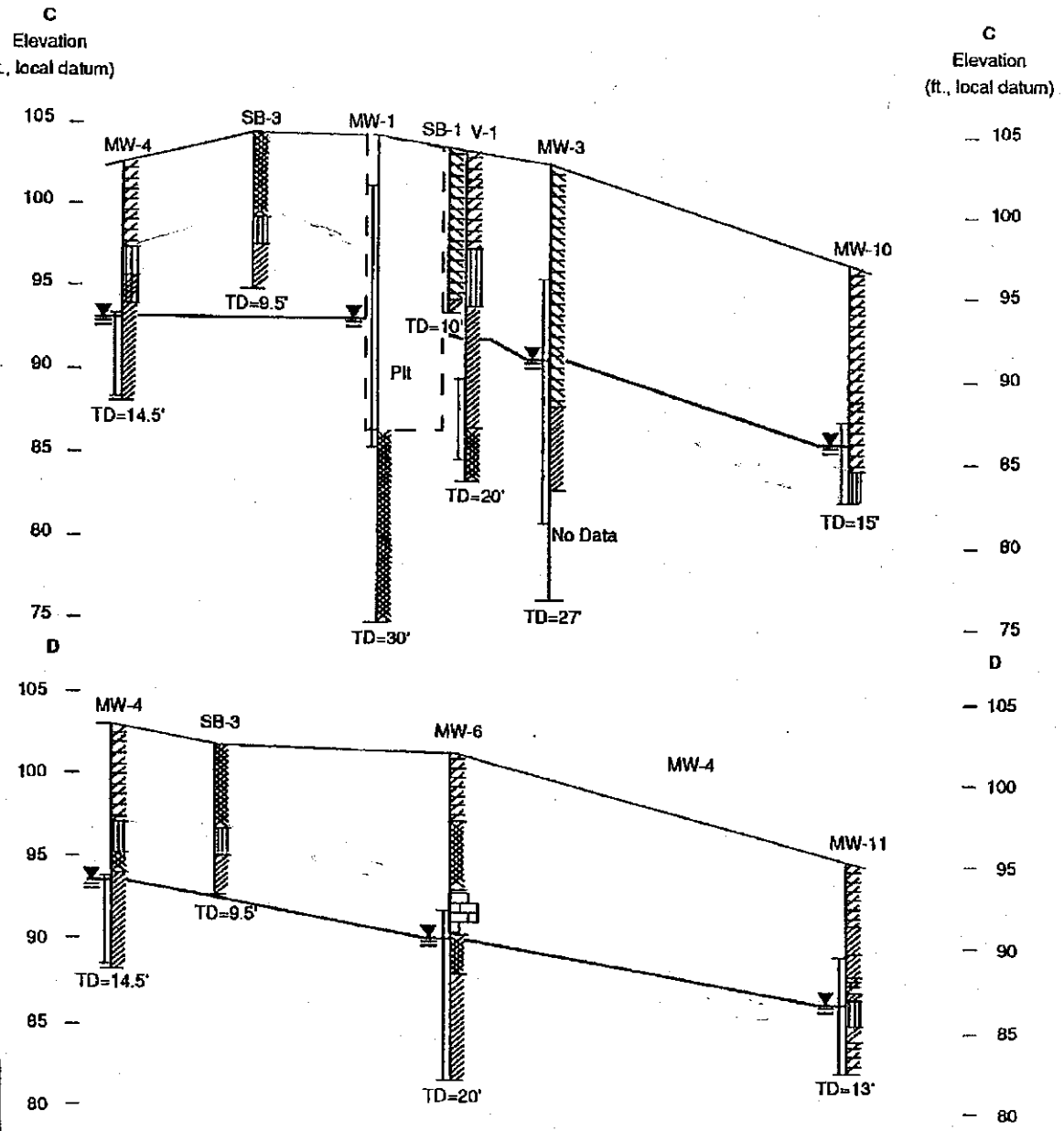


FIGURE 6A

Cross Section Diagram ?
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



Scale (feet)
0 30 60

clay
sand
silt
gravel
sandstone
water table 10/30/92

FIGURE 6B

Cross Section Diagram
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

From:PSTB / NMENV 505 476 4374 03/13/2009 10:05 #786 P.007/039

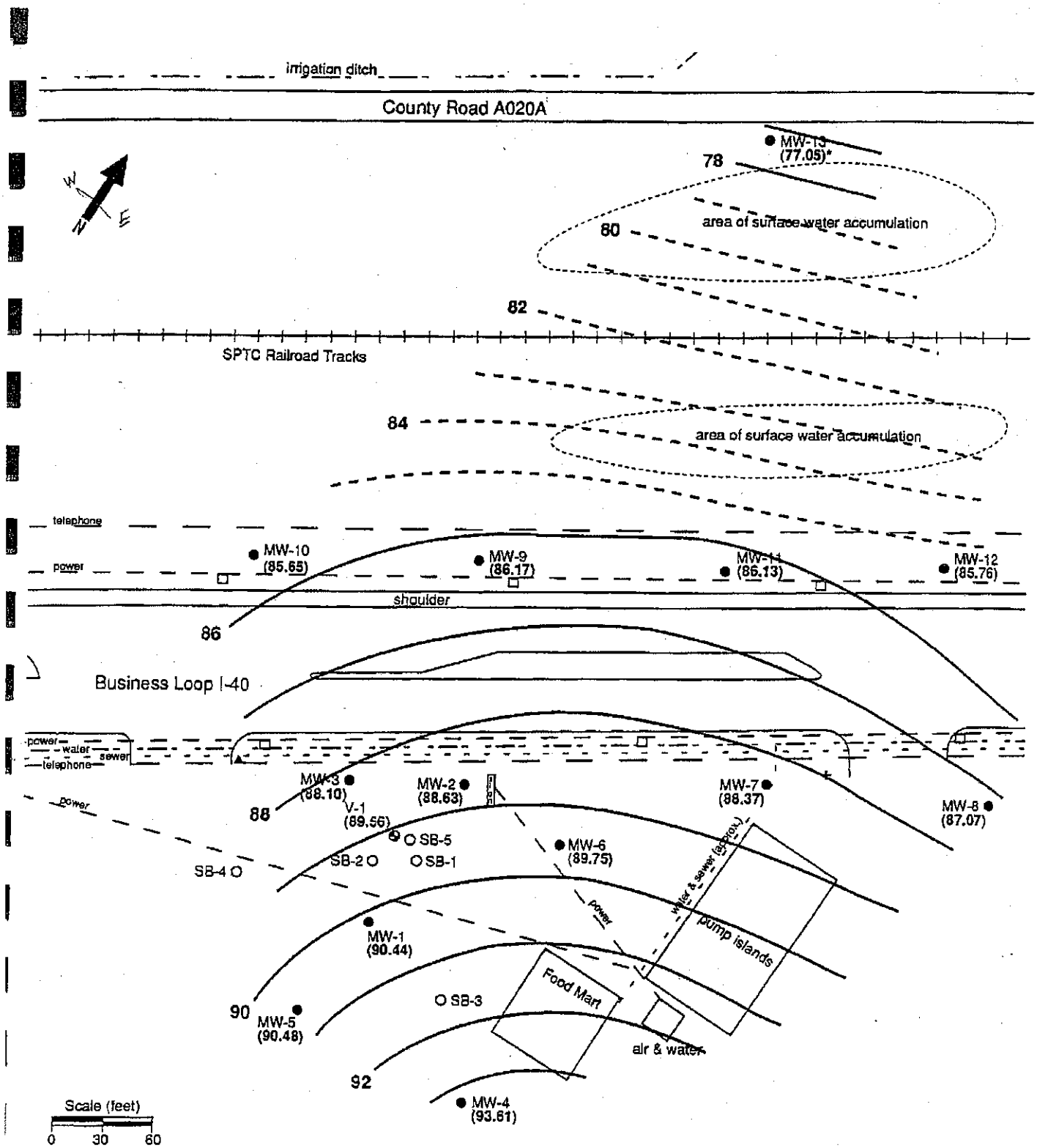
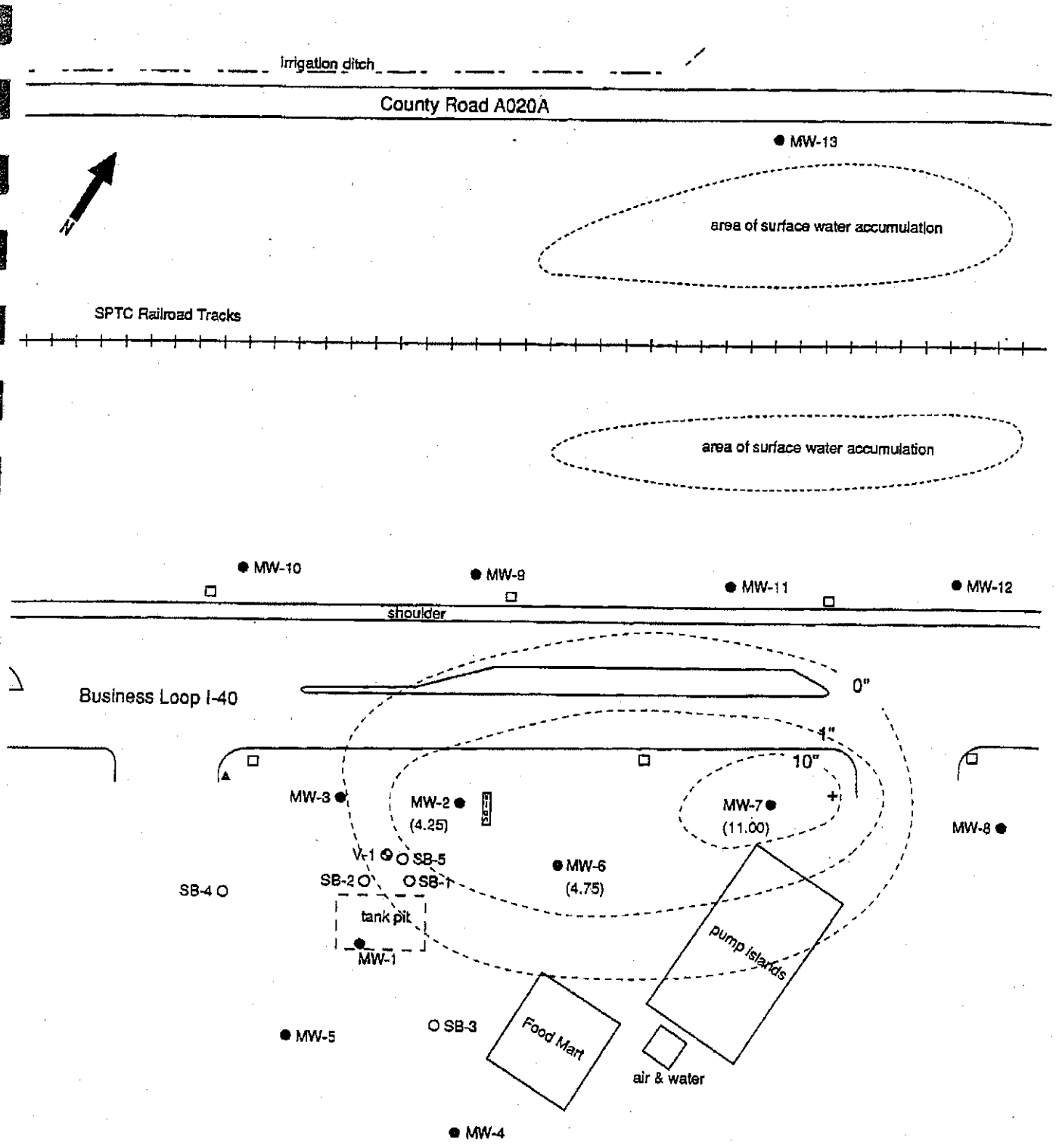


FIGURE 7

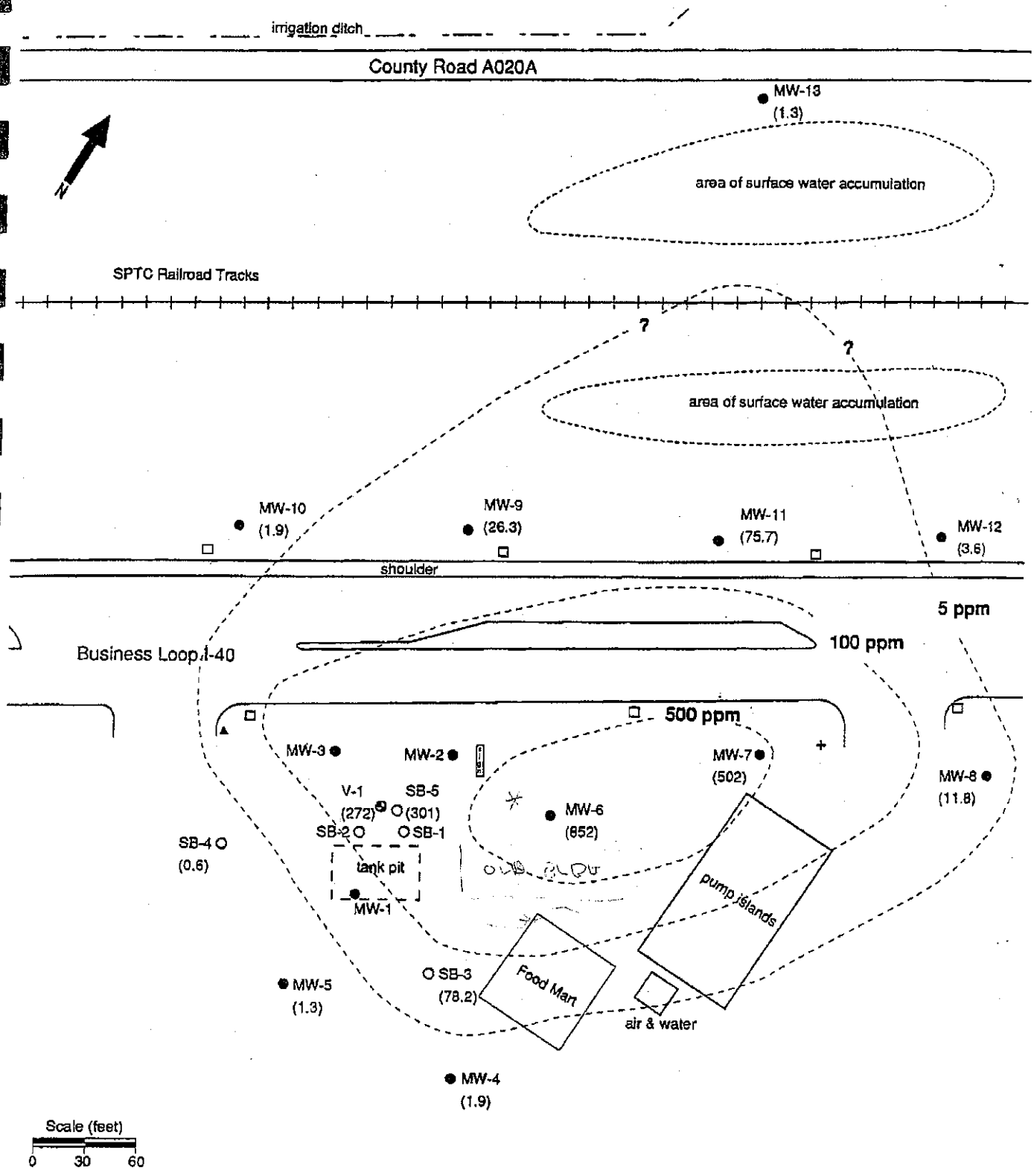
Potentiometric Surface Map-10/30/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



(4.25) product thickness (in.)
- ● monitor well location
- ○ soil boring location
- ⊕ vertical well location
- □ light pole location
- ▲ sewer manhole
- \+ power pole

FIGURE 8

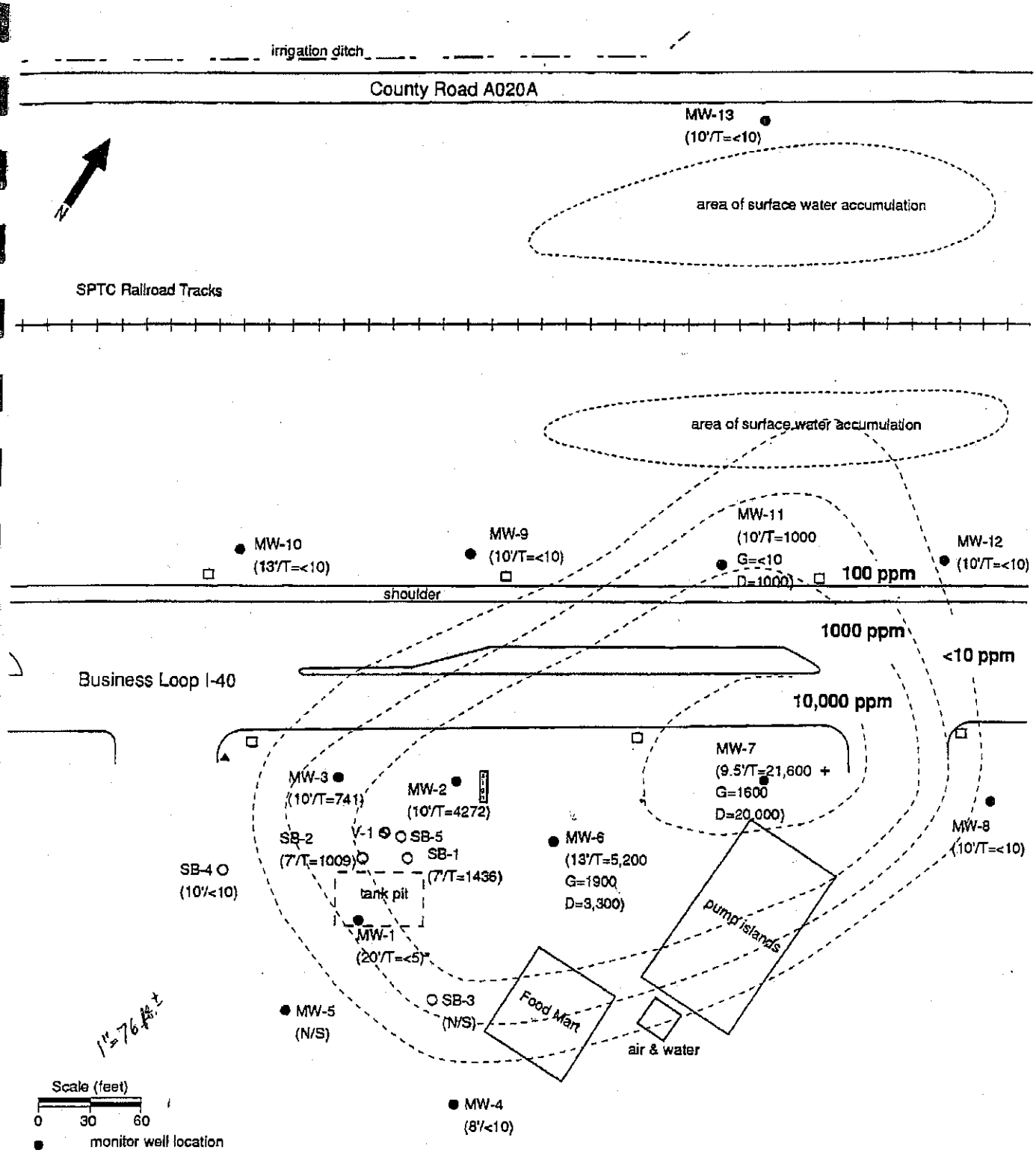
Product Thickness Map 11/4/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



(852) ppm-heated headspace by PID-10.2 e.v.
- ● monitor well location
- ○ soil boring location
- ⊗ vertical well location
- □ light pole location
- ▲ sewer manhole
- \+ power pole

FIGURE 9

Peak Soil Vapor Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



- monitor well location
- soil boring location
- vertical well location
- light pole location
- sewer manhole
- power pole
- 10'/T=100 sample depth/TPH
- G gasoline
- D diesel
- * sample below excavation backfilled with clean material
- N/S not sampled

FIGURE 10

TPH (Soil) Map 10/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

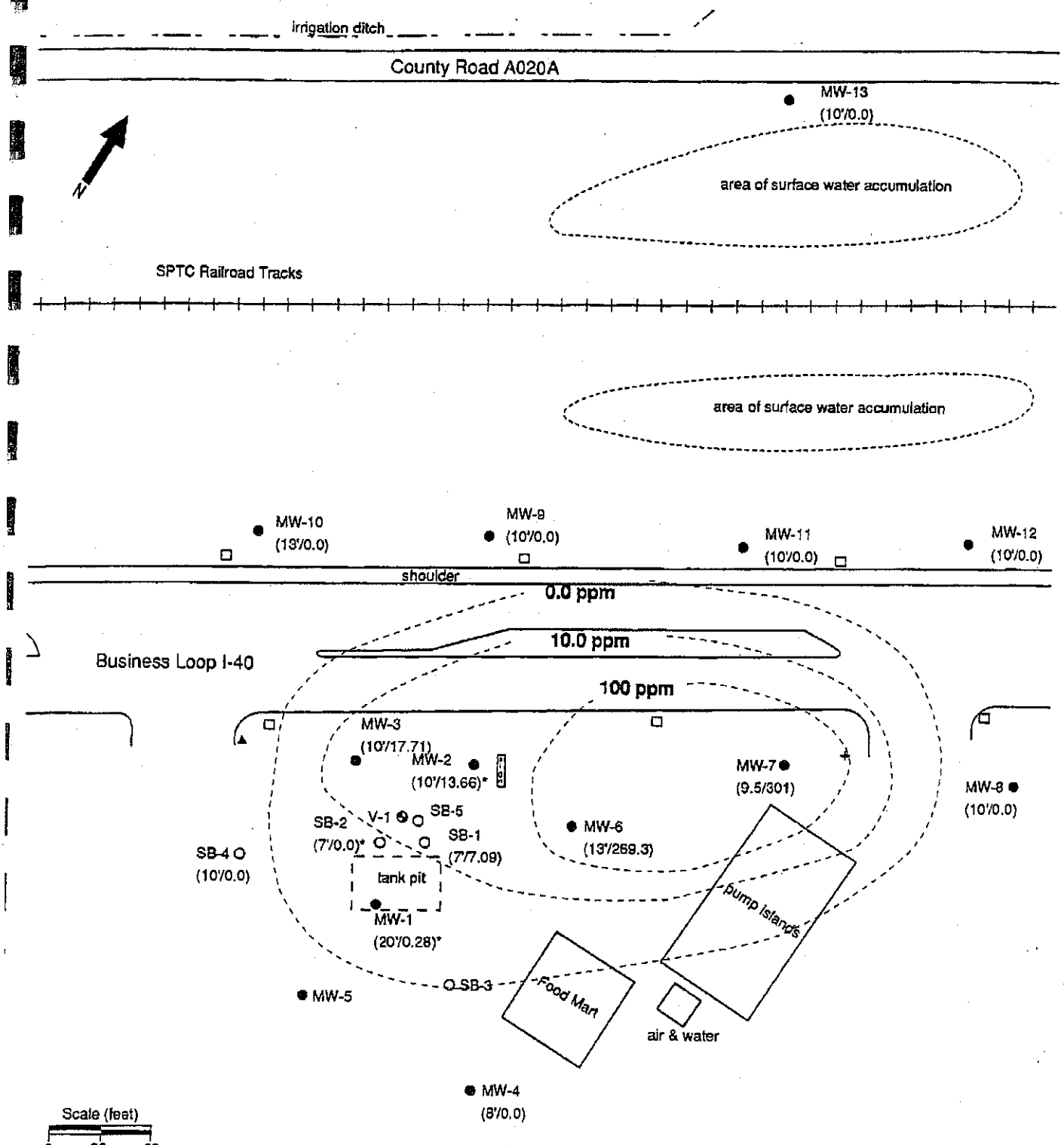
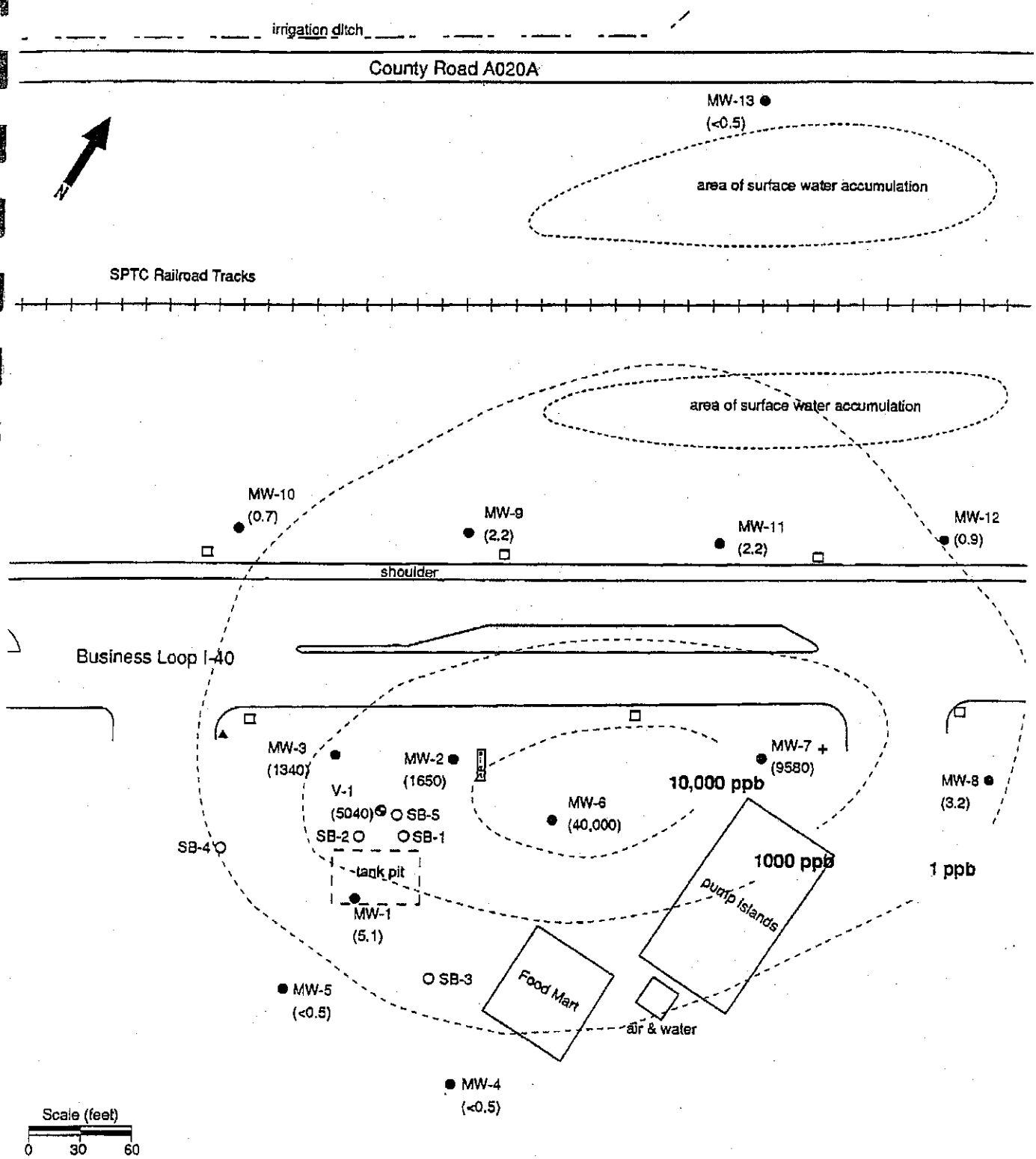


FIGURE 11

Total BTEX (Soil) Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



(0.9) total BTEX-water (ppb)
- monitor well location
- soil boring location
- vertical well location
- light pole location
- sewer manhole
- power pole

FIGURE 12

Total BTEX-Water Map 10/30/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

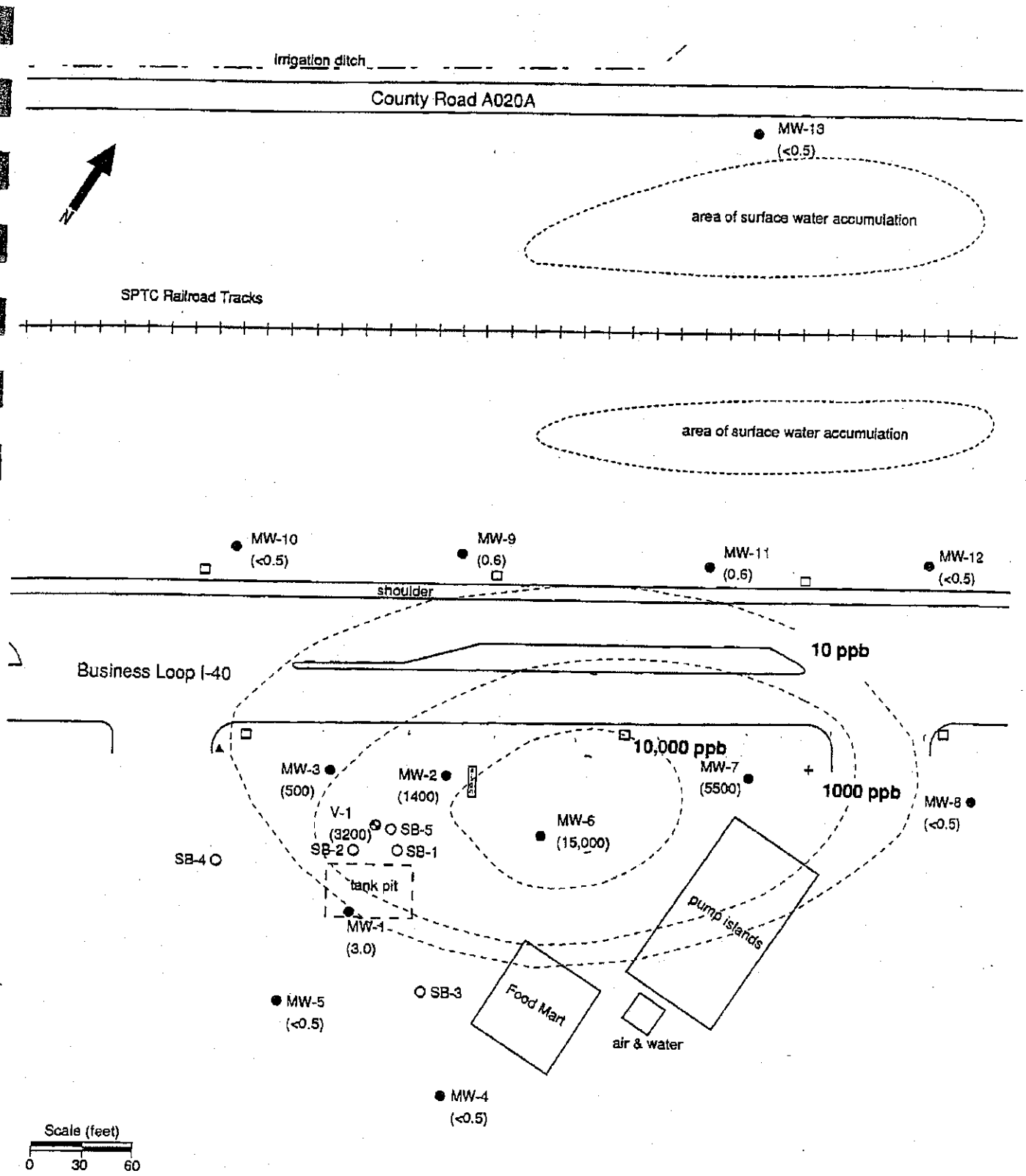


FIGURE 13

Benzene (Water) Map10/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

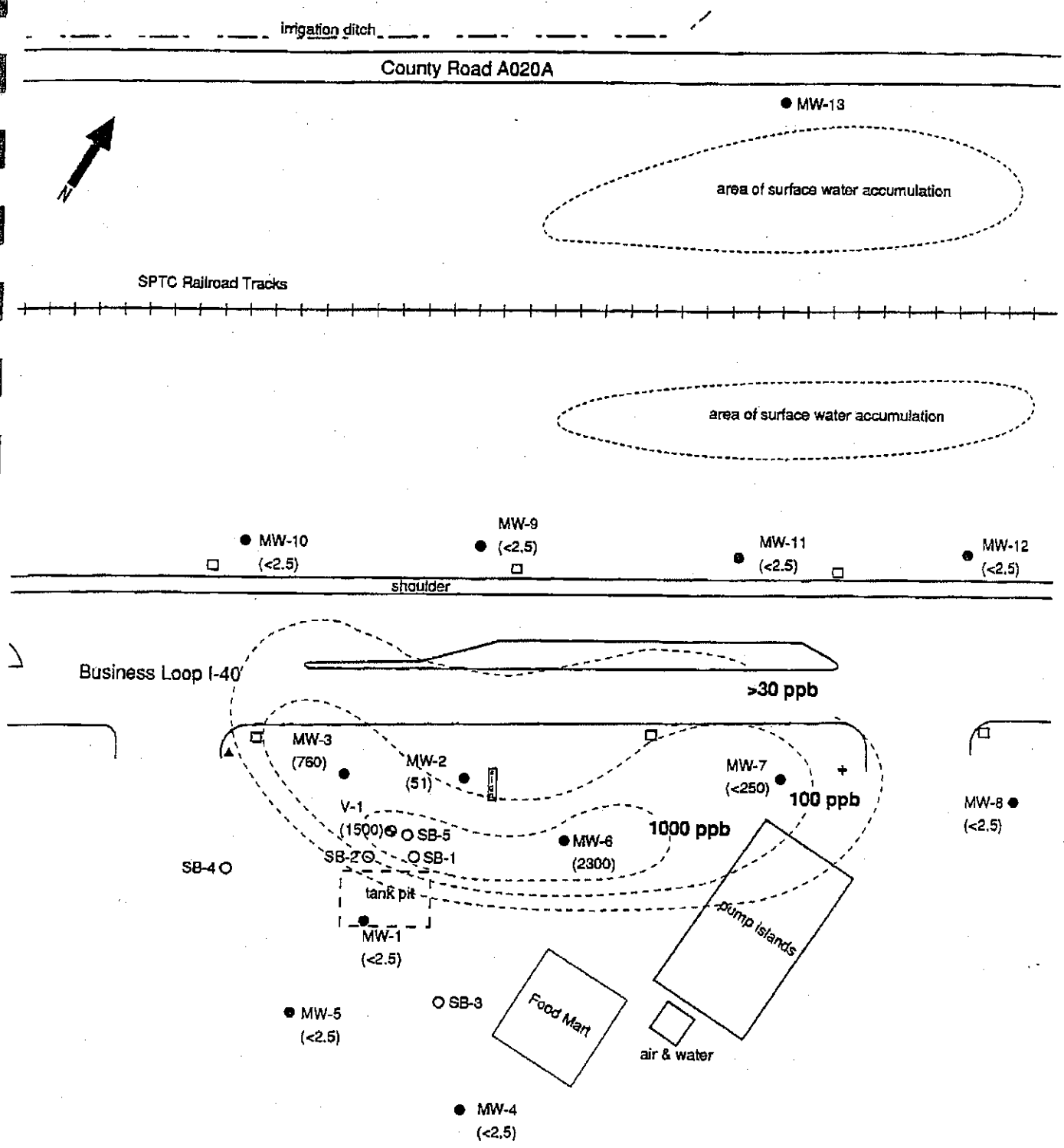


FIGURE 14

MTBE-Water 10/30/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

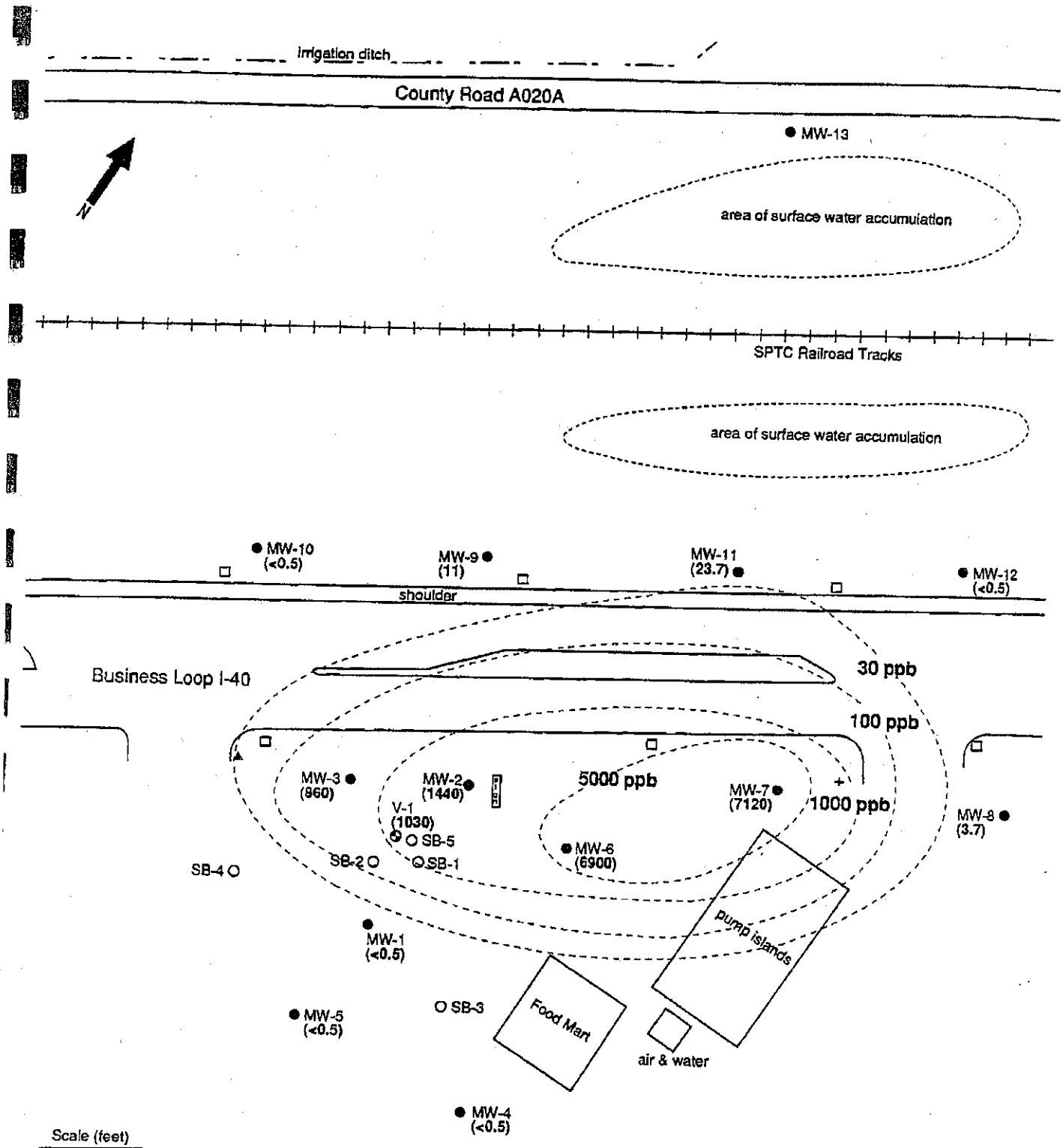
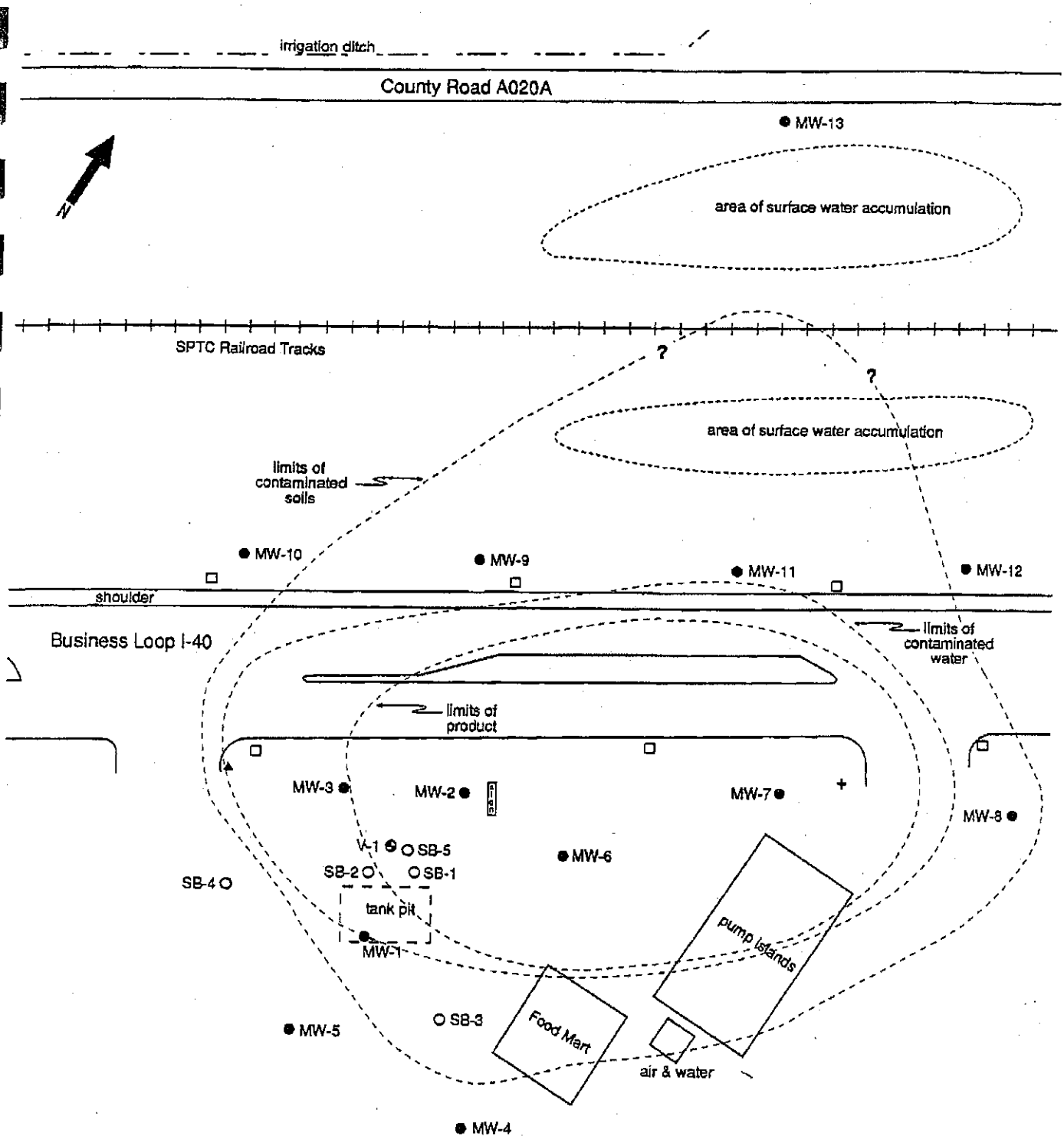


FIGURE 15

Total PAH-10/30/92
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992



Scale (feet)

0 30 60

- monitor well location
- soil boring location
- vertical well location
- light pole location
- sewer manhole
- power pole

FIGURE 16

Plume Type & Extent Map
Shipley-Phillips Site: Tucumcari NM
Billings & Associates, Inc. November, 1992

Table 1

Monitor Well Completion Data

Well ID	Ground Elevation (ft.) [1]	Casing Elevation (ft.) [1]	Total Depth (ft., Ground)	Perforated Interval (ft., Ground)	Sand Pack Interval (ft., Ground)	Upper Seal Interval (ft., Ground)	Date Installed
MW-1 [2]	102.1	101.81	16.4	3.0 - 18.0	None	None	6/11/91
MW-2 [2]	100.4	100.32	27.4	8.0 - 23.0	7.5 - 30.0	5.5 - 7.5	9/25/91
MW-3 [2]	100.4	100.30	27.2	7.0 - 22.0	6.0 - 28.0	4.0 - 6.0	9/25/91
MW-4	103.2	103.06	15.0	9.5 - 14.5	7.8 - 15.0	5.0 - 7.8	10/26/92
MW-5	102.3	102.21	13.3	7.8 - 12.8	6.5 - 13.3	4.0 - 6.5	10/27/92
MW-6	101.4	101.18	20.5	10.0 - 20.0	8.9 - 20.5	5.7 - 8.9	10/27/92
MW-7	99.0	98.87	14.4	8.9 - 13.9	8.0 - 14.4	5.0 - 8.0	10/28/92
MW-8	97.4	96.90	15.5	10.0 - 15.0	9.0 - 15.5	6.0 - 9.0	10/28/92
MW-9	96.2	95.80	15.8	10.3 - 15.3	9.0 - 15.8	6.2 - 9.0	10/28/92
MW-10	97.2	96.86	15.0	9.5 - 14.5	8.4 - 15.0	5.1 - 8.4	10/29/92
MW-11	95.1	94.76	11.3	5.8 - 10.8	5.2 - 11.2	3.3 - 5.2 [3]	10/29/02
MW-12	94.3	93.97	11.9	6.4 - 11.4	5.2 - 11.9	2.0- -5.2	10/29/02
MW-13	84.5 [4]	84.2 [4]	11.4	5.9 - 10.9	5.0 - 11.0	0.7 - 5.0	11/3/92
V-1 [5]	101.4	101.27	19.4	13.9 - 18.9	13.4 - 19.4	11.2 - 13.4	10/29/92

1) Elevation data are relative to local datum - Sewer manhole cover = 100.00 ft.
2) Installed by Enreco Engineering Group 10/91.
3) Basal bentonite pellet seal 11.2 - 13.0
4) MW-13 elevation is approximate.
5) Not completed as a water surface interface well.

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Tucumcari Truck Terminal

PHASE I - Hydrogeologic Investigation Report

Table 2

Potentiometric Surface Data

Well ID	Casing [1] Elevation (ft.)	Depth to [2] Water (ft.)	Water Level Elevation (ft.)	Product Thickness (in.)
MW-1	101.81	11.37	90.44	Hydrocarbon Odor
MW-2	100.32	11.69	88.63	6 5/16"
MW-3	100.30	12.20	88.10	-
MW-4	103.06	9.45	93.61	-
MW-5	102.21	11.73	90.48	-
MW-6	101.18	11.43	89.75	3/8"
MW-7	98.87	10.50	88.37	1"
MW-8	96.90	9.83	87.07	-
MW-9	95.80	9.63	86.13	-
MW-10	96.86	11.21	85.65	-
MW-11	94.76	8.63	86.13	Hydrocarbon Odor
MW-12	93.97	8.21	85.76	-
MW-13	(84.3)[3]	7.25 [4]	(77.05)	-
V-1[5]	101.27	11.71	89.56	Hydrocarbon Odor

1) Elevation data are relative to local datum - Sewer manhole cover = 100.00 ft.

2) Depth to water relative to top of casing. Measured 10/30/92. Liquid level when product is present.

3) MW-13 elevation is approximate.

4) Depth to water relative to top of casing. Measured 11/4/92.

5) Not completed as a water surface interface well.

Table 3

Product Thickness Data

Well ID	Product Thickness 8/19/92	Product Thickness 10/30/92	Product Thickness 11/4/92	Comments
MW-2	1/16"	6 5/16"	4 1/4"	Dark amber-colored product
MW-3	Sheen	0	0	Strong odor on 10/30 & 11/4
MW-6	Not Drilled	-	-	
	-	1"	-	Amber-colored product
	-	-	4 3/4"	Dark amber-colored product
MW-7	Not Drilled	-	-	
	-	3/8"	-	Medium yellow-colored product
	-	-	11"	Dark amber-colored product

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-4
Location: Tucumcari Truck Terminal

Installation Date: 10/26/92
Completion Depth: 15.0' (ground)
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					SANDY CLAY - Approx. 10-12% sand, sand is medium-grained with 1-2% very coarse-grained, clay is slightly plastic, trace moist, no odors, yellowish red 5 YR 5/6.
2					
3		N	1.3		
4					
5			1.3		
6		N			GRAVEL/COBBLE - No cuttings return.
7					
8		N	1.9		GRAVEL INTERBEDDED WITH SAND - Sands are medium-to coarse-grained, well sorted, well rounded to rounded, no odors, light yellowish brown, 10 YR 6/4.
9					
10			0.6		
11 ▽		N			SAND - Fine-grained, well sorted, rounded to well rounded, slightly moist-becomes very moist at 10 ft. and saturated at 11 ft., no odors, at 12 ft. becomes fine-to very fine-grained, light gray 10 YR 7/2.
12			0.6		
13					
14					TOTAL DEPTH DRILLED=14.5 ft.
15					
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-5
Location: Tucumcari Truck Terminal

Installation Date: 10/27/92
Completion Depth: 13.5' (ground)
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					SAND - Medium-to fine-grained, moderately sorted, clay/silt approx. 10%, approx. 8% gravel to 1.5 cm, very dry.
2					CLAYEY SAND - Sand is medium-to fine-grained, moderately sorted, angular to subrounded, approx. 5% coarse sand, approx. 15% clay, slightly moist, no odor, red 2.5 YR 5/6.
3		N	0.6		
4					
5			0.6		
6					GRAVEL/COBBLE - No cuttings return.
7					
8					
9					
10		N	1.3		CLAYEY SAND - Medium-to fine-grained, moderately sorted, angular to subrounded, approx. 3-5% clay/silt, gravel/cobble at 10.5 ft. slightly moist, no odor, reddish yellow 7.5 YR 6/8. At approx. 10.5' becomes strong brown 7.5 YR 5/8.
11					
12		N			
13					
14					TOTAL DEPTH DRILLED=14 ft.
15					
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-6
Location: Tucumcari Truck Terminal

Installation Date: 10/27/92
Completion Depth: 20.5'
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					ASPHALT - 0.25 ft. thick. GRAVELLY SAND
2		Y			CLAYEY SAND - Approx. 15.20% clay, sand is medium-to fine-grained, moderately sorted, subangular, slightly moist, strong hydrocarbon ordor, red 2.5 YR 4/6.
3			851		
4					
5					SILTY SAND/SANDY SILT - Approx. 20-30% silt, sand is fine-to very fine-grained, moderately sorted, rounded, dry, strong hydrocarbon odor, strong brown 7.5 YR 5/8.
6		Y			
7					
8			852		
9			SS. 9		
10		N ?			SANDSTONE - Fine-grained, moderately to well sorted, rounded, calcite-cemented, very hard, dry.
11					
12		Y			SILTY SAND - Approx. 5-10% silt, sand is medium-to fine-grained, moderately sorted, subangular to subrounded, moist, strong hydrocarbon odor, dark reddish brown 5 YR 3/2. At 13' silt content decreases to 3-5%, becomes very moist, black (N 21) mottling present.
13			779		
14					SAND - Fine-to very fine-grained, well sorted, rounded to well rounded, moist to very moist, very strong hydrocarbon odor, dark gray N 4/.
15					
16					
17					
18					
19					
20					TOTAL DEPTH DRILLED=20 ft.

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-7
Location: Tucumcari Truck Terminal

Installation Date: 10/28/92
Completion Depth: 14.4 ft.
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					ASPHALT - 0.25' thick
2		Y			CLAYEY SAND - Approx. 30-40% clay/silt, sand is fine-to very fine-grained, moderately to well sorted, subangular, moist, faint hydrocarbon odor, approximate color is brown 7.5 YR 5/4.
3					
4			21		
5					
6			19		SAND - Fine-grained, well sorted, subangular to subrounded, silt/clay <1%, moist, hydrocarbon odor, light brown, 7.5 YR 6/4. At 10 ft. becomes very moist, strong hydrocarbon odor, yellowish brown 10 YR 5/4 with approx. 5% black (N7/) mottling.
7					
8		Y	502		
9					
10			469		
11		Y			SILTY SAND - Approx. 25% silt, sand is fine-to very fine-grained, moderately to well sorted, rounded, moist, strong hydrocarbon odor, yellowish red 5 YR 5/6.
12					
13					SAND - Fine-grained, well sorted, subangular to subrounded, very moist to saturated, very strong hydrocarbon odor, gray 5 YR 5/1.
14					
15					TOTAL DEPTH DRILLED = 15 FT.
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-8
Location: Tucumcari Truck Terminal

Installation Date: 10/28/92
Completion Depth:
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
					ASPHALT - 0.75' thick
1					SANDY SILT - Approx. 40-45% sand, sand is fine- to very fine-grained, moderately sorted, subangular, slightly moist, no odor, yellowish red 5 YR 5/6.
2					
3		N	11.8		
4					
5		N	7.2		SAND - Fine-grained, well sorted subangular to subrounded, approx. 1-2% silt/clay, approx 2-5% gravel to 1 cm., moist, no odor yellowish red 5 YR 5/6.
6					
7		N			SANDY CLAY - Approx. 8-10% sand, sand is very fine-grained, well sorted, clay is moist, plastic, no odor, yellowish red 5 YR 4/6.
8		N	3.9		
9			7.2		INTERBEDDED SAND AND SANDY SILT - Sand is medium-to fine-grained, moderately to well sorted, subangular to subrounded, <3% silt/clay. Silt is sandy with approx. 10-15% fine-to very fine-grained sand, moist, no odor, overall color is yellowish red 5 YR 4/6
10					
11					
12		N			
13					SAND - Fine-grained, well sorted, rounded, very moist, no odor, reddish yellow 5 Yr 6/6 to yellowish red 5 YR 5/8. At 12 ft. drilling rate decreases, cuttings show very moist silty/clayey sand with no odor.
14					
15					TOTAL DEPTH DRILLED = 15 ft.
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-9
Location: Tucumcari Truck Terminal

Installation Date: 10/28/92
Completion Depth: N/A Backfilled
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1		N			GRAVELLLY SAND - 0.05 ft. Dry.
2					
3			5.2		SANDY SILT- Approx. 15% sand, sand is moderately sorted, subangular to subrounded with approx. 1% very coarse-grained, dry, no odor, dark yellowish brown 10 YR 4/6.
4					GRAVEL/COBBLE - No cuttings return.
5			2.6		SILTY SAND - Approx. 10% silt, sand is medium- to very fine-grained, moderately sorted, rounded, trace moisture, no odors, reddish yellow 5 YR 6/8.
6		N			
7		N			SILTY SAND - Approx. 5% silt, sand is very coarse-grained, moderately to well sorted, rounded, slightly moist, no odor, yellowish red 5 YR 5/8.
8		Y	21.7		SAND - <2% silt, sand is fine-grained, well sorted, rounded, moist to very moist, moderate hydrocarbon odor, 3-5%, dark gray (n 4/) mottles, pinkish gray 5 YR 6/2.
9			26.3		
10					SILTY SAND - Approx. 8-10% silt, sand is fine-grained, well sorted, rounded, moist, slight hydrocarbon odor, yellowish red 5 YR 4/6. Becomes saturated at approx. 12.4 ft.
11		Y			
12					
13					
14					
15					TOTAL DEPTH DRILLED = 15.8 ft.
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-10
Location: Tucumcari Truck Terminal

Installation Date: 10/29/92
Completion Depth: 15.2 ft
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					GRAVELLY SAND - 0.05 ft., very moist from heavy rain previous evening.
2					
3			1.9		SANDY CLAY - Approx. 20-25% sand, sand is fine-grained, moderately sorted, subangular to subrounded, clay is plastic, moist, no odors, strong brown 7.5 YR 4/6. From 3 to 6 ft. approx. 30-40% sand. From 6 to 10 ft. approx. 5-10% sand. Thin (<6" thick) gravelly interbeds at irregular intervals.
4					
5			1.9		
6					
7		N			
8			1.9		
9			1.9		
10					
11					
12					
13					
14		N			Gravelly Clay - Approx. 10% sand, approx. 15% gravel, sand is medium-grained, moderately sorted, subangular to subrounded, gravel averages 1 cm diameter, clay is soft, plastic, saturated, no odors, strong brown 7.5 YR 4/6.
15					TOTAL DEPTH DRILLED = 15.0 ft.
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-11
Location: Tucumcari Truck Terminal

Installation Date: 10/29/92
Completion Depth: 11.5 ft.
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1–4		N	5.2		SANDY CLAY - Approx. 25% sand, approx. 10% gravel to 1.5 cm. diameter is medium- to fine-grained, moderately to poorly sorted, subangular, trace moist, no odors, reddish brown 5 YR 4/4.
5		N	1.9		SAND - Fine-to very fine-grained, well sorted, subangular to subrounded, very moist, no odors, trace fine gravel from 5.25' to 5.5', reddish yellow 7.5 YR 6/6.
6–7		N			SAND - Medium-to fine-grained, well sorted, subrounded, approx 1-2% silt, moist, no odors, yellowish red 5 YR 5/8.
8		N	66.5		SANDY CLAY - Approx. 15% sand, sand is very fine-grained, moderately sorted, subrounded, clay is hard, plastic, dry, no odors, yellowish red 5 YR 5/6.
		Y			SILTY SAND - Approx 15-20% silt, sand is medium- to fine-grained, moderately sorted, subrounded, moist, strong hydrocarbon odor, yellowish red 5 YR 4/6.
9–10			75.7		GRAVEL/COBBLE - No Cuttings Return.
11		Y			SAND - Medium-to fine-grained, well sorted, rounded, saturated, slight hydrocarbon odor, pinkish gray 5 YR 6/2 and yellowish red 5 YR 4/6. Becomes very fine-grained below 10.5 ft.
12–13		N	3.2		SANDY CLAY - Approx. 15-18% sand, sand is fine-grained, moderately sorted, subrounded, moist strong hydrocarbon odor, yellowish red 5 YR 4/5. Clay is dense, plastic, moist, no odors, strong brown, 7.5 YR 5/6.
14–20					TOTAL DEPTH DRILLED = 13 ft.

* Field Monitoring Point

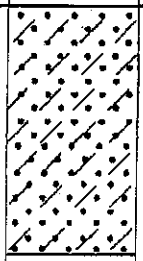
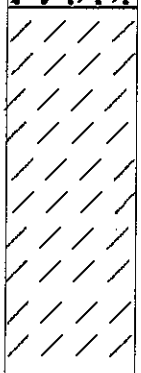
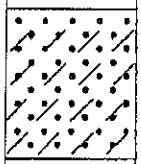
Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: MW-12
Location: Tucumcari Truck Terminal

Installation Date: 10/29/92
Completion Depth: 12.0 ft.

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1		N			SANDY CLAY - Approx. 15-20% sand, approx. 5% gravel to 5 cm. diameter, sand is fine-grained, moderately to poorly sorted, angular to subrounded, clay is stiff, plastic moist, no odors, dark brown 7.5 YR 3/4.
2					
3			3.6		
4					
5			1.9		
6		N			CLAY - Approx 8-10% sand, approx. 1% gravel to 1 cm. diameter, sand is fint-to very coarse-grained, poorly sorted, angular to subrounded, clay is soft, plastic, very moist, no odors, dark brown 7.5 YR 3/2.
7					
8			1.9		
9					SANDY CLAY - Approx. 25-30% sand, sand is medium-to fine-grained, moderately sorted, rounded, clay is very soft, plastic saturated, no odors, reddish brown 5 YR 4/4.
10		N			
11					TOTAL DEPTH DRILLED =11ft.
12					
13					
14					
15					
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: SB-4
Location: Tucumcari Truck Terminal

Installation Date: 10/27/92
Completion Depth: N/A Backfilled
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
					ASPHALT - 0.2' thick
1					SANDY CLAY - Approx. 20% sand, sand is medium-to fine-grained, well sorted, subangular, clay is moderately plastic, slightly moist, no odors, reddish brown 7.5 YR 4/4. Becomes gravelly from 3 to 4 ft.
2		N			
3			0.6		
4					SANDY CLAY - Approx. 20 % sand, sand is medium-grained, moderately sorted, subangular to angular, clay is moderately plastic, slightly moist, no odor, approx. 2-3% nodular caliche, yellowish red 5 YR 5/6.
5		N	0.6		
6					
7					GRAVEL/COBBLE - No cuttings return.
8			0.6		CLAYEY SAND - Approx. 20% clay, sand is medium-to very fine-grained, moderately sorted, subangular, moist, no odor, yellowish red 5 YR 4/6.
9		N			
10			0.6		
11					SANDY CLAY - Approx. 5% sand, sand is fine-grained, moderately to well sorted, subangular to subrounded, clay is plastic, stiff, moist, no odors, reddish brown 5 YR 4/4. At 10.5 ft. moisture increases, sand to 1-2%, clay becomes less stiff.
12		N			
13					
14					TOTAL DEPTH DRILLED=14 ft.
15					
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: SB-5
Location: Tucumcari Truck Terminal

Installation Date: 10/26/92
Completion Depth: N/A Backfilled
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					ASPHALT - 0.5' thick
2					
3		Y			SANDY CLAY - Approx. 30% sand, sand is very fine-grained, moderately sorted, subrounded, clay is soft, plastic, very moist, hydrocarbon odor, brown 7.5 YR 5/4.
4					
5			23		
6					GRAVELLY CLAY - Approx. 25% gravel to 2 cm. diameter, approx. 20% sand, sand is fine-grained, moderately sorted, subrounded, clay is soft, plastic, very moist, strong hydrocarbon odor, brown 7.5 YR 5/4.
7		Y			
8					GRAVEL/COBBLE - No cuttings return.
9					
10		Y	301		SAND - Fine-to very fine-grained, well sorted, subangular to subrounded, very moist, becomes saturated at 10 ft., strong hydrocarbon odor, light gray 10 YR 7/1 with dark gray mottling and streaks.
11					
12					SANDY CLAY - Approx. 15% sand sand is fine-grained, moderately sorted, subangular to subrounded, slightly moist, weak hydrocarbon odor, reddish brown 5 YR 4/4.
13		Y			
14					
15					TOTAL DEPTH DRILLED =15 ft.
16					
17					
18					
19					
20					

* Field Monitoring Point

Water Table:

Billings & Associates, Inc.

BORING LOG

Project: Shipley Phillips
Boring No: V-1
Location: Tucumcari Truck Terminal

Installation Date: 10/29/92
Completion Depth: 19.6 ft.
By: Clay Culver

Depth (ft)	Profile Sketch	Odor (y/n)	PID Field Data (ppm)	Lab Data TPH (ppm)	Description
1					ASPHALT - 0.5' thick
2					SANDY CLAY - Approx. 25% sand, sand is very fine-grained, moderately sorted, subrounded, clay is soft, plastic, very moist, moderate hydrocarbon odor, brown 7.5 YR 5/4.
3					
4		Y			
5			15.1		
6					
7					GRAVEL/COBBLE - No cuttings return.
8					
9					
10					SAND- Fine-to very fine-grained, well to very well sorted, subrounded to rounded, very moist to saturated, strong hydrocarbon odor, pinkish gray 5 YR 7/2.
11			272		
12		Y			
13					
14					
15					
16					
17					
18		Y			SILTY SAND - Approx. 15-20% silt, sand is medium-to fine-grained, moderately sorted, subangular to subrounded, very moist to saturated, moderate to srong hydrocarbon odor, yellowish red 5 YR 4/6.
19					
20					TOTAL DEPTH DRILLED = 20 ft.

* Field Monitoring Point

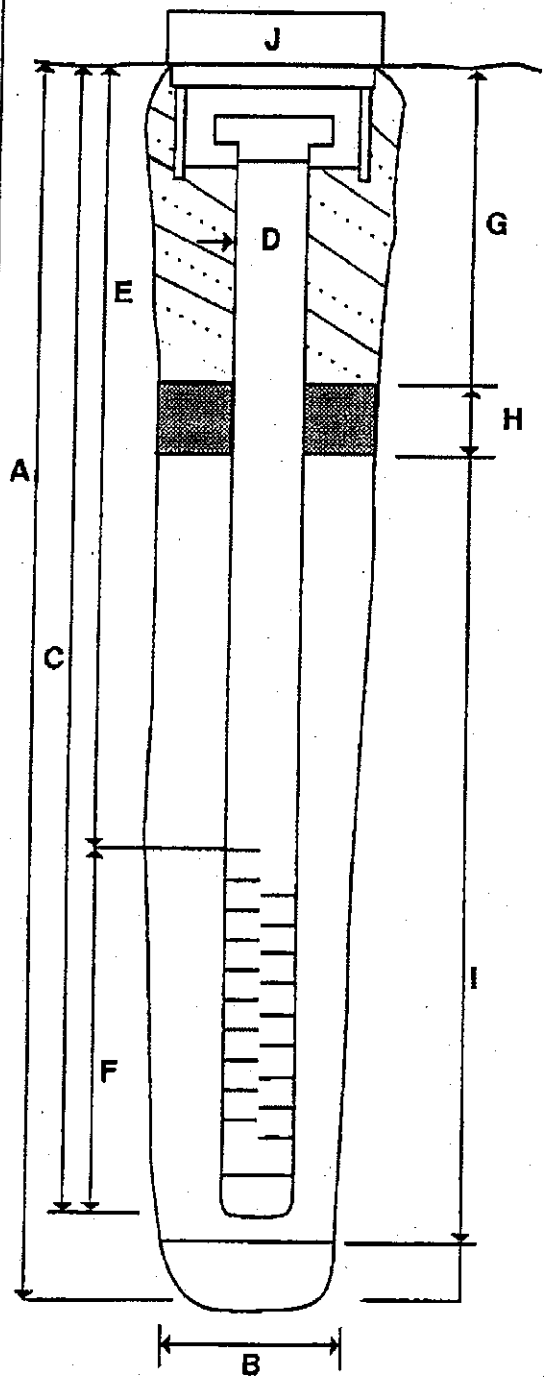
Water Table:

Billings & Associates, Inc.

WELL DETAILS

PROJECT NAME: Shipley-Phillips
PROJECT NUMBER:
WELL PERMIT NO: MW-4

Casing Elevation: 103.06 ft.
Surface Elevation: 103.2 ft.
Completion Date: 10/26/92
By: Clay Culver



A. Total depth: 15.0 '

B. Boring Diameter: 6 1/4"

Drilling method: Hollow Stem Auger

C. Casing Length: 14.9'
Material: PVC - Threaded Sch 40

D. Casing Diameter: 2"

E. Depth to Perforations: 9.5'

F. Perforated Length: 5'

Perforated Interval: 9.5'-14.5'

Perforation Type: Factory slot

Perforation Size: 0.010"

G. Surface Seal: 0-5.0'

Seal Material: Cement

H. Pack Seal: 5.0-7.8'

Seal Material: 1/4" Bentonite Pellets-Hydrated

I. Gravel Pack: 7.8'-15.0'

Pack Material: Silica sand

Size: 10-20

J. Surface Mount: 12" x 12" Manway,
Flush with grade

Appendix D

Aquifer Test Analyses

Aquifer characteristics in the vicinity of the site were quantified by performing slug injection tests on three monitoring wells; MW-4, MW-11, and V-1. A 2.1 gallon slug of water, sufficient to raise the water level instantaneously 12.6 feet above static, was gravity injected. Two tests were conducted on MW-4, and MW-11, with one test being performed on V-1, for a total of five tests. The gathered data was then reduced and analyzed according to the method of Cooper (Cooper, Bredehoeft, and Papadopoulos; WRR, 1967; Vol. 3, No. 1).

Semilogrithmic plots of water level response for all five tests are shown on Figures D-1 through D-5. Note that the tests for MW-4 (D-1 and D-2) and V-1 (D-5) exhibit a fairly classical response to an instantaneous slug of water. The tests for MW-11 (D-3 and D-4) are not classical, and appear to be responding to an unknown boundary condition.

The type curves generated by the Cooper method are shown on Figure D-6. Reduced data from all tests are provided in Figures D-7 through D-11 in the form necessary for analysis by the Cooper method. Match points generated by the method's curve-fitting technique are also shown on the figures, in addition to the computed transmissivity and storativity values.

The non-classical response noted in the water-level graphs of MW-11 (Figures D-3,4,9,10), casts doubt on the reliability of the results and subsequent analysis of this test. Conversely, the middle and late time data (generally more reliable in field

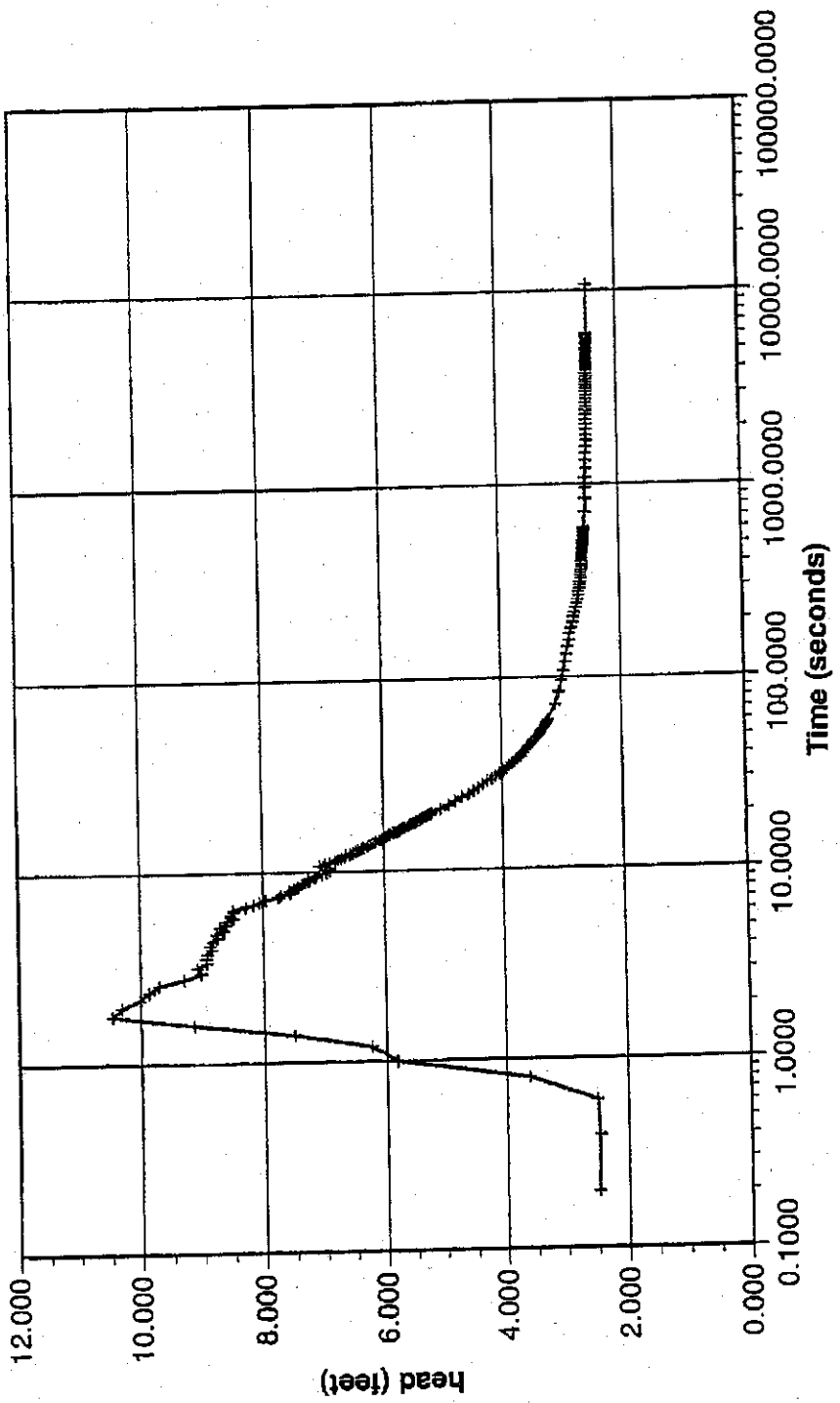
applications) of MW-4, and V-1 show relatively classic responses. This may be partially due to the screen length of V-1 being totally submerged, and that of MW-4 being practically submerged, while the screen of MW-11 being only 40% submerged. Slug injection tests and their analyses are typically more reliable when impacts from partial screen submergence and the vadose zone are minimized.

Based on analysis and interpretation of the results from MW-4, it is concluded that transmissivity of the upper portion of the water-bearing unit is on the order of 70 ft^2/day, with storativity being approximately 0.01. Hydraulic conductivity is equal to transmissivity divided by saturated thickness. For this application, saturated thickness is the depth of water minus bottom depth of the well screen. Using the above, hydraulic conductivity is computed at about 14 ft/day.

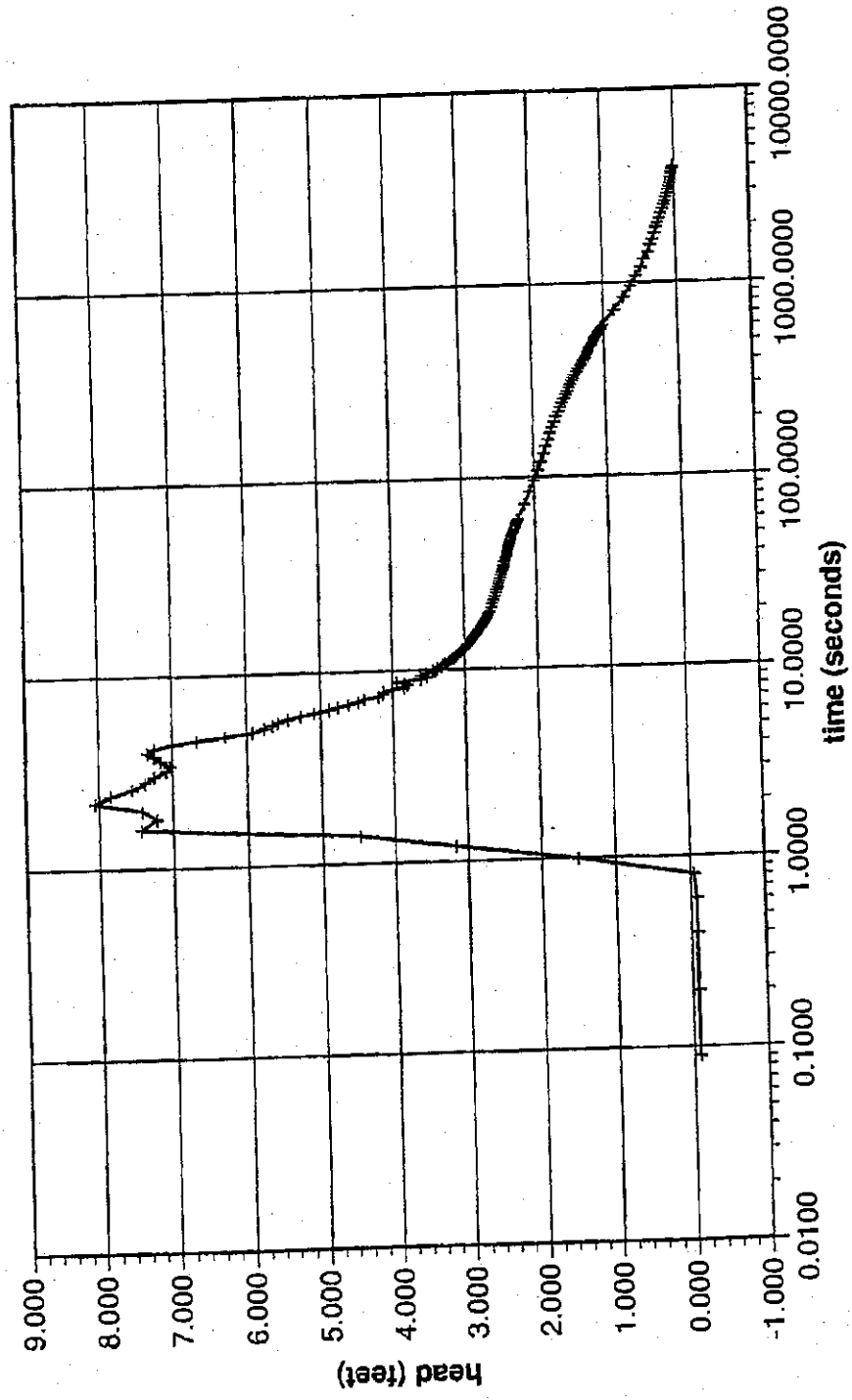
Results fromt the deeper portion of the water-bearing unit, as determined by the vertical well V-1, yielded a transmissivity of 5 ft2/day, a storativity of 0.1, and an estimated hydraulic conductivity of 1 ft/day.

All of these values are well within the range of reported results for this type of geologic matrix. Further, field observations during boring advancement and well installation supports the quantified results obtained from the aquifer testing.

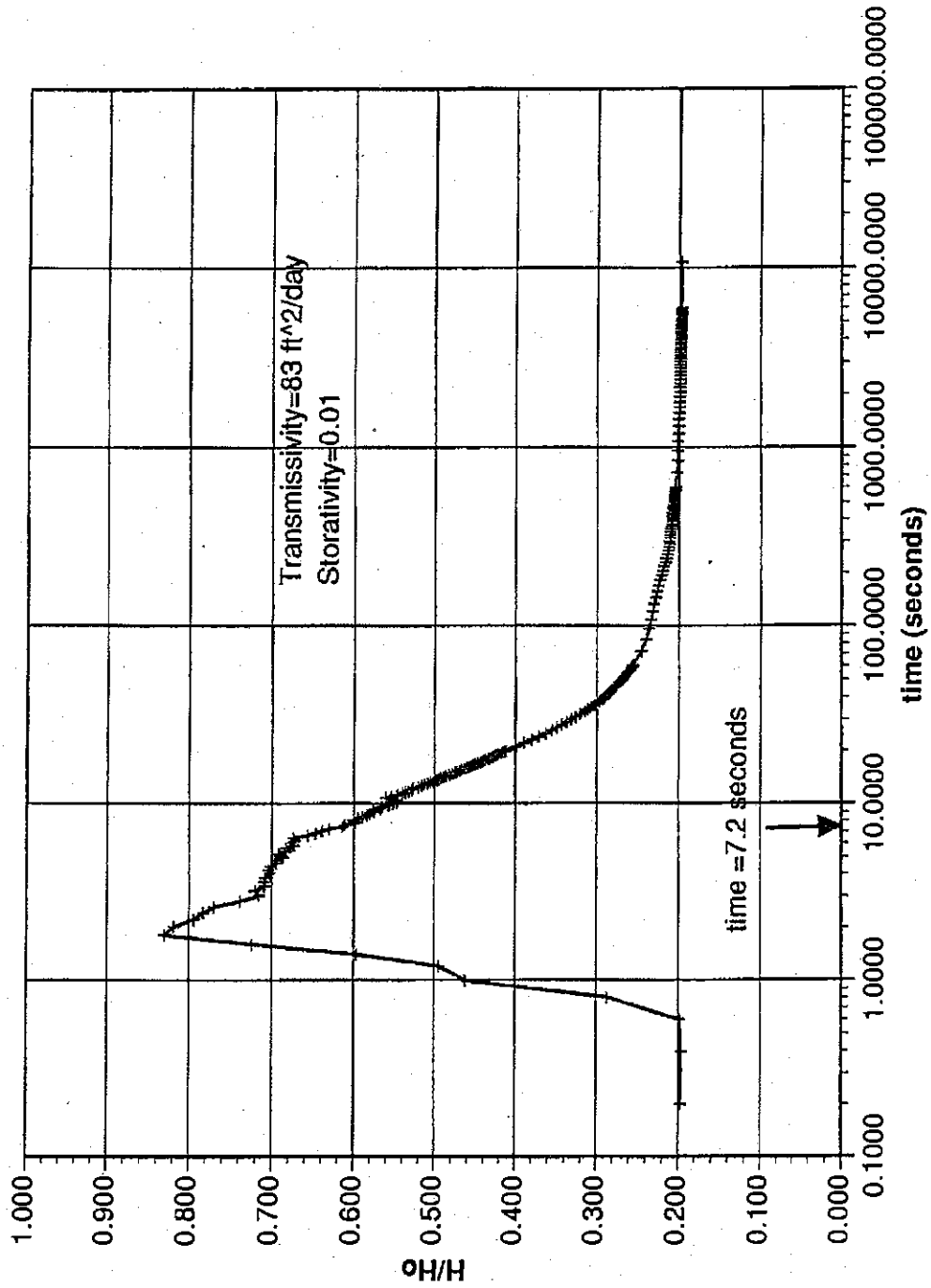
Figue D-1: Water Level Response for Test #1 of MW-4



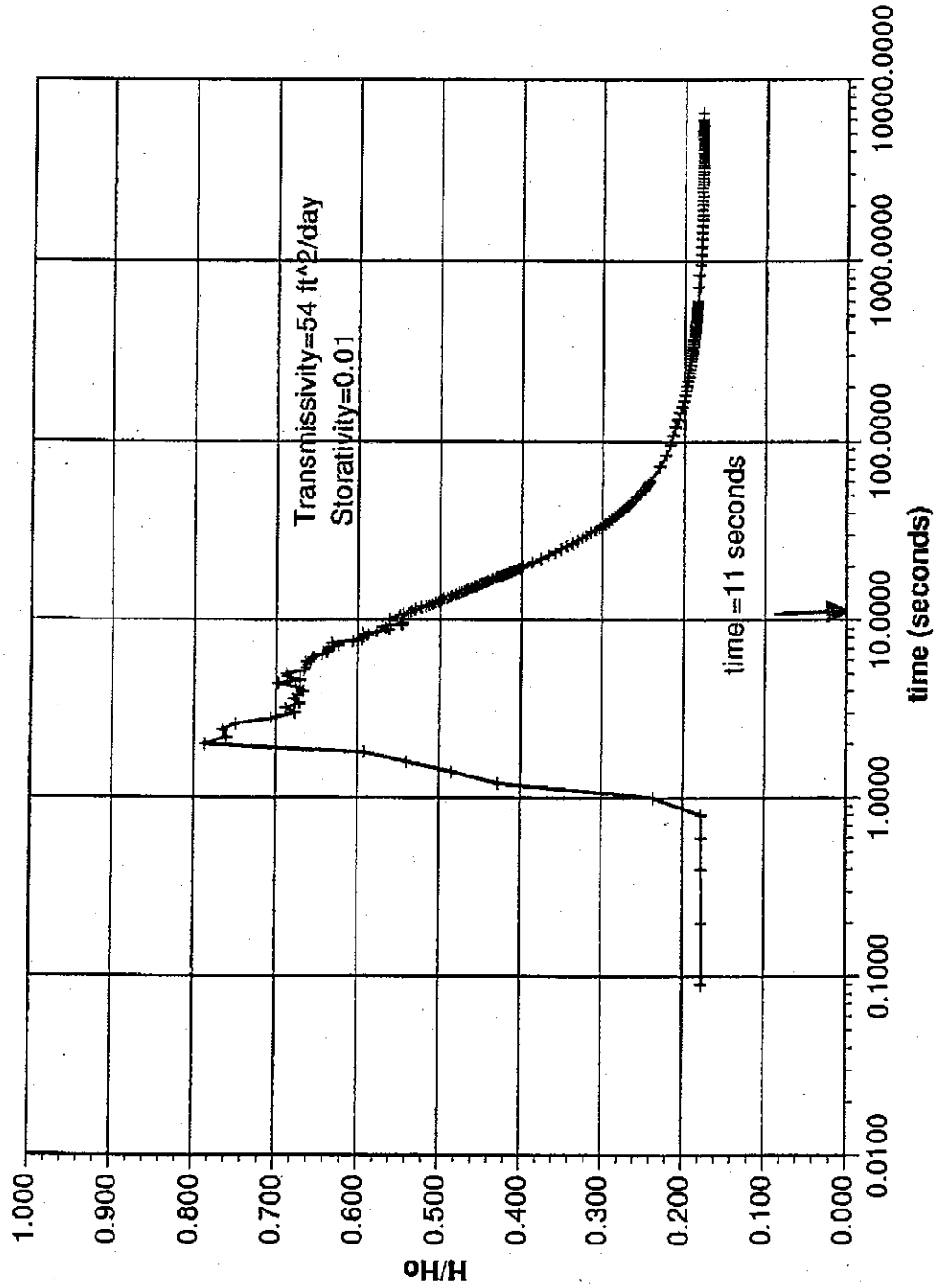
Figue D-3: Water Level Response for Test #1 of MW-11



Figue D-7: Reduced Slug Test Data for MW-1, Test #1



Figue D-8: Reduced Slug Test Data for MW-1, Test #2



Attachment E: EDR Report

Tucumcari Truck Terminal
Tucumcari Truck Terminal
Tucumcari, NM 88401

Inquiry Number: 02465481.1r
April 13, 2009

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	10
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-11
Physical Setting Source Map Findings	A-12
Physical Setting Source Records Searched	A-14

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, NM 88401

COORDINATES

Latitude (North):	35.157900 - 35° 9' 28.4''
Longitude (West):	103.773100 - 103° 46' 23.2''
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	611746.7
UTM Y (Meters):	3891044.8
Elevation:	4095 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	35103-B7 LIBERTY MESA, NM
Most Recent Revision:	1967

AERIAL PHOTOGRAPHY IN THIS REPORT

Photo Year:	2006
Source:	USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
TUCUMCARI TRUCK TERMINAL A EXIT 329 I 40 TUCUMCARI, NM 88401	LUST Facility Status: Cleanup, Responsible Party UST	N/A
TUCUMCARI TRUCK TERMINAL A EXIT 329 I 40 TUCUMCARI, NM 88401	FINDS	N/A

EXECUTIVE SUMMARY

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

CERCLIS ---------- Comprehensive Environmental Response, Compensation, and Liability Information System

Federal CERCLIS NFRAP site List

CERC-NFRAP ---------- CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent CERCLIS

SCS ---------- State Cleanup Sites Listing
SHWS ---------- This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

EXECUTIVE SUMMARY

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Facilities

State and tribal leaking storage tank lists

LAST ---------- Leaking Aboveground Storage Tank Sites
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST ---------- Aboveground Storage Tanks List
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Sites with Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing
VCP ---------- Voluntary Remediation Program Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
SWRCY ---------- Recycling Facility Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ---------- Clandestine Drug Labs
CDL ---------- Clandestine Drug Laboratory Listing

Local Land Records

LIENS 2 ---------- CERCLA Lien Information
LUCIS ---------- Land Use Control Information System

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Spill Data

Other Ascertainable Records

RCRA-NonGen ---------- RCRA - Non Generators

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
DRYCLEANERS	Drycleaner Facility Listing
NPDES	List of Discharge Permits
ASBESTOS	List of Asbestos Demolition and Renovations Jobs
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the New Mexico Environmental Department's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 08/01/2006 has revealed that there are 2 UST

sites within approximately 0.25 miles of the target property.

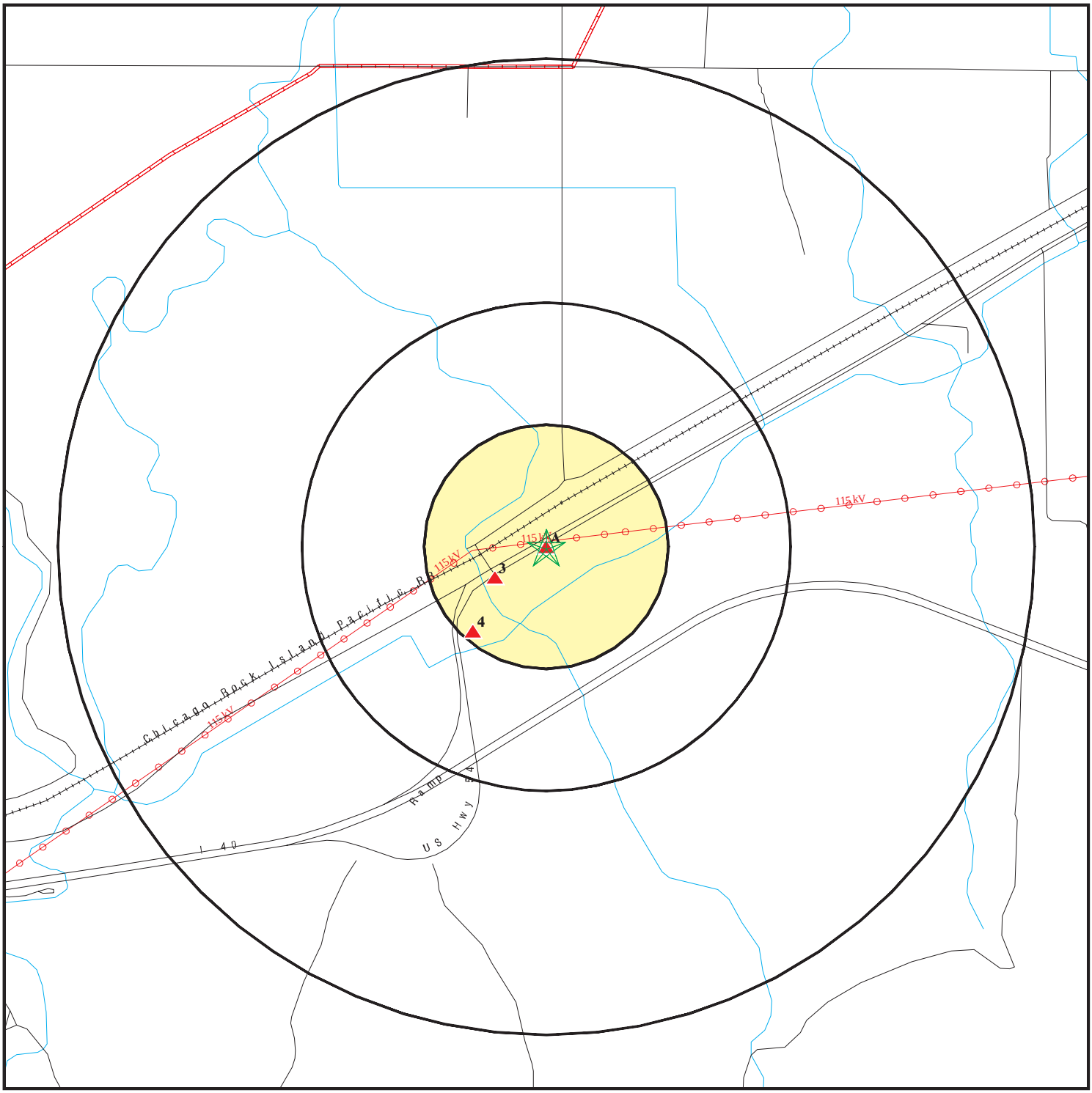
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NMDOT TUCUMCARI PATROL YARD 44	US HWY 54 MILE POST 305	WSW 0 - 1/8 (0.122 mi.)	3	8
BRYANT ABANDONED STATION	W HWY 66	SW 1/8 - 1/4 (0.229 mi.)	4	9

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
VERSATILE CONSTRUCTION ASPHALT PLA	SCS
M & M CLEANERS	DRYCLEANERS
BEACON STATION 654	LUST
NMSHTD TUCUMCARI	LUST
CHARTWELL TRANSPORTATION CO	UST
CHAPPYS HOUSE	UST
NMDOT TUCUMCARI PATROL YARD 44 42	AST
TUCUMCARI REFINED PRODUCTS TERMINA	FINDS, RCRA-NonGen
A T & T CORP	FINDS, RCRA-CESQG
JOHN TRK SVC	FINDS, RCRA-CESQG
UNITED PARCEL SERVICE	FINDS, RCRA-CESQG
TUCUMCARI KOA	FINDS
GASDON TUCUMCARI TRUCK STOP 51 14	FINDS
NMDOT TUCUMCARI PATROL YARD 44 42	FINDS
TUCUMCARI NM RMLR	FINDS
TUCUMCARI NM OLD BUILDING FSS	FINDS
HOLIDAY INN TUCUMCARI	FINDS
SANDIA TUCUMCARI FINA 34	FINDS
TUCUMCARI CHEVRON	FINDS
TUCUMCARI TIRE CO	FINDS

OVERVIEW MAP - 02465481.1r



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines

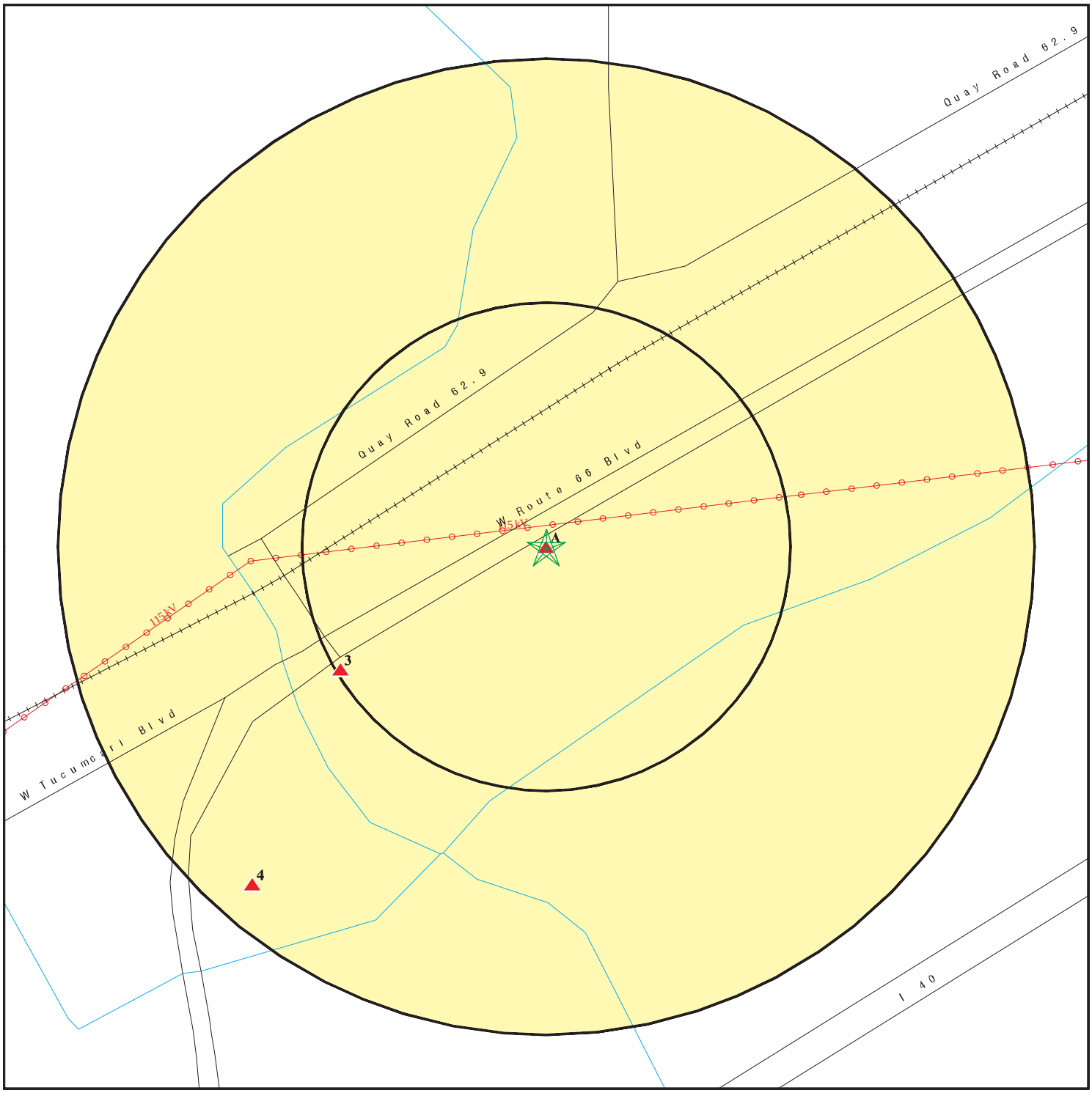
N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tucumcari Truck Terminal ADDRESS: Tucumcari Truck Terminal Tucumcari NM 88401 LAT/LONG: 35.1579 / 103.7731	CLIENT: Army Corp of Engineers CONTACT: Cecilia Horner INQUIRY #: 02465481.1r DATE: April 13, 2009 12:18 pm

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DETAIL MAP - 02465481.1r



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines

0 1/16 1/8 1/4 Miles

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Tucumcari Truck Terminal	CLIENT: Army Corp of Engineers
ADDRESS: Tucumcari Truck Terminal Tucumcari NM 88401	CONTACT: Cecilia Horner INQUIRY #: 02465481.1r
LAT/LONG: 35.1579 / 103.7731	DATE: April 13, 2009 12:19 pm

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	0	0	NR	NR	NR	0
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SCS		1.000	0	0	0	0	NR	0
SHWS		N/A	N/A	N/A	N/A	N/A	N/A	N/A
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	X	0.500	0	0	0	NR	NR	0
LAST		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	X	0.250	1	1	NR	NR	NR	2

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
ASBESTOS		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

A1 **TUCUMCARI TRUCK TERMINAL A** **LUST** **U003193381**
Target **EXIT 329 I 40** **UST** **N/A**
Property **TUCUMCARI, NM 88401**

Site 1 of 2 in cluster A

Actual:
4095 ft.

LUST:

Facility ID:	31248
Status:	**Cleanup, Responsible Party**
Status Date:	07/08/1993
Release ID:	730
Date Release Reported:	06/05/1991
Priority Rank:	180
Mitigating Factor Score:	2
Total Score To Assign Relative Rank:	2353
Project Manager:	George Beaumont

UST:

Facility ID:	31248
Secondary Address:	Not reported
Owner ID:	15102
Owner Name:	SHIPLEY PHILLIPS INC
Owner Address:	EXIT 329 I 40
Owner Address 2:	Not reported
Owner City,St,Zip:	TUCUMCARI, NM 88401
Owner Telephone:	505-461-1730

Tank ID:	31941
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	10000
Tank Substance:	UNLEADED GASOLINE

Tank ID:	31942
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	10000
Tank Substance:	UNLEADED GASOLINE

Tank ID:	31943
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	10000
Tank Substance:	UNLEADED GASOLINE

Tank ID:	31944
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	4000
Tank Substance:	UNLEADED GASOLINE

Tank ID:	31945
Tank Status:	**REMOVED**
Tank Type:	Underground
Tank Capacity:	6000

TUCUMCARI TRUCK TERMINAL A (Continued) **U003193381**

Tank Substance: USED OIL

Tank ID: 31946
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 1000
Tank Substance: USED OIL

Tank ID: 31947
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 2000
Tank Substance: LUBRICATING OIL

Tank ID: 31948
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 2000
Tank Substance: LUBRICATING OIL

A2
Target Property
Actual: 4095 ft.

TUCUMCARI TRUCK TERMINAL A **FINDS** **1009423666**
EXIT 329 I 40 **N/A**
TUCUMCARI, NM 88401

Site 2 of 2 in cluster A

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110022686315

NM-TEMPO (New Mexico - Tools for Environmental Management and Protection Organizations) is an Integrated Management System

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3
WSW
< 1/8
0.122 mi.
646 ft.

Relative: Equal

Actual: 4095 ft.

NMDOT TUCUMCARI PATROL YARD 44 42 **UST** **U003193382**
US HWY 54 MILE POST 305 **N/A**
TUCUMCARI, NM 88401

UST:
Facility ID: 31249
Secondary Address: Not reported
Owner ID: 15789
Owner Name: NEW MEXICO (STATE OF) NMSHD DISTRICT IV
Owner Address: PO BOX 10
Owner Address 2: Not reported
Owner City,St,Zip: LAS VEGAS, NM 87701
Owner Telephone: 505-454-3620

Tank ID: 31949
Tank Status: REMOVED

NMDOT TUCUMCARI PATROL YARD 44 42 (Continued) **U003193382**

Tank Type: Underground
Tank Capacity: 1000
Tank Substance: DIESEL

Tank ID: 31950
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 1000
Tank Substance: GASOLINE UNKNOWN TYPE

4
SW
1/8-1/4
0.229 mi.
1210 ft.

Relative: Higher

Actual: 4105 ft.

BRYANT ABANDONED STATION **UST** **U003193331**
W HWY 66 **N/A**
TUCUMCARI, NM 88401

UST:
Facility ID: 27065
Secondary Address: Not reported
Owner ID: 17041
Owner Name: BRYANT LEWIS ELDEN
Owner Address: 4477 QUAY RD 63
Owner Address 2: Not reported
Owner City,St,Zip: TUCUMCARI, NM 88401
Owner Telephone: 505-461-0267

Tank ID: 22246
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 3000
Tank Substance: LEADED GASOLINE

Tank ID: 22247
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 6000
Tank Substance: LEADED GASOLINE

Tank ID: 22248
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 8000
Tank Substance: LEADED GASOLINE

Tank ID: 22249
Tank Status: REMOVED
Tank Type: Underground
Tank Capacity: 10000
Tank Substance: LEADED GASOLINE

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
TUCUMCARI	1009427113	GASDON TUCUMCARI TRUCK STOP 51 14	I 40 EXIT 321 PALOMAS INTERC	88401	FINDS
TUCUMCARI	S101647556	BEACON STATION 654	I 40 EXIT 321 PALOMAS INTERC	88401	LUST
TUCUMCARI	U003193333	CHARTWELL TRANSPORTATION CO	HWY 54 NE	88401	UST
TUCUMCARI	S109096316	VERSATILE CONSTRUCTION ASPHALT PLA	HWY 54 AND GARCIA		SCS
TUCUMCARI	1000306353	JOHN TRK SVC	HWY 66 & 54	88401	FINDS, RCRA-CESQG
TUCUMCARI	S107413330	NMSHTD TUCUMCARI	US HWY 54 MILE POST 305	88401	LUST
TUCUMCARI	A100268412	NMDOT TUCUMCARI PATROL YARD 44 42	US HWY 54 MILE POST 305	88401	AST
TUCUMCARI	1000144760	TUCUMCARI REFINED PRODUCTS TERMINA	3 EAST HWY 54	88401	FINDS, RCRA-NonGen
TUCUMCARI	U003749048	CHAPPYS HOUSE	2 MILE S OF HWY 102	88401	UST
TUCUMCARI	1009427678	TUCUMCARI NM RMLR	5 MILES S OF I 40	88401	FINDS
TUCUMCARI	1009427676	TUCUMCARI NM OLD BUILDING FSS	MUNICIPAL AIRPORT ROUTE 4 BO	88401	FINDS
TUCUMCARI	1010031678	HOLIDAY INN TUCUMCARI	3716 EAST TUCUMCARI BLVD	88401	FINDS
TUCUMCARI	1009430563	SANDIA TUCUMCARI FINA 34	702 E TUCUMCARI BLVD	88401	FINDS
TUCUMCARI	1009429599	TUCUMCARI CHEVRON	300 W TUCUMCARI BLVD	88401	FINDS
TUCUMCARI	1009423665	TUCUMCARI TIRE CO	723 E TUCUMCARI BLVD	88401	FINDS
TUCUMCARI	1004754294	UNITED PARCEL SERVICE	524 TUCUMCARI BLVD	88401	FINDS, RCRA-CESQG
TUCUMCARI	S108348289	M & M CLEANERS	405 E. TUCUMCARI BLVD	88401	DRYCLEANERS
TUCUMCARI	1004754062	A T & T CORP	1 & 1 HALF M S OF TUCUMCARI	88401	FINDS, RCRA-CESQG
TUCUMCARI	1009429604	TUCUMCARI KOA	HC 30	88401	FINDS
TUCUMCARI	1009423439	NMDOT TUCUMCARI PATROL YARD 44 42	US 54 MP 305	88401	FINDS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/07/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 53

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 01/30/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007
Date Data Arrived at EDR: 12/06/2007
Date Made Active in Reports: 02/20/2008
Number of Days to Update: 76

Source: EPA
Telephone: 703-412-9810
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/17/2008
Date Data Arrived at EDR: 12/22/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 98

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/03/2009
Next Scheduled EDR Contact: 06/01/2009
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 03/25/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 03/25/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 03/25/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 03/25/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 10/06/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 01/30/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SCS: State Cleanup Sites Listing

State cleanup sites that fall under the state's Water Quality Control Commission Regulations.

Date of Government Version: 06/25/2008
Date Data Arrived at EDR: 07/25/2008
Date Made Active in Reports: 08/27/2008
Number of Days to Update: 33

Source: Environment Department
Telephone: 505-827-2855
Last EDR Contact: 02/27/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Department of the Environment
Telephone: 505-827-2918
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: N/A

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/15/2008
Date Data Arrived at EDR: 09/17/2008
Date Made Active in Reports: 09/26/2008
Number of Days to Update: 9

Source: New Mexico Environment Department
Telephone: 505-827-0347
Last EDR Contact: 03/03/2009
Next Scheduled EDR Contact: 06/01/2009
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Priorization Database
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 10/06/2006
Date Made Active in Reports: 11/08/2006
Number of Days to Update: 33
Source: New Mexico Environment Department
Telephone: 505-984-1741
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Varies

LAST: Leaking Aboveground Storage Tank Sites
A listing of leaking aboveground storage tank sites.

Date of Government Version: 05/01/2006
Date Data Arrived at EDR: 05/01/2006
Date Made Active in Reports: 06/05/2006
Number of Days to Update: 35
Source: Environment Department
Telephone: 505-984-1926
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/03/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 20
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/20/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 03/03/2009
Date Data Arrived at EDR: 03/04/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 26
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 03/13/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 13
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 02/15/2009
Date Data Arrived at EDR: 02/27/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 17
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/06/2008
Date Data Arrived at EDR: 10/09/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 41
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

State and tribal registered storage tank lists

UST: Listing of Underground Storage Tanks
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/23/2006
Number of Days to Update: 26
Source: New Mexico Environment Department
Telephone: 505-984-1741
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

AST: Aboveground Storage Tanks List
Aboveground tanks that have been inspected by the State Fire Marshal.

Date of Government Version: 08/01/2006
Date Data Arrived at EDR: 09/27/2006
Date Made Active in Reports: 10/20/2006
Number of Days to Update: 23
Source: Environment Department
Telephone: 505-984-1926
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 03/03/2009
Date Data Arrived at EDR: 03/04/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 26
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 03/13/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 13

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/20/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 11/25/2008
Date Data Arrived at EDR: 11/26/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 27

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 06/06/2008
Date Data Arrived at EDR: 10/09/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 41

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites with Institutional Controls
Sites included in the Voluntary Cleanup listing that have Institutional Controls in place.

Date of Government Version: 04/28/2008
Date Data Arrived at EDR: 07/25/2008
Date Made Active in Reports: 08/27/2008
Number of Days to Update: 33
Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

VCP: Voluntary Remediation Program Sites
Sites involved in the Voluntary Remediation Program.

Date of Government Version: 04/28/2008
Date Data Arrived at EDR: 07/25/2008
Date Made Active in Reports: 08/27/2008
Number of Days to Update: 33
Source: Environment Department
Telephone: 505-827-2754
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 11/14/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 02/10/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

SWRCY: Recycling Facility Listing

A listing of recycling facility locations.

Date of Government Version: 09/15/2008
Date Data Arrived at EDR: 09/17/2008
Date Made Active in Reports: 09/26/2008
Number of Days to Update: 9

Source: Environment Department
Telephone: 505-827-0197
Last EDR Contact: 03/03/2009
Next Scheduled EDR Contact: 06/01/2009
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

CDL: Clandestine Drug Laboratory Listing

A listing of clandestine drug labs, such as illegal methamphetamine labs.

Date of Government Version: 11/10/2008
Date Data Arrived at EDR: 11/12/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 41

Source: Environment Department
Telephone: 505-476-6000
Last EDR Contact: 02/11/2009
Next Scheduled EDR Contact: 05/11/2009
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 11/20/2008
Date Data Arrived at EDR: 12/23/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 03/03/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 03/09/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/2008
Date Data Arrived at EDR: 10/16/2008
Date Made Active in Reports: 11/19/2008
Number of Days to Update: 34

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 01/30/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Annually

SPILLS: Spill Data

Hazardous materials spills data.

Date of Government Version: 01/12/2006
Date Data Arrived at EDR: 01/23/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 35

Source: Environment Department
Telephone: 505-827-0166
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 214-665-6444
Last EDR Contact: 03/25/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/24/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 02/06/2009
Next Scheduled EDR Contact: 05/04/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 11/03/2008
Date Data Arrived at EDR: 01/06/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 83

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/21/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 55

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 07/13/2007
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 10/31/2008
Date Data Arrived at EDR: 12/23/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 97

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/24/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 04/09/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 02/18/2009
Next Scheduled EDR Contact: 04/13/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 10/08/2008
Date Data Arrived at EDR: 10/17/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 52
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35
Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 12/04/2008
Next Scheduled EDR Contact: 01/12/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 07/31/2008
Date Data Arrived at EDR: 08/13/2008
Date Made Active in Reports: 09/09/2008
Number of Days to Update: 27
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/13/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 02/02/2009
Next Scheduled EDR Contact: 05/04/2009
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/07/2009
Date Data Arrived at EDR: 01/15/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 74

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/28/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 12/08/2008
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 01/30/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/30/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: EPA
Telephone: (214) 665-2200
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/19/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaner Facility Listing

A listing of drycleaner facility locations. The listing may contain facilities that are no longer there, or under different management.

Date of Government Version: 01/24/2007
Date Data Arrived at EDR: 01/31/2007
Date Made Active in Reports: 03/22/2007
Number of Days to Update: 50

Source: Environment Department
Telephone: 505-222-9507
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: 04/19/2009
Data Release Frequency: No Update Planned

NPDES: List of Discharge Permits

General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 04/08/2008
Date Data Arrived at EDR: 05/14/2008
Date Made Active in Reports: 06/20/2008
Number of Days to Update: 37

Source: Environment Department
Telephone: 505-827-2918
Last EDR Contact: 02/11/2009
Next Scheduled EDR Contact: 05/11/2009
Data Release Frequency: Semi-Annually

ASBESTOS: List of Asbestos Demolition and Renovations Jobs

Asbestos is a common fibrous rock found worldwide which has been used in various products for over 4500 years. It has been used in over 3000 different products such as textiles, paper, ropes, wicks, stoves, filters, floor tiles, roofing shingles, clutch facings, water pipe, cements, fillers, felt, fireproof clothing, gaskets, battery boxes, clapboard, wallboard, fire doors, fire curtains, insulation, brake linings, etc.

Date of Government Version: 04/01/2007
Date Data Arrived at EDR: 05/09/2007
Date Made Active in Reports: 05/30/2007
Number of Days to Update: 21

Source: New Mexico Environment Department
Telephone: 505-827-1494
Last EDR Contact: 02/06/2009
Next Scheduled EDR Contact: 05/04/2009
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/2009
Next Scheduled EDR Contact: 05/04/2009
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 12/08/2008
Date Data Arrived at EDR: 12/09/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 97

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 05/11/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 02/06/2009
Next Scheduled EDR Contact: 05/04/2009
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 02/25/2009
Date Made Active in Reports: 03/12/2009
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/25/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 07/06/2009
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Providers
Source: Office of Child Development
Telephone: 505-827-7946

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TUCUMCARI TRUCK TERMINAL
TUCUMCARI TRUCK TERMINAL
TUCUMCARI, NM 88401

TARGET PROPERTY COORDINATES

Latitude (North):	35.15790 - 35° 9' 28.4''
Longitude (West):	103.7731 - 103° 46' 23.2''
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	611746.7
UTM Y (Meters):	3891044.8
Elevation:	4095 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	35103-B7 LIBERTY MESA, NM
Most Recent Revision:	1967

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

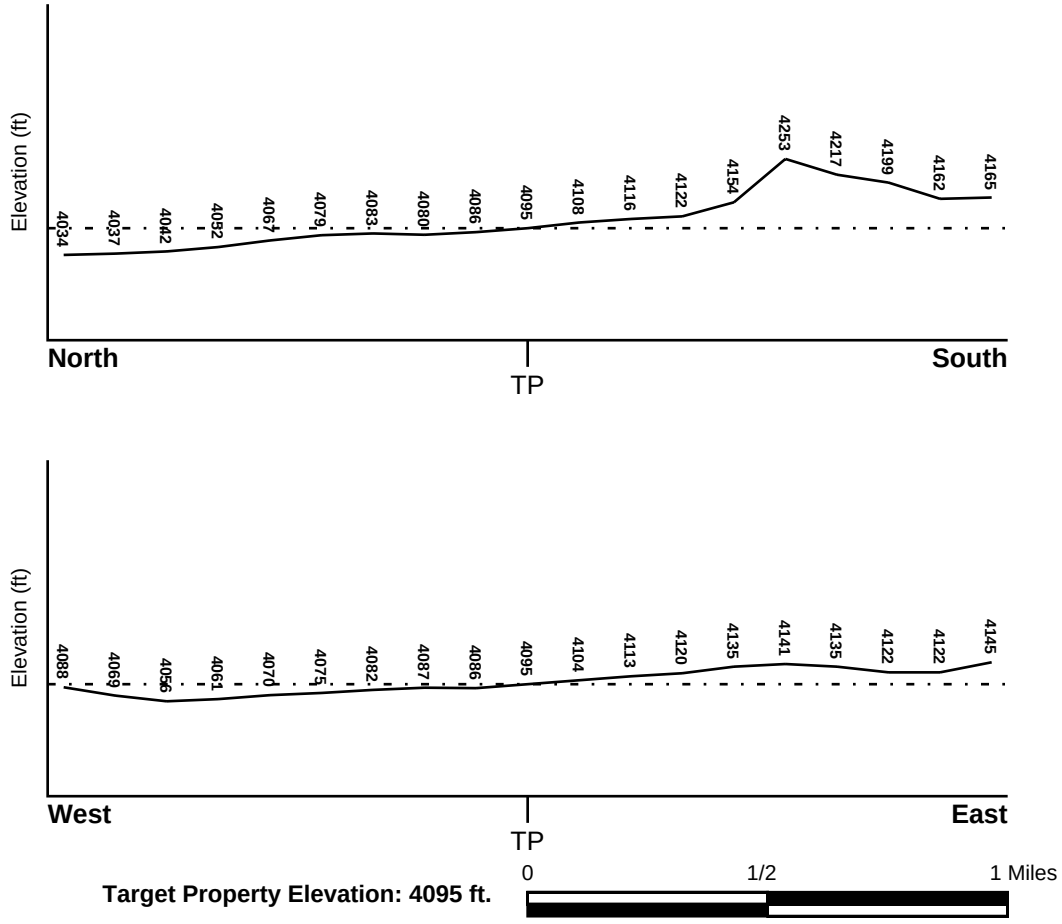
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
QUAY, NM	Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LIBERTY MESA	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

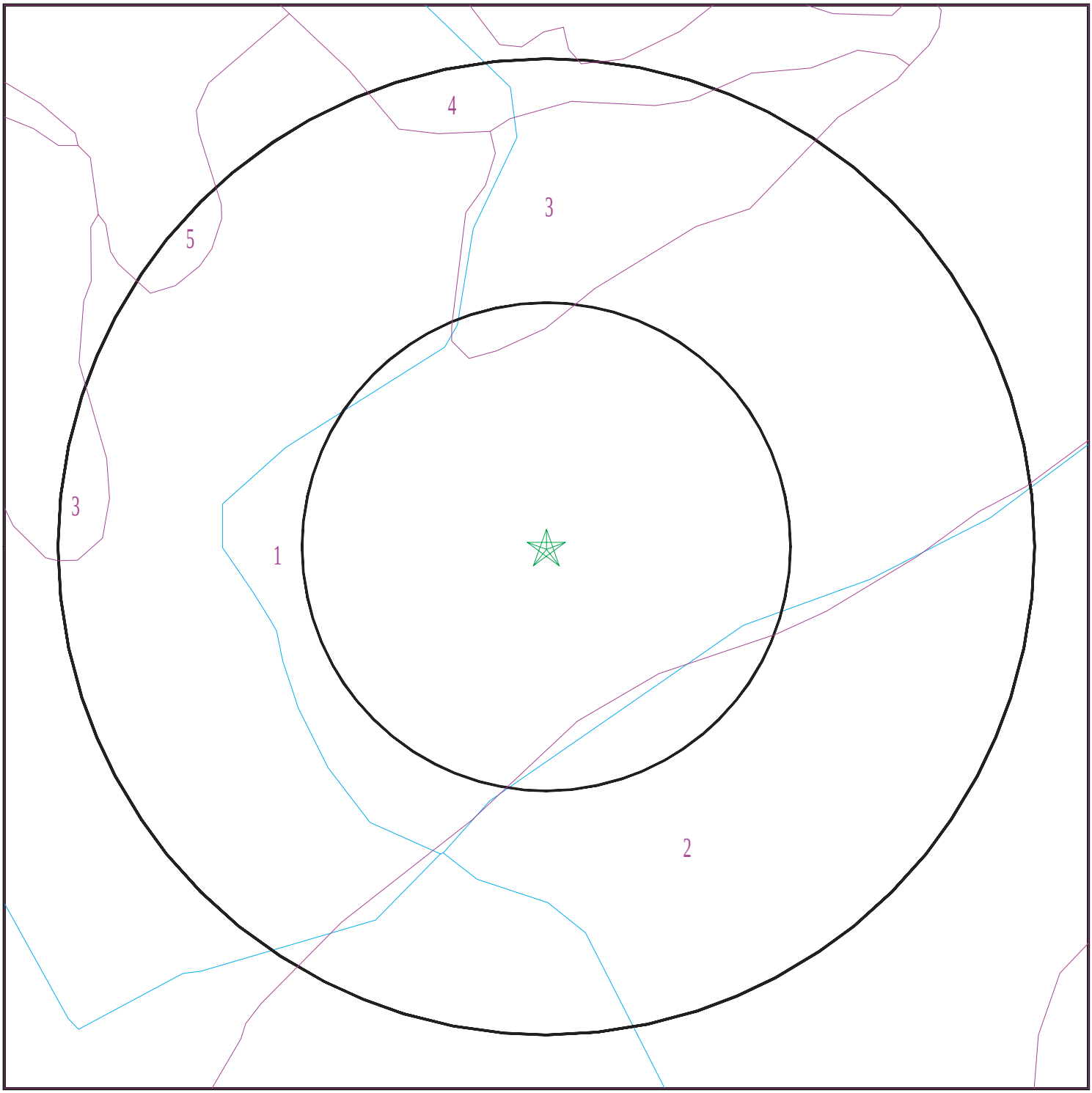
Era:	Mesozoic
System:	Jurassic
Series:	Jurassic
Code:	J *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 02465481.1r



SITE NAME:	Tucumcari Truck Terminal	CLIENT:	Army Corp of Engineers
ADDRESS:	Tucumcari Truck Terminal Tucumcari NM 88401	CONTACT:	Cecilia Horner
		INQUIRY #:	02465481.1r
LAT/LONG:	35.1579 / 103.7731	DATE:	April 13, 2009 12:19 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Quay

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	7 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
3	25 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: Quay

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	9 inches	25 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
3	25 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: Gallegos

Soil Surface Texture: very gravelly loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	very gravelly loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42.34 Min: 14.11	Max: 8.4 Min: 7.4
2	5 inches	59 inches	extremely gravelly clay loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42.34 Min: 14.11	Max: 8.4 Min: 7.4

Soil Map ID: 4

Soil Component Name: Toyah

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9
2	9 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: Kinkead

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	25 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.4
3	25 inches	59 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.23	Max: 8.4 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

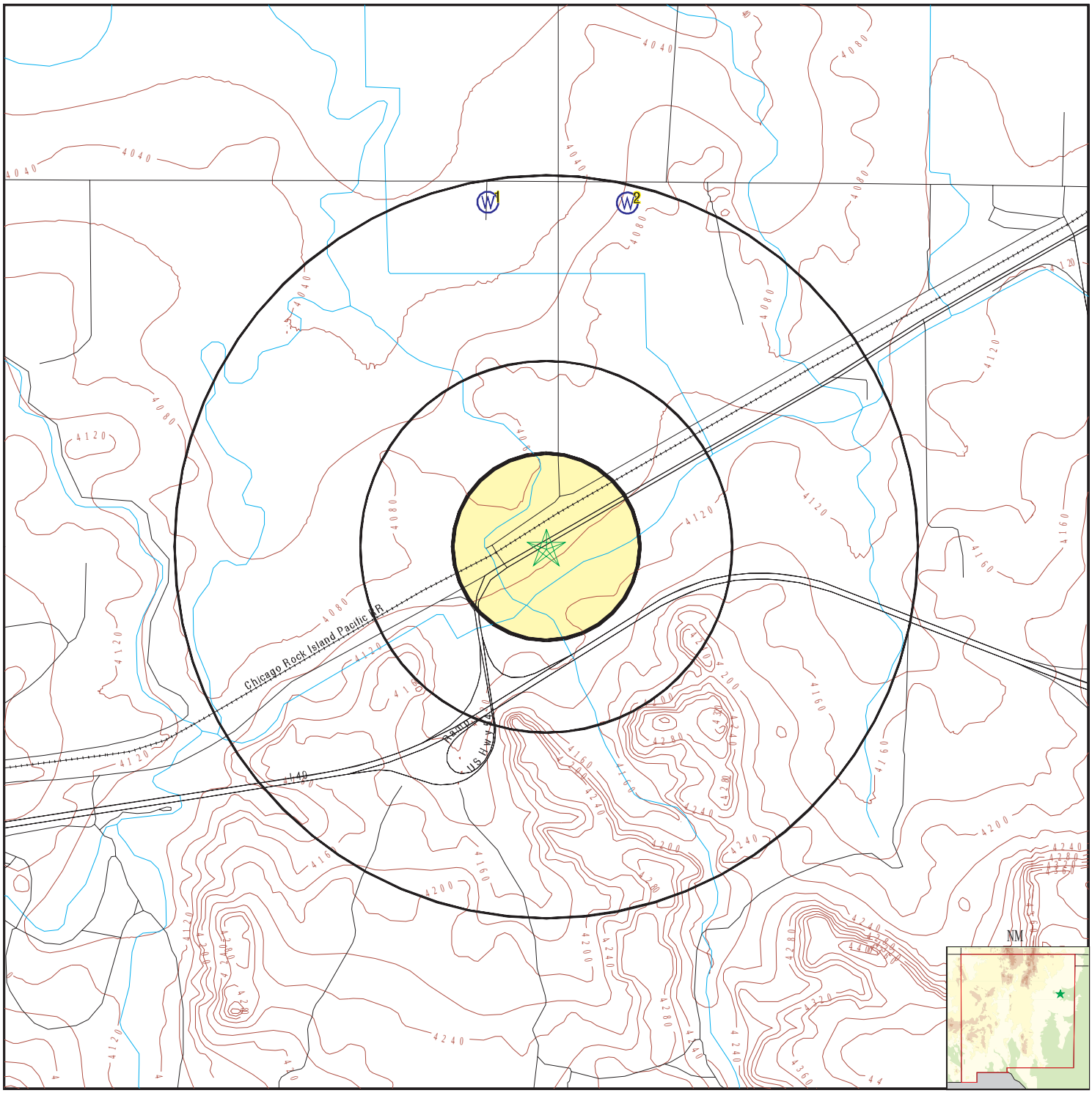
Note: PWS System location is not always the same as well location.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	NM1000000110802	1/2 - 1 Mile North
2	NM1000000110911	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 02465481.1r



0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Tucumcari Truck Terminal	CLIENT:	Army Corp of Engineers
ADDRESS:	Tucumcari Truck Terminal Tucumcari NM 88401	CONTACT:	Cecilia Horner
		INQUIRY #:	02465481.1r
LAT/LONG:	35.1579 / 103.7731	DATE:	April 13, 2009 12:19 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

1
North
1/2 - 1 Mile
Lower

NM WELLS **NM1000000110802**

Objectid:	24030	Id:	130083
X coord:	611473	Y coord:	3892732
Db file nb:	TU 00066		
Use:	72-12-1 LIVESTOCK WATERING		
Diversion:	3	Pod rec nb:	130083
Well numbe:	TU 00066	Tws:	11N
Rng:	30E	Sec:	20
Q:	2	Q2:	2
Q3:	1	Zone:	Not Reported
X:	Not Reported	Y:	Not Reported
Easting:	611523	Northing:	3892528
Start date:	19880301	Finish dat:	19880314
Depth well:	150	Depth wate:	10

2
NNE
1/2 - 1 Mile
Lower

NM WELLS **NM1000000110911**

Objectid:	24139	Id:	147932
X coord:	612077	Y coord:	3892736
Db file nb:	TU 00199		
Use:	72-12-1 DOMESTIC ONE HOUSEHOLD		
Diversion:	3	Pod rec nb:	147932
Well numbe:	TU 00199	Tws:	11N
Rng:	30E	Sec:	21
Q:	1	Q2:	1
Q3:	2	Zone:	Not Reported
X:	Not Reported	Y:	Not Reported
Easting:	612127	Northing:	3892532
Start date:	19990417	Finish dat:	19990419
Depth well:	140	Depth wate:	36

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: NM Radon

Radon Test Results

Zip	Total Sites	Pct. < 4 Pci/L	4 < 10 Pci/L	10 < 20 Pci/L	> 20 Pci/L
88401	8	50.0	50.0	0.0	0.0

Federal EPA Radon Zone for QUAY County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 88401

Number of sites tested: 6

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	3.567 pCi/L	67%	33%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	6.000 pCi/L	0%	100%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Office of the State Engineer
Telephone: 505-827-6175

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Locations
Source: New Mexico Institute of Mining and Technology
Telephone: 505-835-5142

RADON

State Database: NM Radon
Source: Environment Department
Telephone: 505-827-1093
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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Tucumcari Truck Terminal
Tucumcari Truck Terminal
Tucumcari, NM 88434

Inquiry Number: 2472006.1
April 20, 2009

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

4/20/09

Site Name:
Tucumcari Truck Terminal
Tucumcari Truck Terminal
Tucumcari, NM 88434

Client Name:
Army Corp of Engineers
4101 Jefferson Plaza NE
Alburquerque, NM 87109

EDR Inquiry # 2472006.1

Contact: Cecilia Horner

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Army Corp of Engineers were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Tucumcari Truck Terminal
Address: Tucumcari Truck Terminal
City, State, Zip: Tucumcari, NM 88434
Cross Street:
P.O. # NA
Project: NA
Certification # B339-4960-A4E2

Sanborn® Library search results
Certification # B339-4960-A4E2

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✓ Library of Congress
- ✓ University Publications of America
- ✓ EDR Private Collection

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Tucumcari Truck Terminal
Tucumcari Truck Terminal
Tucumcari, NM 88434

Inquiry Number: 2472006.2
April 20, 2009

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

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Date EDR Searched Historical Sources:

Aerial Photography April 20, 2009

Target Property:

Tucumcari Truck Terminal

Tucumcari, NM 88434

Year	***Scale***	***Details***	***Source***
1954	Aerial Photograph. Scale: 1"=1000'	Panel #: 2435103-B7/Flight Date: October 10, 1954	EDR
1983	Aerial Photograph. Scale: 1"=1000'	Panel #: 2435103-B7/Flight Date: June 02, 1983	EDR
1986	Aerial Photograph. Scale: 1"=1000'	Panel #: 2435103-B7/Flight Date: June 12, 1986	EDR
1991	Aerial Photograph. Scale: 1"=750'	Panel #: 2435103-B7/Flight Date: April 15, 1991	EDR
1997	Aerial Photograph. Scale: 1"=750'	Panel #: 2435103-B7/Flight Date: March 05, 1997	EDR
2006	Aerial Photograph. Scale: 1"=484'	Flight Year: 2006	EDR


INQUIRY #: 2472006.2
YEAR: 1954
= 1000'
N


INQUIRY #: 2472006.2
YEAR: 1983
= 1000'
N


INQUIRY #: 2472006.2
YEAR: 1986
= 1000'
N



INQUIRY #: 2472006.2

YEAR: 1991

= 750'

N


INQUIRY #: 2472006.2
YEAR: 1997
= 750'
N


INQUIRY #: 2472006.2
YEAR: 2006
= 484'
N

Tucumcari Truck Terminal
Tucumcari Truck Terminal
Tucumcari, NM 88434

Inquiry Number: 2472006.3
April 20, 2009

The EDR Historical Topographic Map Report

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800.352.0050
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EDR Historical Topographic Map Report

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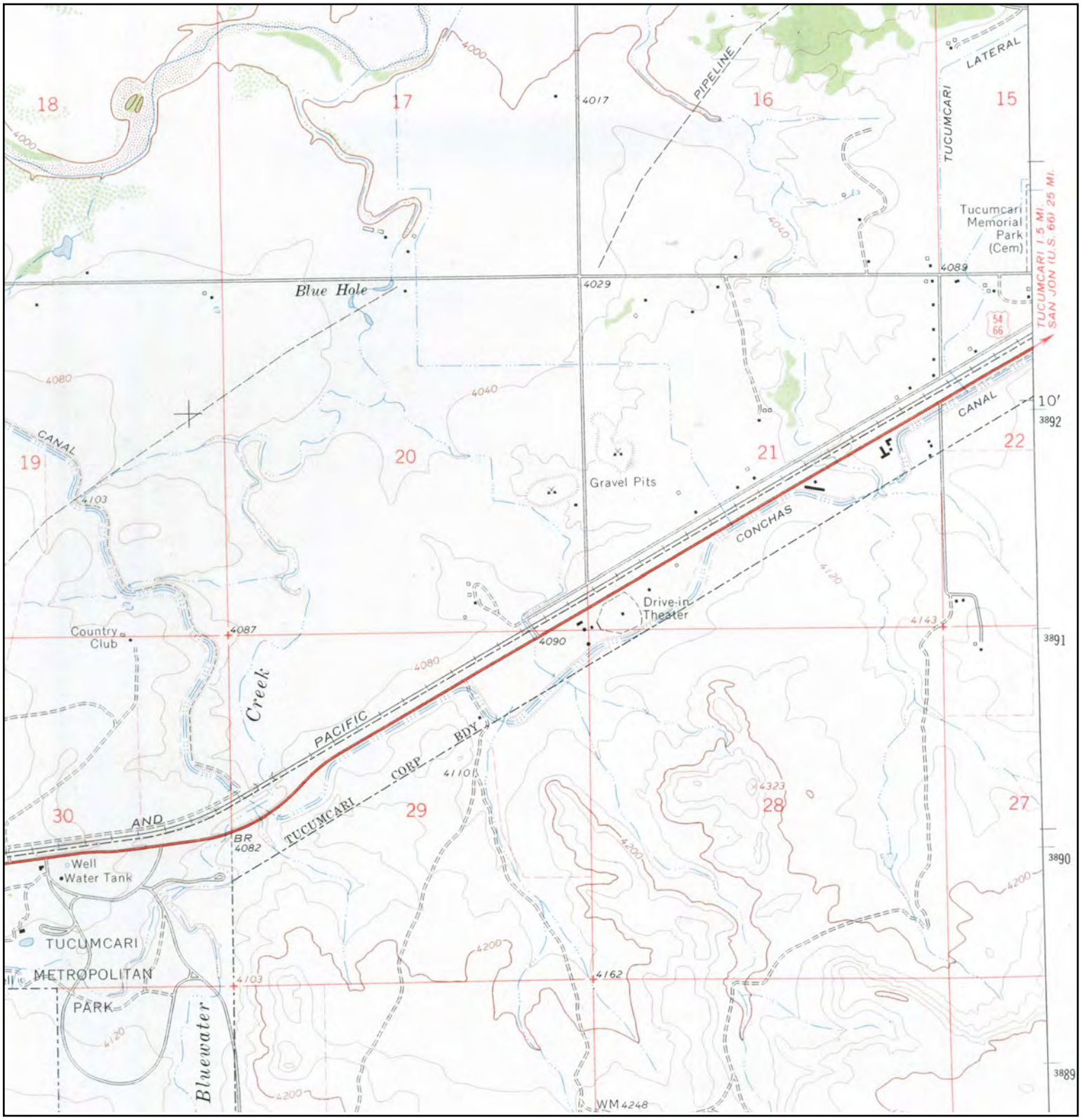
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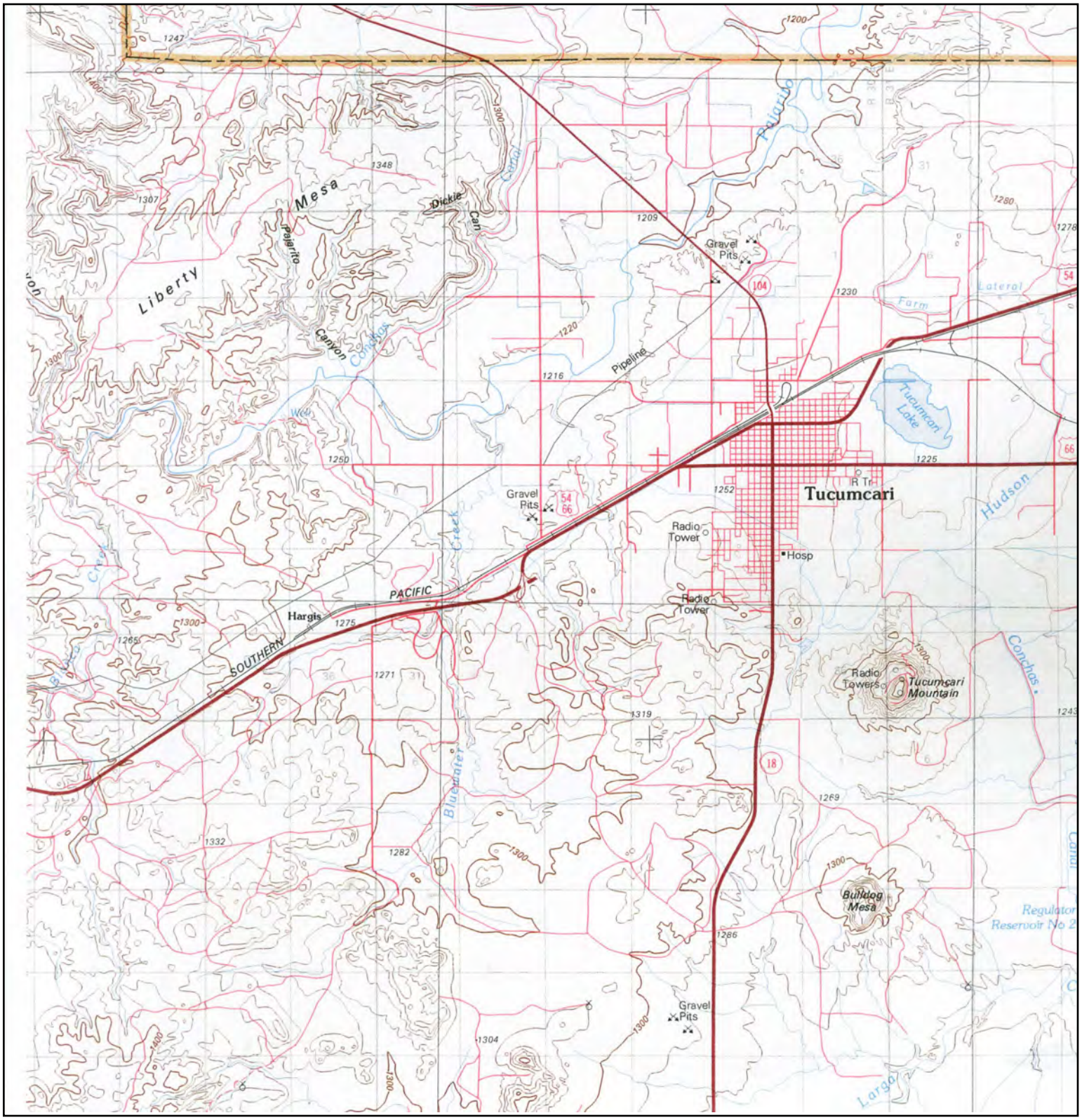
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Historical Topographic Map



N	TARGET QUAD NAME: Liberty Mesa, NM MAP YEAR: 1967 SERIES: 7.5 SCALE: 1:24,000	SITE NAME: Tucumcari Truck Terminal ADDRESS: Tucumcari Truck Terminal Tucumcari, NM 88434 LAT/LONG: 35.1579 / 103.7731	CLIENT: Army Corp of Engineers CONTACT: Cecilia Horner INQUIRY#: 2472006.3 RESEARCH DATE: 04/20/2009

Historical Topographic Map



N	TARGET QUAD NAME: Tucumcari, NM/TX MAP YEAR: 1978 SERIES: 30x60 SCALE: 1:100,000	SITE NAME: Tucumcari Truck Terminal ADDRESS: Tucumcari Truck Terminal Tucumcari, NM 88434 LAT/LONG: 35.1579 / 103.7731	CLIENT: Army Corp of Engineers CONTACT: Cecilia Horner INQUIRY#: 2472006.3 RESEARCH DATE: 04/20/2009

The EDR Environmental LienSearch™ Report

TUCUMCARI TRUCK TERMINAL
QUAY COUNTY
TUCUMCARI, NM 88434

Project Number 02457636.7

April 21, 2009

EDR® Environmental Data Resources Inc

NCO SM

The Standard in Environmental Risk Information

440 Wheelers Farm Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report includes results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers follows established procedures to:

- search for parcel information, legal description, and ownership based on client supplied address information;
- research indexes and title repositories;
- obtain a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument (title, parties involved, and description); and
- provide a copy of the deed.

Thank you for your business.
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with any questions or comments.

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EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, NM 88434

RESEARCH SOURCE

Sources: Quay County

DEED INFORMATION

Type of Deed: WD ☒ QCD ☐ Other ☐ DEED

Title is vested in: Ortega's Shell Plaza, Inc.

Title received from: Shipley-Phillips, Inc., Oil Company

Deed Dated: February 27, 2003
Deed Recorded: March 5, 2003
BK/PG: 128/495

LEGAL DESCRIPTION

Description: Legal attached as Exhibit "A."

Assessor's Parcel Number: 1-177-062-460-197

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If yes:

1st Party:

2nd Party:

Dated:
Recorded:
Book:
Page:
Comments:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

EDR Environmental LienSearch™ Report

EXHIBIT A

WARRANTY DEED

SHIPLEY-PHILLIPS, INC., OIL COMPANY, an Arizona Corporation, for consideration paid, grants to ORTEGA'S SHELL PLAZA, INC., a New Mexico Corporation, whose address is 1000 East Highway 66, Gallup, New Mexico 87301, the following described real estate in Quay County, New Mexico:

A certain tract or parcel of land situate in the Southeast Quarter of the Southeast Quarter (SE1/4SE1/4) of Section Twenty (20), the South Half of the Southwest Quarter (S1/2SW1/4) of Section Twenty-One (21), and the Northwest Quarter of the Northwest Quarter (NW1/4NW1/4) of Section Twenty-Eight (28), all in Township Eleven (11) North, Range Thirty (30) East, N.M.P.M., more particularly described as follows:

Beginning at the corner of Sections 20, 21, 28 and 29 marked by a ½ inch rebar cap from whence the 1/4 corner common to Sections 28 and 29 marked by a U.S.G.L.O. brass cap set in a mound of stone bears S00°17'06"W a distance of 2647.76 feet; Thence N0°17'06"E a distance of 225.94 feet; Thence S89°51'00"W a distance of 433.83 feet; Thence N60°19'00"E a distance of 2409.64 feet; Thence S32°38'00"E a distance of 33.26 feet; Thence S17°46'15"W a distance of 503.40 feet to a point of curve; Thence Southwesterly along the arc of a curve to the right of 340.0 feet radius, a distance of 237.36 feet to a point of tangent, long chord is S37°46'15"W, 232.57 feet; Thence S57°46'15"W, 194.60 feet; Thence S32°13'45"E, 60.0 feet; Thence S57°46'15"W, 648.62 feet to a point of curve; Thence Southwesterly along the arc of curve to the right of 400.0 feet radius, a distance of 106.93 feet, long chord is S65°25'59"W, 106.61 feet; Thence S73°05'15"W, 610.49 feet to a point of curve; Thence Southwesterly along the arc of a curve to the right of 1532.5 feet radius, a distance of 19.59 feet, long chord is S75°43'17"W; 19.59 feet to the point of beginning.

SUBJECT TO burdens, charges and assessments of the Arch Hurley Conservancy District.

SUBJECT TO Right-of-Way Easement to Farmers Electric Cooperation, Inc. for construction, maintenance, relocation and replacement of an electric transmission line over and across said land.

SUBJECT TO Easement to Quay County, State of New Mexico, dated December 16, 1949, recorded in Book 65, Page 323, Warranty Deed Records, Quay County, New Mexico, for highway purposes.

SUBJECT TO all other Easements, Conditions, Restrictions and Reservations of record or in existence.

with warranty covenants.

WITNESS my hand and seal this 27 day of February, 2003.

SHIPLEY-PHILLIPS, INC., OIL COMPANY

By: Milton Dale Phillips
MILTON DALE PHILLIPS
Executive Vice-President

STATE OF NEW MEXICO)
) ss.
COUNTY OF McKinley)

This instrument was acknowledged before me this 27 day of February, 2003, by

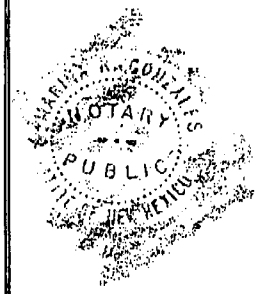
FIRST TITLE SERVICES, INC.

. 496

MILTON DALE PHILLIPS, Executive Vice-President of SHIPLEY-PHILLIPS, INC., OIL COMPANY, an Arizona Corporation.

Marina R. Gonzales
Notary Public

My commission expires:
4-15-2005



STATE OF NEW MEXICO)
COUNTY OF EDDY) ss

Filed for record at 10:00 o'clock A.M.
MAR - 5 2003
WD 495-496 Book 128
of the records of said County
By Veronica M. Rivera



Attachment F: EPA Map of Radon Zones

http://www.epa.gov/radon/zonemap/newmexico.htm
Last updated on Tuesday, March 3rd, 2009.

Radon

EPA Map of Radon Zones

New Mexico

The purpose of this map is to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. This map is not intended to be used to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones. All homes should be tested regardless of geographic location. Important points to note:

- **All homes should test for radon**, regardless of geographic location or zone designation
- There are many thousands of individual homes with elevated radon levels in Zone 2 and 3. Elevated levels can be found in Zone 2 and Zone 3 counties.
- All users of the map should carefully review the map documentation for information on within-county variations in radon potential and supplement the map with locally available information before making any decisions.
- **The map is not to be used in lieu of testing during real estate transactions.**



IMPORTANT: EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area. Contact your state radon coordinator (Click Here) to see if your state has more detailed information available. If you have questions about radon in water Click Here.

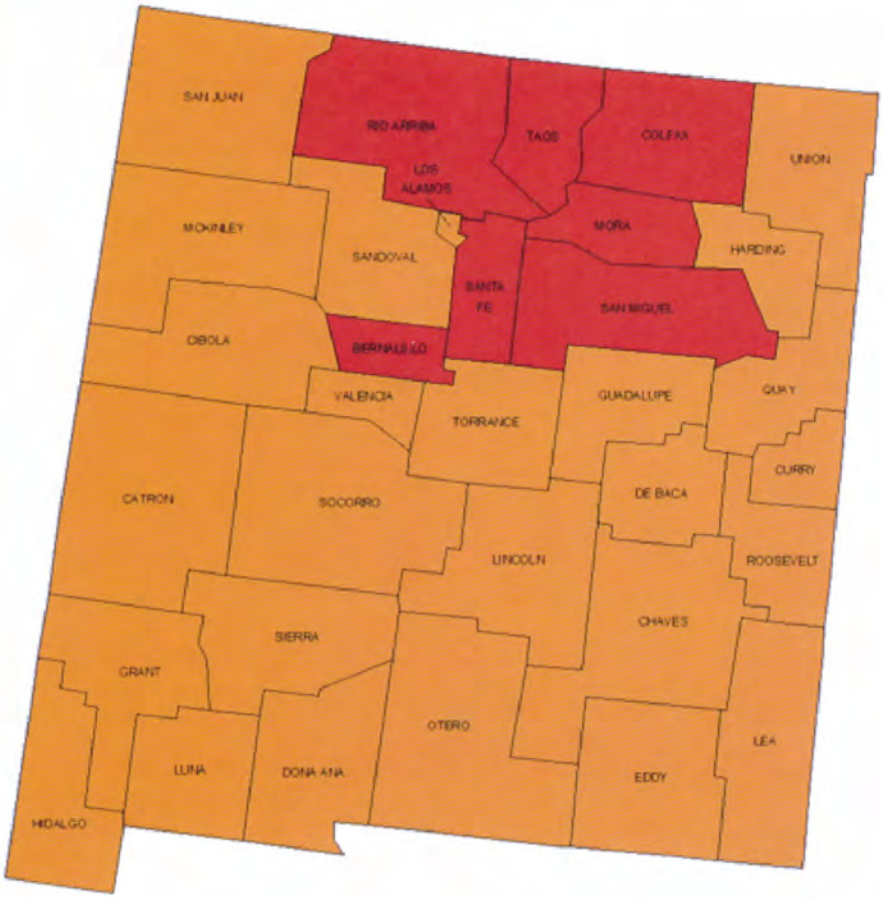
PDF version of the National Map
(PDF, 1 page, 405KB)

The Map was developed using five factors to determine radon potential: indoor radon measurements; geology; aerial radioactivity; soil permeability; and, foundation type. Radon potential assessment is based on geologic provinces. Radon Index Matrix is the quantitative assessment of radon potential. Confidence Index Matrix shows the quantity and quality of the data used to assess radon potential. Geologic Provinces were adapted to county boundaries for the Map of Radon Zones.

Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 (IRAA) directed EPA to list and identify areas of the U.S. with the potential for elevated indoor radon levels. EPA's Map of Radon Zones assigns each of the 3,141 counties in the U.S. to one of three zones based on radon potential:

	Zone 1 counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) **(red zones)**	**Highest Potential**
	Zone 2 counties have a predicted average indoor radon screening level between 2 and 4 pCi/L **(orange zones)**	**Moderate Potential**

	Zone 3 counties have a predicted average indoor radon screening level less than 2 pCi/L **(yellow zones)**	**Low Potential**



/a>

Attachment G: Environmental Professional Qualifications

Phase I Report Prepared By:

Michael J. Bone, P.E.

Education: MS Civil Engineering, University of New Mexico, Albuquerque, New Mexico, July 1994

BS Civil Engineering, University of Colorado, Boulder, Colorado, May 1980

BA Business Management, University of Puget Sound, Tacoma, Washington, May 1974

Professional Certification: Registered Professional Engineer, State of Colorado, License #17403

Experience: Over 30 years of experience working on environmental investigations including Phase I and Phase II Environmental Site Assessments across the country.

Current Position: Project Manager, Albuquerque District, US Army Corps of Engineers

Michael J. Bone, P.E. _____

Phase I Report Reviewed By:

Cecilia V. Horner, P.E.

Education: BS Civil Engineering, University of New Mexico, Albuquerque, December 1990

Hazardous Materials Management Certification, University of California Extension at Davis, February 1995

Professional Certification: Registered Professional Engineer, State of New Mexico, License #17157

Experience: 19 years experience in Civil Engineering, including environmental compliance, CERCLA investigations, removal and remedial actions, groundwater investigation, landfill evapotranspiration covers, mining reclamation.

Current Position: Chief, Environmental Engineering Section, Albuquerque District, US Army Corps of Engineers

Cecilia V. Horner, P.E. _____

Draft
Tucumcari Truck Terminal Phase II Site Specific Work Plan

Phase II Targeted Brownfields Environmental Site Assessment for the Tucumcari Truck Terminal Tucumcari, Quay County, New Mexico

Purchase Oder No. W91ZPP-10-P-0073

For

US Army Corps of Engineers, Albuquerque District
4101 Jefferson Plaza N.E.
Albuquerque, NM 87109

June 2010

By:

INNOVAR ENVIRONMENTAL, INC.
PO Box 14445 · Tulsa, OK 74159-1445 · 918.592.9020

PART I: UNIFORM FEDERAL POLICY – QUALITY ASSURANCE PROJECT PLAN (UFP-QAPP)

Revision Number: Draft
Revision Date: June 14, 2010

Project Name: Tucumcari Truck Terminal
Site Location: Tucumcari, NM

Document Title: Draft Tucumcari Truck Terminal Phase II Site Specific Work Plan, Part I: Uniform Federal Policy – Quality Assurance Project Plan

Lead Organization: US Army Corps of Engineers, Albuquerque District

Preparer's Name/ Organization: Jennifer Hussey, RMC Consultants, Inc.

Preparer's Contact Information: 303-980-4101, jhussey@rmc-consultants.com

Preparation Date (Day/Month/Year): 14 June 2010

Michelle Wilson, Innovar Environmental, Inc.
Investigative Organization's Project Manager — Signature, Date

Jennifer Hussey, RMC Consultants
Investigative Organization's Project QA Officer — Signature, Date

Michael Bone, USACE Albuquerque District
Lead Organization's Project Manager — Signature, Date

Mr. David Reel, US EPA Region 6
Approved By: — Signature, Date

[Type]
Approved By: — Signature, Date

TABLE OF CONTENTS

1.0 PROJECT MANAGEMENT AND OBJECTIVES 1

1.1 UFP-QAPP ORGANIZATION 1
1.2 QAPP IDENTIFYING INFORMATION 4
1.3 DISTRIBUTION LIST 5
1.4 PROJECT ORGANIZATION 5
1.4.1 Project Personnel 6
1.4.2 Field Support Subcontractors 8
1.5 PROJECT DEFINITION, BACKGROUND, AND SITE HISTORY 8
1.5.1 Project Definition 8
1.5.2 Background 9
1.5.3 Site History 14
1.6 PROJECT QUALITY OBJECTIVES 15
1.7 MEASUREMENT AND PERFORMANCE CRITERIA 15
1.7.1 Precision 16
1.7.2 Accuracy and Bias 16
1.7.3 Representativeness 17
1.7.4 Completeness 17
1.7.5 Comparability 18
1.7.6 Sensitivity and Quantitation Limits 18
1.8 SECONDARY DATA EVALUATION 19
1.9 PROJECT OVERVIEW 19
1.10 PROJECT SCHEDULE 20
1.11 CONTRACT DELIVERABLES 22

2.0 FIELD INVESTIGATION TASKS 22

2.1 MOBILIZATION/DEMOBILIZATION 22
2.2 UTILITY CLEARANCE 22
2.3 GENERAL SAFETY PROCEDURES 23
2.4 BOREHOLE DRILLING/ DIRECT-PUSH ADVANCEMENT 23
2.4.1 Soil Sampling 25
2.4.2 Groundwater Sampling (Boreholes) 25
2.5 BOREHOLE ABANDONMENT 25
2.6 SURFACE SOIL SAMPLING 25
2.7 GROUNDWATER SAMPLING (MONITORING WELLS) 25
2.7.1 Well Purging Protocol 25
2.8 WELL SAMPLING PROTOCOL 27
2.9 VERIFY DEPTH AND QUANTITY OF TANK CONTENTS 28
2.10 ACM TESTING 28
2.11 LEAD-BASED PAINT TESTING 28
2.12 IDW MANAGEMENT AND DISPOSAL PROCEDURES 28

3.0 MEASUREMENT AND DATA ACQUISITION 29

3.1 SAMPLING PROCESS DESIGN AND RATIONALE 29
3.2 SAMPLE COLLECTION PROCEDURES 29
3.2.1 Headspace Screening 29
3.2.2 Surface Soil Samples 30

3.2.3 Subsurface Soil Samples *30*
3.2.4 Groundwater Samples *31*
3.3 Sample Containers, Volume, and Preservation 31
3.4 Sampling Equipment Decontamination Procedures 32
3.5 Field Equipment Calibration, Maintenance, Testing, and Inspection Procedures 33
3.6 Field Documentation Procedures 33
3.7 Analytical Tasks and Procedures 35
3.8 Analytical Instrument Calibration, Maintenance, Testing, and Inspection Procedures 40
3.9 Documentation Procedures for Sample Handling, Tracking, and Custody 41
3.9.1 Sample Labeling and Designation *41*
3.9.2 Chain of Custody Record *42*
3.9.3 Custody Seals *42*
3.9.4 Sample Packaging and Shipping *42*
3.10 Field Quality Control Samples 43
3.10.1 Field Quality Control Samples *43*
3.10.2 Analytical Quality Control Samples *44*
3.11 Data Management 46
3.11.1 Project Documentation and Records *46*
3.11.2 Data Package Deliverables *46*
3.11.3 Data Handling and Management *47*
3.11.4 Data Tracking and Control *48*

4.0 ASSESSMENT AND OVERSIGHT 48

4.1 Planned Assessments 48
4.1.1 Field Assessments *48*
4.1.2 Laboratory Assessments *49*
4.2 Assessment Findings and Corrective Action Repsonses 49
4.3 Quality Assurance Management Reports 50
4.4 Final Project Report 50

5.0 DATA REVIEW 51

5.1 Data Review Process 51
5.1.1 Data Verification *51*
5.1.2 Data Validation *52*
5.1.3 Data Usability *52*
5.2 Data Limitations and Actions from Usability Assessment 54

6.0 REFERENCES 54

ATTACHMENTS

Attachment 1: Field Worksheets
Attachment 2: Laboratory Certifications

TABLE OF FIGURES AND TABLES

TABLE 1-1 UFP-QAPP CROSSWALK 2
TABLE 1-2 QAPP IDENTIFYING INFORMATION 4
TABLE 1-3 DISTRIBUTION LIST 5
FIGURE 1-1-ORGANIZATIONAL CHART FOR FORMER TUCUMCARI TRUCK TERMINAL 6
TABLE 1-4-2: FIELD SUPPORT SUBCONTRACTORS AND CONTACT NUMBERS 8
FIGURE 1-2- SITE LOCATION MAP FIGURE 1-3- SITE LAYOUT 10
FIGURE 1-3- SITE LAYOUT 11
FIGURE 1-4- SITE FEATURES AND DETAILS 12
FIGURE 1-5- APPROXIMATE FUEL PIPING LOCATIONS 13
TABLE 1-5-3A SITE TIMELINE 14
TABLE 1-5-3B SITE CONCERNS 14
TABLE 1-7-5 COMPARABILITY GUIDELINES 18
TABLE 1-9 ANALYSES OVERVIEW 20
FIGURE 1-6 PROJECT SCHEDULE 21
TABLE 1-11 CONTRACT DELIVERABLES 22
FIGURE 2-1 PROPOSED SAMPLE LOCATIONS 24
TABLE 4.2A: STABILIZATION CRITERIA 26
TABLE 2-7-1A STABILIZATION CRITERIA 26
TABLE 4.2B: EQUIPMENT LIST 27
TABLE 2-7-1B EQUIPMENT LIST 27
TABLE 3-3 SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES 32
TABLE 3-7 – LABORATORY METHODS, ANALYTES, AND QUALITY CONTROL LIMITS 35
TABLE 3-30-1 FIELD QUALITY CONTROL SAMPLES FOR LABORATORY ANALYSES 43
TABLE 3-30-2 ANALYTICAL QUALITY CONTROL SAMPLE REQUIREMENTS 45
TABLE 5-1-3 DATA REVIEW INPUT SUMMARY 52

Acronyms

ACBM	Asbestos-Containing Building Material
AST	Aboveground Storage Tank
BAI	Billings and Associates, Inc
bgs	below ground surface
CD	compact disk
C-O-C	Chain-of-Custody
° C	degrees Celsius
DoD	Department of Defense
DQCR	Daily Quality Control Report
DRO	Diesel Range Organics
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
FTL	Field Team Leader
GC/MS	Gas Chromatography/Mass Spectrometry
GRO	Gasoline Range Organics
GTEDC	Greater Tucumcari Economic Development Corporation
HASP	Health and Safety Plan
HCl	hydrochloric acid
ID	Identification
IDW	Investigation Derived Waste
Innovar	Innovar Environmental, Inc.
LBP	Lead-Based Pain
LCS	Laboratory Control Sample
LOD	Limit of Detection
LOQ	Limit of Quantitation
ug/kg	micrograms per kilogram
ug/L	micrograms per Liter
mg/kg	milligrams per kilogram
mg/L	milligrams per LIter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NELAP	National Environmental Laboratory Approval Program
NMED	New Mexico Environment Department
OM	Operations Manager
ORO	Oil Range Organics
PAH	Polynuclear Aromatic Hydrocarbon
PID	Photoionization Detector
PM	Project Manager
PPE	Personal Protective Equipment
PQOs	Project Quality Objectives
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
RL	Reporting Limit
RMC	RMC Consultants, Inc.
RPD	Relative Percent Difference

SOP	Standard Operating Procedure
SSHO	Site Safety and Health Officer
SVVS	Subsurface Volatilization and Ventilation System
TAL	Target Analyte List
TBA	Targeted Brownsfield Assessment
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbon
UFP	Uniform Federal Policy
USACE	U.S. Army Corps of Engineers
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WP	Work Plan

1.0 PROJECT MANAGEMENT AND OBJECTIVES

Innovar Environmental, Inc. (Innovar) has prepared this Work Plan (WP) to conduct a Phase II Environmental Site Assessment (ESA) at the former Tucumcari Truck Terminal located at I-40 Exit 329 in Tucumcari, New Mexico. This Phase II ESA is being conducted for the United States Army Corps of Engineers (USACE), Albuquerque District under Contract Number W912PP-10-P-0073, and is being funded through the U.S. Environmental Protection Agency (EPA) Region 6 Targeted Brownfields Assessment (TBA) program.

1.1 UFP-QAPP Organization

This Work Plan is organized using a format that combines the elements of a Sampling and Analysis Plan and a Site Health and Safety Plan (HASP). Part I contains the Uniform Federal Policy (UFP) - Quality Assurance Project Plan (QAPP). The function of the QAPP is to serve as a technical planning document, identifying the purpose of the project and defining the project quality objectives, and outlining the field work, sampling, analytical, and quality assurance/quality control (QA/QC) activities that will be used to support project decisions; serve as an organizational document, identifying key project personnel and facilitating communication; and serve as an oversight document providing the criteria for assessment of project implementation, and for QA and contractor oversight.

Part I has been prepared using the guidance provided in the *Uniform Federal Policy for Quality Assurance Project Plans* (EPA, 2005a). This guidance was developed to provide a single national consensus document for consistently and systematically implementing project-specific requirements across Federal agencies. It is consistent with EPA QAPP guidance (QA/G-5; EPA, 2002) and QAPP requirements (QA/R-5; EPA, 2001), and has been approved for use by the EPA Office of Solid Waste and Emergency Response (EPA, 2005b, 2005c) and the Department of Defense (DOD) (DOD, 2006) for use at federal facility hazardous waste sites. Part II contains the HASP, which has been prepared following the guidance provided in 29 CFR 1910.120 and the USACE Safety and Health Requirements Manual, EM 385-1-1.

Following the Project Management and Objectives (Section 1), Part I of the Work Plan is organized as follows:

Section 2: Field Investigation Tasks-describes the field activities to be performed.

Section 3: Measurement and Data Acquisition-describes the procedures and methodology for how project data will be collected, measured, and documented.

Section 4: Assessment and Oversight-presents the procedures used to ensure that project activities are implemented as planned and the required responses necessary to address nonconformance and deviations from the QAPP.

Section 5: Data Review-summarizes the process and activities for the examination and evaluation of data collected to meet project objectives.

Section 6: References-includes those documents cited in the Work Plan.

The following table exhibits UFP-QAPP required elements and the corresponding location in this document.

Table 1-1 UFP-QAPP Crosswalk	
UFP QAPP Required Elements and Corresponding Sections	**Corresponding Sections of Phase II ESA Work Plan, Part I – QAPP Tucumcari Truck Terminal**
Project Management and Objectives	
2.1 ***Title and Approval Page***	Title Page, Approval Page
2.2 ***Document Format and Table of Contents***	See below
2.2.1 Document Control Format	Document header
2.2.2 Document Control Numbering System	Document copies not controlled
2.2.3 Table of Contents	Table of Contents; Section 1.1
2.2.4 QAPP Identifying Information	Table 1-2
2.3 ***Distribution List and Project Personnel Sign-Off Sheet***	See below
2.3.1 Distribution List	Table 1-3
2.3.2 Project Personnel Sign-Off Sheet	Approval Page
2.4 ***Project Organization***	Section 1.4
2.4.1 Project Organizational Chart	Figure 1-1
2.4.2 Communication Pathways	Sections 1.4.1, 1.4.2
2.4.3 Personnel Responsibilities and Qualifications	Sections 1.4.1, 1.4.2; Table 1-3
2.4.4 Special Training Requirements and Certification	Section 1.4.1.6
2.5 ***Project Planning/Problem Definition***	Sections 1.5, 1.9
2.5.1 Project Planning (Scoping)	Sections 1.5, 1.9
2.5.2 Problem Definition, Site History, and Background	Sections 1.5.1, 1.5.2, 1.5.3; Figures 1-2 through 1-6
2.6 ***Project Quality Objectives and Measurement Performance Criteria***	Sections 1.6, 1.7
2.6.1 Development of Project Quality Objectives Using the Systematic Planning Process	USACE-Abuquerque District *Scope of Services*
2.6.2 Measurement Performance Criteria	Section 1.7
2.7 ***Secondary Data Evaluation***	Section 1.8
2.8 ***Project Overview and Schedule***	Sections 1.9, 1.10
2.8.1 Project Overview	Section 1.9
2.8.2 Project Schedule	Section 1.10
Measurement/Data Acquisition	
3.*1* ***Sampling Tasks***	Sections 2.0, 3.0
3.1.1 Sampling Process Design and Rationale	Section 3.1
3.1.2 Sampling Procedures and Requirements	Section 3.2
3.1.2.1 Sampling Collection Procedures	Section 3.2.1, 3.2.2, 3.2.3, 3.2.4

Table 1-1 UFP-QAPP Crosswalk	
UFP QAPP Required Elements and Corresponding Sections	**Corresponding Sections of Phase II ESA Work Plan, Part I – QAPP Tucumcari Truck Terminal**
3.1.2.2 Sample Containers, Volume, and Preservation	Section 3.3, Table 3-3
3.1.2.3 Equipment/Sample Containers Cleaning and Decontamination Procedures	Section 3.4
3.1.2.4 Field Equipment Calibration, Maintenance, Testing, and Inspection Procedures	Sections 3.5
3.1.2.5 Supply Inspection and Acceptance Procedures	Section 2.1
3.1.2.6 Field Documentation Procedures	Section 3.6
3.2 ***Analytical Tasks***	Sections 3.7, 3.8; Table 3-7
3.2.1 Analytical SOPs	*Subcontract Laboratory SOPs*
3.2.2 Analytical Instrument Calibration Procedures	Section 3.8; *DoD QSM v4.1*
3.2.3 Analytical Instrument and Equipment Maintenance, Testing, and Inspection Procedures	*Subcontract Laboratory SOPs*
3.2.4 Analytical Supply Inspection and Acceptance Procedures	*Subcontract Laboratory SOPs*
3.3 ***Sample Collection Documentation, Handling, Tracking, and Custody Procedures***	Sections 3.2, 3.6, 3.9
3.3.1 Sample Collection Documentation	Sections 3.2, 3.6, 3.9.1, 3.9.2
3.3.2 Sample Handling and Tracking System	Section 3.9
3.3.3 Sample Custody	Sections 3.9.2, 3.9.3, 3.9.4
3.4 ***Quality Control Samples***	Sections 3.10
3.4.1 Sampling Quality Control Samples	Sections 3.10.1; Table 3-30-1
3.4.2 Analytical Quality Control Samples	Section 3.10.2; Table 3-30-2
3.5 ***Data Management Tasks***	Section 3.11
3.5.1 Project Documentation and Records	Sections 3.11.1
3.5.2 Data Package Deliverables	Section 3.11.2
3.5.3 Data Reporting Formats	Section 3.11.2
3.5.4 Data Handling and Management	Section 3.11.3
3.5.5 Data Tracking and Control	Section 3.11.4
Assessment/Oversight	
4.1 ***Assessments and Response Actions***	Section 4.0
4.1.1 Planned Assessments	Section 4.1
4.1.2 Assessment Findings and Corrective Action Responses	Section 4.2
4.2 QA Management Reports	Section 4.3
4.3 Final Project Report	Section 4.4
Data Review	
5.2 ***Data Review (Section 5.1 is Overview)***	Section 5.1; Table 5-1-3
5.2.1 Step I: Verification	Section 5.1.1; Table 5-1-3
5.2.2 Step II: Validation	Section 5.1.2; Table 5-1-3
5.2.2.1 Step IIa Validation Activities	Section 5..1.2; Table 5-1-3

Table 1-1 UFP-QAPP Crosswalk	
UFP QAPP Required Elements and Corresponding Sections	**Corresponding Sections of Phase II ESA Work Plan, Part I – QAPP Tucumcari Truck Terminal**
5.2.2.2 Step IIb Validation Activities	Section 5.1.2; Table 5-1-3
5.2.3 Step III: Usability Assessment	Section 5.1.3; Table 5-1-3
5.2.3.1 Data Limitations and Actions from Usability Assessment	Section 5.2
5.2.3.2 Activities	Section 5.2
5.3 ***Streamlining Data Review***	Not applicable to the project
5.3.1 Data Review Steps To Be Streamlined	Not applicable to the project
5.3.2 Criteria for Streamlining Data Review	Not applicable to the project
5.3.3 Amounts and Types of Data Appropriate for Streamlining	Not applicable to the project

1.2 QAPP Identifying Information

This document is a project-specific QAPP developed for the USACE and funded by the EPA Region 6 TBA program. Funding is being provided on behalf of the Greater Tucumcari Economic Development Corporation (GTEDC) in response to their request to EPA for assistance. GTEDC proposes to acquire the site for economic redevelopment that will provide jobs and tax base for the community. Table 1-2 lists the project QAPP identifying information.

Table 1-2 QAPP Identifying Information	
Site Name/Project Name: Former Tucumcari Truck Terminal	**Title:** Phase II ESA for the Former Tucumcari Truck Terminal
Site Location: Tucumcari, New Mexico	**Revision Number:** Draft 1.0
Site Number/Code: not applicable	**Revision Date:** 14 June 2010
Contractor Name: Innovar Environmental, Inc.	**Lead Organization:** USACE, Albuquerque District
Contract Number: W912PP-10-P-0073	**Scoping Sessions:** Scope of Services 28 April 2010
Work Assignment Number: not applicable	**Previous Site Documents:** Phase I ESA (USACE, 2009)
Regulatory Agencies: USEPA Region 6 with support from the New Mexico Environment Department (NMED)	
Other Data Users: not applicable	

1.3 Distribution List

Table 1-3 documents those key individuals and organizations to which copies of the approved QAPP and any subsequent revisions will be sent. The list includes representatives from the Contractor Team, the lead organization and regulatory agencies.

Table 1-3 Distribution List

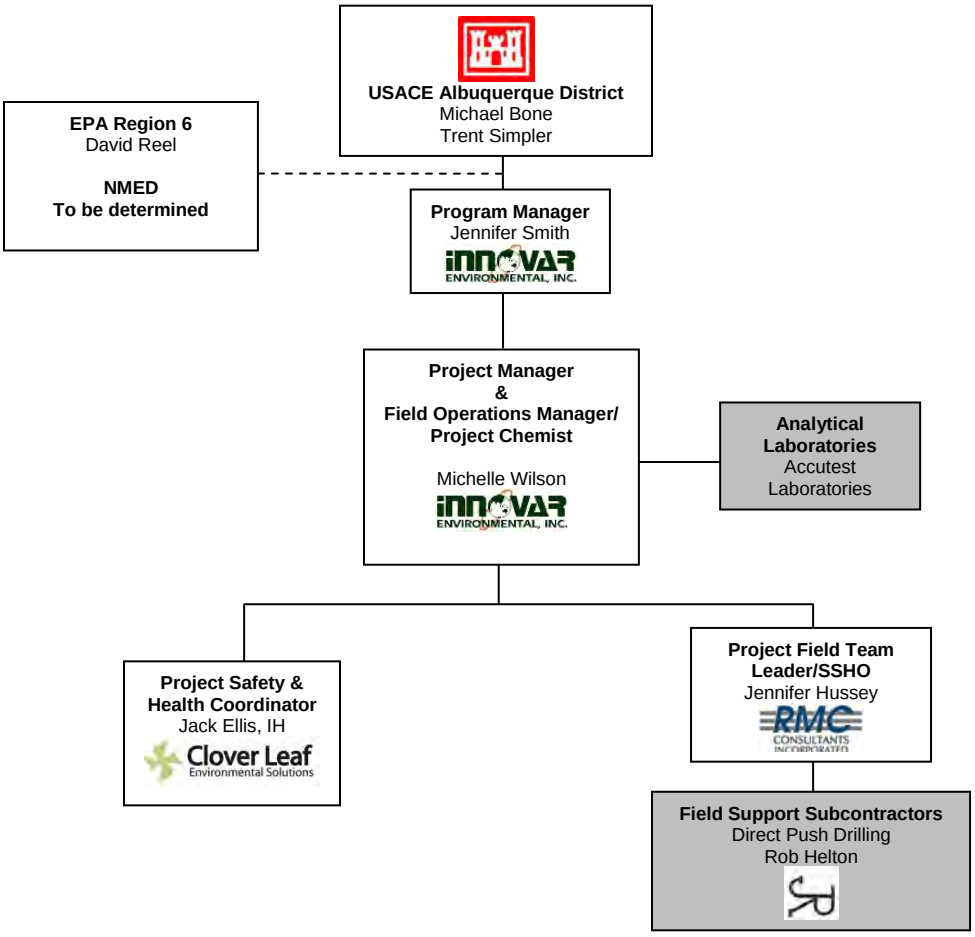
QAPP Recipients	Title	Organization	Telephone Number	E-mail Address
Jennifer Smith	Program Manager	Innovar Enviromental, Inc.	918.592.9020	jsmith@innovar-env.com
Michelle Wilson	Project Manager	Innovar Enviromental, Inc.	918.592.9020	mwilson@innovar-env.com
Michael Bone	USACE Project Manager	USACE, Albuquerque District	505.342.4826	Michael.J.Bone@usace.army.mil
Trent Simpler	USACE Technical Lead	USACE, Albuquerque District	505.342.4823	Trent.Simpler@usace.army.mil
David Reel	EPA TBA Program Project Manger	USEPA Region 6	214-665-2768	Reel.David@epa.gov
To be determined	--	New Mexico Environment Department	--	--

Four bound hard copies and five electronic copies on compact disks (CDs) of the Draft Work Plan will be provided to the USACE Project Manager, who will then distribute copies to the appropriate relatory agiences listed in Table 1-3. The Final Work Plan will also be provided to each of the recipients in the same formats described above.

1.4 Project Organization

The project management organization is designed to provide a line of functional responsibility and authority, supported by a management control structure and independent QA review. The project organizational structure is presented in Figure 1-1.

Figure 1-1-Organizational Chart for Former Tucumcari Truck Terminal



As the prime contractor, Innovar has responsibility for conducting all phases of the project. Innovar will provide project management services; perform data review and assessment and oversight activities; prepare Daily Quality Control Reports (DQCRs); and prepare a Phase II ESA Report. Project support subcontractors for analytical and drilling services are listed in Section 1.4.2.

1.4.1 Project Personnel

This section identifies roles and associated personnel responsible for this project. A description of responsibilities of the key project personnel is provided below.

1.4.1.1 Program Manager

Ms. Jennifer Smith will serve as the Innovar Program Manager. The Program Manager will have the overall responsibility, authority, and accountability for the project. Ms. Smith will be the point of contact for all matters concerning this project.

1.4.1.2 Project Manager

The Innovar Project Manager (PM), Michelle Wilson, will be responsible for overseeing all aspects of the Phase II ESA at the former Tucumcari Truck Terminal. Ms. Wilson is responsible for project oversight from both a technical and

managerial perspective, and has the authority to commit the resources necessary to meet project objectives and contractual requirements. She will also coordinate with all USACE project personnel during field work activities.

1.4.1.3 Field Operations Manager

Ms. Wilson will also be acting as Innovar's Operations Manager (OM) and is responsible for coordination and overall implementation of the fieldwork. She will provide direction to the on-site Field Team Leader (FTL) and complete all technical reports including the DQCRs. The OM will ensure all work is completed safely and in a manner consistent with the approved WP.

1.4.1.4 Field Team Leader

Ms. Jennifer Hussey, a geologist with RMC Consultants, Inc. (RMC), will serve as the on-site FTL and support Innovar with the coordination and performance of all fieldwork to ensure data collected will support the intent of the sampling effort. She will provide direction to the field team and all field support subcontractors, and assist Innovar with the completion of technical reports. The FTL will work closely with the OM and the field support subcontractors to ensure all work is completed safely and in a manner consistent with the approved WP. She will also serve as the liaison with the Industrial Hygienist for this project. Consequently, Ms. Hussey will also be responsible for ensuring compliance with health and safety procedures at the site as outlined in the HASP.

1.4.1.5 Project Industrial Hygienist

The Project Industrial Hygienist, Jack Ellis with Clover Leaf Environmental Solutions, Inc., is responsible for review and approval of the HASP. The Industrial Hygienist is responsible for responding to any non-routine matters that relate to health, safety, and emergency response during the project; Mr Ellis has the authority and responsibility to stop site work at any time when site conditions and or the health and safety of personnel warrant such action.

1.4.1.6 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO), Jennifer Hussey with RMC, is responsible for ensuring that the HASP is strictly adhered to during field activities. The SSHO's primary safety and health responsibilities include on-site personnel and environmental monitoring. As the SSHO, Ms. Hussey has the authority and responsibility to stop site work at any time when site conditions and or the health and safety of personnel warrant such action. Prior to commencement of field activities, the SSHO will ensure that all on-site personnel have completed the required medical monitoring and have met the qualification criteria for site work; have received site-specific training; have received the required Occupational Safety and Health Act 40-hour hazardous waste operations and emergency response training and the annual 8-hour refresher course, if applicable; and that all on-site supervisory personnel have had 8-hours of site supervisor training. During field activities, the SSHO will ensure that a site safety meeting with all on-site personnel is held at least once per day and that a written record is maintained in the field log which includes the date, time, attendance, subjects discussed and who conducted the meeting (see Attachment 1). The SSHO will

also ensure that all field equipment, including safety equipment, is adequate and suitable for its intended use and in good working condition.

1.4.1.7 Contractor Quality Control Supervision/ Project Chemist

Innovar's Quality Control Supervisor/Project Chemist for this project is Michelle Wilson. Ms. Wilson will be responsible for evaluating the quality of work performed during field investigation activities. The QC Supervisor is responsible for assuring that the QAPP procedures (Part I of this Work Plan) are implemented during the on-site field activities. She will confirm that the final project deliverables are based on defensible and documented data, manage the control of records during project performance, and address foreseeable data management and QC problems.

1.4.2 Field Support Subcontractors

The following is a list of field support subcontractors and contact phone numbers:

Table 1-4-2: Field Support Subcontractors and Contact Numbers

Service Type	Field Support Subcontractors	Phone Number
Analytical Laboratory	Accutest Laboratories – Andrea Colby	(386) 615-8479
Direct Push Drilling	JR Drilling, LLC – Rob Helton	(505) 286-7772
Public Utility Locating	New Mexico One Call, Inc.	811

JR Drilling, LLC in Edgewood, New Mexico will be providing direct-push services. Several subcontract laboratories will be providing analytical services; however, a laboratory has not yet been selected for the analysis of potential asbestos-containing building material (ACBM) and lead-based paint (LBP) samples. Accutest Laboratories, accredited under the National Environmental Laboratory Approval Program (NELAP), will perform analyses for all soil and groundwater samples. A subcontract laboratory (to be determined) accredited by the National Voluntary Laboratory Accreditation Program will be used for ACBM bulk sample analysis. Laboratory certifications are available in Attachment 2.

1.5 Project Definition, Background, and Site History

1.5.1 Project Definition

This work effort requires a Phase II ESA to conclusively determine whether potentially hazardous materials are present at the former Tucumcari Truck Terminal area in Tucumcari, New Mexico in preparation for residential development activities. Site investigations activities are being completed under the EPA Region 6 TBA program.

Findings from the Phase I ESA Report (USACE, 2009) indicate that soil and groundwater contamination likely exists at the site. However, the determination or estimation of contamination quantities that may or may not be associated with the site was beyond the scope of the Phase I ESA conducted by the USACE in 2009. Potential contamination may be associated with both the tanks

[(underground storage tanks (USTs) and aboveground storage tanks (ASTs)] and piping onsite, past site operations and spills, ongoing activities associated with the existing temporary lease for the highway construction, and LBP and asbestos, if present, in the abandoned residence onsite. Environmental concerns associated with the site are summarized in Section 1.5.3.1.

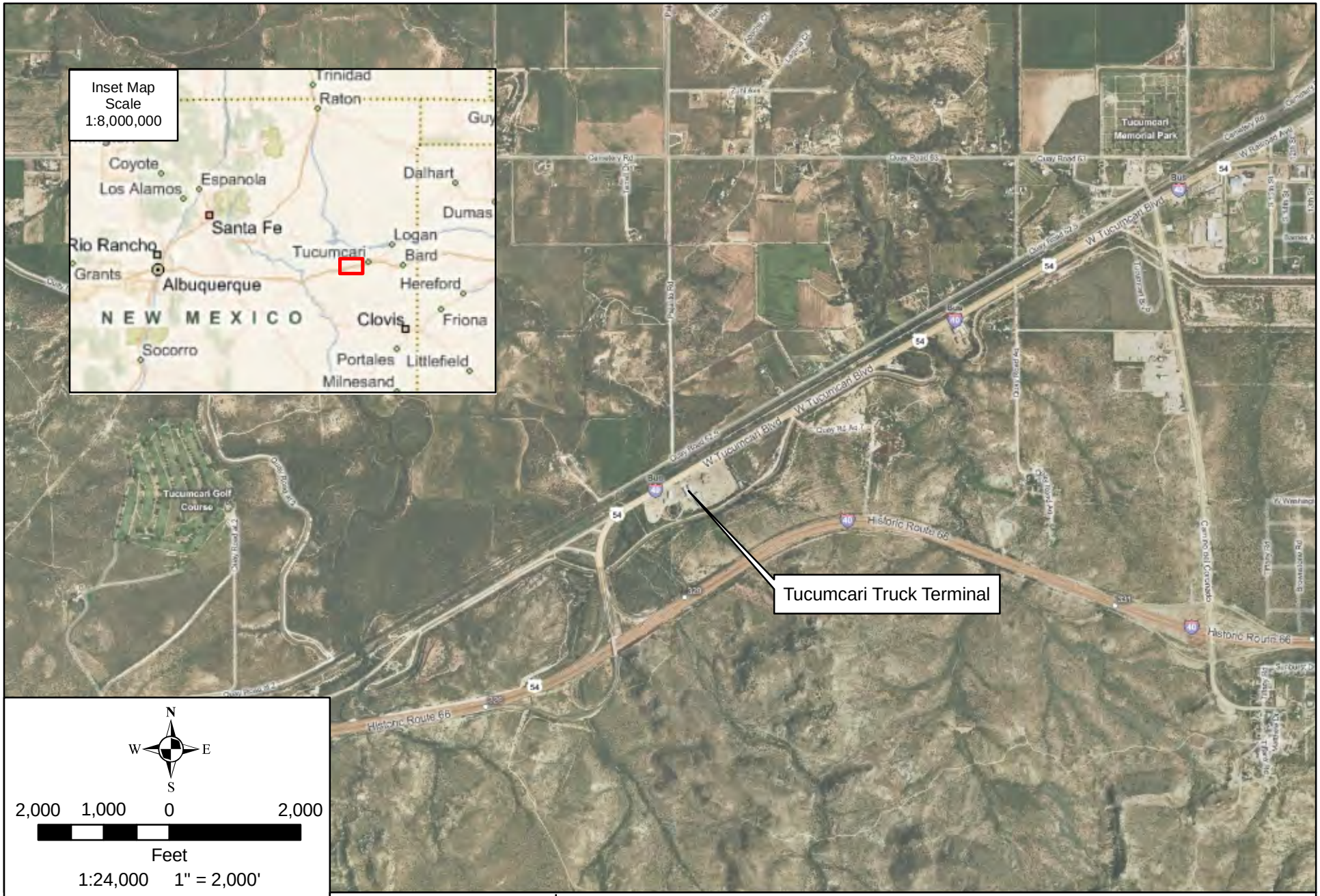
1.5.2 Background

The site is located at I-40 Exit 329 at the west end of Tucumcari in Quay County, New Mexico (Figure 1-2). The former Tucumcari Truck Terminal area consists of approximately 22.0 acres of land. A variety of buildings (most of which are boarded up) and tank structures associated with gas and diesel fueling & storage operations are present at the site. The southwest end of the site comprises the facilities of the former Tucumcari Truck Terminal while the northeast end is undeveloped acreage. For descriptive purposes, the developed truck terminal end of the site has been divided into zones (west, middle, and east) designated as Areas A, B and C, respectfully (Figure 1-3) as done in the Phase I ESA Report (USACE, 2009). A site layout of the truck terminal area is provided in Figure 1-3. Site features and approximate fuel piping locations are presented in Figures 1-4 and 1-5, respectively. The site is comprised of the following structures:

Area A:
- Food mart convenience store
- Gas and diesel dispensing island
- An air and water station
- A subsurface volatilization and ventilation system (SVVS)
- Pump house for the SVVS system
- A concrete vault with four gasoline USTs (size unknown)
- Two 860,000 gallon diesel ASTs
- One approximate 2,000 gallon # 3 diesel above-ground storage tank (AST)

Area B:
- One warehouse building comprising a warehouse, tire shop, and lubrication maintenance facility
- Two ~2,000 gallon waste oil storage tanks (east side of warehouse)
- Two diesel fueling islands
- Oil water separator sump
- Generator building with transformer

Area C:
- Restaurant travel center
- Maintenance and repair shop
- 2-story residential building



Date:	Drawn by:	Checked by:
6/3/2010	JLK	JLH

INNOVAR ENVIRONMENTAL, INC.

Figure 1-2
Site Location Map
Tucumcari Truck Terminal, Tucumcari, New Mexico



Legend

Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
6/4/2010	JLK	JLH

INNOVAR ENVIRONMENTAL, INC.

Figure 1-3
Site Layout
Tucumcari Truck Terminal, Tucumcari, New Mexico



Legend

Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
6/8/2010	JLK	JLH

INNOVAR ENVIRONMENTAL, INC.

Figure 1-4
Site Features and Details
Tucumcari Truck Terminal, Tucumcari, New Mexico



Date:	Drawn by:	Checked by:
6/8/2010	JLK	JLH

INNOVAR ENVIRONMENTAL, INC.

Figure 1-5
Approximate Fuel Piping Locations
Tucumcari Truck Terminal, Tucumcari, New Mexico

1.5.3 Site History

Table 1-5-3A documents the past activities that have occurred at the site.

Table 1-5-3A Site Timeline	
Year	**Activity**
1950	During the 1950s, the drive-in theater was in operation near Areas B & C
1950	Mid 1950s, Shipley family owners (as corporation)
1958	Construction of 1st Truck Stop Structure in Area A
1975	860,000 gallon diesel AST installed; 20,000 gallon diesel UST (possibly leaking) removed
1985	Four 20,000 gallon diesel USTs removed in Area B
1991	June- Four leaking USTs (3- 10,000 gallon, 1- 4,000 gallon), two used oil USTs (6,000 and 10,000 gallons), and two lubrication oil UST (both 2,000 gallons) were removed from Area A.
1992	November Billings and Associates, Inc (BAI) did hydrogeologic investigation report.
1993	July- BAI installed SVVS remediation system
1996	April- SVVS system operations ceased.
1999	Site bought by Phillips family
2003	February- Site sold to Arthur Ortega
2003	August- BAI conducted product bail down tests, released report.
2004	Terminals closed.
2005	NMED PST Bureau Site Summary released
Unknown	Three 10,000 diesel trucks tipped (different locations and times)- unconfirmed.
Unknown	Fuel pump in Area B severed at foundation, fuel flowed into culvert

1.5.3.1 Previous Environmental Investigations and Reports

As reported in the Phase I ESA, the following reports have been written regarding the environmental condition of the site.

- George G. Beaumont, January 20, 2005. NMED PST Bureau Site Summary
- Billings & Associates, Inc. August 2003. Product Bail Down Test Report
- Billings & Associates, Inc. November 1992. Phase I Hydrogeologic Investigation Report.

The following table lists the concerns for the site as documented in the NMED PST Bureau Site Summary and in the Phase I ESA.

Table 1-5-3B Site Concerns		
Cause	**Results/ Potential Results**	**Year**
Abandoned residence in Area C	Potential for the presence of lead-based paint and asbestos.	1940s to present
Possibly leaking 20,000 gallon UST removed.	Potential for contaminated soil and/or groundwater.	1975
Leaking USTs in Area C that were	Soil vapors in Area C detected	1977- 1991

Table 1-5-3B Site Concerns		
Cause	**Results/ Potential Results**	**Year**
removed in 1991. One of the leaking tanks contained diesel.	>100 µg/L; PID readings of 1009-47,697 µg/L.	
Four leaking USTs were removed from Area A.	Potential for contaminated soil and/or groundwater.	1991
Undocumented	Benzene plume (possibly shrinking in size) in groundwater that extended over a 69,600 square foot area.	1992
Undocumented	Free product detected in 4 monitoring wells.	1998, still present in 2003
All USTs, ASTs, and piping currently on-site.	Potential for contaminated soil and/or groundwater.	Present
Highway construction	Potential for fuel, oil, asphalt, and tar contamination	Present
Three 10,000 diesel trucks tipped over at different locations and times	Potential for contaminated soil and/or groundwater (sheen on the surface of water by the Restaurant Travel Center)	Unknown
Fuel pump in Area B severed at foundation, fuel flowed into culvert	Potential for contaminated soil and/or groundwater.	Unknown
Numerous gasoline, diesel, lubrication oil, and waste oil tanks were removed from within ¼-mile to the southwest of the site	Given the proximity to the site and the influence on groundwater from the Conchas Canal, any contamination could have affected the west side of Area A.	
Lube services, repair shops, waste oil tanks	Potential for used waste oil and solvent contamination from operations.	

1.6 Project Quality Objectives

Project quality objectives (PQOs) define the type, quantity, and quality of data that are needed to answer specific environmental questions and support proper environmental decisions. A systematic planning process was used during the initial scoping sessions conducted by the project team to determine the PQOs. This process was also used to identify appropriate sampling, analytical, and assessment activities. Planned project activities and procedures for achieving the PQOs are presented throughout this document.

1.7 Measurement and Performance Criteria

Measurement performance criteria have been determined for each matrix, analytical group, concentration level, and analyte. The criteria indicate the level of quality associated with measurement data, and are called data quality indicators. These data quality indicators include parameters of precision, accuracy and bias, representativeness, comparability, completeness, and sensitivity. Data quality indicators document whether established analytical method quality control objectives are attained, and they support data usability and contract compliance.

1.7.1 Precision

Precision is the degree to which a set of measurements, obtained under similar conditions, conforms to itself. Precision data indicate the consistency and reproducibility of field sampling and/or analytical processes. Precision is usually expressed as a percent difference or standard deviation, in either absolute or relative terms. Overall project precision is measured by the analysis of field sample/duplicate pairs and matrix spike/matrix spike duplicate (MS/MSD) pairs. Precision specific to the analytical process is measured by preparing and analyzing two aliquots of the same prepared sample in the laboratory; these aliquots are called laboratory duplicates. Duplicate precision is evaluated by calculating a relative percent difference (RPD) using the following equation:

$$RPD = \frac{|x_1 - x_2|}{(x_1 + x_2)/2} \times 100\%$$

where: x_1 = original sample concentration
x_2 = duplicate sample concentration

The RPD of field duplicates, laboratory duplicates, and matrix spikes will be calculated and evaluated against the criteria listed in Table 3-7.

1.7.2 Accuracy and Bias

Accuracy is the degree of agreement between a sample result and a reference value. Bias refers to the systematic inaccuracy associated with a measurement process. Analytical accuracy is determined by adding a known concentration of target analyte(s) or surrogate analyte(s) (those with properties that mimic analytes of interest, but unlikely to be found in environmental samples) to a standard reference material or a laboratory control sample (LCS) consisting of an analyte-free matrix, and performing the prescribed method on the reference material or LCS. Analytical method accuracy is measured as a percentage, by calculating the amount of material recovered from the reference material or LCS by the analytical procedure, using the following equation:

$$\text{Accuracy/Bias} = \frac{\text{Measured Value}}{\text{Expected Value}} \times 100\%$$

Bias introduced by the sample matrix is determined by adding a known concentration of target analyte(s) or surrogate analyte(s) to an aliquot of field sample, referred to as a MS sample, and performing the prescribed method on the spiked sample aliquot. The accuracy/bias for a specific analyte is measured as a percentage, by analyzing the MS samples and taking into account the concentration of analyte(s) determined to be present in a non-spiked aliquot of the field sample, using the following equation:

$$\%\text{Recovery} = \frac{\text{Spiked Sample Conc.} - \text{Measured Sample Conc. (without spike)}}{\text{Concentration of Spike Added}} \times 100\%$$

The percent recovery of LCSs and MS samples will be calculated and evaluated against the criteria listed in Table 3-7.

1.7.3 Representativeness

Representativeness is a qualitative measure of the degree to which a sampling and analysis program reflects the conditions of a site. Representativeness describes the adequacy of the sample collection process and the analysis process, as determined by sample matrix homogeneity and the consistency with which analytical procedures are performed. The documentation and use of statistical sampling designs and standardized operating procedures in the field and laboratory will help assure that sample results are representative of site conditions.

1.7.4 Completeness

Completeness is a measure of the amount of valid data collected compared to the expected amount of total data. Overall completeness will be inferred from a records review and documented data validation. Sampling completeness is assessed through an evaluation of the total number of samples proposed for collection compared to the actual number of samples collected and analyzed. Analytical completeness is evaluated by comparing the number of useable data points collected compared to the total number of data points generated for each analyte and sample. Completeness is calculated as a percentage using the following equations:

$$\%\text{ Sampling Completeness} = \frac{\text{Number of Samples Collected}}{\text{Number of Proposed Samples}} \times 100\%$$

$$\%\text{ Analytical Completeness} = \frac{\text{Useable Data}}{\text{Total Data Collected}} \times 100\%$$

The importance of any missing or unusable (i.e., rejected) records or data will be evaluated in terms of the sample location, analyte, decision to be made, and the consequences of an erroneous decision. If an information gap affecting project goals is created when expected data are missing or judged to be unusable for project decisions, the PM will be notified. Critical samples or analytes for which data is missing or unusable will be re-collected and or reanalyzed.

1.7.5 Comparability

Comparability is the degree to which separate data sets can be represented as similar. The documentation and use of standardized operating procedures in the field and laboratory will help assure the comparability of measurements. Also, field triplicate samples will be collected, sent to a different laboratory (to be determined), and results will be compared to the field results. Data will be considered using the Table 1-7-5. Inconsistent data results will be addressed during the data validation and data usability review outlined in Section 5.

Table 1-7-5 Comparability Guidelines

Matrix	Parameter	Disagreement	Major Disagreement
All	All	> 5x difference when one result is < DL	> 10x difference when one result is < DL
All	All	> 3x difference when one result is < RL	> 5x difference when one result is < RL
Water	All except TPH	> 2x difference	> 3x difference
Soil	All except metals, VOCs, BTEX, and TPH	> 4x difference	> 5x difference
Soil	Metals	> 2x difference	> 3x difference
Water and soil	TPH	> 3x difference	> 5x difference
Soil	VOCs and BTEX	> 5x difference	> 10x difference

Source: Table 4-1 of EM 200-1-6

1.7.6 Sensitivity and Quantitation Limits

Sensitivity refers to the ability of an analytical method or instrument to detect target analytes at a specified concentration. The detection limit is generally defined as the lowest amount of a substance that can be measured with a specified degree of confidence. Analytical sensitivity is quantified by instrument detection limits and laboratory reporting limits and is compared to project-specific screening or action levels to ensure that prospective analytical data are adequate for project decisions. The DOD Quality Systems Manual (QSM) has defined the following terms associated with the analysis and reporting of environmental data:

- Limit of Detection (LOD) - *The smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%*. This may also be referred to as the method detection limit.
- Limit of Quantitation (LOQ) - *The lowest concentration that produces a quantitative result within specified limits of precision and bias. For DOD projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard*.
- Reporting Limit (RL) - *A client-specified lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific* matrix.

The laboratory will maintain a list of verified detection limits (LOD) that are less than the concentration of the lowest initial calibration standard (LOQ) set for each analyte and test method. The laboratory's established LOQ must be less than or equal to the project RL specified for the method and analyte in Table 3-7. The verified LOD and RL will be adjusted as appropriate (e.g., analytical dilutions, percent moisture) for listing with each sample analyte result reported. Analytes not identified at concentrations equal to or greater than the LOD will be reported as not-detected and analyte concentrations equal to or greater than the LOD but less than the RL will be qualified as estimated values.

1.8 Secondary Data Evaluation

Secondary data includes data collected in other investigations designed to answer different questions than those posed by the current investigation. The Phase I ESA (USACE, 2009) provided the majority of the secondary information for this project, and has been detailed in Section 1.5.3.

1.9 Project Overview

A field investigation will be conducted to support the Phase II ESA and to determine the presence or absence of soil and/or groundwater contamination and whether potentially hazardous materials are present at the former Tucumcari Truck Terminal area. An overview of the field investigation is provided below and analyses are summarized in Table 1-9; further details of the proposed field investigation activities are presented in Section 2.0.

- Two soil samples will be collected from each of the twenty soil borings advanced using direct-push sampling techniques at locations targeting potential areas of concern identified in the Phase I ESA (USACE, 2009).
- Subsurface soil samples will be analyzed for volatile organic compounds (VOCs) by EPA Method 8260B, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C, total petroleum hydrocarbons (TPH) (gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO)) by EPA Method 8015B, and target analyte list (TAL) metals by EPA Method 6010/6020.
- If groundwater is encountered during soil boring advancement, a groundwater sample will be collected and analyzed for the same analytes and methods as the subsurface soil samples.
- Ten surface soil samples will be collected at the site and analyzed for TPH by EPA Method 8015B and TAL metals by EPA Method 6010/6020.
- Four monitoring wells will also be sampled for TAL metals, VOCs, PAHs, and TPH.
- Sampling activities will also consist of collecting samples from the two rooms of the abandoned residence to test for the presence of LBP and ACBM.
- In addition to sampling activities, the approximate depth or quantity of any fluids that may remain in the existing ASTs and USTs present at the site will be verified.

- An investigation derived waste (IDW) composite sample will be collected and analyzed using the Toxicity Characteristic Leaching Procedures (TCLP).

Table 1-9 Analyses Overview

Sample Type	Parameter	Method	Quantity
Soil boring	VOC	EPA Method 8260B	Two samples/boring = 40 samples
	PAH	EPA Method 8270C	
	TPH GRO/ DRO/ ORO	EPA Method 8015B	
	TAL Metals	EPA Method 6010/6020.	
Surface soil	TPH GRO/ DRO/ ORO	EPA Method 8015B	10 samples
	TAL Metals	EPA Method 6010/6020.	
Groundwater from soil borings	VOC	EPA Method 8260B	20 samples (1 per boring)
	PAH	EPA Method 8270C	
	TPH GRO/ DRO/ ORO	EPA Method 8015B	
	TAL Metals	EPA Method 6010/6020.	
	Water level, pH, conductivity, temperature, and dissolved oxygen	Water level meter and calibrated multiple-parameter meter	
Groundwater from monitoring wells	VOC	EPA Method 8260B	4 samples
	PAH	EPA Method 8270C	
	TPH GRO/ DRO/ ORO	EPA Method 8015B	
	TAL Metals	EPA Method 6010/6020.	
	Water level, pH, conductivity, temperature, and dissolved oxygen	Water level meter and calibrated multiple-parameter meter	
Abandoned Residence	LBP	TBD	2 samples
	ACM	TBD	
Tank contents	Depth	Gauge stick	Up to 9 samples
	Quantity	Gauge stick	
IDW	VOC	TCLP 8260B	1 composite sample
	PAH	TCLP 8270C	
	TPH GRO/ DRO/ ORO	TCLP 8015B	
	TAL Metals	TCLP 6010/6020.	

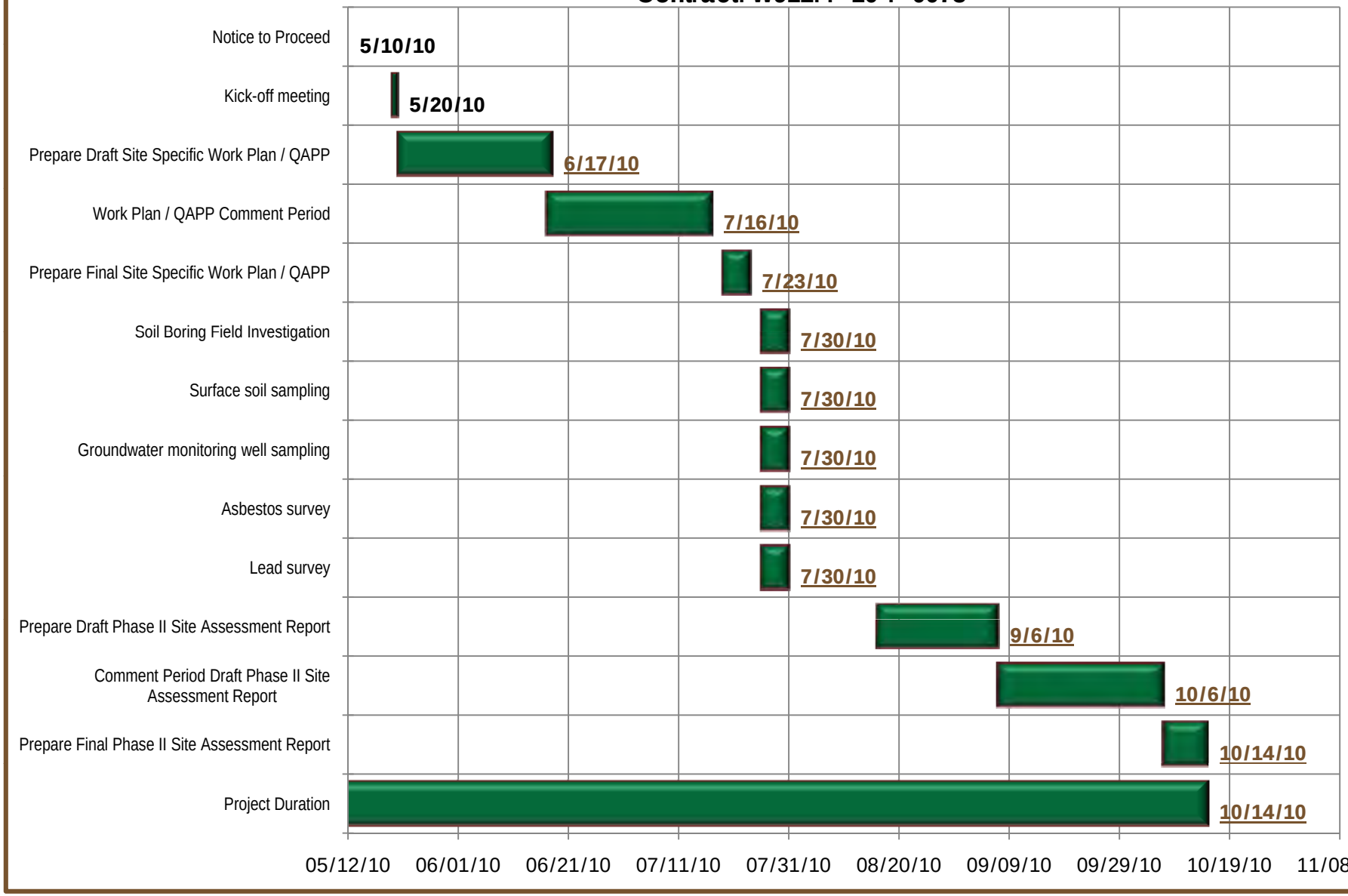
Key: TBD- to be determined

1.10 Project Schedule

Finalization of this Work Plan is scheduled to take place in mid-July 2010, followed by approximately one week of field activities. The final Phase II ESA report is scheduled to be completed by October 18, 2010. The proposed schedule for completion of project activities is presented in Figure 1-6.

INNOVAR ENVIRONMENTAL, INC.

Phase II Targeted Brownfields Environmental Site Assessment
For the Tucumcari Truck Terminal
Contract: W912PP-10-P-0073



brown, underlined font indicates a scheduled date
black font indicates an actual end date/ completed.

1.11 Contract Deliverables

The following table summarizes the required deliverables.

Table 1-11 Contract Deliverables		
Task # in scope	**Deliverable**	**Quantities and Types**
2.1	Draft Site Specific Work Plan	4 hard copies with 4 CDs plus 1 additional compact disk (CD)
2.2	Final Site Specific Work Plan	4 hard copies with 4 CDs plus 1 additional CD
2.9	Draft Phase II Site Assessment	4 hard copies with 4 CDs plus 1 additional CD
2.10	Final Phase II Site Assessment	4 hard copies with 4 CDs plus 1 additional CD

2.0 FIELD INVESTIGATION TASKS

2.1 Mobilization/Demobilization

Mobilization includes the preparation required to accomplish each phase of the field investigation. Innovar will provide all field support personnel for this effort. A variety of tasks will be performed during mobilization activities, including but not limited to:

- Obtain Utility Clearances (see Section 2.2);
- Identify and establish decontamination and IDW staging areas for field operations;
- Procure personal safety equipment, sample containers, and all miscellaneous field supplies;
- Provide field personnel copies of the QAPP and HASP;
- Conduct a site orientation with all personnel, including subcontractors, to discuss planned drilling and sampling activities, site health and safety issues, and any restrictions that may be imposed due to site conditions; and
- Field-mark approximate locations of the proposed soil boring and surface soil sample locations.

Demobilization will include decontaminating equipment used on the project and completing site cleanup. All equipment and supplies will be removed from the site.

2.2 Utility Clearance

Prior to the start of direct-push activities, the locations of all utilities will be determined for the site. Several methods will be used to identify the locations of all utilities in the vicinity of the proposed boreholes and ensure a safe working environment during direct-push activities. These methods are as follows:

- Notify the New Mexico One Call, Inc. for mark-out by calling 811;
- Refer to site figure (Figure 1-5) illustrating approximate underground fuel piping locations; and
- Identify above ground power and telephone wires, so that heavy equipment does not create a hazard.

2.3 General Safety Procedures

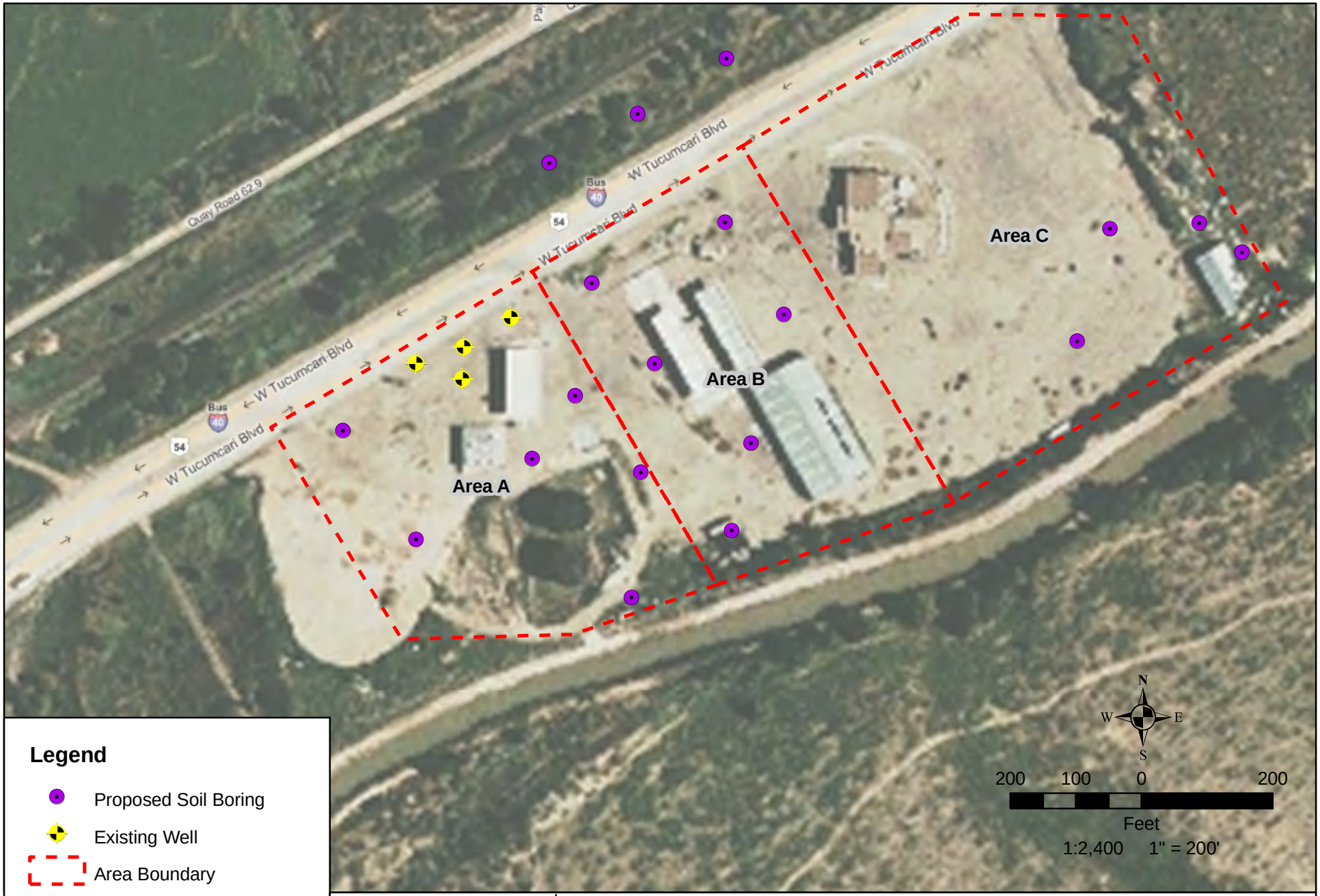
During field investigation activities the HASP presented in Part II of the Work Plan will be strictly adhered to for all specific health and safety procedures. In general, the following safety procedures will be discussed and/or implemented prior to breaking ground:

- Field personnel will don appropriate personal protective equipment (PPE);
- Discussions will be held regarding the chemical, physical and toxicological properties of each substance that is known or expected to be present on the site;
- Physical barriers, such as traffic cones, snow fencing or an equivalent, will be erected to restrict access to the work zones, if needed; and
- Applicable first aid procedures and routes to local hospitals will be discussed with all field personnel.

2.4 Borehole Drilling/ Direct-Push Advancement

Prior to drilling, Innovar personnel will ensure all utilities in the area have been suitably located. Soil borings will be advanced using a truck-mounted GeoProbe® operated by JR Engineering, LLC based in Edgewood, New Mexico. Nineteen soil borings will be advanced at approximate locations depicted in Figure 2-1with the location of one additional boring to be determined in the field. However, borehole locations may need to be adjusted in the field following the location of underground utilities. All borings will be advanced to a maximum depth of 20 feet below ground surface (bgs), or until groundwater or refusal is encountered.

Soil borings will be advanced using direct-push sampling techniques and logged at five foot intervals using the Unified Soil Classification System (USCS) for unconsolidated materials. Two soil samples will be collected from each borehole as discussed in Section 2.4.1. Soil samples will be field screened for VOCs using a MiniRae 2000 photo ionization detector (PID) or equivalent (see Section 3.2.1 for details). All drilling equipment used to advance soil borings will be steam-cleaned before use at each borehole. All soil generated during direct push activities will be containerized pending receipt of analytical results and handled according to the practices described in Section 2.12, IDW Management.



Legend

- Proposed Soil Boring
- Existing Well
- Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
6/15/2010	JLK	JLH

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Figure 2-1
Proposed Sample Locations
Tucumcari Truck Terminal, Tucumcari, New Mexico

2.4.1 Soil Sampling

Soil samples will be collected from each borehole at 5 to 10 feet bgs and 15 to 20 feet bgs using GeoProbe® 540UD utilizing the DT-21 samplers with acetate liners. If groundwater or refusal is encountered at depths shallower than 20 feet, a sample will be collected from the five foot interval immediately above where groundwater or refusal is encountered. Other sample depth intervals may also be selected if signs of contamination are indicated through visual inspection, odors, and/or headspace screening. Soil samples will be analyzed for VOCs by SW-846 Method 8260B, PAHs by SW-846 Method 8270C/8310, TPH-(DRO/GRO/ORO) by SW-846 Method 8015B, and TAL metals SW-846 Method 6010/6020. Subsurface soil sample collection procedures are detailed in Section 3.2.3.

2.4.2 Groundwater Sampling (Boreholes)

If groundwater is encountered during soil boring advancement, a groundwater sample will be collected and analyzed for VOCs by EPA Method 8260B, PAHs by EPA Method 8270C/8310, TPH by EPA Method 8015B, and TAL metals (dissolved) by EPA Methods 6010B/6020. Groundwater sampling will be completed using a peristaltic pump with new tubing and low-flow purging and sampling methods (see Section 3.2.4 for groundwater sampling procedures). The initial water level will be measured and the following water quality parameters will be recorded during pumping: pH, conductivity, temperature, and dissolved oxygen.

2.5 Borehole Abandonment

Boreholes will be abandoned by backfilling with a high solids bentonite grout (Quick-Grout ®) tremied to the surface. The boreholes should be finished at grade to match the exiting surface conditions in accordance with New Mexico state requirements.

2.6 Surface Soil Sampling

Ten surface soil samples will be collected at locations to be determined jointly with the USACE representative and the Innovar field team while on site during the field investigation. The surface soil sample locations will be identified once on site to determine the most appropriate locations for sample collection. Surface soil samples will be collected with a decontaminated stainless steel trowel from 0 to 0.5 feet bgs. Surface soil samples will be analyzed for TPH (DRO/GRO/ORO) by SW-846 Method 8015B and TAL metals by SW-846 Method 6010/6020.

2.7 Groundwater Sampling (Monitoring Wells)

2.7.1 Well Purging Protocol

Before purging activities begin, the sampling crew will take a water level measurement. The water level indicator will be decontaminated before being used in the monitoring well. The decontaminated well purging equipment will be inserted and connected to the well and purging will begin.

The sampling team will collect stabilization readings every three minutes during the purging of the monitoring well. The stabilization readings (flow, temperature, pH, specific conductivity, dissolved oxygen, oxidation reduction potential, turbidity, and water level) will be used to ascertain when the groundwater is indicative of the formation, and thus, in readiness to be sampled. Table 2-7-1A shows the units and the stabilization threshold requirements that are to be used to determine when a well is stabilized. Readings will be taken until three consecutive readings meet the stabilization requirements. A minimum of five readings will be collected for each well.

The stabilization readings will be taken using either a QED MP-20 multi-parameter meter or similar meter capable of producing data to at least two significant digits. The multi-parameter meter will be calibrated according to manufacturer's instructions and recommendations. The meter will be used in conjunction with a flow through cell.

Table 2-7-1A Stabilization Criteria

Stabilization Parameter	Units	Stabilization Requirements
Flow	mL/min	100-500
Temperature	°C	± 0.5
pH		± 0.1
Specific Conductivity	mS/cm	± 3%
Dissolved Oxygen	mg/L	greater of ± 10% or ± 0.15
Oxidation Reduction Potential	millivolts	± 10
Turbidity	NTUs	± 10% or < 10
Water Level	feet	0-0.3 drawdown

To be in accordance with EPA guidelines for low-flow sampling, the rate of groundwater being pumped from the well will not exceed 500 mL/L. The low-flow purging rate shall be varied as required to minimize drawdown of the groundwater level, not to exceed 0.3 feet. Field worksheets will be filled out for each well during purging and sampling (see Attachment 1).

Equipment that Innovar plans to use in the purging process is shown in the following table.

Table 2-7-1B Equipment List		
Manufacturer	**Name**	**Use**
QED	MP-20	Multi-parameter meter w/ flow cell
QED	MP-10	Micro-purge controller
QED	3020 compressor (oil-less)	Air supply
QED	Bladder Pump	Purge and sample well
Hach	DR-890	Analyze for ferrous iron

2.8 Well Sampling Protocol

The sampling crew will take precautions to collect samples that are representative of the formation water. Thus, sampling of the monitoring wells will be performed in accordance with current guidelines established by the EPA ("*Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures"*). Field worksheets will be filled out for each well at the time of sampling.

The sampler will wear disposable nitrile gloves and will don new gloves between each monitoring well location. A label identifying sample identification (ID), sample date/time, analysis method/number, preservation, and sampler signature will be attached to each sample container. VOC vials will be filled to the point that a positive meniscus forms before being capped. It will be ensured that no air bubbles greater than the size of a pea are present in the vial. All other containers will be filled to near the top.

The VOC samples will be collected first followed by the other parameters. Samples will be immediately put in coolers with ice and the temperature of the cooler will be maintained at ± 4°C. All samples will be shipped to the designated analytical laboratory for analysis

If the Low-Flow technique cannot be performed then, upon USACE concurrence, three to five well volumes will be purged. A submersible pump or disposable bailers will be used to purge the well(s). Samples will be collected with a Teflon or stainless steel bailer suspended from a dedicated Teflon coated monofilament line or through an in-line sample pump with inert tubing. All equipment, unless disposable or dedicated for that particular well location, will be properly decontaminated prior to sampling. Sampling equipment will be transported in sealed, clean containers, and care will be taken to avoid contamination. Non-disposable sampling equipment will be cleaned between well locations.

2.9 Verify Depth and Quantity of Tank Contents

The site presently contains a variety of ASTs and vaulted USTs for fuels and waste oils. Area A consists of a concrete vault with four gasoline USTs (size unknown), two 860,000 gallon diesel ASTs, and one approximate 2,000 gallon #3 diesel AST. Area B contains two approximate 2,000 gallon waste oil ASTs located on the east side of the warehouse. Tank locations are illustrated on Figure 1-4.

Innovar will verify the approximate depth or quantity of any fluids that may remain in the existing ASTs and USTs present at the site. Access to the inside of the tanks will be made through a fill or dispenser port. An indicating tape will be lowered into the tank and retrieved, marking the depth of tank contents. Then, using tables for tank sizes the contents quantity will be calculated. A gauge stick, weighted measuring tape affixed to a rod, or bailer may be used as the indicating tape. No personnel will enter the tank and thus, no confined space permits will be required.

2.10 ACM Testing

The abandoned residence located in Area C may date back to the 1940's according to interviews conducted during the Phase I ESA (USACE, 2009). Although no definitive observations of ACBM were observed during the Phase I site visit, there is the potential for the presence of asbestos in portions of the old residence. As a result, samples will be collected from the two rooms of the abandoned residence and submitted to a subcontract laboratory (to be determined) for ACBM bulk sample analysis. Innovar will subcontract a local licensed asbestos professional to sample potential ACM.

2.11 Lead-Based Paint Testing

There is the potential that LBP may exist in portions of the abandoned residence located in Area C due to its age. Two rooms of the abandoned residence will be tested for LPB. Innovar will subcontract a local EPA certified LBP inspector to collect potential LBP samples and submit samples to an appropriate laboratory (to be determined).

2.12 IDW Management and Disposal Procedures

The primary IDW will consist of discarded soil cuttings left over from direct-push activities. After logging each borehole and collecting the necessary soil samples for analysis, the remaining soil will be placed in 55-gallon steel drums. One composite sample will be collected from the soil IDW and analyzed using the TCLP for waste characterization. Disposal determination will be made upon receipt of analytical results. Miscellaneous disposable PPE, disposable sampling equipment, tubing, and acetate liners used during direct-push sample collection will be collected in plastic bags for disposal as municipal waste at an approved landfill. Decontamination water associated with direct push and sampling activities will be containerized in 55-gallon drums. The final characterization and disposition of the containerized decontamination water will be based on sample analytical results obtained from groundwater samples.

All drums used for containerizing IDW will be U.S. Department of Transportation- and EPA-approved for transport of hazardous materials. The drums will be sealed, labeled, and recorded so that the contents can be identified as to material and source. The drums will be labeled in accordance with Title 6 of the CCR Part 1007-3 (6 CCR 1007-3), Section 261. At a minimum, drums will be labeled as to type of material contained, site number and location, point of contact, telephone number, and date. Labeling will be made with a permanent marker and positioned so that it can be easily viewed when the drums are staged. The drums containing IDW will be temporarily stored in a staging area at the site.

3.0 MEASUREMENT AND DATA ACQUISITION

3.1 Sampling Process Design and Rationale

Soil boring locations were selected for potential areas of concern identified during the Phase I ESA and based on recommended sampling activities presented in the Phase I ESA Report (USACE, 2009). Sample locations will target potential contamination associated with both the tanks (USTs and ASTs) and piping onsite, past site operations and spills, and ongoing activities associated with the existing temporary lease for the highway construction. Environmental concerns identified for the site are summarized in Section 1.5.3.1.

Soil samples will be collected from each borehole at 5 to 10 feet bgs and 15 to 20 feet bgs. Additional sample intervals may be selected based on field observations and headspace screening. If encountered, groundwater will also be sampled from soil borings. Previous operation of an SVVS remediation system was terminated before complete remediation of the site (USACE, 2009). Soil and groundwater contamination is therefore still expected to exist at the site. Previous site investigations summarized in Section 1.5.3.1 also indicate past soil and groundwater hydrocarbon contamination.

Ten surface soil samples will be collected from 0 to 0.5 feet bgs at locations to be determined jointly with the USACE representative and the Innovar field team while on site during the field investigation. Determinations will be made based on visible clues such as staining; smelling; and location to soil borings with high PID readings.

The abandoned residence located in Area C may date back to the 1940's according to interviews conducted during the Phase I ESA (USACE, 2009). Due to its age, there is the potential that ACBM and LBP may exist in portions of the abandoned residence. As a result, samples will be collected from the two rooms of the abandoned residence to test for the presence of LBP and ACBM.

3.2 Sample Collection Procedures

3.2.1 Headspace Screening

Soil will be screened from each five-foot sample interval using an 11.7 electron volt PID meter to determine the relative presence of organic compounds and identify locations which may warrant the collection of soil samples in addition to

those specified in Section 3.1. Headspace screening measurements will be recorded in the field in accordance with the following protocol:

1. A representative portion of soil collected from each sample will be placed in a clean Ziplock™ bag and sealed air tight.

2. The Ziplock™ bag containing the soil will be agitated for at least fifteen seconds and then allowed to volatilize in direct sunlight for a minimum of five minutes.

3. The bag will then be shaken and the vapor sampling probe of the PID will be used to puncture the bag to measure the volatile vapor headspace. The maximum meter response (within the first 2 to 5 seconds) will be recorded.

The headspace screening measurements will be recorded on the appropriate field documentation forms (e.g., boring logs and/or field notebooks).

3.2.2 Surface Soil Samples

Ten surface soil samples will be collected and submitted for TPH (DRO/GRO/ORO) and TAL metals analysis by EPA Methods 8015B and 6010/6020, repectively. All debris and plant material shall be scraped from the surface soil sample location prior to collection. The surface soil sample will be collected with a decontaminated stainless steel trowel from 0 to 0.5 feet bgs. The soil sample will be composited in a stainless-steel bowl, placed in appropriate labeled sample containers, and immediately placed on ice and cooled to approximately 4 °C. Samples designated for GRO analysis will be placed directly in sample containers without being homogenized to avoid potential volatilization of target chemicals.

3.2.3 Subsurface Soil Samples

Soil samples will be collected from each borehole at 5 to 10 feet bgs and 15 to 20 feet bgs using GeoProbe stainless steel Macro-Core and DT-21 samplers with acetate liners. If groundwater or refusal is encountered at depths shallower than 20 feet, a sample will be collected from the five foot interval immediately above where groundwater or refusal is encountered. Other sample depth intervals may also be selected if signs of contamination are indicated through visual inspection, odors, and/or headspace screening. Soil samples will be analyzed for VOCs by SW-846 Method 8260B, PAHs by SW-846 Method 8270C, TPH-DRO/GRO/ORO by SW-846 Method 8015B, and TAL metals SW-846 Method 6010/6020.

Soil samples for VOC and GRO analyses should be collected immediately upon sample retrieval without being homogenized to avoid potential volatilization of target chemicals. EnCore™ Soil Samplers (or other equivalent soil samplers) will be used to collect VOC samples in accordance with EPA Method 5035A protocol. Three 5-gram samples will be collected for each VOC sample and sealed prior to the collection of samples to be used for headspace screening, as well as other analytical samples. Soil samples for VOC analysis must be

transported to a laboratory and be preserved or analyzed within 48 hours of collection.

The protocol for use of an EnCore™ Soil Sampler (see distributor instructions for Terra Core or other equivalent soil sampler) is as follows:

1. Depress locking lever on T-handle. Place coring body, plunger end first, into open end of T-handle, aligning the slots on the coring body with the two locking pins in the T-handle. Twist coring body clockwise to lock pins in slots. Check to ensure sampler is locked in place.
2. Turn T-handle with T-up and coring body down. This positions plunger bottom flush with bottom of coring body (ensure that plunger bottom is in position).
3. Using T- handle, push sampler into soil until coring body is completely full. When full, the small o-ring will be centered in the T-handle viewing hole.
4. Remove the sampler from the soil. Wipe excess soil from the coring body exterior with a clean disposable towel.
5. Cap the coring body while it is still attached to the T-handle. Push and twist the cap over the bottom until the grooves on the locking arms seat over the ridge on the coring body. Correct seating of the cap is essential to maintain zero headspace.

Samples collected for the remaining analytical parameters will be composited in a stainless-steel bowl, placed in appropriate labeled sample containers, and immediately placed on ice and cooled to approximately 4 °C.

3.2.4 Groundwater Samples

If groundwater is encountered during soil boring advancement, a groundwater sample will be collected and analyzed for VOCs by EPA Method 8260B, PAHs by EPA Method 8270C/8310, TPH by EPA Method 8015B, TAL metals (dissolved) by EPA Methods 6010B/6020. Groundwater sampling will be completed using a peristaltic pump with new tubing and low-flow purging and sampling methods. The initial water level will be measured and the following water quality parameters will be recorded during pumping: pH, conductivity, temperature, and dissolved oxygen. The flow rate and sample disturbance shall be minimized while filling the 40-mL VOC and GRO vials. These vials will be preserved with hydrochloric acid (HCl) and have zero headspace (i.e., no bubbles). All remaining samples will then be collected in analyte-appropriate containers. The sample for dissolved metals will be field filtered using an inline 0.45-micron filter. After collection, samples will be placed on ice in an insulated cooler and maintained at 4°C until shipped to an off-site laboratory.

3.3 Sample Containers, Volume, and Preservation

Sample containers will be provided by the subcontract laboratory. Sample container types, preservation requirements, and holding times are provided in Table 3-3.

Table 3-3 Sample Containers, Preservation, and Holding Times				
Parameter	**Analytical Methods**	**Sample Container**	**Preservation**	**Holding Time**
Soil Samples				
VOCs	SW5035A (preparation) SW8260B (analysis)	4 vials (2 - MeOH and 2 – aqueous)	Cool to 4°C, then freeze to < -7°C and > -20°C; or preserve with methanol or sodium bisulfate	48 hours to preservation, then 14 days
TPH-GRO	SW3550C or other appropriate method (preparation) SW8015B (analysis	4 vials (2 - MeOH and 2 – aqueous)	Cool to 4°C, then freeze to < -7°C and > -20°C; or preserve with methanol or sodium bisulfate	48 hours to preservation, then 14 days
TPH-GRO/DRO/ORO	SW3550C or other appropriate method (preparation) SW8015B (analysis)	8-oz jar with Teflon-lined septa and screw cap	Cool to 4°C	14 days until extraction and 40 days for analysis
PAHs	SW3540C or other appropriate method (preparation) SW8270C/8310 (analysis)	8-oz jar with Teflon-lined septa and screw cap	Cool to 4°C	14 days until extraction and 40 days for analysis
TAL Metals	SW6010 or SW6020 (analysis)	8-oz glass with PTFE-lined screw cap	Ambient, (for Hg: Cool to 4°C)	180 days (for Hg: 28 days)
Groundwater Samples				
VOCs	8260B	2 sets of 3x 40 mL glass septa vial, no headspace	Cool to 4°C, HCl pH < 2	14 days
TPH- GRO	8015B	2 sets of 3x 40 mL glass septa vial, no headspace	Cool to 4°C, HCl pH < 2	14 days
TPH- DRO/ ORO	8015B	2 1-L amber bottles	pH <2, cool to 4°C	7 days till extraction
PAHs	8270C/8310	2 1-L amber bottles	cool to 4°C	7 days till extraction
TAL Metals	6010B/6020	500 ml HDPP	HNO3 to pH <2, ambient (for Hg: 4°C)	180 days (for Hg: 28 days)
Waste Characterization				
TCLP	SW1311	16oz jar with Teflon-lined septa and screw cap	Cool to 4°C	14 days TCLP extraction

3.4 Sampling Equipment Decontamination Procedures

Equipment cleaning will take place in an area away from sampling locations. Personnel will wear disposable nitrile gloves during all decontamination procedures. Sampling equipment will either be disposable or decontaminated using the following procedure:

1. Brush/remove all soil and solids from equipment and place on plastic used for IDW.
2. Wash sample equipment in a potable water and Liquinox® (or other phosphate-free detergent) solution.

3. Rinse equipment with potable water followed by a rinse with deionized water.
4. Allow equipment to dry then store equipment appropriately for transport.

Pumps used for groundwater sampling will be decontaminated before initial use and between boring locations. Drilling equipment will be steam cleaned using high-pressure potable water upon entering the site, between boreholes, and prior to leaving the site. All decontamination tubs will be kept on plastic sheeting while in use. Deionized water will be stored in labeled plastic pump sprayers or their original containers. Clean decontaminated equipment will remain on plastic sheeting until needed for subsequent sample collection.

3.5 Field Equipment Calibration, Maintenance, Testing, and Inspection Procedures

Field equipment will be calibrated at the start of each workday and periodically thereafter to ensure that the equipment is functioning properly and that accurate field data is collected. PIDs will be calibrated at least once per day using a calibration gas of known concentrations. The water quality meter will be calibrated with calibration standards per manufacturer's recommendations. Calibration frequencies will be recorded in the field log along with the calibration standards used.

Field equipment will be inspected and tested on a daily basis to ensure that it is in working order and able to collect appropriate data during field operations. Equipment maintenance will be performed by field personnel when possible (if spare parts are ready available) or completed by the manufacturer. Corrective actions taken to fix problems with field equipment prior to and during field operations will be documented in the field logbook.

3.6 Field Documentation Procedures

A qualified geologist, or environmental scientist will prepare a log of each borehole. Logs will be completed in the field as the soil borings are advanced. The preparer will sign each log. All log entries will be printed in indelible ink. The complete and accurate log prepared for each borehole will include the following information:

- Logging will be conducted for each five-foot sample interval.
- All log entries will be printed. Photo reproductions will be clear and legible.
- Borehole depth information will be from direct measurement from ground surface and accurate to 0.1 feet.
- All relevant information blanks in the log heading and log body will be completed.
- Every material type encountered shall be described on the log form. Material types are to be logged directly from samples and indirectly

interpolated using professional judgment, cuttings, direct-push action, etc., between sampling intervals.

- Soils will be described as outlined below:
    1. Descriptive USCS in accordance with American Society for Testing and Materials D 2488-84;
    2. Presence of odors, staining, oxidation, or other evidence of petroleum contamination, along with the PID reading;
    3. Consistency of cohesive materials or apparent density of non-cohesive materials;
    4. Other descriptive features [organic materials, mineral content, macrostructure of fine-grained soils (e.g., root holes, fractures, etc.)];
    5. Color; and,
    6. Moisture content assessment (e.g., moist, wet, etc.).
- Stratigraphic/lithologic changes will be identified by a solid horizontal line at the appropriate scale depth on the log that corresponds to the measured borehole depths at which the change occurred, measured and recorded to the nearest 0.1 feet. Gradational transitions, changes identified from cuttings or methods other than direct observation and measurement will be identified by a horizontal dashed line at the appropriate scale depth based on the best judgment of the logger.
- Logs will clearly show the depth intervals from which all samples are retained.
- Logs will show total depth of penetration and sampling. The bottom of the hole will be identified on the log by solid double lines from margin to margin with the notation "total depth."
- Any special direct-push or sampling problems will be recorded on logs, including descriptions of problem resolutions.

In addition to the boring logs, a detailed account of field activities will be recorded in a hard-bound field notebook. Each page in the field logbook will be consecutively numbered. All entries will be made in waterproof ink and initialed and dated by the author. Errors will be corrected by drawing a single line through the erroneous entry, adding a new entry, and initialing and dating the correction. The following information will be recorded in the field notebook on a daily basis.

- Date
- Equipment and personnel, including subcontractors, present on site and times of arrival and departure from site.
- Field calibration of instruments (i.e. PID), and other quality QA/QC activities.

- Weather conditions, including temperature, humidity, precipitation, wind, and cloud cover data.
- Daily site safety and health meeting minutes, including the topics covered and measures enacted.
- General description of work performed, problems encountered, and resolutions enacted.
- List of visitors (name and title) to the site.
- Sample numbers, types, descriptions, analysis to be performed and preservation methods.
- Field measurements

3.7 Analytical Tasks and Procedures

A subcontract laboratory (Accutest Laboratories) accredited in accordance with NELAP will perform all soil, groundwater, and waste characterization sample analyses. Surface soil samples will be analyzed for TPH-GRO/DRO/ORO using EPA SW-846 Method 8015B – *Nonhalogenated Organics by Gas Chromatography* and TAL metals using EPA SW-846 Methods 6010/6020 – *Inductively Coupled Plasma-Atomic Emission Spectrometry*. Subsurface soil samples will also be analyzed for TPH and TAL metals by the same methods used for surface soil samples. Additionally, subsurface soil samples will be analyzed for VOCs using EPA SW-846 Method 8260B - *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)* and PAHs using EPA SW-846 Method 8270C – *Semivolatile Organic Compounds by GC/MS*. Waste characterization samples may be prepped using EPA SW-846 Methods 1311 – *TCLP.* Groundwater samples will be analyzed for VOCs, PAHs, TPH, and TAL metals using the same methods as the soil samples.

The analyte lists and QC limits are provided in Table 3-7. All sample analyses will be performed following the procedures outlined in the applicable method (the GC/MS will be operated in the selected ion monitoring (SIM) mode for PAH analysis) and the requirements listed in the DOD QSM v4.1 (2009).

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits

Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
SOIL				
SW8260B – VOCs (ug/kg)				
Acetone	21	50	61-144	29
Benzene	1	5	78-130	25
Bromodichloromethane	1	5	73-122	25

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits				
Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
Bromoform	1.8	5	70-139	26
Chlorobenzene	1	5	83-122	23
Chloroethane	2	5	61-153	31
Chloroform	1	5	79-129	27
Carbon disulfide	2.4	5	61-142	27
Carbon tetrachloride	1.6	5	79-135	29
1,1-Dichloroethane	1.5	5	77-132	26
1,1-Dichloroethylene	2.3	5	66-132	27
1,2-Dichloroethane	1.2	5	78-129	24
1,2-Dichloropropane	1	5	74-127	27
Dibromochloromethane	1.7	5	78-117	27
cis-1,2-Dichloroethylene	1	5	74-123	26
cis-1,3-Dichloropropene	1	5	79-130	23
trans-1,2-Dichloroethylene	1.9	5	77-129	27
trans-1,3-Dichloropropene	1.1	5	87-131	27
Ethylbenzene	1.1	5	82-124	25
2-Hexanone	12	25	67-130	29
4-Methyl-2-pentanone	8.3	25	69-125	24
Methyl bromide	2	5	60-146	31
Methyl chloride	2.5	5	58-163	26
Methylene chloride	5	10	62-140	25
Methyl ethyl ketone	7.5	25	66-134	23
cis-1,2-Dichloroethylene	1	5	74-123	26
cis-1,3-Dichloropropene	1	5	79-130	23
trans-1,2-Dichloroethylene	1.9	5	77-129	27
trans-1,3-Dichloropropene	1.1	5	87-131	27
Ethylbenzene	1.1	5	82-124	25
2-Hexanone	12	25	67-130	29
4-Methyl-2-pentanone	8.3	25	69-125	24
Methyl bromide	2	5	60-146	31
Methyl chloride	2.5	5	58-163	26
Methylene chloride	5	10	62-140	25
Methyl ethyl ketone	7.5	25	66-134	23
SW8015B – TPH (mg/kg)				
TPH-GRO (C6-C10)	2.5	5	74-121	17

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits				
Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
TPH-DRO/ORO (C10-C28)	5	8.3	60-107	36
TPH-DRO/ORO (>C28-C40)	5	8.3	47-124	33
SW8270C/8310 – PAHs (ug/kg)				
Acenaphthene	170	330	68-115	30
Acenaphthylene	170	330	70-122	30
Anthracene	170	330	67-116	26
Benzo(a)anthracene	84	330	75-122	28
Benzo(a)pyrene	17	33	70-121	27
Benzo(b)fluoranthene	17	33	76-124	26
Benzo(g,h,i)perylene	17	33	76-122	24
Benzo(k)fluoranthene	17	33	76-122	30
Chrysene	84	330	76-124	28
Dibenzo(a,h)anthracene	17	33	76-124	27
Fluoranthene	84	330	76-126	26
Fluorene	170	330	71-118	26
Indeno(1,2,3-cd)pyrene	17	33	74-121	27
Naphthalene	170	330	58-104	31
1-Methylnaphthalene	84	330	62-108	32
2-Methylnaphthalene	84	330	60-104	30
Phenanthrene	170	330	77-125	26
Pyrene	84	330	76-123	26
SW6010/6020 - TAL Metals (mg/kg)				
Aluminum	1	10	80-120	20
Antimony	0.1	1	80-120	20
Arsenic	0.1	0.5	80-120	20
Barium	0.5	10	80-120	20
Beryllium	0.05	0.25	80-120	20
Cadmium	0.05	0.2	80-120	20
Calcium	5	250	80-120	20
Chromium	0.05	0.5	80-120	20
Cobalt	0.05	2.5	80-120	20
Copper	0.1	1.25	80-120	20
Iron	1.5	15	80-120	20
Lead	0.05	1	80-120	20
Magnesium	5	250	80-120	20
Manganese	0.05	0.75	80-120	20

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits				
Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
Mercury	0.0103	0.083	80-120	20
Molybdenum	0.05	2.5	80-120	20
Nickel	0.05	2	80-120	20
Potassium	25	500	80-120	20
Selenium	0.2	1	80-120	20
Silver	0.05	0.5	80-120	20
Sodium	37.5	500	80-120	20
Strontium	0.05	0.5	80-120	20
Thallium	0.1	0.5	80-120	20
Tin	0.05	2.5	80-120	20
Titanium	0.1	0.5	80-120	20
Vanadium	0.05	2.5	80-120	20
Zinc	0.25	1	80-120	20
GROUNDWATER				
SW8260B – VOCs (ug/l)				
Acetone	10	25	10	59-134
Benzene	0.21	1	0.21	83-124
Bromodichloromethane	0.28	1	0.28	76-116
Bromoform	0.24	1	0.24	68-128
Chlorobenzene	0.2	1	0.2	87-115
Chloroethane	0.51	2	0.51	54-166
Chloroform	0.25	1	0.25	85-123
Carbon disulfide	0.4	2	0.4	67-147
Carbon tetrachloride	0.34	1	0.34	74-139
1,1-Dichloroethane	0.22	1	0.22	82-127
1,1-Dichloroethylene	0.29	1	0.29	75-133
1,2-Dichloroethane	0.33	1	0.33	76-122
1,2-Dichloropropane	0.27	1	0.27	81-120
Dibromochloromethane	0.33	1	0.33	74-116
cis-1,2-Dichloroethylene	0.32	1	0.32	81-114
cis-1,3-Dichloropropene	0.2	1	0.2	83-119
trans-1,2-Dichloroethylene	0.34	1	0.34	82-126
trans-1,3-Dichloropropene	0.22	1	0.22	87-123
Ethylbenzene	0.2	1	0.2	87-118
2-Hexanone	5	10	5	58-125
4-Methyl-2-pentanone	2	5	2	62-125

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits				
Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
Methyl bromide	0.78	2	0.78	55-151
Methyl chloride	0.5	2	0.5	55-173
Methylene chloride	2	5	2	69-125
Methyl ethyl ketone	2	5	2	61-127
Naphthalene	1	5	1	59-125
Styrene	0.2	1	0.2	78-118
1,1,1-Trichloroethane	0.22	1	0.22	79-133
1,1,2,2-Tetrachloroethane	0.29	1	0.29	71-120
1,1,2-Trichloroethane	0.29	1	0.29	80-114
Tetrachloroethylene	0.44	1	0.44	80-131
Toluene	0.2	1	0.2	86-116
Trichloroethylene	0.24	1	0.24	85-124
Vinyl chloride	0.28	1	0.28	57-153
Xylene (total)	0.54	3	0.54	86-120
SW8015B – TPH (mg/l)				
TPH-GRO (C6-C10)	0.05	0.1	75-129	13
TPH-DRO/ORO (C10-C28)	0.1	0.25	59-114	34
TPH-DRO/ORO (>C28-C40)	0.1	0.25	60-140	30
SW8270C/8310 – PAHs (ug/L)				
Acenaphthene	1	2	60-102	33
Acenaphthylene	1	2	66-108	32
Anthracene	1	2	64-107	28
Benzo(a)anthracene	0.05	0.2	70-108	19
Benzo(a)pyrene	0.05	0.2	72-115	20
Benzo(b)fluoranthene	0.05	0.2	73-111	20
Benzo(g,h,i)perylene	0.1	0.2	69-113	22
Benzo(k)fluoranthene	0.05	0.2	70-111	21
Chrysene	0.5	2	71-111	20
Dibenzo(a,h)anthracene	0.05	0.2	71-114	23
Fluoranthene	0.5	2	68-110	17
Fluorene	1	2	63-102	25
Indeno(1,2,3-cd)pyrene	0.05	0.2	69-110	22
Naphthalene	1	2	55-94	28
1-Methylnaphthalene	0.5	2	55-97	29
2-Methylnaphthalene	0.5	2	51-97	25
Phenanthrene	1	2	67-108	22

Table 3-7 – Laboratory Methods, Analytes, and Quality Control Limits				
Method/Analyte	Method Detection Limit	Reporting Limit	Control Limits[a]	
			Accuracy/ Bias (%)	Precision (% RPD)
Pyrene	0.5	2	71-107	17
SW6010/ 6020B - TAL Metals (ug/L)				
Aluminum	25	200	80-120	20
Antimony	2	6	80-120	20
Arsenic	2	10	80-120	20
Barium	5	200	80-120	20
Beryllium	1	4	80-120	20
Cadmium	1	5	80-120	20
Calcium	100	1000	80-120	20
Chromium	1	10	80-120	20
Cobalt	1	50	80-120	20
Copper	2	25	80-120	20
Iron	35	300	80-120	20
Lead	1	5	80-120	20
Magnesium	100	5,000	80-120	20
Manganese	1	15	80-120	20
Mercury	0.071	1	80-120	20
Molybdenum	2	50	80-120	20
Nickel	2	40	80-120	20
Potassium	500	10,000	80-120	20
Selenium	2	10	80-120	20
Silver	1	10	80-120	20
Sodium	750	10,000	80-120	20
Strontium	1	10	80-120	20
Thallium	1.5	10	80-120	20
Tin	1	50	80-120	20
Titanium	2	10	80-120	20
Vanadium	1	50	80-120	20
Zinc	5	20	80-120	20

3.8 Analytical Instrument Calibration, Maintenance, Testing, and Inspection Procedures

Laboratory instruments, standard reference materials, and equipment will be calibrated and verified in accordance with the requirements listed in the DOD QSM v4.1 (2009). Laboratory instrument calibration procedures include the initial calibration, daily calibration, and continuing calibration steps detailed in the

applicable method and outlined in the DOD QSM for the specific instrument type. The laboratory must keep instrument and equipment maintenance logs to document analytical instrumentation and equipment maintenance, testing, and inspection activities.

3.9 Documentation Procedures for Sample Handling, Tracking, and Custody

3.9.1 Sample Labeling and Designation

All sample containers will be labeled immediately after sealing. The label will identify the site name, sample ID number, sample type (e.g., grab, composite, QC), collection time/date, analyses required, and preservation type. This information will also be duplicated in the field logbook, along with any in-situ measurements or field observations.

A formal sample identification system will be used for each sample collected during the field investigation. The identification system will provide a tracking procedure to allow retrieval of information about a particular sample location and ensure that each sample is assigned a unique sample identification that describes where the sample was collected. Each identifier will consist of groups of letters and numbers separated by hyphens.

The project field sample ID will consist of several components. The proposed sample nomenclature is as follows:

- Sample Location – This component shall consist of a four-character code that identifies surface soil or soil boring sample locations.

  Ex: SB01 = Soil Boring 1

  SS01 = Surface Soil Sample Location 1

- Sample Media – The next component will include one or two letter matrix code. "S" will denote a soil sample, and "GW" will denote groundwater.
- Sample Depth – The sample depth will follow the previous alphabetic components and include numerical digits denoting the depth from which the sample was obtained, if applicable (soil samples only).

  Ex: 10/15 = Sample collected from 10 to 15 feet bgs

- Field QC samples will have additional character codes. "MS/MSD" denotes a matrix spike/matrix spike duplicate sample and "TB01" denotes a trip blank. The two digits at the end (i.e., 01) will increase consecutively depending on the number of trip blanks required for the laboratory. Duplicates samples submitted to the contract laboratory will be blind duplicates. Field documentation (logbooks and field forms) will indicate which samples are duplicates.
- Several examples are provided below which illustrate the sample numbering system.

Sample No. SB01-S-15/20 designates:

SB01:	Soil boring number one
S:	Soil sample
15/20:	Sample depth (15 to 20 feet bgs)

Sample No. SB03-GW-MS/MSD designates:

SB03:	Soil boring number three
GW:	Groundwater sample
MS/MSD:	Matrix spike/matrix spike duplicate

3.9.2 Chain of Custody Record

A completed chain of custody (C-O-C) record will accompany each shipment of samples submitted to the laboratory to track the movement of samples, to provide a written record of persons handling the samples, and specify sample analyses. The information provided on the C-O-C record will include the following:

- Project name
- Signature of the samplers
- Contact Information
- Sample number
- Date and time of collection
- Time and date of sample receipt
- Type of sample matrix
- Preservatives used
- Analytical methods required

C-O-C records will be placed in a plastic bag and taped to the inside of the lid of the shipping container used for sample transport from the field to the laboratory.

3.9.3 Custody Seals

All containers used to transport samples from the field to the laboratory will have a custody seal documenting the date and the name of the individual who packaged the samples. This seal will be placed across the lid seam of a packed shipping container that has been secured shut with packing tape. The seals will also be covered in clear packing tape to prevent inadvertent damage during shipping. Upon arrival at the laboratory, the custody seal will be examined by laboratory personnel to ensure that the samples were not disturbed or tampered with during shipping.

3.9.4 Sample Packaging and Shipping

After collection, samples will be prepared for shipment to the laboratory. Individual sample containers will be wrapped in bubble pack to prevent

breakage during shipment. The containers will be placed into insulated shipping coolers with absorbent material and sufficient ice to keep samples at a temperature of 4°C. The ice will be double bagged to minimize the likelihood of leakage during shipping. A temperature blank (plastic container filled with water) will be placed in the cooler for documentation of the inside temperature of cooler upon receipt at the laboratory.

A C-O-C record describing the contents of the cooler will be placed in a sealed plastic bag and taped to the inside of the cooler lid. The cooler drain (if any) will be taped securely shut to prevent water (melted ice) from leaking out. The cooler lid will then be taped securely shut and sealed with a custody seal on the front and back side.

Samples will be delivered by an overnight carrier from the site to the laboratory. The laboratory will check the custody seals, temperature of the samples in the cooler (using the temperature blank), and the condition of the samples. The laboratory Sample Custodian will notify the Project Chemist of any problems observed with any received samples for corrective action if necessary.

3.10 Field Quality Control Samples

QC activities are performed for monitoring, measuring, and controlling the performance of a measurement process. QC samples provide measurable data quality indicators used to evaluate the different components of the measurement system, including sampling and analysis. The required types of field and analytical QC samples for this project are summarized below.

3.10.1 Field Quality Control Samples

QC samples collected during the field investigation will consist of field duplicates, MS/MSDs, trip blanks, and equipment rinse blanks. The required types and collection frequencies for field QC samples are summarized in Table 3-30-1.

Table 3-30-1 Field Quality Control Samples for Laboratory Analyses

Field QC Sample Type	Minimum Frequency	Field Sample Collection Data Quality Indicator
Field Duplicate	1 per 10 samples collected per analyte group, per matrix	Precision
Matrix Spike/Matrix Spike Duplicate	1 pair per 20 samples collected per analyte group, per matrix	Accuracy/Bias, Precision, Representativeness
Trip Blanks	Minimum 1 per shipment cooler containing groundwater samples designated for VOC analysis	Contamination (Accuracy/Bias)
Equipment Blanks	Minimum one per analyte group, per matrix, per sampling procedure	Contamination (Accuracy/Bias)

Field Duplicates

Field duplicate samples are used to evaluate the precision of the sample collection process. A field duplicate will be collected at the same time and from the same location as the primary sample. Field duplicate samples will be submitted to the contract laboratory as blind duplicates to prevent the laboratory from knowing their true identities. Duplicate samples will be collected and submitted to the laboratory for each set of analyses on a given matrix, at a frequency of one for every ten project samples per matrix.

Matrix Spike/Matrix Spike Duplicates

MS/MSD sample pairs are used to evaluate the precision and bias the sample collection process and the sample matrix may have on the analytical method. The MS sample is a field sample spiked in the laboratory with a known standard solution containing all the target analytes and analyzed to check for matrix interference. The evaluation of the MS/MSD samples takes into account the native concentration of analyte(s) determined to be present in a non-spiked parent sample and may not be effectively assessed when the native concentration of an analyte is significantly greater than the known concentration added to the spiked sample. MS/MSD samples will be collected and submitted to the laboratory for each set of analyses on a given matrix, at a frequency of one for every twenty project samples per matrix.

Trip Blanks

The trip blank is used to indicate potential contamination by VOCs during sample shipping and handling. A trip blank consists of analyte-free laboratory reagent water in a 40-milliliter glass vial sealed with a Teflon® septum (with zero headspace). The trip blank accompanies the empty sample bottles to the field and is placed in each shipping cooler containing samples returning to the laboratory for VOC analyses. The trip blank is not opened until the corresponding site samples are analyzed.

Equipment Blanks

Equipment blanks are samples of the rinse water from decontaminated sampling equipment. Equipment blanks are used to determine the effectiveness of decontamination procedures and to identify potential cross-contamination between samples. Equipment blanks will be collected and submitted to the laboratory for each set of analyses on a given matrix and sampling procedure (unless disposable equipment, such as tubing, bailers or acetate liners, are used and don't require decontamination).

3.10.2 Analytical Quality Control Samples

Analytical QC samples provide information used to evaluate the quality of the sample analysis component of project activities. The laboratory will use the following approach for the analysis of laboratory QC samples:

- The standards, guidance, and analytical QC acceptance criteria listed in the DOD QSM will apply where applicable to the test methods employed.

- The standards and guidance listed in the QSM shall be supplemented

and/or modified as necessary by project-specific requirements.

- If standards or requirements more stringent than those listed in the QSM are included in a test method or mandated by regulation, the method and/or regulatory requirement must be followed.

- Where methods analytically similar to those proposed for use are not cited in the QSM, specific analytical QC sample types and their associated criteria will be documented in the project-specific plan.

Table 3-30-2 provides a summary of basic analytical QC samples types and the minimum analysis frequency that will be used for analytical tasks.

Table 3-30-2 Analytical Quality Control Sample Requirements

Analytical QC Sample Type	Minimum Frequency	Analytical Data Quality Indicator
Method Blank	1 per preparation batch of samples per matrix type per sample extraction or preparation method	Accuracy/bias
Instrument (analysis system) blank	1 per analytical sequence or as specified by the method	Accuracy/bias
Laboratory Control Sample	1 per preparation batch of 20 or less samples per matrix type, except for analytes for which spiking solutions are not available or appropriate	Accuracy/bias
Laboratory Duplicate sample	As specified by the QSM	Precision
Surrogate Spikes	As specified by the QSM	Accuracy/bias
Internal Standards	As specified by the QSM	Accuracy/bias Precision
Instrument Tune (mass spectrometer methods only)	Prior to instrument calibration	Sensitivity
Interference Check solution(inductively coupled plasma methods only)	Prior to sample analysis	Accuracy/bias Sensitivity
Instrument Calibration standard	As specified by the QSM	Accuracy/bias
Second Source Calibration standard	1 per initial instrument calibration	Accuracy/bias
Calibration Verification check Continuing Calibration check	As specified by the QSM	Accuracy/bias
Post Digestion Spikes and Serial Dilutions (metals analysis only)	As specified by the QSM	Accuracy/bias

Table 3-30-2 Analytical Quality Control Sample Requirements		
Analytical QC Sample Type	**Minimum Frequency**	**Analytical Data Quality Indicator**
Detection Limit Verification and Reporting Limit Verification	Based on Limit of Detection and Limit of Quantitation requirements, as specified by the lowest concentration calibration standard	Sensitivity

3.11 Data Management

3.11.1 Project Documentation and Records

All project information and sample data will be fully documented. This includes sample collection and field measurement data, laboratory analytical results, and data review and usability assessment summaries. Analytical project support documentation items that must be maintained include but are not limited to:

- Data, activities, observations, and measurements recorded in the field;
- Descriptions of operating procedures applicable to the specific test method used, including the computational steps necessary to arrive at a final reported value;
- The results of project reviews and audits;
- Correspondence and communications related to project-specific requirements, activities, and inquiries;
- Final reports;
- Regulatory certifications, approvals, and proficiency test sample results; and
- All original project-related analytical calibration and test data including worksheets, logbook entries, and electronic data files.

3.11.2 Data Package Deliverables

Reporting of laboratory data in support of the Phase II ESA will follow the guidance outlined in the DOD QSM, Appendix E: SW-846 Reporting Requirements. The laboratory data package deliverable will include, but is not limited to, the following:

- Case Narrative — Project identification, analytical method description and reference citation, and discussion of unusual circumstances, problems and non-conformances.
- Chain of Custody — Signed and dated when samples were received at Laboratory.
- Sample Receipt Form — Condition of samples when received at Lab.

• Dates of Sample Preparation and Analysis	On sample data sheets.
• Quantitation Limits (MDL and LRL)	
• Dilution or Concentration Factors	
• Summary Analytical Batch Report	Includes analytical batch samples, method of analysis, matrix description, date of sample collection and receipt, laboratory identification number of each environmental sample plus identification number of each batch QC sample (including MS/MSD, calibration check, etc.).
• QC Limits	
• Corrective Actions Report	
• Percent Moisture of all Soil Samples	
• Other pertinent reports	

Laboratory reports will consist of sample analysis data in hard-copy format delivered as PDF files with all of the elements described above, and will include a complete and verifiable raw analytical chemistry data package. The final analytical data will also be provided as an electronic data deliverable in the 'Staged Electronic Data Deliverable' Stage 2A format.

3.11.3 Data Handling and Management

All project records will be safely and securely stored in confidence. Project record systems will be utilized that promptly and legibly record the identity of the facility and personnel, the date(s), and corrections or changes to records (documented by the date, the identity of the person modifying the record, and the reason for the change) of sample receipt and handling, sample measurement system calibration and testing, and data review and reporting.

The documentation of on-site field measurements and off-site laboratory data will be sufficient to: 1) verify that specified procedures and methods were followed as written; 2) determine whether QC criteria have been met; and 3) reproduce the reported results. Information considered essential for the documentation and subsequent reproduction of data includes but is not limited to:

- The appropriateness of sample container type and preservation, and the completeness and accuracy of sample C-O-C and identification upon

receipt;

- Reference to the specific test method, instrument identification, and analytical batch associated with the data;
- Reference to specific chemical standards, reagents, and reference materials used during performance of the analytical testing procedures;
- The date and time of sample preparation, analysis, and instrument calibration, particularly for time-critical procedures;
- Data and statistical calculations;
- Intermediate values, and final sample and analytical QC results;
- The results of data review tasks;
- Data audit reports and corrective action reports; and
- All original raw analytical test data including worksheets, logbook entries, and electronic data output records.

3.11.4 Data Tracking and Control

The objectives for data tracking and control procedures are to ensure that project information will be accounted for upon completion of the project. The data control system consists of a central filing system to store and archive both hard-copy and electronic data and information with a designated person(s) responsible for its maintenance. Documents used or generated during the course of the project are accounted for and become a part of the project files upon completion of the task. These documents may include but are not limited to project deliverables; investigation requirements; reports and correspondence material; and contract documents.

4.0 ASSESSMENT AND OVERSIGHT

4.1 Planned Assessments

Planned assessments may include a general appraisal and review of project activities in relation to project objectives, or a more detailed and comprehensive examination of the procedures and records that document the performance of project-related activities -- referred to as an "audit". Actions and procedures that can most affect data quality and influence project decisions will be targeted for oversight. Audits may include technical system audits, performance audits, and data audits.

4.1.1 Field Assessments

Field assessments are relevant to data generation and sample collection activities. Sample collection activities are generally considered to be a major contributor to overall measurement bias and error associated with project analytical data. Therefore, relevant standard operating procedures (SOPs) for field activities will be identified and reviewed prior to implementation. All

sampling tasks will be considered when planning field assessments and checked for conformance with the QAPP.

Oversight of field activities is the responsibility of the Project Manager. A thorough evaluation of critical field resources and procedures, including a review of available personnel, equipment, and SOPs, will be performed prior to field mobilization. Additional evaluations may include one or more of the following assessments:

1) A readiness review prior to the start of field activities and sample collection;
2) An on-site technical systems audit at the start of or during actual field activities; and
3) A documentation review at the end of field activities.

Documentation of audits and any necessary corrective action implementations will be available to all project personnel, and be maintained as part of the project record.

4.1.2 Laboratory Assessments

Laboratory assessments include both internal reviews conducted by the laboratories generating analytical data for a project, as well as external reviews conducted by the Innovar Team. During these assessments, the laboratory quality system is evaluated for overall effectiveness, and compliance with specific QC procedures and criteria. These reviews may include technical system audits and data audits.

A technical systems audit is a thorough examination during which the organization or facility, sample handling and tracking procedures, equipment, instrumentation, supplies, personnel training, analytical methods and procedures, and data review and reporting processes are checked for conformance with the project-specific work plan or quality plan. A sufficient technical systems audit frequency will be demonstrated by the organization or facilities' ongoing ability to produce and report data of known and documented quality, and maintain required accreditations, certifications, and contract approvals.

Data audits are systematic evaluations of hard copy or electronic records documenting the handling of samples or reference materials from the time of field collection, through completion of the analytical and reporting processes. Data audits are required to be performed by the QC Supervisor as part of any corrective action investigation resulting from a finding during a data review or assessment that inaccurate data have been intentionally reported.

4.2 Assessment Findings and Corrective Action Repsonses

Corrective action investigations will be initiated in response to deficiencies encountered during project and data assessments. The corrective action process will include the following sequence of events:

- Documentation of deficiencies;
- Notification of findings;
- Request for corrective action;
- Implementation of corrective action; and
- Verify the corrective action's effectiveness.

Documentation of each step of the corrective action process will be performed. This documentation will be reviewed during project assessments. Problems identified will be resolved at the level it occurred with support from project management and/or the QC Supervisor.

Corrective actions will be categorized as either routine or non-routine and will require short-term or long-term action. Routine corrective actions involve deficiencies covered by specific project procedures and will involve either a short-term action for sporadic problems or a long-term action for more chronic problems. Deficiencies that are not covered by specific procedures will require the identification of new procedures (i.e., non-routine corrective actions). Both types will require administrative coordination between the person initiating the corrective action and the QC Supervisor.

4.3 Quality Assurance Management Reports

During field work, DQCRs will be completed to record daily site activities. These reports will include information concerning site preparation activities, direct-push activities, field measurement activities, sampling tasks, and an inventory of samples shipped to the off-site laboratory. These reports will be completed by the Innovar OM and submitted to the Innovar PM and the USACE Albuquerque District PM on a daily basis.

The Phase II ESA Report will include the QC practices utilized in the field and during the laboratory analysis of samples; deviations from the approved QAPP; the documentation of any problems and corrective actions taken; and a data review and data usability assessment. Monthly management reports will also be submitted to the USACE PM to provide updates on project status and results of all QA assessments.

4.4 Final Project Report

A Draft Phase II ESA Report will be prepared as a consolidation of all the findings and work done during the project and a summary of the QA/QC elements presented in Section 3.0, and distributed for comment. Following the receipt of all comments, a written response-to-comments will be issued for concurrence of any modifications to the Draft Report. A Final Phase II ESA Report containing the modifications will then be prepared. Four bound hard copies and five electronic copies on a CD of the Draft Report will be provided to the USACE Project Manager for distribution to appropriate regulatory agencies. The Final Report will also be provided to each of the recipients in the same formats described above.

5.0 DATA REVIEW

5.1 Data Review Process

The data review procedures described in this section will ensure that data are reviewed and documented appropriately, and that reported results are accurate or qualified if necessary. The Project Chemist will be responsible for data review, including the verification, validation, and usability reviews of all on-site field and off-site laboratory data.

Data review is the process by which data are examined and evaluated to ensure that data: 1) are of known and documented quality, and 2) meet project-specific quality objectives. The process involves three related assessments to ensure that project data quality needs are met:

- Verification – Confirming data completeness and ensuring that specific data sets conform and comply with procedural, documentation, and contract requirements
- Validation – Substantiating that method-specific requirements have been met and that data qualifiers have been applied appropriately and consistently
- Usability – Evaluating the adequacy of the project-specific data for the decisions being made, based on the results of the verification and validation review steps

Each step of the review process is critical to the overall assessment of data quality and successively builds on the outcome of the previous step. In order to perform data verification and data validation, the on-site field documentation and off-site laboratory reports must include detailed narratives indicating any deviations from the method requirements or project-specified measurement quality objectives. Final analytical reports must be supported by a complete raw data package containing sufficient documentation to reproduce the reported analytical results and verify that the specified analytical procedures were followed as written. Inadequate or incomplete sample information or raw data might prevent the completion of the data review process resulting in re-sampling or re-analysis.

5.1.1 Data Verification

Data verification is a sample-specific assessment performed to determine whether the requested sample information has been gathered; assess sample data for conformance with the applicable QC requirements; and assess sample data for compliance with the quality objectives of the project plan and contract requirements. All data inputs are reviewed to ensure that the laboratory data packages (analytical report and raw data) are complete and adequate for data verification and validation. Data packages must contain the necessary items to completely document the analytical testing, and it must be sufficient for a method-specific data validation. The data verifier evaluates whether: 1) samples were collected and analyzed for the list of analytes and the specific test methods specified in the project plan; 2) sample detection limits met project-

specific objectives; 3) analytical holding times were met; and 4) measurement acceptance criteria for QC samples were met.

Sample-specific data verification will be performed on all field samples collected and analyzed. Table 5-1-3 contains a list of potential data verification input items for the data review process.

5.1.2 Data Validation

Data validation is a method-specific assessment that substantiates whether analytical requirements have been met and qualifies data that do not meet the measurement performance criteria discussed in Section 1.7. The objectives of the data validation review step are to 1) assess the performance of the sampling and analysis processes to determine the quality of specified data, 2) verify compliance with method, procedure, and contract requirements, and 3) ensure that data qualifiers have been applied appropriately and consistently based on the data quality indicators used to assess the measurement quality objectives for the project.

The necessary level of data validation will be based on the results of the data verification review and other technical and project considerations. Data will be validated according to the general requirements and specific analytical method criteria listed in the DOD QSM and EM 200-1-6. Table 5-1-3 contains a list of potential data validation input items for the data review process.

5.1.3 Data Usability

Data usability is a project-specific assessment that evaluates the suitability of the sample data as a basis for making project decisions. The usability assessment is the final step in the data review process and can only be performed on data of known and documented quality (i.e., verified and validated data). All types of data (e.g., sample collection information, field measurements, and laboratory analyses) are relevant to the usability assessment. When the required measurement performance criteria are not achieved, additional data may be required to make project decisions. The results of the data verification assessment and data validation assessment are essential data usability input items for the data review process. The Project Chemist will provide a final determination of data quality and acceptability, and categorize the data as fully usable, usable but qualified, or rejected. This will be documented in the Final Phase II ESA Report.

Table 5-1-3 Data Review Input Summary

Input Item	Verification	Validation	Usability
Planning Documents			
Work Plan, Quality Assurance Project Plan	X	X	Use output from Verification and Validation
Sampling Documents			
Sample chain-of-custody form	X	X	Use output from

Table 5-1-3 Data Review Input Summary			
Input Item	**Verification**	**Validation**	**Usability**
Laboratory sample receipt logs	X	X	Verification and Validation
Field notes and drilling logs	X	X	
Analytical Results Report			
Case narrative	X	X	Use output from Verification and Validation
Sample chronology	X	X	
Sample results	X	X	
Laboratory control sample results	X	X	
Surrogate results	X	X	
Method blank results	X	X	
Reporting limits	X	X	
Hold times	X	X	
Instrument calibration summaries	X	X	
Internal standard area summaries	X	X	
Laboratory duplicates	X	X	
Analytical Raw Data Package			
Instrument calibration records		X	Use output from Verification and Validation
Manual chromatographic		X	
Internal standard areas		X	
Sample dilution records		X	
Sample preparation records	X	X	
Instrument analysis logs	X	X	
Instrument tune and performance	X	X	
Calibration blank results	X	X	
Serial dilution & post digestion spike	X	X	
Integration reports & chromatograms		X	
Second column/detector confirmation results	X	X	
Verification of tentatively identified compounds	X	X	
Spectral identification		X	
Analyte retention times		X	

Table 5-1-3 Data Review Input Summary			
Input Item	**Verification**	**Validation**	**Usability**
Analyte wavelengths		X	
Verification of calculations and results by recalculation from raw data		X	
Communication logs	X	X	
Documentation of corrective actions	X	X	
Field Quality Control Samples			
Matrix spike/matrix spike duplicate	X	X	Use output from Verification and Validation
Field duplicate/field replicate results	X	X	
Equipment blank results	X	X	
Trip blank results	X	X	
Ambient blank results	X	X	

5.2 Data Limitations and Actions from Usability Assessment

Data quality indicators (precision, accuracy/bias, representativeness, comparability, completeness, and sensitivity) are important components of validation and usability assessment. When the project measurement performance criteria (discussed in Section 1.7) are not achieved and project data are not usable to adequately to support project decisions, then the usability discussion will address how this problem will be resolved and discuss the potential need for re-sampling.

6.0 REFERENCES

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Attachment 1: Field Worksheets

Chain of Custody Record
Primary Lab:
POC: Quote #:
QA Lab:
POC: Quote #:
Page: ____ of ____
Date: _____
Project:
Site:
Collected By:
Send Results To:

1535 S Atlanta Place
Tulsa, OK 74104
918-592-9020
POC:

Sample ID	Date Collected	Time Collected	Matrix	Field Filtered?	Containers							*Comments:*
					Analysis Requested/ Method/Preservatives							

Relinquished By:	Date:	Time:	Received By:	*Date:*	*Time:*

Possible Hazard Identification: Non-hazard Sample Disposal: Disposal by Lab TAT:
Shipping Info: Date: _____ Carrier: Airbill #: _____ Cooler #:_____
Temperature upon receipt:_____ Custody Seal Intact: _____ Drinking Water?:

Project:_____
Site:_____

Low Flow Groundwater Sampling Field Data Form

WELL DATA

Well ID: _____ Initial Depth to Water (FtBTOC): _____

Date: _____

Fe (II): _____ Mn (II): _____ (Hach Field Test Kit)

Flow Cell Make & Model: _____ Calibration Date: _____ Calibration Time: _____

PURGE DATA

Time	Flow (ml/min)	Temp (°C)	SP (mS/cm)	DO (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Water Level (FtBTOC)
	100-500	±0.5	±3%	±10% or 0.15 mg/L	±0.1	±10mV	±10% or < 10	0-0.3' (or 4") drawdown

Final (post sample) depth to groundwater prior to pump shutoff (FtBTOC): _____

Total Volume Purged: _____

Sample ID:_____

Sample Date: _____ Sample Time: _____

VOC Sample Chest:_____ Sample Chest:_____

QC/QA?: ID:_____ Time:_____

Crew Members: _____

Well Seal #_____

Sampling Conditions & Observations:

Site access:

Tubing Size:
Casing Size:
Maintenance:

Well Condition:
Pump Condition:
Post Condition:
Pad Condition:

Comments:

Picture:

GPS: N W

EPE:

Daily Field Activities and Quality Control Log

Project:

Contract:

Date: _____ Arrival Time: _____

Weather Notes:

Safety (meeting summary, activities, remarks, notes, etc):

Field Contacts/Crew Members:

On-site?	Name	Phone	Email	Address	Role/Responsibilities

Visitor Sign In:

Name (print)	Name (signature)	Company/Title	Time In/Out

End of Day Summary (include summary of activities and progress made, verbal instructions given, change in site conditions, QC activities, references, and/or general remarks):

Departure Time: _____

Photo Log:

Photo ID	Location	Description:

Calibration Log:

Time	Temp.	Meter Make and Model	pH 4	pH 7	pH 10	Conductivity setting	Conductivity (✓)	DO setting	DO (✓)	ORP setting	ORP (✓)	Turbidity setting	Turbidity (✓)	Initial

Signature: Date:

Environmental Sampling Field Worksheet

Project:

Site: **Sample ID:**

Well Information

Casing Size/Type:	
Total Well Depth: (ft)	
Depth to Water: (ft)	
Water in casing: (ft)	
Well Seal Number:	

Sampling Information

Sample ID:	
Date:	Time:
New Depth to Water: (ft)	
Sampling Method:	Teflon bailer
Matrix:	water

Purging Information

Date: Time: to	
Purging system used:	
Gallons to Purge:	
Average Flow Rate: volumetric	
Amount Purged: (gal)	

Sample Water Quality

Time:	
pH:	
Conductivity: (mS/cm)	
Turbidity: (NTU)	
DO: (mg/L)	
Temperature (°C)	
ORP: (mV)	
Fe:	

Well Condition (Good, Fair, Poor)

Pad:	
Post:	
Overall:	
Maintenance Done:	
Maintenance Needed:	
Note:	

Miscellaneous

QC/QA?: ID:	Time:
Rate of recharge:	
Sampling Conditions:	
Sample Observations:	
GPS: N:	W:
Picture#:	

Purge Water Quality

Instrument Used:	Calibration Date:
	Calibration Time:

	Volume 1	Volume 2	Volume 3	Volume 4	Volume 5
Time					
pH					
Conductivity (mS/cm)					
Turbidity (NTU)					
DO (mg/L)					
ORP (mv)					
Temperature (°C)					

Shipping Information

Courier:	Totals
Primary Lab:	Glass:
QA Lab:	Plastic:
Chest #:	Vials:
VOC Chest#:	VOC Vials:

Innovar Crew Members: Contract POC: Comments:

Attachment 2: Laboratory Certifications

LABORATORY ACCREDITATION BUREAU

Certificate Number L2229

Certificate of Accreditation

Accredited to DoD ELAP and ISO/IEC 17025:2005

Accutest Laboratories Southeast, Inc.

4405 Vineland Rd., Ste C-15
Orlando, FL 32811

has met the requirements set forth in L-A-B's policies and procedures, all requirements of ISO/IEC 17025:2005 "General Requirements for the competence of Testing and Calibration Laboratories" and the U.S. Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP).*

The accredited lab has demonstrated technical competence to a defined "Scope of Accreditation" and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Accreditation Granted through: December 15, 2012

R. Douglas Leonard, Jr., Managing Director
Laboratory Accreditation Bureau
Presented the 15th of December, 2009

*See the laboratory's Scope of Accreditation for details of the DoD ELAP requirements
Laboratory Accreditation Bureau is found to be in compliance with ISO/IEC 17011:2004 and recognized by ILAC (International Laboratory Accreditation Cooperation) and NACLA (National Cooperation for Laboratory Accreditation).

PART II: Health and Safety Plan for Phase II Environmental Site Assessment at the Tucumcari Truck Terminal

Revision Number: Draft
Revision Date: June 9, 2010

Project Name: Phase II ESA for the Tucumcari Truck Terminal
Site Location: Tucumcari, NM

Document Title: Draft Tucumcari Truck Terminal Phase II Site Specific Work Plan, PART II: Health and Safety Plan for Phase II Environmental Site Assessment at the Tucumcari Truck Terminal

Lead Organization: US Army Corps of Engineers, Albuquerque District

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TABLE OF CONTENTS

1.0 Overview And Plan Approval 1
2.0 Site Location And History 2
2.1 Site Description and History 2
2.2 Previous Investigations Summary 3
3.0 Scope of Work 4
3.1 General Overview 4
3.2 Specific Tasks 5
4.0 Safety And Health Personnel Responsibilities 5
4.1 All Personnel 5
4.2 Project Manager 6
4.3 Field Team Leader 6
4.4 Industrial Hygienist 6
4.5 Subcontractors 7
4.6 On-Site Personnel and Visitors 7
5.0 Project Hazard Analysis 7
5.1 Chemical Hazards 7
5.2 Physical Hazard Evaluation 10
5.3 Noise 10
5.4 Biological Hazards 11
5.5 Severe Weather Hazards 13
5.6 Buddy System 14
5.7 Heat Stress 14
5.8 Cold Stress 18
5.9 Sanitation 22
5.10 Electrical Hazards 22
5.11 Lifting Hazards 23
6.0 Personal Protective Equipment 24
6.1 Levels of Protection 24
6.2 Using PPE 25
6.3 Selection Matrix 26
7.0 Emergency Response 26
7.1 Fire 27
7.2 Medical Emergency 27
7.3 Reporting Injuries and Illnesses 28
7.4 Accident/Incident Reporting 28
7.5 Route to the Hospital 29
8.0 Training Requirements 30
8.1 General 30
8.2 Emergency Response Training 31
8.3 Supervisor Course 31
8.4 Site-Specific Training 31
8.5 Hazard Communication Program 31
8.6 First Aid and CPR 31
9.0 Medical Surveillance 31
9.1 Pre-Placement and Periodic Medical Examination 31
9.2 First Aid and Medical Treatment 32

9.3 Medical Restriction 33
10.0 Safety And Health Standard Operating Procedures 33

ATTACHMENTS

ATTACHMENT A- Job Hazard Analysis
ATTACHMENT B- ENG FORM 3394

TABLE OF FIGURES AND TABLES

Figure 2.1: Site Map 2
Table 5.1– Current Occupational Exposure Limits for Compounds Detected in Previous Groundwater Samples 8
Table 5.2 – Chemical Contaminants, Exposure Symptoms and Treatment 9
Table 5.3 – Noise Monitoring 11
Table 5.7.1 – Work/Rest Schedule Assigned to Identified Ambient Temperature 14
Table 6.3 – Personal Protective Equipment 26
Table 7.4A – Personnel Requiring Notification of All Emergencies 28
Figure 7:5: Route Map to Dr Dan C Trigg Memorial Hospital 30

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AST	above-ground storage tank
bpm	beats per minute
CPR	cardiopulmonary resuscitation
DPT	Direct-push technology
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FTL	Field Team Leader
GTEDC	Greater Tucumcari Economic Development Corporation
HASP	Site Safety Health Plan
IH	Industrial Hygienist
JHA	Job Hazard Analysis
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PEL	Permissible Exposure Limit
PM	Program Manager
PPE	personal protective equipment
RMSF	Rocky Mountain Spotted Fever
SVVS	subsurface volatilization and ventilation system
TLV	Threshold Limit Value©
TPH	Total petroleum hydrocarbon
USACE	US Army Corps of Engineers
UST	underground storage tank

1.0 OVERVIEW AND PLAN APPROVAL

This site-specific Health and Safety Plan (HASP) establishes procedures and work practices to protect Innovar Environmental, Inc. employees, subcontractors, and authorized on-site visitors from potential safety and health hazards during investigative activities. This HASP has been prepared in accordance with Occupational Safety and Health Administration (OSHA) regulations outlined in 29 CFR 1910.120 along with US Army Corps of Engineers (USACE) Safety and Health Requirements Manual EM 385-1-1.

All site personnel and visitors are required to be familiar with the requirements contained within the HASP and comply with HASP requirements prior to site entry. Supervisors and site safety and health personnel are to ensure that project personnel understand and follow the requirements set forth within this plan.

The HASP and all site activities will be in compliance with the following regulations and guidelines:

- United States Department of Labor, OSHA Standards
- 29 CFR 1910 (General Industry)
- 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response)
- 29 CFR 1910.1200 (Hazard Communication)
- USACE Safety and Health Requirements Manual, EM 385-1-1, latest revision

PLAN ACKNOWLEDGMENT FORM
All personnel on-site will sign below agreeing to the following sentence: "I have read, understand, and agree to follow the guidelines described in this HASP".

SIGNATURE	ORGANIZATION	DATE

2.0 SITE LOCATION AND HISTORY

This project requires a Phase II Environmental Site Assessment (ESA) including surface soil and subsurface soil sampling, and groundwater sampling. This Phase II ESA will be conducted at the former Tucumcari Truck Terminal located at the west end of Tucumcari, New Mexico on U.S. Route 66 (the Site). The purpose of this Phase II is to conclusively determine the presence of potentially hazardous materials at the site in preparation for residential development activities. Development is anticipated at this location at a future date.

2.1 Site Description and History

The USACE has completed a Phase I ESA at the Tucumcari Truck Terminal located at I-40 Exit 329, Tucumcari, Quay County, New Mexico (Figure 2.1). This Phase I ESA is funded through the US Environmental Protection Agency (EPA)Region 6 Targeted Brownfields Assessments program. It is being provided on behalf of the Greater Tucumcari Economic Development Corporation (GTEDC) in response to their request to EPA for assistance. GTEDC proposes to acquire the site for economic redevelopment that will provide jobs and a tax base for the community. The Site is a somewhat rectangular area of approximately 22.0 acres running southwest to northeast. The southwest end of the Subject Site comprises the facilities of the Tucumcari Truck Terminal while the northeast end is undeveloped acreage. For descriptive purposes, the developed truck terminal end of the Subject Site can be divided into zones (west, middle, and east) designated as Areas A, B and C respectfully.



Figure 2.1: Site Map

The Subject Site comprises the following structures:

Area A
- Food mart convenience store
- Gas and diesel dispensing island
- An air and water station
- A subsurface volatilization and ventilation system (SVVS)
- Pump house for the SVVS system
- A concrete vault with four gasoline underground storage tanks (USTs) (size unknown)
- Two 860K gallon diesel above-ground storage tanks (ASTs)
- One approximate 2000 gallon # 3 diesel AST

Area B
- One warehouse building comprising a warehouse, tire shop, and lubrication maintenance facility
- Two ~2000 gallon waste oil storage tanks (east side of warehouse)
- Two diesel fueling islands
- Oil water separator sump
- Generator building with transformer

Area C
- Restaurant travel center
- Maintenance and repair shop
- 2-story residential building

2.2 Previous Investigations Summary

As documented in the Phase I ESA at the Tucumcari Truck Terminal, the following is a summary of contamination risks associated with the Site. However, the determination or estimation of contamination quantities that may or may not be associated with the Subject Site was beyond the scope of this report.

- There is past evidence of fuel spills from leaking USTs located in Area A. A SVVS remediation system was operated for a few years but was terminated before complete remediation of fuel contamination in the soil and groundwater. Also, a complete understanding of leaks occurring in the area was never fully determined. Multiple fuel lines from active tank operations in the area could have been contributing to the source term contamination even during the remediation activities.
- According to interviews there were additional diesel USTs in Areas A and B that had been removed but there is no State documentation of their removal. There is the potential for contamination in these areas.
- There are diesel ASTs, and gasoline USTs (concrete vaulted) that presently exist on the Subject Site including all the underground piping to the fuel dispensing pumps. There is the potential for contamination associated with both the tanks and the piping.
- There are no records indicating the status of remaining fuels in the existing ASTs and USTs on the Subject Site. If there are remaining fuels and leaks exist in the tanks or fuel lines then there is the potential for ongoing source contamination.

- According to the interviews there were previous diesel truck rollovers as well as a truck accident involving one of the fuel dispensing pumps. The nature and extent of the resulting contamination from these incidents has never been evaluated. Based on the direction of surface drainage as well as groundwater flow, there is the potential for contamination in the drainage area between the railroad and West Route 66 Blvd.
- Section 3.3.16 of the Phase I ESA mentioned the presence of sheen on the surface of water that has collected in a cutoff steel pipe adjacent to the generator building. This location is also adjacent to a diesel truck rollover shown in front of the Restaurant Travel Center as shown in Figure 5 of the Phase I ESA report. Since part of the pipe sticks above the ground surface, water accumulation would principally collect from direct rain into the pipe or from high groundwater levels. In either case, the presence of fuel contamination sheen is further evidence of soil and groundwater contamination associated with the truck fueling operations that were conducted at the Subject Site.
- There is the potential for oil contamination in the area of the warehouse in Area B due to the lubrication activities as well as the waste oil tanks adjacent to the building.
- The potential that polychlorinated biphenyls (PCBs) may have been present in the transformer associated with the generator building on the Subject Site has been checked by Xcel Energy and it has been determined that It is a "non-PCB" transformer.
- There were two UST sites located within ¼-mile to the southwest of the Subject Site. Numerous gasoline, diesel, lubrication oil, and waste oil tanks were removed from these two sites. There is the potential for contamination associated with these two sites. Given the proximity to the Subject Site and the influence on groundwater from the Conchas Canal, any contamination could have affected the west side of Area A of the Subject Site.
- Lubrication and repair activities were also associated with the repair and maintenance shop in Area C. There is the potential for oil and solvent contamination in the area around this building.
- Due to the diverse amount of equipment debris located close to the repair shop there is also the potential for oil and solvent contamination from the debris.
- The abandoned residence located in Area C dates to the 1940s. There is the potential for the presence of lead-based paint and asbestos.
- The activities associated with the existing temporary lease for the highway construction company has the potential for fuel, oil, asphalt, and tar contamination.

3.0 SCOPE OF WORK

3.1 General Overview

Innovar Environmental, Inc. will conduct a Phase II ESA including surface soil and subsurface soil sampling and groundwater sampling. The purpose of this Phase II is to conclusively determine the presence of potentially hazardous materials at the site in

preparation for residential development activities. Development is anticipated at this location at a future date.

3.2 Specific Tasks

Detailed descriptions of project work tasks are described in Part I of the site-specific the workplan. Anticipated work can be broken down into tasks listed below and were the basis for the development of HASP requirements. The asbestos and lead work may be subcontracted to local firms in Tucumcari. This has yet to be finally determined.

- Draft Site Specific Work Plan (UFP-QAPP) and Health and Safety Plan
- Final Site Specific Work Plan (UFP-QAPP) and Health and Safety Plan
- Drilling 20 Direct Push Technology (DPT) borings to the water table, refusal, or to a maximum of 20 ft below ground surface.
- Collect two soil samples from each soil boring and submit for VOC, TPH, PAH, and TAL metals analysis.
- If encountered, collect a groundwater sample from each soil boring and analyze for VOCs, TPH, PAHs, and TAL metals.
- Collection of 10 surface soil samples to be analyzed for metals, and total petroleum hydrocarbons (TPH) (diesel, gasoline and oil range organics).
- Collection of additional groundwater samples from four existing groundwater monitoring wells shall be analyzed for metals, volatile organic carbons, polycyclic hydrocarbons, and TPH.
- Verify the approximate depth or quantity of any fluids that may remain in the existing AST's and UST's.
- Test for asbestos containing materials in two rooms of the abandoned residence.
- Test for lead in two rooms of the abandoned residence.

4.0 SAFETY AND HEALTH PERSONNEL RESPONSIBILITIES

Located in Table 7.4A contains information for the personnel responsible for the site safety and health during project activities and ensuring compliance with the requirements and procedures contained within this HASP.

4.1 All Personnel

All personnel must adhere to these health and safety procedures during the performance of their work. Each person is responsible for completing tasks safely, and reporting any unsafe acts or conditions to his or her immediate supervisor or to the Project Manager (PM). No person may work in a manner that conflicts with the letter or the intent of the safety and environmental precautions expressed in these procedures. After due warnings, the Field Team Leader (FTL) will dismiss from the site any person who violates safety procedures. If necessary, Innovar's employees are subject to progressive discipline and may be terminated for blatant or continued violations.

All on-site personnel will receive training in accordance with 29 CFR 1910.120 and be familiar with the requirements and procedures contained in this document.

4.2 Project Manager

The PM is responsible for providing the FTL with the equipment, materials, and qualified personnel to implement fully all safety requirements in this HASP.

As required by the company, the PM will be responsible for informing the FTL and the Industrial Hygienist (IH) of any changes in the work plan or procedures so that those changes may be addressed in the HASP.

4.3 Field Team Leader

The FTL has the overall responsibility for the health and safety of the project. This includes ensuring the safety of employees by enforcing the correct use of personal protective equipment (PPE) and other protective measures, implementing the medical surveillance program, ensuring work being performed is in compliance with this HASP, OSHA, and EM385-1-1 requirements, and conduct field monitoring of hazards when necessary.

In support of these overall responsibilities the FTL must:

- Stop work, as required, to ensure personal safety and protection of property, or in cases of life or property-threatening safety noncompliance.
- Ensure that all site personnel have the proper medical clearance, have met applicable training requirements, and have training documentation available on site.
- Ensure that all project activities are completed in accordance with the requirements and procedures in this plan. The FTL is responsible for ensuring this HASP is written, reviewed, approved, and modified (if the scope or conditions change), if appropriate.
- It is the FTL's responsibility to thoroughly investigate all accidents and incidents on the project. The FTL must perform at least one on-site safety review during the project and ensure all personnel and visitors have read, understood, and signed this HASP.
- The FTL must approve in writing any addenda or modifications of the HASP.
- If the FTL determines work conditions have changed, he/she may suspend work activities and inform the PM and IH. The FTL must also maintain all material safety data sheets for chemicals onsite and inspect all equipment daily to ensure it is in a safe operating condition.

4.4 Industrial Hygienist

The IH is responsible for authoring this HASP and providing guidance and advice to the FTL as requested in understanding and implementing the requirements. When requested by the FTL or PM, the IH may visit the site or consult to assist in ensuring the safety of employees through clarification of PPE requirements, implementation of

medical surveillance program, ensure work being performed is in compliance with this HASP, OSHA, and EM385-1-1 requirements, and conduct field monitoring of hazards when necessary.

4.5 Subcontractors

On-site subcontractors and their personnel must understand and comply with the site requirements established in this HASP. Subcontractors must attend and participate in any site safety meetings. Subcontractors must cooperate in the investigation of accidents or incidents involving their workers or scope of work.

4.6 On-Site Personnel and Visitors

All personnel must read and acknowledge their understanding of this HASP, abide by the requirements of the plan, and cooperate with site supervision in ensuring a safe and healthful work site. Site personnel will immediately report any of the following to the FTL or PM:

- Accidents and injuries, no matter how minor,
- Unexpected or uncontrolled release of chemical substances,
- Symptoms of chemical exposure,
- Unsafe or malfunctioning equipment, and
- Changes in site conditions that may affect the health and safety of project personnel.

5.0 PROJECT HAZARD ANALYSIS

The job hazards associated with site operations are related to drilling, pressure grouting, air (rotary and hammer), concrete coring and cross contamination. These job hazards are associated with geo drilling and DPT.

A Job Hazard Analysis (JHA) is necessary to identify potential safety, health, and environmental hazards associated with each type of field activity. Because of the complex and changing nature of field projects, supervisors must continually inspect the work site to identify hazards that may harm site personnel, the community, or the environment. The PM must be aware of these changing conditions and discuss them with the FTL whenever these changes impact the health, safety, or performance of the project. The PM will keep subcontractors informed of the changing conditions and implement any changes into the JHA and associated hazard controls as necessary. The JHA is shown in Attachment A.

5.1 Chemical Hazards

The chemical hazards associated with site operations are related to inhalation, ingestion, and skin exposure to site contaminants. The concentration of lead, asbestos, metals, TPH diesel, gasoline and oil range organics, volatile organics, and polynuclear aromatic hydrocarbons present in the soil and groundwater beneath the site is unknown. Despite the unknown concentration levels, the potential for inhalation of contaminants during environmental assessment operations is minimal due to the non-confined nature of the work site.

The potential for dermal contact with contaminated soils/water during environmental assessment operations is moderate and controls are outlined in Section 6.0.

Listed in Table 5.1 the current Occupational Exposure Limits of the site contaminants of concern during field activities.

Table 5.1– Current Occupational Exposure Limits for Compounds Detected in Previous Groundwater Samples

Contaminant	ACGIH TLV(1)	OSHA PEL(2)
Lead	0.05mg/m^3	0.05mg/m^3
Asbestos	0.1 f/cc	0.1 f/cc
TAL Metals (3)	mg/m^3	mg/m^3
TPH Diesel	100 IFV(2) mg/m^3	NA
Gasoline	890 mg/m^3	NA
Oil Range Organics (4)	1,800 mg/m3	NA

(1) American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) (2010).

(2) OSHA permissible exposure limit (PEL); IFV Measured as inhalable fraction and vapor

(3) TAL METALS (23) - Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn

(4) Oil Range Organics (C22 - C32) TPH oil range organics - 1,800 mg/kg From a report on Health Consultation Murphy Oil Spill Meraux, St. Bernard Parish, Louisiana, Record of Activity: November 8, 2005; From a report on Health Consultation, Murphy Oil Spill Meraux, St. Bernard Parish, Louisiana, Record of Activity: November 8, 2005

The potential for exposure may be mitigated through employee training and awareness of safe work practices set forth in this HASP. It has been determined that the potential for exposure is minimal due to the non-confined nature of the work site and the suspected low concentrations. The potential for exposure will be reduced through good work practices, engineering controls, decontamination, and proper use of personal protective equipment.

Table 5.2 lists the chemical, physical, and toxicological properties of the site contaminants of concern during field activities.

Table 5.2 – Chemical Contaminants, Exposure Symptoms and Treatment

Substance [CAS]	Route [a]	Symptoms of Exposure	Treatment
Lead [7439-92-1]	Inh Ing Con	Weak, lass, insomnia; facial pallor; pal eye, anorexia low-weight, malnutrition; constipation, abdominal pain, colic' anemia; gingival lead line; tremor; paresthesia wrist, ankles; encephalopathy; kidney disease' irritates eyes; hypotension	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention
Asbestos [1332-21-4]	Inh Ing Con	Asbestosis (chronic exposure): dyspnea, interstitial fib, restricted pulmonary function, finger clubbing; irritation of eyes; [carc]	Eye: Irrigate immediately Breath: Immediate fresh air
TAL Metals (1)	Inh Ing Con	The TLV and PEL varies by metal, all are toxic. (1)	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention
TPH Diesel [8008-20-9]	Inh Ing Con	Irritation of eyes, skin, nose, throat, burning sensation in chest, head, nausea, weak, restless, incoherence, conf, drowsiness; vomit, diarrhea, dermatitis; chemical pneumonia (aspiration liquid)	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention
Gasoline [8006-61-9]	Inh Abs Ing Con	Irritation of eyes, skin, mucous membrane; dermatitis; head, fatigue, blurred vision, dizziness slurred speech, conf, convulsions; chemical pneumonia (aspiration); possible liver, kidney damage; [carc]	Eye: Irrigate immediately Skin: Soap wash immediately Breath: Respiratory support Swallow: Immediate medical attention
Oil Range Organics	Inh Ing Con	Irritation eyes, nose, throat; dizziness; dermatitis; chemical pneumonitis (aspiration liquid); in animals: kidney damage	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately

[a] Route = Inh, Inhalation; Abs, Skin absorption; Ing, Ingestion; Con, Skin and/or eye contact.

(1) American Conference of Governmental Industrial Hygienists Threshold Limit Values (2010).

(2) IFV Measured As inhalable fraction and vapor

(3) TAL METALS (23) - Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Na, Ni, Pb, Sb, Se, Tl, V, Zn

(4) Oil Range Organics (C22 - C32) Total petroleum hydrocarbon (TPH) oil range organics - 1,800 mg/kg From a report on Health Consultation Murphy Oil Spill Meraux, St. Bernard Parish, Louisiana, Record of Activity: November 8, 2005

From a report on Health Consultation, Murphy Oil Spill Meraux, St. Bernard Parish, Louisiana, Record of Activity: November 8, 2005

5.2 Physical Hazard Evaluation

Physical hazards associated with the project consist of hazards associated with the groundwater sampling equipment and site support equipment. Employee experience in the handling of supplies and equipment will reduce exposure potential. All supplies and equipment operations will be in accordance with EM 385-1-1, standard equipment operating procedures and activity hazard analysis. Potential physical hazards include exposure to: noise, vibration and temperature extremes

5.3 Noise

DPT is a category of equipment that pushes or drives steel rods into the ground. During drill/push activities the equipment may also generate excessive noise during operation. High levels of noise may be generated by blowers and compressors and may result in hearing loss.

Exposure to noise over the OSHA action level can cause temporary impairment of hearing; prolonged and repeated exposure can cause permanent damage to hearing. The risk and severity of hearing loss increases with the intensity and duration of exposure to noise. In addition to damaging hearing, noise can impair voice communication, thereby increasing the risk of accidents on site.

All personnel must wear hearing protection with a noise reduction rating of at least 20 when noise levels exceed 85 dB(A). All site personnel who may be exposed to noise must also receive baseline and annual audiograms and training as to the causes and prevention of hearing loss.

Whenever possible, equipment that does not generate excessive noise levels will be selected for this project. If the use of noisy equipment is unavoidable, wherever possible, barriers or increased distance will be used to minimize worker exposure to noise.

Noise monitoring will be conducted if necessary. Hearing protection is mandatory for all employees in noise hazardous areas, such as around heavy equipment. As a general rule of thumb, sound levels that cause speech interference at normal conversation distance should require the use of hearing protection.

If noise monitoring is conducted, the action levels listed in Table 5.3 will determine the need for an upgrade in PPE to include appropriate hearing protectors (muffs or plugs) or initiate possible noise control engineering. Noise monitoring equipment must be calibrated prior to use and checked at the end of monitoring to determine accuracy.

Selection of hearing protection must match the employee's needs and the ability to attenuate noise below 90 dB(A). Each hearing protection device (muff or plugs) has a noise reduction rating assigned by the Environmental Protection Agency. To calculate the hearing protector's effectiveness use the following formula:

Noise Reading dB(A) - (NRR - 7dB) < 90dB(A)

Table 5.3 – Noise Monitoring

Instrument	Measurement	Action
Perimeter Monitoring	Local Ordinance	Barriers or other engineering controls must be established.
On-site Monitoring	80-85 dB(A)	Hearing protection recommended. Limit work duration to 8-hour shifts.
	85-90 dB(A)	Hearing protection required. Limit work duration to 8-hour shifts.
	90-115 dB(A)	Hearing protection required. Investigate use of engineering controls. Limit work duration to 8-hour shifts.
	> 115 dB(A)	Stop work. Contact FTL.

5.4 Biological Hazards

Biological hazards may include poison ivy, snakes, scorpions, spiders, thorny bushes and trees, ticks, mosquitoes, or other pests, and medical waste. Avoidance of poisonous plants and animals will limit exposure. Good work practices, protective clothing, and insect repellents will also reduce exposure.

5.4.1 Tick-Borne Diseases

Lyme Disease and Rocky Mountain Spotted Fever (RMSF) are diseases transmitted by ticks and occurs throughout the United States during spring, summer, and fall.

Lyme Disease: The disease commonly occurs in summer and is transmitted by the bite of infected ticks. "Hot spots" in the United States include New York, New Jersey, Pennsylvania, Massachusetts, Connecticut, Rhode Island, Minnesota and Wisconsin. Few cases have been identified in other states (less than 1 in 100,000).

The disease is transmitted by the Deer Tick, which is smaller and redder than the common Wood Tick. The disease may be transmitted by immature ticks, which are small and hard to see. The tick may be as small as a period on this page.

Symptoms of the disease include a rash or a peculiar red spot, like a bull's eye, which expands outward in a circular manner. The victim may have headache, weakness, fever, a stiff neck, swelling and pain in the joints, and eventually, arthritis.

Rocky Mountain Spotted Fever: This disease is transmitted via the bite of an infected tick. The tick must be attached 4 to 6 hours before the disease-causing organism (*Rickettsia rickettsii*) becomes reactivated and can infect humans.

The primary symptom of RMSF is the sudden appearance of a moderate-to-high fever. The fever may persist for two to three weeks. The victim may also have a severe headache, deep muscle pain, and chills. A rash appears on the hands and feet on about the third day and eventually spreads to all parts of the body. For this reason,

RMSF may be confused with measles or meningitis. The disease may cause death if untreated, but if identified and treated promptly, death is uncommon.

Control: Tick repellant containing diethyltoluamide (DEET) should be used in tick-infested areas, and pants legs should be tucked into boots. In addition, workers should search the entire body every three or four hours for attached ticks. Ticks should be removed promptly and carefully without crushing, since crushing can squeeze the rickettsia into the skin. A gentle and steady pulling action should be used to avoid leaving the head or mouth parts in the skin. Hands should be protected with surgical gloves when removing ticks.

5.4.2 Poisonous Plants

Poison ivy may be present in the work area. Personnel should be alerted to its presence, and instructed on methods to prevent exposure.

Control: The main control is to avoid contact with the plant, cover arms and hands, and frequently wash potentially exposed skin. Particular attention must be given to avoiding skin contact with objects or protective clothing that have touched the plants. Treat every surface that may have touched the plant as contaminated. If skin contact is made, the area should be washed immediately with soap and water, and observed for signs of reddening.

5.4.3 Snakes

The possibility of encountering snakes exists, specifically for personnel working in heavily wooded/ vegetated areas. Rocky hillsides are favorite habitats of poisonous snakes. Snake venom is complex and includes proteins, some of which have enzymatic activity. The effects produced by venom include neurotoxic effects with sensory, motor, cardiac, and respiratory difficulties; cytotoxic effects on red blood cells, blood vessels, heart muscle, kidneys, and lungs; defects in coagulation, and effects from local release of substances by enzymatic actions. Other noticeable effects of venomous snake bites include swelling, edema and pain around the bite, and the development of ecchymosis (the escape of blood into tissues from ruptured blood vessels).

Control: To minimize the threat of snake bites and insect hazards, all personnel walking through vegetated areas must be made aware (during training) of the potential for encountering snakes and will avoid actions encouraging encounters, such as turning over logs, etc. Additional caution will be exercised around preferred snake habitat. If a snake bite occurs, an attempt should be made to kill the snake so it can be identified. The victim should be transported to the nearest hospital within 30 minutes; first aid consists of applying a constriction band, washing the area around the wound to remove any unabsorbed venom. Cutting and sucking (unless medical care cannot be obtained within 30-minutes) will not be done.

5.4.4 Snake Bite Procedures

- Seek immediate medical attention
- Keep victim calm and immobile.

- Hold affected extremity lower than body while waiting for medical assistance.
- Do not cut the bite area as it will accelerate the affect of the venom.
- Do not apply suction to the wound.
- Do not apply a tourniquet since the venom is most dangerous when concentrated in a small area.
- Do not allow the victim to run for help or move rapidly as this will accelerate circulation.

5.4.5 Medical Items

The potential for encountering medical items exists at the work site is low. Syringes and other sharps can transmit disease or infection if contacted. Any material uncovered that is suspected of being medical waste will be handled using hand tools and placed directly into drums.

5.5 Severe Weather Hazards

Meteorological conditions will be closely watched when field operations are being performed. The FTL and IH will be responsible for determining if weather conditions are creating an unsafe work environment for equipment and personnel. In the event that unsafe conditions are present, work operations will be terminated until it is safe to proceed with field activities. Extreme caution must be taken when severe weather conditions are present during field sampling activities at the wells. The FTL and/or IH will be responsible for terminating field operations when severe weather and lightening conditions are present.

5.5.1 Tornado Warning or Severe Thunderstorm

A severe thunderstorm or tornado warning indicates that a thunderstorm or tornado has been sighted or is present in the area of the warning. Field activities will be terminated during a severe thunderstorm or tornado warning. Employees should seek shelter immediately. The following places should be AVOIDED in the event of a thunderstorm or tornado warning:

- open fields
- isolated trees
- unprotected gazebos
- rain/picnic shelters
- baseball dugouts
- communications towers
- flagpoles/light poles
- bleachers
- metal fences
- convertibles
- golf carts
- water sources

5.5.2 Lightning

In the event of lightning, groundwater field activities should cease and employees should immediately seek shelter indoors or inside a metal vehicle

with windows rolled up. Trees and tall objects should be avoided. Wait thirty minutes to pass after the last sound of thunder or sighting of lightning before resuming field activities.

5.5.3 Tornado

In the event that personnel are in the field during a tornado event the following steps should be taken:

- Evacuate office trailers and vehicles.
- If outdoors, lie flat in a nearby surface depression or ditch.
- Stay away from power poles, electrical equipment and metal objects.
- Seek some form of structural shelter if possible.
- Do not try to outrun a tornado.

5.6 Buddy System

All on-site personnel must use the buddy system. Visual contact must be maintained between crew members at all times, and crew members must observe each other for signs of chemical exposure. Indication of adverse effects include, but are not limited to:

- Changes in complexion and skin coloration
- Changes in coordination
- Changes in demeanor
- Excessive salivation and pupillary response
- Changes in speech pattern.

Team members must also be aware of potential exposure to possible safety hazards, unsafe acts, or noncompliance with safety procedures.

If protective equipment or noise levels impair communications, prearranged hand signals must be used for communication. Personnel must stay within the line of sight of another team member.

5.7 Heat Stress

Heat stress effects range from transient heat fatigue to serious illness and death. Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, and the individual characteristics of the worker. Because heat stress is one of the most common and potentially serious illnesses during field operations, alertness to the symptoms and knowledge of preventive measures are vital.

5.7.1 Heat Stress Action Levels and Work Periods

An action level of 75^{o} F ambient temperature will be established when site personnel are working in chemical protective clothing. The following work/rest schedule is recommended, with personnel drinking fluids at rest periods. If possible site personnel should remove chemical protective clothing during rest periods and take breaks in shaded areas.

Table 5.7.1 – Work/Rest Schedule Assigned to Identified Ambient Temperature

Ambient Temperature (degrees F)	Work Period (minutes)	Rest Period (minutes)
75 - 80	120	15
80 - 85	90	15
85 - 90	60	15
90 - 95	30	15
95 - 100	15	15

The actual work/rest schedule may be adjusted by conducting pulse monitoring before and after the work period. The action level for adjusting the work/rest schedule will be 110 beats per minute (bpm), obtained immediately after the work period in a seated position.

When a person's pulse exceeds 110 bpm, that person is considered to be undergoing heat stress which will require the work period to be reduced in 15-minute intervals while maintaining the same rest period until post work period pulse monitoring is maintained below 110 bpm.

Field activities in which site personnel are required to wear chemical protective clothing at ambient temperatures higher than 95° F will be avoided whenever feasible by scheduling these activities during the work day to avoid peak ambient temperatures (10 am - 2 pm).

5.7.2 Heat Related Illness

There are four typical types of heat-related illnesses (result of heat strain) resulting from prolonged exposure to high thermal environments (stressor which causes the strain). These are described below:

1. Heat Rash (Prickly Heat)

Heat rash is a painful temporary condition caused by clogged sweat pores, typically from hot sleeping quarters.

Commonly observed in tropical climates, heat rash is caused by the plugging of sweat ducts due to the swelling of the moist keratin layer of the skin which leads to inflammation of the sweat glands. Heat rash appears as tiny red bumps on the skin, and can impair sweating, resulting in diminished heat tolerance. It is not a common concern in North American employment.

Treatment: Heat rash can usually be cured by providing cool sleeping quarters; body powder may also help absorb moisture.

2. Heat Cramps

Heat cramps are characterized by painful intermittent spasms of the voluntary muscles following hard physical work in a hot environment. Heat cramps usually occur after heavy sweating, and often begin at the end of the workday. The cramps are caused by a loss of electrolytes, principally salt. This results in fluids leaving the blood and collecting in muscle tissue, resulting in painful spasms.

Treatment: Increase ingestion of water and eat normally. Normal food contains enough salt to compensate for the salt lost during sweating.

3. Heat Exhaustion

This condition is characterized by profuse sweating, weakness, low blood pressure, rapid pulse, dizziness, and frequently nausea and/or headache. The skin is cool and clammy, and appears pale. The body core temperature is normal or depressed. Victim may faint and/or vomit.

Treatment: Move victim to a cool area, loosen clothing, place in a head-low (shock prevention) position, and provide rest and plenty of fluids.

This is the most common form of serious heat illness encountered during employment activities. Any worker who is a victim of heat exhaustion may not be exposed to a hot working environment for an absolute minimum of 24 hours, and if fainting has occurred, the victim should not return to work until authorized by a physician.

4. Heat Stroke

This is the most serious heat disorder and is life-threatening. Heat stroke is a true medical emergency. This results when the body's heat dissipating system is overwhelmed and shuts down (thermoregulatory failure). Heat stroke results in a continual rise in the victim's deep core body temperature, which is fatal if not checked. The symptoms are hot, dry, flushed skin, elevated body core temperature, convulsions, delirium, unconsciousness, and possibly death.

Treatment: First aid consists of immediately moving the victim to a cool area; cool the body slowly by immersion in tepid water or sponging the body with tepid water; treat for shock and obtain immediate medical assistance. If immersion is not possible, wet the victim's clothing with tepid water. Do not allow the victim to shiver as this raises the body temperature. Treatment response time is critical when assisting a victim of heat stroke. Do not give coffee, tea or alcoholic beverages.

5.7.3 Prevention

It is interesting to note that if a person works continually, for about a week, in a hot environment, he/she tolerates much hotter conditions than initially. This process of adjustment is termed "acclimatization". Acclimatization is essential if work is to be frequently performed in hot environments. Essentially, in acclimatized workers, their core body temperatures and heart rates are slower than non-acclimatized workers, and they sweat more but with less salt loss. Acclimatization to heat can, however, be lost almost as rapidly as it is acquired, if the worker is removed from the hot environment for a few days.

5.7.3.1 Provision of Water (or other drinking fluids)

Fluids are a key preventative measure to minimize the risk of heat related illnesses. Employees shall have access to potable drinking water. Where the supply of water is not plumbed or otherwise continuously supplied, drinking water shall be provided in sufficient quantity at the beginning of the work shift to provide at least one quart per

employee per hour for the entire shift. Employees may begin the shift with smaller quantities of drinking water if able to replenish the supply during the shift. The beverages should be cool (50 to 60° F), and readily available (as close as possible to employees). Coffee, tea and other warm beverages should be avoided.

Employees are encouraged to maximize daily fluid intake and realize that thirst is not an adequate indicator of sweat loss. Drinking fluids should be consumed at a target rate of one cup every 20 minutes at a minimum.

If drinking fluid containers are being shared by employees disposable/single use drinking cups will be provided, or employees may use a personal cup. In addition, a supervisor or designated employee shall be assigned to monitor the quantity and condition of the drinking fluids. When drinking fluid levels within a container drop below 50%, the fluids will be replenished.

5.7.3.2 Access to Shade (Rest Area)

Access to rest and shade or other cooling measures are important preventative steps to minimize the risk of heat related illnesses. Employees suffering from (or exhibiting symptoms of) heat illness or believing a preventative recovery period is needed, will be provided access to an area with shade that is either open to the air or provided with ventilation or cooling for a period of no less than five minutes. Such access to shade shall be permitted at all times.

The rest area should be shaded from the sun, and cool (air-conditioned if possible). Air conditioned construction offices, trailers and work vehicles make good rest areas. When possible, rest areas should be readily accessible, and near supplies of drinking fluids.

5.7.4 Additional Health Measures

To help prevent the onset of heat-related disorders, employees should practice additional good health measures, such as

- The workers should be as physically fit as possible. This is especially important concerning hot work. Obesity predisposes individuals to heat disorders;
- Older workers are at a disadvantage in hot work because the aging process results in a sluggish response of sweat glands, resulting in a less effective control of body temperature;
- A victim of a heat-related disorder is permanently predisposed to suffering a recurrence;
- Every worker is unique in his/her ability to handle heat. Work/rest periods should be based on the individual's capacity to safely handle the heat, not on a predetermined or inflexible time length;
- Alcohol has been commonly associated with the occurrence of heat-related disorders. Alcohol reduces heat tolerance;

Inform female workers of the possible adverse consequences of hot work while pregnant, due to elevated core body temperatures.

5.8 Cold Stress

Cold and/or wet environmental conditions can place workers at risk of a cold-related illness. Hypothermia can occur whenever temperatures are below 45°F, and is most common during wet, windy conditions, with temperatures between 30 to 40°F. The principal cause of hypothermia in these conditions is loss of the insulating properties of clothing due to moisture, coupled with heat loss due to wind and evaporation of moisture on the skin.

Frostbite, another illness associated with cold exposure, is the freezing of body tissue, which ranges from superficial freezing of surface skin layers to deep freezing of underlying tissue. Frostbite will only occur when ambient temperatures are below 32°F. The risk of frostbite increases as the temperature drops and wind speed increases.

5.8.1 Cold Related Illness

There are four types of cold-induced injury resulting from prolonged exposure to low temperatures.

1. Hypothermia

Normally, the core body temperature should generally not be allowed to fall below 96.8° F (36° C), but one occasional excursion (per exposure) to 95° F (35° C) is permitted by the most current ACGIH Threshold Limit Value. This is the point that severe shivering occurs. Hypothermia results when the body core temperature falls below 95° F (35° C). If the body core temperature drops below this critical level, the victim cannot produce enough body heat by himself to recover. At this point, a true medical emergency exists. True hypothermia always requires immediate attention, since untreated hypothermia can lead to ventricular fibrillation (heart attack) and death.

2. Frostbite

Frostbite is the actual freezing of body tissue. There are three degrees of frostbite:

- First degree: freezing without blistering or peeling;
- Second degree: freezing with blistering or peeling;
- Third degree: freezing with skin tissue death and possible deep tissue damage.

The extremities are most commonly affected, and therefore frostbite generally first appears in toes, fingers, nose and ears. The initial stage of frostbite is termed “Frost-Nip”, when only a localized, superficial freezing of extremities has occurred. Regardless of the Wind Chill, frostbite does not occur until the absolute ambient temperature falls below freezing, 32° F (0° C). However, frostbite can occur when bare skin comes into contact with objects whose surface temperature is below freezing, despite warm environmental temperatures. The first warning of frostbite is often a sharp prickling sensation. Frostbitten skin is characterized initially by turning red, then blue/red, and finally by loss of color and feeling in the affected tissue. The skin may become waxy pale in appearance because of a lack of oxygen. Frostbite damage may be reversible if properly treated in the first 12 to 24 hours. If not treated, frostbitten areas may become gangrenous. Workers who have suffered frostbite are susceptible to future recurrences and subsequent injury.

3. Immersion Foot

"Immersion foot" is caused by chronic cooling for prolonged periods, and is most commonly seen in workers who stand in cold water for long continuous periods. Injury is thought to be due to persistent local tissue anoxia, resulting in damage to the blood capillary walls. The condition may be aggravated by tight footwear. Industrially, trench workers are at risk. It is characterized by intense pain, tingling, itching and discoloration of the foot. Immersion foot is rarely observed now, but was once fairly common among mine workers and in trenching operations.

4. Raynaud's Phenomenon

The term "Raynaud's Phenomenon", also called "white fingers", is used to describe a vascular abnormality characterized by a loss of circulation associated with exposure to cold, and/or vibration. It is essentially a disorder of the blood vessels and nerves in the fingers. There is a historical background incidence in the general population of approximately 5 percent, with females being the most susceptible. The onset of Raynaud's Phenomenon is gradual, and is characterized by several stages. The initial stage is manifested by occasional pain, and a slight loss of hand sensitivity. If removed from cold and vibration, it is usually reversible at this stage. As the condition worsens, pain and numbness increases, and finger sensitivity decreases. As the blood vessels are damaged, blood flow slows and the skin temperature decreases. In the pronounced stages, fingers become white and the hands feel cold and moist. At this point, the condition is irreversible. Current research suggests that this disease appears to be related to vibrational energy in the 40-125 Hertz (cycles per second) range, and cold temperatures play a co-antagonistic role. Employees who routinely work in cold environments should limit the duration that they use rotating or vibrating tools.

5.8.2 Cold Illness First Aid

All cold related injuries require immediate removal from the cold environment and proper medical treatment. The supportive first aid measures included here are to be used only until proper medical treatment by a qualified physician can begin.

1. Hypothermia

Hypothermia is a life-threatening condition that requires immediate response. Remove the victim to a warm area out of any wind. All cold wet clothing should be removed, and the victim should be wrapped in warm blankets. Immediate medical attention should be summoned. The victim may be disoriented and unable to talk clearly or understand simple questions. If conscious and able to converse, they may be given hot (non-caffeinated, non-alcoholic) liquids to drink, and sweetened foods high in carbohydrates. Keep victim awake until medical assistance arrives.

2. Trench Foot, Frostnip, and Frostbite

The affected area should be gradually warmed (immediate or sudden heating of affected areas must be avoided, to minimize further tissue damage). Superficially frostbitten areas (characterized by a sudden blanching or whitening of the skin, firm to the touch, resilient tissue beneath) are best warmed by placing them next to warm skin. A good guideline when re-warming frostbitten areas is to not raise the temperature

much above that of the body. The abdomen and the armpit are body areas that can be used to re-warm frostbitten areas. Deep frostbitten tissue is characterized by cold, pale, or darkened tissue that is solid to the touch. Do not rub the frostbitten part, and do not break any blisters. Wrap the affected part lightly and protect from further injury. Provide warm drinks (not caffeinated or alcoholic), and do not let the victim smoke. Remember that the tissue will be very painful as it thaws. The victim should not use the affected limb or area until cleared by a physician.

5.8.3 Prevention of Cold Disorders

5.8.3.1 Physiological Limits and Medical Considerations

1. Maximum severe shivering develops when the deep core body temperature falls to 95° F (35° C). Medical experience indicates that, beginning at this level of decreased core temperature, mental functioning becomes impaired. Therefore, exposure to cold should be immediately terminated for any employee when observable shivering occurs. The employee should warm up, and don additional clothing, before returning to the cold area. Unless there are unusual or extenuating circumstances, cold injury to the non-extremity portions of the body is unlikely without the development of the initial signs of hypothermia (severe shivering).
2. Pain in the extremities is commonly the first early warning sign of the onset of cold stress. While frostbite will occur only at absolute temperatures below freezing, 32° F (0° C), regardless of wind speed, unpleasant cold sensations in extremities may be felt at higher temperatures, and heat loss in extremities can assist in the onset of hypothermia. Don additional warm, dry clothing, especially on the affected body part (hands, feet, head).
3. Wear adequate insulating dry clothing if work is to be performed in air temperatures below 40° F (4° C).
4. Workers who are suffering from diseases or taking medication that interferes with normal body temperature regulation, or which reduces tolerance to cold environments, should be excluded from prolonged work in cold below 30° F (–1° C).
5. For exposed skin, continuous exposure should not be permitted when the wind chill reaches -25° F (–32° C). If outside work must be conducted in the extreme cold, cover all exposed skin with clothing, layering as necessary. Take frequent breaks in a warm shelter, loosening clothing to allow sweat to evaporate.
6. At air temperatures of 35.6°F (2°C) or less, it is imperative that workers who become immersed in water or whose clothing becomes wet (from external sources, not incidental sweat) be immediately provided a change of clothing and observed for symptoms of hypothermia.
7. Cold temperatures increase the susceptibility to vibration-induced injury. When working in cold environments, limit exposure time to vibrating tools and mechanical processes.
8. Dehydration occurs insidiously in cold environments, and may increase the susceptibility of the worker to cold injury due to a significant change in blood flow to the extremities. Warm sweet drinks and soups should be provided at the work site to replenish caloric intake and fluid volume. The intake of coffee,

however, should be limited because of the diuretic and circulatory effects. The same applies to alcohol consumption, which increases blood circulation to the skin, and interferes with mental acuity, which can lead to risk taking.

9. These recommendations apply to healthy employees in fair to good physical condition. Older employees or those with circulatory problems may need to avoid extremely cold environments, or wear extra clothing; if in doubt, the employee should consult a physician familiar with cold stress factors and their medical condition.

5.8.3.2 Personal Protective Clothing Considerations

1. Eye protection for workers employed out-of-doors in a snow and/or ice covered terrain should be supplied. Safety glasses/goggles possessing ultraviolet/glare protection should be worn when there is an expanse of snow coverage causing a potential eye hazard from blowing ice crystals or reflective radiation.
2. In general, gloves or mittens should be worn whenever the air temperatures fall below 40° F. If the task precludes the wearing of gloves, then special provisions should be established to allow the workers to frequently warm their hands. Some possible methods include battery-operated hand warmers, contact warm plates or radiant heaters.
3. If the work involved presents the possibility of becoming wet through splashing, an outer layer of clothing impermeable to water should be worn.
4. If the ambient temperature is not excessively cold, but a low wind chill is present due to high winds, a light windbreak jacket will significantly reduce the potential for cold stress, without trapping excess perspiration.
5. Use of steel-toed safety shoes may become uncomfortable, as low ground temperatures are transmitted to the user's feet. It may become necessary to substitute alternative protective footwear, such as high impact plastic/rubber-composition footwear, during cold periods.
6. The insulation value of any clothing is determined by the quantity of still air that it can trap between the skin and the outside environment. Many layers of light clothing are better than one or two heavy layers. This is due to the many layers of trapped insulating air between each garment. Also, workers can shed layers as necessary, to maintain the optimum body temperature condition. The outer layer should be wind-resistant, and the layers should be capable of being vented at the wrist, neck and waist to reduce wetting by perspiration. Water and moisture (sweat) both reduces the insulating quality of clothing, and removes heat from the skin surface through evaporation.

Avoidance of extremely cold, windy environments is the preferred method of avoiding hypothermia or frostbite. Employees are encouraged to dress appropriately by wearing several layers of loose-fitting, lightweight, warm clothing, hats, scarves, and gloves. Trapped air between the layers is the best insulation, and layers can be removed to avoid sweating and subsequent chill. Outer garments should be tightly woven, wind resistant and water repellent, and hooded. All personnel will strive to stay dry and out of the wind.

5.9 Sanitation

Site sanitation will be maintained according to OSHA and Department of Health requirements.

5.9.1 Break Area

Breaks will be taken away from the sampling area and from hazardous chemicals. There will be no smoking, eating, drinking, or chewing gum or tobacco in or around sampling equipment and chemicals.

5.9.2 Potable Water

The following rules apply for all project field operations:

- An adequate supply of potable water should be provided during each sampling event.
- Portable containers used to dispense drinking water must be capable of being tightly closed, and must be equipped with a tap dispenser. Water must not be drunk directly from the container, nor dipped from the container.
- Containers used for drinking water must be clearly marked and not used for any other purpose.
- Disposable cups will be supplied; both a sanitary container for unused cups and a receptacle for disposing of used cups must be provided.

5.9.3 Sanitary Facilities

Access to facilities for washing before eating, drinking, or smoking will be provided.

5.9.4 Lavatory

If permanent toilet facilities are not available, an appropriate number of portable chemical toilets will be provided.

5.10 Electrical Hazards

Electricity may pose a particular hazard to site workers due to the use of portable electrical equipment and electric fences. If wiring or other electrical work is needed, it must be performed by a qualified electrician.

- General electrical safety requirements include:
- All electrical wiring and equipment must be a type listed by UL, Factory Mutual Engineering Corporation, or other recognized testing or listing agency.
- All installations must comply with the National Electrical Safety Code, the National Electrical Code, or United States Coast Guard regulations.
- Portable and semi-portable tools and equipment must be grounded by a multi-conductor cord having an identified grounding conductor and a multi-contact polarized plug-in receptacle.

- Tools protected by an approved system of double insulation, or its equivalent, need not be grounded. Double insulated tools must be distinctly marked and listed by UL or FM.
- Live parts of wiring or equipment must be guarded to prevent persons or objects from touching them.
- Electric wire or flexible cord passing through work areas must be covered or elevated to protect it from damage by foot traffic, vehicles, sharp corners, projections, or pinching.
- All circuits must be protected from overload.
- Temporary power lines, switch boxes, receptacle boxes, metal cabinets, and enclosures around equipment must be marked to indicate the maximum operating voltage.
- Plugs and receptacles must be kept out of water unless of an approved submersible construction.
- All extension outlets must be equipped with ground fault circuit interrupters.
- Attachment plugs or other connectors must be equipped with a cord grip and be constructed to endure rough treatment.
- Extension cords or cables must not be fastened with staples, hung from nails, or suspended by bare wire.
- Flexible cords must be used only in continuous lengths without splice, with the exception of molded or vulcanized splices made by a qualified electrician.

5.11 Lifting Hazards

Back strain or injury may be prevented by using proper lifting techniques. The fundamentals of proper lifting include:

- Consider the size, shape, and weight of the object to be lifted. Two persons must lift an object if it cannot be lifted safely alone (e.g., >60 lbs).
- The hands and the object should be free of dirt or grease that could prevent a firm grip.
- Gloves must be used, and the object inspected for metal slivers, jagged edges, burrs, rough or slippery surfaces.
- Fingers must be kept away from points which could crush or pinch them, especially when putting an object down.
- Feet must be placed far enough apart for balance. The footing should be solid and the intended pathway should be clear.
- The load should be kept as low as possible, close to the body with the knees bent.
- To lift the load, grip firmly and lift with the legs, keeping the back as straight as possible.
- A worker should not carry a load that he or she cannot see around or over.
- When putting an object down, the stance and position are identical to that for lifting; the legs are bent at the knees, and the back is straight as the object is lowered.

6.0 PERSONAL PROTECTIVE EQUIPMENT

PPE is required to safeguard site personnel from various hazards. Varying levels of protection may be required depending on the level of contaminants and the degree of physical hazard. This section presents the various levels of protection and defines the conditions of use for each level.

6.1 Levels of Protection

Protection levels are determined based upon contaminants present in the work area. A summary of the protection levels is presented in Table 5 of this section.

6.1.1 Level D Protection

The minimum level of protection that will be required of company personnel and subcontractors during groundwater sampling will be Level D, which will be worn as the initial protection level for site operations. The following equipment will be used:

- Work clothing as prescribed by weather
- Safety toe work boots, ANSI approved
- Safety glasses or goggles, ANSI approved
- Hard hat, ANSI approved
- Hearing protection

6.1.2 Modified Level D Protection

Modified Level D Protection requires the same levels of protection set forth in Level D, however, nitrile gloves are included. This level of protection will be required for company personnel and subcontractors during groundwater sampling. The following equipment will be used:

- Work clothing as prescribed by weather
- Safety toe work boots, ANSI approved
- Safety glasses or goggles, ANSI approved
- Hard hat, ANSI approved
- Hearing protection
- Nitrile Gloves

6.1.3 Level C Protection

Level C protection will be required when the airborne concentration of suspected contaminants is known to be one half the ACGIH TLV or the OSHA PEL. [This is not anticipated for this project.] Level C protection will be used for operations when air monitoring instruments indicate an upgrade is necessary. See Table 6.3 for the specific requirements for this project.

6.1.4 Selection of PPE

Equipment for personal protection will be selected based on the potential for contact, site conditions, ambient air quality, and the judgment of supervising site personnel and Health & Safety professionals. For sampling, Level D will be required. Any upgrades will may be required by the IH or FTL.

6.2 Using PPE

Depending upon the level of protection selected for this project, specific donning and doffing procedures may be required. The procedures presented in this section are mandatory if Level C PPE is selected.

All people conducting groundwater operations must put on the required PPE in accordance with the requirements of this plan. When finished collecting samples, PPE will be removed in accordance with the procedures listed to minimize the spread of contamination.

6.2.1 Donning Procedures

These procedures are mandatory if Level C or B PPE is used on the project:

- Remove bulky outerwear. Remove street clothes and store in clean location.
- Put on work clothes or coveralls.
- Put on the required chemical protective coveralls or rain gear.
- Put on the required chemical protective boots or boot covers.
- Tape the legs of the coveralls to the boots with duct tape.
- Put on the required chemical protective gloves.
- Tape the wrists of the protective coveralls to the gloves.
- Don the required respirator and perform appropriate fit check.
- Put hood or head covering over head and respirator straps.
- Don remaining PPE, such as safety glasses or goggles and hard hat.

If these procedures are instituted, each person must ensure that each collecting groundwater samples has the proper protective equipment and is wearing it appropriately. People must not be allowed to collect samples if they are not wearing the required PPE.

6.2.2 Doffing Procedures

The following procedures are mandatory if Level C or B PPE is required for this project. Whenever a person leaves a Level C or higher work site, the following decontamination sequence will be followed:

- Remove protective equipment and garments. All disposable clothing should be placed in plastic bags, which are labeled with contaminated waste labels.
- Wash hands, face and neck or shower (if necessary).
- Proceed to clean area and dress in clean clothing.
- Clean and disinfect respirator for next use .
- Proceed to the sign-out point.

All disposable equipment, garments, and Level C PPE must be bagged in two 6 mil plastic bags, labeled for disposal.

6.3 Selection Matrix

The level of personal protection selected will be based upon real-time air monitoring of the work environment and an assessment by the PM, FTL, and IH of the potential for skin contact with contaminated materials. The Levels of PPE for this project are given in Table 6.3. This table is based upon information available at the time this plan was written. Material Safety Data Sheets for chemicals brought on site should also be consulted to ensure the proper PPE is being worn during the use of those chemicals.

Table 6.3 – Personal Protective Equipment

Level	Requirements (See Notes.)
Level D	• Work uniform • Steel-toed boots • Approved safety glasses or goggles • Hard hat • Fluorescent vest, when vehicular traffic is on or adjacent to the site • Hearing Protection (as required)
Modified Level D	• Work uniform • Steel-toed boots • Approved safety glasses or goggles • Hard hat • Fluorescent vest, when vehicular traffic is on or adjacent to the site • Hearing Protection (as required) • Nitrile Gloves
Level C [Not anticipated for use on this project]	• Level D • Chemical safety boots or chemical booties • PE-coated Tyvek™ coveralls with hood – taped at ankles and wrists • NIOSH/MSHA-approved full-face respirator with organic vapor/acid gas HEPA cartridges.
Notes: 1. Prior to using, all equipment must be inspected to ensure proper working condition.	

7.0 EMERGENCY RESPONSE

If an incident occurs, the FTL will:

- Evaluate the incident and assess the need for assistance.
- Call for outside assistance as needed.
- Act as liaison between outside agencies and on-site personnel.
- Will ensure the PM is notified promptly of the incident, who will ensure those listed in Table 7.4A are notified.
- Take appropriate measures to stabilize the incident scene.

7.1 Fire

In the case of a fire on the site, the PM will assess the situation and direct fire-fighting activities. The PM will ensure that the client site representative (as appropriate) is immediately notified of any fires. Site personnel will attempt to extinguish the fire with available extinguishers, if safe to do so. In the event of a fire that site personnel are unable to safely extinguish, the local fire department will be summoned via 911 or other number. The Project Manager will notify the fire department after-the-fact regarding fires successfully extinguished.

7.2 Medical Emergency

All employee injuries must be promptly reported to the PM. The PM will:

- Ensure that the injured employee receives prompt first aid and medical attention.
- Ensure that the FTL and appropriate managers are promptly notified of the incident .
- Initiate an investigation of the incident.

7.2.1 First Aid - General

- Survey the scene. Determine if it is safe to proceed. Protect yourself from exposure before attempting to rescue the victim.
- Do a primary survey of the victim. Check for **airway** obstruction, **breathlessness**, and **pulse**. Assess likely routes of chemical exposure by examining the eyes, mouth, nose, and skin of the victim for symptoms.
- Phone Emergency Medical Services (EMS). Give the location, telephone number used, caller's name, what happened, number of victims, victims' condition, and help being given.
- Perform rescue breathing as necessary.
- Perform cardiopulmonary resuscitation (CPR) as necessary.
- Do a secondary survey of the victim. Check **vital signs** and do a **head-to-toe exam**.
- Treat other conditions as necessary. If the victim can be moved, take him to a location away from the work area where EMS can gain access.

7.2.2 First Aid - Inhalation

Any employee complaining of symptoms of chemical overexposure as described in Section 3.0 will be removed from the work area and transported to the designated medical facility for examination and treatment.

7.2.3 First Aid - Ingestion

Call EMS and consult a poison control center for advice. If available, refer to the MSDS for information on inducing vomiting, if recommended. If unconscious, keep the victim on his side and clear the airway if vomiting occurs.

7.2.4 First Aid - Skin Contact

Project personnel who have had skin contact with contaminants will, unless the contact is severe, proceed through the decontamination zone, to the wash-up area. Personnel will remove any contaminated clothing, and then wash the affected area with water for at least 15 minutes. The worker should be transported to the medical facility listed below, if they show any sign of skin reddening, irritation, or if they request a medical examination.

7.2.5 First Aid - Eye Contact

Project personnel who have had contaminants splashed in their eyes or who have experienced eye irritation while in the contaminated zone must immediately proceed to the eyewash station. Remove whatever protective clothing is necessary to use the eyewash. Flush the eye with clean running water for at least 15 minutes. Arrange prompt transport to the designated medical facility.

7.3 Reporting Injuries and Illnesses

All injuries and illnesses, however minor, will be reported to the PM and FTL immediately. A written report, ENG FORM 3394 included as Attachment B, will be forwarded to the Safety and Occupational Health Office, at the address listed below, within 48 hours of the accident/incident.

US Army Corps of Engineers
Safety and Occupational Health Office
4101 Jefferson Plaza N.E.
Albuquerque, NM 87109

7.4 Accident/Incident Reporting

All serious incidents/accidents resulting in equipment damage, emergency response, lost work time, medical treatment or fatality will be reported through the supervisory chain to the Tulsa District Safety and Occupational Health Office. A written report (ENG FORM 3394) will be forwarded to the Safety and Occupational Health Office, at the address listed below, within 48 hours of the accident/incident.

Table 7.4A – Personnel Requiring Notification of All Emergencies

Title	Name	Office Phone	Cell Phone	Email
Innovar Program Manager	Jennifer Smith	918-592-9020	918-625-9591	jsmith@innovar-env.com
Project IH	Jack Ellis	505-314-0682	505-340-8505	jellis@cloversolutions.us
FTL	Michelle Wilson	918-592-9020	918-894-2227	mwilson@innovar-env.com
USACE Program	Michael Bone	505-342-4826	505-340-5866	Michael.j.bone@usace.ar

Title	Name	Office Phone	Cell Phone	Email
Manager				my.mil
District Safety Officer	Not assigned	NA	NA	NA

Table 7.4B – Emergency Information

Description	Contact Info from cell phone
Ambulance	911
Police	911
Poison Control	911
Hospital	(575) 461-7000

7.5 Route to the Hospital

The local hospital, Dr Dan C Trigg Memorial Hospital, is located 4.2 miles from the site(approximately 8 minutes). The address is

Dr Dan C Trigg Memorial Hospital
301 East Miel De Luna Avenue
Tucumcari, NM 88401

Directions to the hospital from the work site are as follows (courtesy of Google Maps):

1.Head northeast on W Tucumcari Blvd toward Q R Aq	2.9 mi
2.Turn right at S 1st St	1.1 mi
3.Turn left at E Miel De Luna Ave (Destination will be on the left)	0.2 mi



Figure 7:5: Route Map to Dr Dan C Trigg Memorial Hospital

8.0 TRAINING REQUIREMENTS

8.1 General

All field employees receive a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. Personnel must also read, understand, and sign this HASP prior to conducting field work.

8.2 Emergency Response Training

All personnel assigned to provide emergency response services for this project will have completed 24 hours of training as specified in 29 CFR 1910.120 (q). Additionally, an 8–hour refresher training course is required annually to remain qualified to provide emergency response services.

8.3 Supervisor Course

Management and supervisors receive an additional eight hours of training which typically includes:

- General site safety and health procedures
- PPE programs
- Air monitoring techniques

8.4 Site-Specific Training

Prior to initiating field activities project personnel will receive additional site specific training addressing the unique hazards which are potentially present at the site. Site specific training will be conducted and will address the following areas:

- History of the site.
- Field activities planned.
- Safety and health hazards present at the site.
- Personal protective equipment requirements.
- Safe work practices.
- Industrial hygiene sampling activities.
- Signs and symptoms of potential chemical exposure.
- Emergency response and evacuation procedures.

8.5 Hazard Communication Program

In accordance with 29 CFR 1910.1200, MSDS sheets for chemicals brought onto or used at the site will be made available to project personnel.

8.6 First Aid and CPR

At least one (strong preference for two) employee current in first aid/CPR will be assigned to the work crew and will be on the site whenever operations are ongoing. Refresher training in first aid (triennially) and CPR (annually) is required to keep the certificate current. These individuals must also receive training regarding the precautions and protective equipment necessary to protect against exposure to blood borne pathogens.

9.0 MEDICAL SURVEILLANCE

9.1 Pre-Placement and Periodic Medical Examination

All employees working at hazardous waste sites are required to participate in the Medical Surveillance Program as required by 29 CFR 1910.120. Each employee is also required to receive a physician's interpretation as to the employee's ability to wear a respirator. Medical surveillance occurs at the intervals as outlined in the following list.

Category	Frequency
Occupational Physical Examination	Bi annual
Medical History	Bi annual
Work History	Bi annual
Audiogram (OSHA 1910.95 criteria)	Bi annual
Blood Chemistry Profile	Bi annual
Complete Blood Count	Bi annual
Urinalysis	Bi annual
Pulmonary Function Testing	Bi annual
Vision Screening	Bi annual
Chest x-ray	Every 4 Years
EKG	Baseline
Laser Eye Exam	Job Specific
Blood, Urine (mercury Screening)	Job Specific
Blood Lead	Job Specific
Cholinesterase	Job Specific

The examining physician must provide the employer with a letter confirming the worker's fitness for work and ability to wear a respirator.

All contractors will certify that all their employees have successfully completed a physical examination by a qualified physician. The physical examinations must meet the requirements of 29 CFR 1910.120 and 29 CFR 1910.134. Contractors will supply copies of the medical examination certificate for each on-site employee.

9.1.1 Other Medical Examination

In addition to pre-employment, annual, and exit physicals, personnel may be examined:

- At employee request after known or suspected exposure to toxic or hazardous materials;
- At the discretion of the client, Health & Safety professional, or occupational physician after known or suspected exposure to toxic or hazardous materials;
- At the discretion of the occupational physician.

9.2 First Aid and Medical Treatment

All persons on site must report any near-miss incident, accident, injury, or illness to the FTL. First aid will be provided by a trained first aid provider. Injuries and illnesses requiring medical treatment must be documented. The Project Manager must conduct an accident investigation as soon as emergency conditions no longer exist and first-aid and/or medical treatment has been ensured. If first-aid treatment is required, first aid kits must be kept near-by. If treatment beyond first aid is required, the injured should be transported to a medical facility. If the injured is not ambulatory, or shows any sign of not being in a comfortable and stable condition for transport, then an ambulance-/paramedics should be summoned. If there is any doubt as to the injured worker's

condition, it is best to let the local paramedic or ambulance service examine and transport the worker.

Unless otherwise specified, first-aid kits must be Type III, 16-unit first-aid kits containing the minimum fill contents and one pocket mouth piece of CPR barrier. First-aid kits shall be easily accessible to all workers, protected from the weather, and each item's sterility shall be maintained. The locations first-aid kit shall also be clearly marked and the contents checked weekly.

9.3 Medical Restriction

If an examining physician identifies a need to restrict work activity, the employee's supervisor must communicate the restriction to the employee and the terms of the restriction will be discussed with the employee and this supervisor. Every attempt should be made to keep the employee working, while not violating the terms of the medical restriction.

10.0 SAFETY AND HEALTH STANDARD OPERATING PROCEDURES

A Job Hazard Analysis for groundwater sampling is shown in Attachment A. All employees will be trained and informed on the hazard analysis.

The following is a table of contents of the US Army Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1) that serves as minimum safety and health procedures that must be implemented as part of this HASP. EM 385-1-1 will be available on-site during all field work activities.

TABLE OF CONTENTS

EM 385-1-1, 15 Sep 08

1. Program Management
2. Sanitation
3. Medical and First-Aid Requirements
4. Temporary Facilities
5. Personal Protective and Safety Equipment
6. Hazardous or Toxic Agents and Environments
7. Lighting
8. Accident Prevention Signs, Tags, Labels, Signals, Piping System Identification, and Traffic Control
9. Fire Prevention and Protection
10. Welding and Cutting
11. Electrical
12. Control of Hazardous Energy
13. Hand and Power Tools
14. Material Handling, Storage, and Disposal
15. Rigging
16. Cranes and Hoisting Equipment
17. Conveyors
18. Motor Vehicles, Machinery and Mechanized Equipment, All Terrain Vehicles, Utility Vehicles and other Specialty Vehicles
19. Floating Plant and Marine Activities

20. Pressurized Equipment and Systems
21. Fall Protection
22. Work Platforms and Scaffolding
23. Demolition
24. Safe Access, Ladders, Floor & Wall Openings, Stairs and Railing Systems
25. Excavations and Trenching
26. Underground Construction (Tunnels), Shafts, and Caissons
27. Concrete, Masonry, Steel Erection and Residential Construction
28. Hazardous Waste Operations and Emergency Response (HAZWOPER)
29. Blasting
30. Diving Operations
31. Tree Maintenance and Removal
32. Airfield and Aircraft Operations
33. Munitions and Explosives of Concern (MEC) Encountered During USACE Activities
34. Confined Space Entry

Appendices

A – Minimum Basic Outline for Accident Prevention Plans
B – Emergency Operations
C – BLANK
D – Assured Equipment Grounding Conductor Program
E – BLANK
F – BLANK
G – BLANK
H – BLANK
I – Crane Testing Requirements for Performance Tests
J – BLANK
K – BLANK
L – BLANK
M – USACE Process for Requesting Interpretations
N – USACE Process for Requesting Waivers/Variances
O – Manning Levels for Dive Teams
P – Safe Practices of Rope Access Work
Q – Definitions
R – Metric Conversion Table
S – References and Resources
T – BLANK
U – Floating Plant/Marine Railing Types

1

ATTACHMENT A- Job Hazard Analysis

Title: PHASE II Targeted Brownfields Env. Site Assessment - Tucumcari Truck Terminal
Instructions: A Job Hazard Analysis is a process that is used to evaluate a job to 1) determine the tasks necessary to complete the job, 2) determine the hazards associated with each task, 3) Identify appropriate protection and controls for these hazards for someone performing the tasks. This JHA covers the equipment determined to be used for the job.

Task	Hazard	Protection
Motor Vehicle Operation	Car Accident	• Inspect the vehicle daily for proper functioning parts, equipment, and accessories. • Wear seatbelts during operation. • Be aware of surroundings. • Operator shall utilize defensive driving techniques and possess a license/permit at all times. • Obey posted signs and traffic laws.
	Vehicle Exhaust	• Turn off vehicle when it is stationary. • If vehicle must remain in operation while personnel are outside, ensure a safe operating distance from the source of exhaust.
Trailer Towing During Motor Vehicle Operation	Trailer Operational Injuries	• Inspect trailer to ensure it is structurally adequate for the operational demand. • Trailer shall be equipped with safety chains or cables. • If the trailer is equipped with power brakes, it shall be equipped with a breakaway device that effectively locks-up the brakes in the event of separation from towing vehicle.
Direct Push Technology Operation	Strike subsurface obstacles/utilities	• Request/conduct a utilities locate prior to initiating work
	Hearing loss - percussion hammering	• Adequate hearing protection
	Struck by flying dust/debris	• Adequate eye protection (safety glasses)
	Sustain Head injury	• Adequate head protection (hard hat)
	Feet injured by probe foot / or derrick	• Keeping feet clear of equipment and wearing safety boots
	Hands injured by equipment	• Keeping hands clear of equipment and wearing heavy work gloves.
	Exposure to hazardous substances	• Air monitoring • Appropriate respiratory protection • Adequate decontamination procedures • Adequate personal protective equipment
Operating Electrical Generator	Noise	• If personnel cannot understand normal speech, ear plugs with a Noise Reduction Rating (NRR) of 33 must be worn. • Limit generator usage to ensure excessive noise levels

Task	Hazard	Protection
		are not produced consistently. • Noise monitoring may be necessary if the noise levels produced during generator operating seem excessive.
	Electrical	• Before work is begun, the person in charge shall ascertain whether any part of an electric power circuit is located such that performance of work could bring any person, tool, or machine, into physical or electrical contact with it. • All electrical cords shall be examined daily and damaged cords will not be used. • Always unplug electrical cords from generator after use.
	Exhaust	• Turn off generator when not in use. • Maintain a safe distance from generator exhaust and do not directly inhale exhaust fumes. • Turn off generator if it is anticipated a large amount of time is expected to be spent next to the exhaust.
Sampling Pump Operating	Electrical	• Inspect power cord for any damages prior to plugging the pump in. • If it is necessary to inspect the circuit board, power device or electrical connection, ensure power has been disconnected.
	Chemical	• Water samples may contain Trichloroethene, so when extracting samples, personnel must wear Modified Level D PPE.
Inspect Tank Contents	Little elevated risk	• It is unlikely anyone would be exposed to a significant level or quantity of vapors by lowering an indicating tape into the tank and retrieving it to see the mark. • Personnel will not enter tanks.

ATTACHMENT B- ENG FORM 3394

(For Safety Staff only)	REPORT NO.	EROC CODE	**UNITED STATES ARMY CORPS OF ENGINEERS ACCIDENT INVESTIGATION REPORT** *(For Use of this Form See Help Menu and USACE Suppl to AR 385-40)*	**REQUIREMENT CONTROL SYMBOL: CEEC-S-8(R2)**

1. **ACCIDENT CLASSIFICATION**

PERSONNEL CLASSIFICATION	INJURY/ILLNESS/FATAL	PROPERTY DAMAGE	MOTOR VEHICLE INVOLVED	DIVING
GOVERNMENT ☐ CIVILIAN ☐ MILITARY	☐	☐ FIRE INVOLVED ☐ OTHER	☐	☐
☐ CONTRACTOR	☐	☐ FIRE INVOLVED ☐ OTHER	☐	☐
☐ PUBLIC ☐ FATAL ☐ OTHER			☐	

2. **PERSONAL DATA**

a. Name *(Last, First, MI)*	b. AGE	c. SEX ☐ MALE ☐ FEMALE	d. SOCIAL SECURITY NUMBER	e. GRADE

f. JOB SERIES/TITLE	g. DUTY STATUS AT TIME OF ACCIDENT	h. EMPLOYMENT STATUS AT TIME OF ACCIDENT
	☐ ON DUTY ☐ TDY ☐ OFF DUTY	☐ ARMY ACTIVE ☐ ARMY RESERVE ☐ VOLUNTEER ☐ PERMANENT ☐ FOREIGN NATIONAL ☐ SEASONAL ☐ TEMPORARY ☐ STUDENT ☐ OTHER *(Specify)*

3. **GENERAL INFORMATION**

a. DATE OF ACCIDENT *(month/day/year)*	b. TIME OF ACCIDENT *(Military time)* hrs	c. EXACT LOCATION OF ACCIDENT	d. CONTRACTOR'S NAME (1) PRIME: (2) SUBCONTRACTOR:

e. CONTRACT NUMBER	f. TYPE OF CONTRACT	g. HAZARDOUS/TOXIC WASTE ACTIVITY
☐ CIVIL WORKS ☐ MILITARY ☐ OTHER *(Specify)*	☐ CONSTRUCTION ☐ SERVICE ☐ A/E ☐ DREDGE ☐ OTHER *(Specify)*	☐ SUPERFUND ☐ DERP ☐ IRP ☐ OTHER *(Specify)*

4. **CONSTRUCTION ACTIVITIES ONLY** *(Fill in line and corresponding code number in box from list - see help menu)*

a. CONSTRUCTION ACTIVITY (CODE) #	b. TYPE OF CONSTRUCTION EQUIPMENT (CODE) #

5. INJURY/ILLNESS INFORMATION *(Include name on line and corresponding code number in box for items e, f & g - see help menu)*

a. SEVERITY OF ILLNESS/INJURY (CODE) #	b. ESTIMATED DAYS LOST	c. ESTIMATED DAYS HOSPITALIZED	d. ESTIMATED DAYS RESTRICTED DUTY

e. BODY PART AFFECTED	g. TYPE AND SOURCE OF INJURY/ILLNESS
PRIMARY (CODE) #	TYPE (CODE) #
SECONDARY (CODE) #	SOURCE (CODE) #
f. NATURE OF ILLNESS/INJURY (CODE) #	

6. PUBLIC FATALITY *(Fill in line and correspondence code number in box - see help menu)*

a. ACTIVITY AT TIME OF ACCIDENT (CODE) #	b. PERSONAL FLOATATION DEVICE USED?
	☐ YES ☐ NO ☐ N/A

7. MOTOR VEHICLE ACCIDENT

a. TYPE OF VEHICLE	b. TYPE OF COLLISION	c. SEAT BELTS	USED	NOT USED	NOT AVAILABLE
☐☐ PICKUP/VAN ☐☐ AUTOMOBILE ☐☐ TRUCK ☐☐ OTHER *(Specify)*	☐ SIDE SWIPE ☐ HEAD ON ☐ REAR END ☐ BROADSIDE ☐ ROLL OVER ☐ BACKING ☐ OTHER *(Specify)*	(1) FRONT SEAT			
		(2) REAR SEAT			

8. PROPERTY/MATERIAL INVOLVED

a. NAME OF ITEM	b. OWNERSHIP	c. $ AMOUNT OF DAMAGE
(1)		
(2)		
(3)		

9. VESSEL/FLOATING PLANT ACCIDENT *(Fill in line and correspondence code number in box from list - see help menu)*

a. TYPE OF VESSEL/FLOATING PLANT (CODE) #	b. TYPE OF COLLISION/MISHAP (CODE) #

10. ACCIDENT DESCRIPTION *(Use additional paper, if necessary)*

11. **CAUSAL FACTOR(S)** *(Read Instruction Before Completing)*

a. (Explain YES answers in item 13)	YES	NO
DESIGN: Was design of facility, workplace or equipment a factor?	☐	☐
INSPECTION/MAINTENANCE: Were inspection & maintenance procedures a factor?	☐	☐
PERSON'S PHYSICAL CONDITION: In your opinion, was the physical condition of the person a factor?	☐	☐
OPERATING PROCEDURES: Were operating procedures a factor?	☐	☐
JOB PRACTICES: Were any job safety/health practices not followed when the accident occurred?	☐	☐
HUMAN FACTORS: Did any human factors such as, size or strength of person, etc., contribute to accident?	☐	☐
ENVIRONMENTAL FACTORS: Did heat, cold, dust, sun, glare, etc., contribute to the accident?	☐	☐

a. *(CONTINUED)*	YES	NO
CHEMICAL AND PHYSICAL AGENT FACTORS: Did exposure to chemical agents, such as dust, fumes, mists, vapors or physical agents, such as, noise, radiation, etc., contribute to accident?	☐	☐
OFFICE FACTORS: Did office setting such as, lifting office furniture, carrying, stooping, etc., contribute to the accident?	☐	☐
SUPPORT FACTORS: Were inappropriate tools/resources provided to properly perform the activity/task?	☐	☐
PERSONAL PROTECTIVE EQUIPMENT: Did the improper selection, use or maintenance of personal protective equipment contribute to the accident?	☐	☐
DRUGS/ALCOHOL: In your opinion, was drugs or alcohol a factor to the accident	☐	☐

b. WAS A WRITTEN JOB/ACTIVITY HAZARD ANALYSIS COMPLETED FOR TASK BEING PERFORMED AT TIME OF ACCIDENT?

☐ YES *(If yes, attach a copy.)* ☐ NO

12. **TRAINING**

a. WAS PERSON TRAINED TO PERFORM ACTIVITY/TASK?	b. TYPE OF TRAINING.	c. DATE OF MOST RECENT FORMAL TRAINING.
☐ YES ☐ NO	☐ CLASSROOM ☐ ON JOB	(Month) (Day) (Year)

13. **FULLY EXPLAIN WHAT ALLOWED OR CAUSED THE ACCIDENT; INCLUDE DIRECT AND INDIRECT CAUSES** *(See instruction for definition of direct and indirect causes.) (Use additional paper, if necessary)*

a. DIRECT CAUSE

b. INDIRECT CAUSE(S)

14. **ACTION(S) TAKEN, ANTICIPATED OR RECOMMENDED TO ELIMINATE CAUSE(S).**

DESCRIBE FULLY:

15. **DATES FOR ACTIONS IDENTIFIED IN BLOCK 14.**

a. BEGINNING (Month/Day/Year)	b. ANTICIPATED COMPLETION (Month/Day/Year)		
c. SIGNATURE AND TITLE OF SUPERVISOR COMPLETING REPORT CORPS _____ CONTRACTOR _____	d. DATE *(Mo/Da/Yr)*	e. ORGANIZATION IDENTIFIER *(Div, Br, Sect)*	f. OFFICE SYMBOL

16. **MANAGEMENT REVIEW** *(1st)*

a. ☐ CONCUR b. ☐ NON CONCUR c. COMMENTS

SIGNATURE	TITLE	DATE

17. **MANAGEMENT REVIEW** *(2nd - Chief Operations, Construction, Engineering, etc.)*

a. ☐ CONCUR b. ☐ NON CONCUR c. COMMENTS

SIGNATURE	TITLE	DATE

18. **SAFETY AND OCCUPATIONAL HEALTH OFFICE REVIEW**

a. ☐ CONCUR b. ☐ NON CONCUR c. ADDITIONAL ACTIONS/COMMENTS

SIGNATURE	TITLE	DATE

19. **COMMAND APPROVAL**

COMMENTS

COMMANDER SIGNATURE	DATE

*U.S. GOVERNMENT PRINTING OFFICE: 1993-0-791-757

10. ACCIDENT DESCRIPTION ***(Continuation)***

13a. DIRECT CAUSE ***(Continuation)***

13b. INDIRECT CAUSES *(Continuation)*

14. ACTION(S) TAKEN, ANTICIPATED, OR RECOMMENDED TO ELIMINATE CAUSE(S) *(Continuation)*

DRAFT
PHASE II ENVIRONMENTAL TARGETED BROWNFIELDS SITE ASSESSMENT FOR THE TUCUMCARI TRUCK TERMINAL

"Phase II Targeted Brownfields Environmental Site Assessment for the Tucumcari Truck Terminal"

Tucumcari, Quay County, New Mexico

Purchase Order No. W912PP-10-P-0073

For

US Army Corps of Engineers, Albuquerque District
4101 Jefferson Plaza N.E.
Albuquerque, NM 87109

January 8, 2011

By:

PO Box 14445 · Tulsa, OK 74159-1445 · 918.592.9020

TABLE OF CONTENTS

1.0 INTRODUCTION 1
1.1 PURPOSE AND SCOPE 1
1.2 REPORT ORGANIZATION 1
2.0 SITE BACKGROUND 2
2.1 SITE DESCRIPTION 2
2.2 SITE HISTORY 3
2.3 PREVIOUS INVESTIGATIONS 4
2.4 ENVIRONMENTAL SETTING 6
2.4.1 Site Geology 6
2.4.2 Groundwater 6
3.0 FIELD INVESTIGATION ACTIVITIES 8
3.1 SURFACE SOIL SAMPLING 8
3.2 SOIL BOREHOLE DRILLING AND SAMPLING 8
3.2.1 Borehole Soil Sampling 9
3.2.2 Borehole Groundwater Sampling 9
3.3 GROUNDWATER MONITORING WELL SAMPLING 10
3.4 VERIFYING QUANTITY OF TANK CONTENTS 10
3.5 ASBESTOS-CONTAINING MATERIAL TESTING 12
3.6 LEAD-BASED PAINT TESTING 12
3.7 IDW MANAGEMENT AND DISPOSAL 12
4.0 ANALYTICAL RESULTS 13
4.1 SURFACE SOIL SAMPLE RESULTS 13
4.2 SOIL BORING SAMPLE RESULTS 14
4.2.1 Soil 14
4.2.2 Groundwater 15
4.3 GROUNDWATER MONITORING WELL SAMPLE RESULTS 16
4.4 ACM SAMPLE RESULTS 16
4.5 LBP SAMPLE RESULTS 16
4.6 IDW 16
5.0 SUMMARY AND CONCLUSIONS 17
5.1 SUMMARY OF FINDINGS 17
5.1.1 Soil 17
5.1.2 Groundwater 18
5.1.3 ASTs and USTs 18
5.1.4 Abandoned Site Residence 18
5.2 CONCLUSIONS AND RECOMMENDATIONS 18
5.2.1 Conclusions 18
5.2.2 Recommendations 19
6.0 REFERENCES 20

LIST OF TABLES

TABLE 4-1	Summary of Surface Soil Analytical Results
TABLE 4-2	Summary of Subsurface Soil Analytical Results
TABLE 4-3	Summary of Groundwater Analytical Results

LIST OF FIGURES

FIGURE 2-1	Site Location Map
FIGURE 2-2	Site Layout and Features
FIGURE 2-3	Historical Details and Approximate Fuel Piping Locations
FIGURE 3-1	Sample Locations
FIGURE 4-1	Soil Analytical Results Above State Standards
FIGURE 4-2	Groundwater Analytical Results Above State and Federal Standards

APPENDICES

APPENDIX A	Photograph Log
APPENDIX B	Field Forms
APPENDIX C	Asbestos and Lead-Based Paint Surveys
APPENDIX D	NMED Soil Screening Levels and WQCC Groundwater Standards
APPENDIX E	Data Validation Report
APPENDIX F	Laboratory Analytical Report

LIST OF ACRONYMS

ACBM	Asbestos-Containing Building Material
Acme	Acme Environmental, Inc.
AHERA	Asbestos Hazard Emergency Response Act
AST	Aboveground Storage Tank
bgs	below ground surface
BAI	Billings and Associates, Inc.
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CD	compact disk
DAF	Dilution Attenuation Factor
DQCR	Daily Quality Control Report
DRO	Diesel Range Organics
EDR	Environmental Data Resources
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
GRO	Gasoline Range Organics
GPS	Global Positioning System
HAS	Hollow-Stem Auger
HWB	Hazardous Waste Bureau
HUD	U.S. Department of Housing Urban Development
ID	Inner Diameter
IDW	Investigation Derived Waste
Innovar	Innovar Environmental, Inc.
LBP	Lead-Based Paint
LNAPL	Light Non-Aqueous Phase Liquids
LUST	Leaking Underground Storage Tank
MCLs	Maximum Contaminant Levels
MDL	Method Detection Limit
µg/kg	micrograms per kilogram
µg/L	micrograms per Liter
um	micrometers
mg/cm^2	milligrams per centimeter squared
mg/kg	milligrams per kilogram
mg/L	milligrams per Liter
mL	milliliter
MTBE	Methyl Tertiary Butyl Ether
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
ORO	Oil Range Organics
PAH	Polynuclear Aromatic Hydrocarbon
PID	Photoionization Detector
PLM	Polarized Light Microscopy
PPE	Personal Protective Equipment
ppm	parts per million
PSTB	Petroleum Storage Tank Bureau
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
RECs	Recognized Environmental Conditions
RL	Reporting Limit
RMC	RMC Consultants, Inc.
RSL	Regional Screening Level

SSL	Soil Screening Level
SVVS	Subsurface Volatilization and Ventilation System (SVVS)
TAL	Target Analyte List
TBA	Targeted Brownsfield Assessment
TCLP	Toxicity Characteristic Leaching Procedure
TPH	Total Petroleum Hydrocarbon
TOC	Top of Casing
USACE	U.S. Army Corps of Engineers
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOA	Volatile Organic Analysis
VOC	Volatile Organic Compound
WP	Work Plan
WQCC	Water Quality Control Commission
XRF	X-ray Fluorescence

1.0 INTRODUCTION

This report documents the Phase II Environmental Site Assessment (ESA) completed at the former Tucumcari Truck Terminal located in Tucumcari, New Mexico. This Phase II ESA was prepared by Innovar Environmental, Inc. (Innovar) and their subcontractor, RMC Consultants Inc. (RMC) under Contract Number W912PP-10-P-0073 (and its modification W912PP-12PP-120-P-0182) with the United States Army Corps of Engineers (USACE), Albuquerque District. Funding for this project is through the U.S. Environmental Protection Agency (EPA) Region 6 Targeted Brownfields Assessment (TBA) program. Tasks described in this document were performed pursuant to the approved Work Plan (WP) (Innovar, 2010).

1.1 Purpose and Scope

A field investigation was conducted in September and November 2010 as part of the Phase II ESA to determine whether potentially hazardous materials are present at the former Tucumcari Truck Terminal. This work effort is being completed under the EPA Region 6 TBA program in preparation for commercial development activities. Tasks completed during the field portion of the Phase II ESA are provided below. Further details of the field investigation are presented in Section 3.0.

- Soil samples were collected from a total of 10 surface sample locations and 19 soil borings at areas of concern associated with both the tanks [(underground storage tanks (USTs) and aboveground storage tanks (ASTs)] and fuel distribution piping onsite, past site operations and spills, and recent activities associated with the temporary lease for the highway construction.
- Groundwater samples were collected from each of the 19 soil borings and one existing monitoring well (MW-6).
- The approximate depth or quantity of any liquids that remain in the existing ASTs and USTs present at the site were verified.
- Samples were collected from the interior of the abandoned residence to test for lead-based paint (LBP).
- An asbestos survey was performed at the abandoned residence to test for asbestos-containing building material (ACBM).

The scope of work for this Phase II ESA was based largely on recommendations made in the Phase I ESA (USACE, 2009) for additional site investigation activities.

1.2 Report Organization

Including this introductory section, this Phase II ESA report is divided into five sections as follows: Section 1 – Introduction, Section 2 – Site Background, Section 3 – Field Investigation Activities, Section 4 – Analytical Results Summary, Section 5 – Summary and Conclusions, and Section 6 – References. Tables, figures, and appendices are attached.

2.0 SITE BACKGROUND

2.1 Site Description

The former Tucumcari Truck Terminal, referred to herein as the site, is located right off I-40 Exit 329 on the west end of Tucumcari in Quay County, New Mexico. The site is bounded by West Tucumcari Blvd. (historic Route 66/NM State Highway 54) on its north side, the Conchas irrigation canal on its south side, and undeveloped land to the east and west. The Union Pacific Railroad is situated just north and parallel to West Tucumcari Blvd., and Interstate I-40 is south of the irrigation canal that is adjacent to the site. Surrounding properties are primarily farmland and undeveloped acreage. A site location map is included as Figure 2-1.

The Tucumcari Truck Terminal area consists of approximately 22.0 acres of land. A variety of buildings (most of which are boarded up) and tank structures associated with gas and diesel fueling and storage operations are present at the site. The southwest end of the site comprises the facilities of the former Tucumcari Truck Terminal while the northeast end is undeveloped acreage. For descriptive purposes, the developed truck terminal end of the site has been divided into zones (west, middle, and east) designated as Areas A, B and C, respectfully. A site layout of the truck terminal area is provided in Figure 2-2. Site features and approximate fuel piping locations are presented in Figures 2-2 and 2-3, respectively. The site is comprised of the following structures:

Area A:
- Food mart convenience store
- Gas and diesel dispensing island
- An air and water station
- A subsurface volatilization and ventilation system (SVVS)
- Pump house for the SVVS system
- A concrete vault with four gasoline USTs (size unknown)
- Two 860,000 gallon diesel ASTs
- One approximate 2,000 gallon #3 diesel AST

Area B:
- One building comprising a warehouse, tire shop, and lubrication maintenance facility
- Two approximate 2,000 gallon used diesel fuel storage tanks (east side of warehouse)
- Two diesel fueling islands
- Oil water separator sump
- Generator building with transformer

Area C:
- Restaurant travel center
- Maintenance and repair shop
- 2-story residential building

An abandoned fuel tanker truck is located in the southern portion of Area A near the dirt road that runs parallel to the Conchas Canal. Miscellaneous trash and debris was observed in some grassy parts of Areas A and B and on the east side of the repair shop in Area C, which was littered with old equipment, fuel pumping dispensers, signs, water heaters, tires, and construction debris. Seven partially full to full blue drums, labeled Chevron Ultra-Duty Grease, were observed on the south side of the warehouse. The origin of these drums is unknown (see Photograph 17 in Appendix A). Conditions of the

site structures and property, at the time of the site visit conducted by the USACE in March 2009, are detailed in the Phase I ESA (USACE, 2009).

2.2 Site History

The following discussion of the site history is based largely on information acquired from interviews conducted during the Phase I ESA (USACE, 2009) with key personnel knowledgeable of the site. The Tucumcari Truck Terminal was operated continuously from 1958, with the construction of the first truck stop structures located in Area A, up until the Terminal's closure in approximately 2004. There was also a drive-in theater located in the vicinity of Areas B and C during the 1950s. According to interviews, the abandoned residence located in Area C was utilized by a caretaker during the operation of the drive-in theater (USACE, 2009). It is unknown when the residence was last inhabited, but it is presently uninhabitable due to its deteriorating condition.

At the peak of operations, the truck terminal was grossing $1.1 million in revenues and employed over 80 people (USACE, 2009). Previous property owners included the Phillips and Shipley families, who owned the property as a corporation that they had formed in the mid-1950s. The current property owner Arthur Ortega purchased the property from the Phillips family in February 2003 and operated the facility for approximately another year before closing the truck terminal. Although most of the truck terminal facility has not been operational since approximately 2004, the east half of Area C was used in 2009 by a contractor performing nearby highway construction, as observed during the Phase I ESA (USACE, 2009). During this time, the area was temporarily leased from the owner, Mr. Ortega, and used for trailer offices, equipment storage, fuel and oil operations, tar operations, water storage, and soil and asphalt stockpiles.

As the Phase I ESA indicated, there are several known incidents directly involving the spilling of diesel fuel on the site. During the years of operation at least three fully loaded 10,000 gallon diesel trucks had tipped over at different locations spilling much of their contents. There was also an incident in which one of the fuel dispensing pumps at the diesel fueling islands in Area B was struck by a truck and severed off its foundation. Diesel fuel flowed freely until the main lines to the 860,000 gallon tanks could be shut off. The diesel fuel flowed into a drainage culvert that runs under West Tucumcari Blvd. and discharges to a drainage area on the other side of the road. However, the Chief of the Tucumcari Fire and Rescue could not confirm that they had knowledge or records confirming that these spill accidents had occurred (USACE, 2009).

The site was listed as a leaking UST (LUST) facility in the Environmental Data Resources (EDR) report dated April 2009 and provided in the Phase I ESA (USACE, 2009). Previous site characterization activities have identified the presence of free product in monitoring wells, benzene, toluene, ethylbenzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) impacted soils, and elevated concentrations of BTEX, methy tertiary butyl ether (MTBE), total naphthalene and 1,2-dichloroethane in groundwater. An SVVS was installed by BAI in Area A in July 1993. However, operation of this system was terminated in April 1996 before complete remediation of the site. Previous investigations and environmental concerns associated with the site are summarized in Section 2.3.

A summary of major events that have occurred at the site is included in Table 2-2-1.

Table 2-2-1 Summary of Major Events	
Year	**Activity**
1950s	The drive-in theater was in operation near Areas B & C.
Mid-1950s	Phillips and Shipley families own the property as a corporation.
1958	Construction of 1st Truck Stop Structure in Area A.
1975	860,000 gallon diesel AST installed; 20,000 gallon diesel UST (possibly leaking) removed.
1985	Four 20,000 gallon diesel USTs removed in Area B.
June 1991	Four leaking USTs (three 10,000 gallon, one 4,000 gallon), two used oil USTs (6,000 and 10,000 gallons), and two lubrication oil USTs (both 2,000 gallons) were removed from Area A.
November 1992	Billings and Associates, Inc (BAI) prepared a Hydrogeologic Investigation Report.
July 1993	BAI installed an SVVS remediation system.
April 1996	SVVS operations ceased.
1999	Site purchased by Phillips family.
February 2003	Site sold to Arthur Ortega.
August 2003	BAI conducted product bail down tests, released report.
2004	Tucumcari Truck Terminal closed.
January 2005	New Mexico Environment Department (NMED) PST Bureau Site Summary completed.
Unknown	Three 10,000 gallon diesel trucks tipped (different locations and times)-unconfirmed.
Unknown	Fuel pump in Area B severed at foundation, fuel flowed into culvert.

2.3 Previous Investigations

The following reports document previous site investigations and the environmental condition of the site:

- Phase I Hydrogeologic Investigation Report (BAI, 1992)
- Product Bail Down Test Report (BAI, 2003)
- NMED PST Bureau Site Summary (Beaumont, 2005)
- Phase I Environmental Site Assessment (USACE, 2009)

A summary of site concerns as documented in the NMED PST Bureau Site Summary and in the Phase I ESA are listed in Table 2-3-1.

Table 2-3-1 Summary of Site Concerns		
Cause	**Results/ Potential Results**	**Year**
Abandoned residence in Area C.	Potential for the presence of lead-based paint and asbestos.	1940s to present
Possibly leaking 20,000 gallon diesel UST removed.	Potential for contaminated soil and/or groundwater.	1975
Four leaking USTs in Area A that were removed in 1991. (three 10,000 gallon and one 4,000 gallon; one of the leaking tanks	Soil vapors in Area A were detected >100 ppm; PID readings of 1,009 to 47,697 ppm. Known soil and groundwater	1977 (installed) - 1991 (removed)

Table 2-3-1 Summary of Site Concerns		
Cause	**Results/ Potential Results**	**Year**
contained diesel)	contamination.	
Four 20,000 gallon diesel USTs were removed from Area B.	Leaks could have occurred from the four USTs and diesel fuel piping to the fueling islands in Area B.	1985
Undocumented	Benzene plume (possibly shrinking in size) in groundwater that extended over a 69,600 square foot area in Area A.	1992
Undocumented	Free product detected in four monitoring wells in Area A.	1998, still present in 2003
All USTs, ASTs, and piping currently on-site.	Potential of ongoing source contamination of oils and fuels.	Present
Highway construction	Potential for fuel, oil, asphalt, and tar contamination.	2009
Three 10,000 gallon diesel trucks tipped over at different locations and times.	Potential for contaminated soil and/or groundwater (sheen on the surface of water by the Restaurant Travel Center).	Unknown
Fuel pump in Area B severed at foundation, fuel flowed into culvert.	Potential for contaminated soil and/or groundwater.	Unknown
Numerous gasoline, diesel, lubrication oil, and waste oil tanks were removed from within ¼-mile to the southwest of the site.	Given the proximity to the site and the influence on groundwater from the Conchas Canal, any contamination could have affected the west side of Area A.	
Activities associated with repair/ maintenance shops and the warehouse where lubrication services were performed.	Potential for used waste oil and solvent contamination from operations.	

During the Phase I Hydrogeologic Investigation, BAI installed ten monitoring wells in Area A and adjacent to the site. Findings from the hydrogeologic investigation indicated the presence of free product on groundwater, BTEX and TPH impacted soils, and the extent of elevated concentrations of BTEX, MTBE, total naphthalene and 1,2-dichloroethane in groundwater (BAI, 1992). BAI later installed an SVVS remediation system in July 1993. A significant reduction in groundwater contamination was noted during the operation of the SVVS, and the product plume was reduced to a small area around one well (BAI, 2003). Operation of this system was terminated in April 1996 before completion of remedial efforts due to budget constraints of the NMED through the Underground Storage Tank Bureau, now known as the Petroleum Storage Tank Bureau (PSTB) (USACE, 2009). A product bail down test was conducted by BAI in August 2003 which indicated measurable free product ranging from about one inch to two plus feet in thickness in four of the monitoring wells (MW-2, MW-7, MW-14, and MW-16). Bail down tests on monitor wells MW-7 and MW-14 indicated product recoveries of 0.31 and 0.96 gallons/day, respectively.

The Phase I ESA (USACE, 2009) identified potential current or former recognized environmental conditions (RECs) present on the site, and immediately adjacent properties. These RECs are highlighted in Table 2-3-1. Findings from the Phase I ESA (USACE, 2009) indicate that there is potential for soil and groundwater fuel contamination elsewhere within Areas A, B, and C, in addition to what has been previously identified. The recommendations for additional site investigation activities presented in the Phase I ESA were used in determining the project objectives and scope for this Phase II ESA.

2.4 Environmental Setting

The site geology and hydrology is described in greater detail in the Phase I Hydrogeologic Investigation Report (BIA, 1992).

2.4.1 Site Geology

The site is located on the south slope of the valley formed by Pajarito Creek, which is located approximately two miles north of the site. The site is underlain by alluvium, the Tucumcari Shale and the Morrison Formation. The alluvium at the site is the product of the erosion of the higher terrains to the south, east, and west which are composed of the Morrison Formation (shales and sandstones), Tucumcari Shale, and the Dakota Sandstone.

The Hydrogeologic Investigation Report indicates a fluvial depositional environment of low to high energy. This depositional environment has resulted in lenticular deposits with little potential for detailed lateral correlation. The alluvium is composed of sands, silts, clays, and gravels. The gravels range in size from pebbles to cobbles. The cross sections shown in the Hydrogeologic Report indicate that a gravel lens occurs at times within the vadose zone (near MW-4 and the Food Mart) and below the static water level at the MW-11 location (USACE, 2009).

In general, subsurface soils encountered in boreholes drilled [at depths up to 32 feet below ground surface (bgs)] during the Phase II ESA consisted of silty clay, silt and clayey silt, fine-grained sand, silty and clayey sand, and some gravel (mostly fine). Small lenses of very hard, cemented sandstone and siltstone were also observed at several soil boring locations. Refusal was encountered during direct-push advancement typically around 7 feet bgs; the direct-push sampling tools were unable to advance through the compact silt or dense fine-grained sand present at depths greater than 7 to 10 feet bgs.

2.4.2 Groundwater

The groundwater encountered at the site is thought to be a perched system contained in the alluvium. Groundwater flow direction is generally to the north to northwest and away from the Conchas Canal. Groundwater gradients determined for Area A during the 1992 hydrogeologic investigation ranged from 0.0209 ft/ft in the vicinity of MW-4 to 0.0178 ft/ft in the vicinity of V-1.

The depth to groundwater measured on September 8, 2010 at the monitoring wells located in Area A ranged from 19.10 to 23.24 feet below top of casing (TOC) (all monitoring wells are flush mount). Monitoring wells located on the north side of West Tucumcari Blvd. and Area A wells MW-15 and MW-17 were dry. The water level rose approximately 2 to 10 feet above where it was encountered during drilling in many of the soil borings advanced across the site (in Areas A, B, and C) during the Phase II ESA. Upon

reaching total depth of soil borings, groundwater equilibrated fairly quickly to the potentiometric surface level. Groundwater appears to be under localized confined conditions observed in soil borings located throughout the site. The Hydrogeologic Investigation Report (BAI, 1992) noted that the shallow water generally occurs under water table conditions with localized areas of apparent confinement. There also appeared to be multiple perched groundwater lenses present at some of the boring locations, evident by dry soil cuttings following wet soil samples and/or cuttings to the surface during drilling.

The Conchas Canal located along the southern boundary of the site is thought to be a potential seasonal source of recharge to the shallow aquifer at the site. The Hydrogeologic Investigation Report stated that there are unconfirmed reports that the canal had been lined with bentonite to reduce water loss in sandy material in the vicinity of the site (BAI, 2003). The Conchas Canal, which is operated by the Arch Hurley Conservancy District, typically runs from April to October. It was full during the September 2010 field investigation (completed September 6 through September 8) and was dry at the start of the November 8, 2010 field investigation.

3.0 FIELD INVESTIGATION ACTIVITIES

The following sections summarize the sampling activities associated with the Phase II ESA. Field investigation activities are also documented in the Photograph Log provided in Appendix A. Field data was collected in accordance with the approved Quality Assurance Project Plan (QAPP) (Innovar, 2010); any deviations from the QAPP are noted in this section and in the Daily Quality Control Reports (DQCRs) provided in Appenidx B. Initial field investigation tasks commenced on September 6, 2010 and concluded on September 8, 2010. During the September 2010 field investigation, groundwater was sampled from one monitoring well, eight surface soil samples were collected, six soil borings were advanced and sampled using direct-push methods, and the quantity of liquids were verified in USTs and ASTs present at the site. Refusal was encountered (typically around 7 feet bgs) at all six borings advanced using direct-push technology, prior to reaching groundwater due to the nature of the overburden material (compact silt and dense fine-grained sand). As a result, the contract for this project was modified to include a second site mobilization so that total depths of soil borings (approximately 25 feet bgs) could be reached through use of hollow-stem auger (HSA) drilling. This second phase of the field activities was completed November 8 through November 15, 2010. During the November 2010 field investigation, two surface soil samples were collected and a total of 19 soil borings were drilled using a HSA drill rig and sampled for soil and groundwater.

3.1 Surface Soil Sampling

Ten surface soil samples (SS01 through SS10) and one duplicate sample (SS17 is a duplicate of SS07) were collected at locations deemed most appropriate by the USACE representative and Innovar field team (see Figure 3-1) and analyzed for TPH [(gasoline range organics (GRO), diesel range organics (DRO), and oil range organics (ORO)] by SW-846 Method 8015B and target analyte list (TAL) metals by SW-846 Method 6010B. All surface soil samples were collected with a decontaminated stainless steel trowel from 0 to 0.5 feet bgs.

3.2 Soil Borehole Drilling and Sampling

A total of six soil borings (SB01 through SB06) were advanced in September 2010 using a truck-mounted GeoProbe® operated by JR Drilling, LLC based in Edgewood, New Mexico. Soil borings were advanced and continuously sampled using a GeoProbe® Dual Tube Soil Sampler (DT-21) with disposable acetate liners. The six soil borings were advanced until refusal was encountered at a depth of approximately 7 feet bgs in five of the six borings and at 15.5 feet bgs in SB01. The direct-push sampling tools could not penetrate through the compact overburdern material consisting of silt and dense fine-grained sand. Two soil samples were collected from SB01 and only one soil sample was collected from the remaining soil borings (SB02 through SB06) advanced using direct-push technology. Groundwater was not encountered in any of the direct-push soil borings.

A total of 19 soil borings were drilled in November 2010 using a SIMCO® 70 drill rig operated by Precision Sampling, Inc. based in Colorado Springs, Colorado. Six of the 19 soil borings were drilled within approximately two to three feet of the original boring locations advanced during the September 2010 direct-push activities. Soil borings were drilled with 3.25-inch inner diameter HSAs and a pilot or tri-cone bit and sampled every five feet using stainless steel split spoon samplers, 2 inches in diameter and 2 feet in length. Total depths of soil borings ranged from 23 feet to 30 feet bgs in the southeast portion of the site, which was approximately four to six feet higher in elevation than the central and western portion of the site. In some instances, potable water had to be

added during drilling to assist the soil cuttings to the surface and prevent the HSAs from locking up. Only a minimal amount of water was used, when necessary, and quantities of water added were recorded on the drill logs. Groundwater was encountered and sampled in all 19 soil borings. During HSA drilling, only one soil sample was collected from five soil borings (SB02 through SB06) and two soil samples were collected from soil borings SB07 through SB19.

All boring locations were logged during direct-push advancement and HSA drilling using the Unified Soil Classification System (USCS) for unconsolidated materials and field screened for volatile organic compounds (VOCs) using a MiniRae 2000 photo-ionization detector (PID). Elevated PID readings [> 100 parts per million (ppm)], hydrocarbon odors, and/or visible staining were observed in soil borings associated with the following soil borings: SB01 (located near the Area B storm water drainage grate to culvert that runs beneath West Tucumcari Blvd.), SB12 (adjacent to the diesel supply pipeline that runs from the 860,000 gallon ASTs to the diesel fueling islands in Area B), SB13 (near the diesel fueling islands in Area B), and SB19 (adjacent to where the four gasoline USTs were removed from Area A in 1991). Soil from SB17 (located east of the Food Mart in Area A) exhibited a faint to moderate sewage-like odor; no staining or elevated PID readings above 100 ppm were detected. Although soil contamination was detected at depths where groundwater was encountered, product was not detected with an oil/water interface meter in any of the boring locations. Details of the individual boring logs and headspace readings are included in Appendix B. Two soil samples and one groundwater sample were collected from each boring location. Borehole soil and groundwater sampling activities are discussed in Sections 3.2.1 and 3.2.2, respectively.

Following completion of direct-push and HSA drilling activities at each location, soil borings were properly abandoned by backfilling each hole with hydrated bentonite pellets. The surface areas were then restored to pre-activity conditions with like material (i.e., asphalt or native soil). Global positioning system (GPS) data was recorded for all soil boring locations, which are illustrated in Figure 3-1.

3.2.1 Borehole Soil Sampling

A total of 38 soil samples and 4 duplicate samples were obtained from the 19 soil borings. Two soil samples were collected from each boring location at depths between 5 and 10 feet bgs and from a deeper interval immediately above groundwater. Sample IDs and sample depths for the subsurface soil samples are indicated in Table 4-2. Soil samples were analyzed for VOCs by SW-846 Method 8260B, polynuclear aromatic hydrocarbon (PAHs) by SW-846 Method 8310, TPH (GRO, DRO, and ORO) by SW-846 Method 8015B, and TAL metals SW-846 Method 6010B. VOC and GRO soil samples were collected in methanol and distilled water preserved 40 milliliter (mL) volatile organic analysis (VOA) vials. Soil samples collected for the remaining analyses were collected in clean air-tight laboratory supplied jars. All samples were stored in ice-packed sample coolers until shipment to Accutest Laboratories in Orlando, Florida.

3.2.2 Borehole Groundwater Sampling

Groundwater samples were collected from each of the 19 soil borings drilled in November 2010. Groundwater was sampled from either an open borehole or a one-inch polyvinyl chloride (PVC) temporary monitoring well with a 0.010-inch slotted screen that was installed in the boring. Groundwater was typically purged for approximately 10 to 15 minutes prior to sample collection. Groundwater samples were collected from each boring location using either a disposable bailer or a peristaltic pump with disposable C-Flex® tubing. Groundwater samples were collected directly from the bailer or tubing into

appropriate laboratory supplied bottles. Groundwater samples were analyzed for VOCs by SW-846 Method 8260B, PAHs by SW-846 Method 8310, TPH by SW-846 Method 8015B, and TAL metals (dissolved) by SW-846 Method 6010B. Samples submitted for dissolved metals analysis were filtered in the field using a 0.45 micrometers (µm) in-line filter attached to the tubing's discharge end. All samples were stored in ice-packed sample coolers until shipment to Accutest Laboratories in Orlando, Florida.

3.3 Groundwater Monitoring Well Sampling

Innovar was unable to determine the monitoring well IDs at the time of the September 2010 field investigation. Therefore, Innovar assigned generic IDs MW-A through MW-F until the correct IDs could be determined. Innovar located the correct well IDs listed in figures provided in the Hydrogeologic Investigation Report (BAI, 1992) and was able to verify the well IDs and well locations during the November 2010 field investigation. The groundwater sample submitted as MW-D was collected from monitoring well MW-6. The sample is referenced as MW-6/MW-D in Table 4-3 and on figures to eliminate confusion.

An oil/water interface probe was used to measure water levels in the following monitoring wells located in Area A: MW-6, MW-7, MW-14, MW-15, MW-16, and MW-17. Monitoring wells MW-15 and MW-17 were dry and only 0.45 feet of water was present in MW-7. Two monitoring wells located on the north side of West Tucumcari Blvd., across from Area A, were also dry. The water columns measured in monitoring wells MW-6, MW-14, and MW-16 were 1.57, 1.47, and 0.78 feet, respectively. Free product was detected in monitoring wells MW-7 (0.03 feet), MW-14 (0.13 feet), and MW-16 (1.08 feet).

All wells were purged dry using a disposable bailer. Monitoring wells MW-7, MW-14, and MW-16 were not sampled due to either insufficient recharge or the return of light non-aqueous phase liquids (LNAPL) during groundwater recharge, following purging. One groundwater sample was collected from monitoring well MW-6 using a disposable bailer and submitted for the following analysis: VOCs by SW-846 Method 8260B, PAHs by SW-846 Method 8310, and TPH (GRO/DRO/ORO) by SW-846 Method 8015B. There was insufficient groundwater sample volume to collect a sample for dissolved metals analysis. The groundwater sample was placed in an ice-packed insulated cooler and shipped overnight to Accutest Laboratories located in Orlando, Florida. Groundwater sampling logs for each well are presented in Appendix B.

3.4 Verifying Quantity of Tank Contents

The site presently contains a variety of ASTs and vaulted USTs for fuels and waste oils. Area A consists of a concrete vault with four 10,000 gallon gasoline USTs, two 860,000 gallon diesel ASTs, and one approximate 4,000 to 5,000 gallon #3 diesel AST. The Phase I ESA (USACE, 2009) identifies the latter tank (#3 diesel AST) as a 2,000 gallon capacity tank. However, it appears much larger (approximately 4,000 to 5,000 gallon capacity). Area B contains two approximate 2,000 gallon ASTs located on the east side of the warehouse. The Phase I ESA identifies the 2,000 gallon ASTs as waste oil tanks, however both ASTs are labeled as used diesel fuel. Tank locations are illustrated on Figure 2-2.

Field personnel verified the approximate depth or quantity of any liquids present in the existing ASTs and USTs at the site on September 7 and 8, 2010. An oil/water interface probe was lowered into the tanks through a fill or dispenser port to measure the depth to liquids. The contents of all but one tank was measured in this manner. The access hatch located on top of the approximate 5,000 gallon #3 diesel AST located in Area A could

not be opened safely. Based on observations made regarding the AST's rusted sides and top, the height of the tank plus the pitch on top of the tank, and its location immediately adjacent to a barbed-wire fence, both the Site Safety and Health Officer and the USACE representative deemed it unsafe to access the port on top of the AST to attempt to gauge the depth of the AST contents. Instead, a heat test was conducted on the side of the tank in the afternoon, which indicated that approximately 2.2 feet of liquid is present inside the AST. The fluid level in the AST was determined by noting the change in warm to cool feel while running your hand along the side of the tank. The change in temperature was felt approximately 2.2 feet above the tank's bottom, thus indicating the estimated liquid level.

Each of the four USTs located inside the concrete vault in Area A has a 10,000 gallon capacity and is approximately 27 feet in length and 8 feet in diameter. For referencing purposes, the four tanks are identified as USTs #1 through #4 from east to west. The volume of gasoline estimated for each of the four USTs is provided in Table 3-4-1 and is based on the approximate dimensions of the USTs and the depth of gasoline measured inside each UST.

Table 3-4-1 Summary of Area A UST Content Volumes

UST ID	Contents	Depth of gasoline	Approximate volume of gasoline
UST #1 (furthest east)	unleaded mid-grade gasoline	0.22 feet	78 gallons
UST #2	unleaded regular gasoline	0.7 feet	434 gallons
UST #3	unleaded regular gasoline	0.73 feet	462 gallons
UST #4 (furthest west)	unleaded premium gasoline	0.89	618 gallons

The concrete vault enclosing the four USTs had 1.33 feet of standing water inside, but no product was detected with the oil/water interface probe.

Both LNAPL (diesel) and water were detected with the oil/water interface probe in the two 860,000 gallon diesel ASTs. The depth of diesel measured in the southern 860,000 gallon AST was 0.15 feet and a similar amount of diesel (not recorded) was detected in the northern 860,000 gallon AST. Approximately 0.94 and 0.26 feet of liquid are present in the northern and southern 860,000 gallon ASTs, respectively. Based on a tank radius of approximately 29.6 feet (determined by using 186 feet as the approximate circumference of the tank, which was measured in the field), the quantity of liquids calculated for both tanks were approximately 19,328 gallons (northern AST) and 5,346 gallons (southern AST).

The two 2,000 ASTs located near the northeast corner of the Warehouse in Area B contain 3.03 feet(north tank) and 3.52 feet (south tank) of used diesel fuel. Using the tank's radius of 3.5 feet, the quantity of fuel in each AST was calculated. There are

approximately 871 gallons of used diesel fuel in the northern 2,000 gallon AST and approximately 1,015 gallons of used diesel fuel in the southern 2,000 gallon AST.

No personnel entered any of the tanks and thus, no confined space permits were required.

3.5 Asbestos-Containing Material Testing

An asbestos survey was conducted in two rooms of the abandoned residence located in Area C by Mr. Brett Engel, an Asbestos Hazard Emergency Response Act (AHERA)-accredited asbestos inspector with Acme Environmental, Inc. (Acme), Albuquerque, New Mexico. The survey consisted of a visual inspection of building materials for suspect ACBM and the collection of bulk samples for laboratory analysis by polarized light microscopy (PLM). Acme performed asbestos bulk sampling in compliance with the established 40 CFR 763 sampling protocol and requirements set forth in OSHA's 29 CFR 1926.1101. Bulk samples of homogeneous materials, including plaster, linoleum, roofing materials, window caulking, and piping insulation, were submitted to Crisp Analytical Laboratories in Carrollton, Texas for analysis. The sample location, material type/description, and quantity of all potential ACBM in association with the structure were recorded during the survey. Details of the asbestos survey, analytical method, and laboratory results are presented in the report prepared by Acme and provided in Appendix C.

3.6 Lead-Based Paint Testing

Potential LBP samples were collected from two rooms of the abandoned residence located in Area C by Mr. Brett Engel, an EPA-certified LBP Risk Assessor with Acme. The lead content of paint was determined by x-ray fluorescence (XRF) and consistent with U.S. Department of Housing and Urban Development (HUD) and EPA sampling protocols. Details of the LBP survey, including sample locations, paint condition, and lead concentrations, are presented in the report prepared by Acme and provided in Appendix C.

3.7 IDW Management and Disposal

Investigation Derived Waste (IDW) generated during the field investigation was contained in 55-gallon drums, labeled appropriately and stored in a staging area at the site. IDW consisted of soil cuttings from direct-push and HSA drilling activities, decontamination water, and purge water associated with groundwater sampling activities. One composite sample was collected from the soil and water IDW and analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) for waste characterization. Miscellaneous disposable personal protective equipment (PPE), disposable sampling equipment, and tubing used during drilling and sample collection were collected in plastic bags and disposed of as municipal waste.

4.0 ANALYTICAL RESULTS

Analytical results for soil, groundwater, and IDW are summarized in the following sections and in Tables 4-1 through 4-3. The laboratory analytical reports and the complete analytical data packages are provided on the attached compact disk (CD) as Appendix F. Results for the potential LBP and ACBM samples collected by Acme are presented in Appendix C.

A summary of the data quality review completed for this project is provided in Appendix E. Analytical data that required qualification and the overall data usability are addressed in Attachment 1 of Appendix E. Data qualifiers were assigned to results as appropriate and are shown in the analytical results summary tables provided as Tables 4-1 through 4-3. Results of the quality control samples collected for this project (e.g., duplicate samples, trip blanks, and equipment blanks) are also discussed in Appendix E.

Analytical results were compared to all applicable state and federal regulations and standards. Specifically, soil samples were compared to the NMED Soil Screening Levels (SSLs) (updated December 2009) as developed by the NMED Hazardous Waste Bureau (HWB) and the Ground Water Quality Bureau Voluntary Remediation Program and presented in Table A-1 of the NMED Technical Background Document for Development of SSLs (NMED, 2009). The SSLs for the following exposure pathways and/or scenarios were used for comparison to analytical results: residential, industrial/occupational, and construction worker exposure; and migration to groundwater pathway using a dilution attenuation factor (DAF) of 1 and 20. EPA currently has no regulatory standards for TPH; therefore, TPH results were compared to the NMED TPH Screening Guidelines dated October 2006 for unknown oil, the most conservative standard listed in Table 2a of the guidelines. The NMED TPH screening guidelines list soil standards for residential and industrial direct exposure, and are based on use of groundwater as a potable water supply. In the event that New Mexico did not have a screening value listed in the aforementioned risk tables, the USEPA Regional Screening Levels (RSLs) (May 2010) were used to evaluate data. Lastly, groundwater results were compared to the New Mexico Water Quality Control Commission (WQCC) standards for groundwater [listed under 20.6.2.3103 New Mexico Administrative Code (NMAC)] and Federal Maximum Contaminant Levels (MCLs) in drinking water. State standards and screening levels are provided in tables in Appendix D.

4.1 Surface Soil Sample Results

TPH

TPH results (GRO+DRO+ORO) were compared to the NMED TPH (unknown oil) screening guideline for residential and industrial direct exposure, which is 200 milligrams per kilogram (mg/kg) for both exposure scenarios. Of the ten samples analyzed for TPH, six samples (SS02 and SS06 through SS10) reported TPH concentrations above the state screening guideline of 200 mg/kg for unknown oil. The greatest TPH concentrations were reported for samples SS02 (18,690 mg/kg), SS06 (10,800 mg/kg) and SS10 (19,705 mg/kg). SS02 was collected from stained oil present in an area with empty discarded containers labeled as heavy duty motor oil, and SS06 and SS10 were collected from stained soil near the two 860,000 gallon diesel ASTs. The remaining TPH results that exceeded the state screening guideline for unknown oil were between 266.5 and 649 mg/kg.

Metals

Arsenic was the only metal detected above the state residential SSLs in surface soil samples. Arsenic was detected above the residential SSL (3.9 mg/kg) in surface soil

sample SS10 at 6.0 mg/kg. Manganese was detected at a concentration above the state construction worker SSL (463 mg/kg) in surface soil samples SS08 (495 mg/kg) and SS09 (465 mg/kg). Cobalt was detected above the EPA RSL - Risk Based SSL (0.49 mg/kg) in all ten soil samples at concentrations ranging from 2.5 to 4.1 mg/kg; there are no state SSLs available for cobalt. Two metals (arsenic and manganese) were detected above the SSLs for a migration to groundwater pathway using both a DAF of 1 and 20, and six metals were detected above the SSLs with a DAF of 1. Metal results that exceed the aforementioned SSLs are highlighted in Table 4-1.

4.2 Soil Boring Sample Results

The following subsections discuss the results for soil and groundwater samples collected from soil boring locations (see Figure 3-1). A summary of soil and groundwater analytical results are also presented in Tables 4-2 and 4-3, respectively.

4.2.1 Soil

VOCs

Seven VOCs were detected above the method detection limit (MDL) in soil samples collected from the 19 boring locations. Of the seven VOCs detected, the following six compounds were detected above the reporting limit (RL): benzene, ethylbenzene, methylene chloride, naphthalene, 1,1,2,2-tetrachloroethane, and total xylenes. Methylene chloride, a common laboratory contaminant, was also detected in the method blank and the appropriate sample results were flagged by the laboratory as having concentrations similar to the method blank concentration.

Naphthalene was detected above the state residential SSL [45,000 micrograms per kilogram (µg/kg] in soil sample SB13-S-6.5/8 (64,200 µg/kg), which was collected from boring SB13 located near the diesel fueling islands in Area B. No other VOCs were detected at concentrations above the state residential SSLs, and none of the VOCs were detected above the industrial/occupational and construction worker SSLs. Up to five VOCs were detected above SSLs for a migration to groundwater pathway using both a DAF of 1 and 20 in ten samples, and benzene was only detected above the SSL using a DAF of 1 in one sample. VOC results that exceed the aforementioned SSLs are highlighted in Table 4-2.

PAHs

PAHs were detected in six soil samples collected from borings SB01, SB12, and SB13. Results for 1-methylnaphthalene and 2-methylnaphthalene were reported above the EPA RSL - Risk Based SSL for all six soil samples collected from SB01, SB12, and SB13. Results for 1-methylnaphthalene also exceeded the EPA RSL for Residential Soil in both samples collected from SB12, and in only one of the two samples collected from each of the SB01 and SB13 borings. Naphthalene was detected above the SSLs with a DAF of both 1 and 20 in all six samples collected from SB01, SB12, and SB13. None of the PAHs were detected above state SSLs for residential, industrial/occupational, or construction exposure scenarios.

TPH

TPH was detected in 20 of the 38 subsurface soil samples analyzed for TPH at concentrations (GRO+DRO+ORO) ranging between 3.63 J (estimated concentration) and 7,235 mg/kg. TPH results were compared to the NMED TPH (unknown oil) screening guideline for residential and industrial direct exposure, which is 200 mg/kg for both exposure scenarios. A total of seven samples reported TPH concentrations above the state screening guideline of 200 mg/kg for unknown oil. TPH only slightly exceeded the

screening guideline in soil samples SB13-S-15/16 (257.4 mg/kg) and SB19-S-12/16 (218.57 mg/kg). TPH concentrations were greatest in both SB01 samples (5,077 and 7,235 mg/kg), followed by the shallow sample from SB13 (4,670 mg/kg) and both SB12 samples (3,044 and 4,085 mg/kg).

Metals

Arsenic was the only metal detected above the state residential SSLs in subsurface soil samples. Arsenic was detected above the residential SSL (3.9 mg/kg) in soil sample SB17-S-5/7 at 5.4 mg/kg. Manganese was detected above the state construction worker SSL (463 mg/kg) in five soil samples (one from SB06, SB08, SB15, SB17, and SB19) at concentrations ranging from 468 to 615 mg/kg. Cobalt was detected above the EPA RSL - Risk Based SSL (0.49 mg/kg) in all ten soil samples at concentrations ranging from 0.50 J to 7.7 mg/kg; there are no state SSLs available for cobalt. Two metals (arsenic and manganese) were detected above the SSLs for a migration to groundwater pathway using both a DAF of 1 and 20, and six metals were only detected above the SSLs with a DAF of 1. Metal results that exceed the aforementioned SSLs are highlighted in Table 4-2.

4.2.2 Groundwater

VOCs

Nine VOCs were detected above the RL in groundwater sampled from soil borings. Benzene exceeded both the New Mexico WQCC standard [10 micrograms per Liter (µg/L)] and Federal MCL in drinking water (5 µg/L) in groundwater sampled from SB01 (10.7 µg/L), SB12 (25.2 µg/L), and SB17 (1,060 µg/L). The 1,2-dichloroethane result for SB14 (6.3 µg/L) exceeded the Federal MCL in drinking water (5 µg/L). Naphthalene was detected above the state tap water screening level for domestic use (1.43 µg/L) in groundwater sampled from soil borings SB01, SB12, SB13, and SB14 at concentrations ranging from 1.9 J to 202 µg/L; there is no available New Mexico WQCC standard or Federal MCL for naphthalene.

PAHs

Up to five PAHs were detected above the RL in groundwater sampled from 5 of the 19 soil borings. The New Mexico WQCC groundwater standard for PAHs (30 µg/L), which consists of naphthalene plus monomethylnaphthalenes, was exceeded by PAH results for groundwater sampled from soil borings SB01, SB12, SB13, and SB17 (see Table 4-3). Neither fluorene or phenanthrene results exceeded the state tap water screening level for domestic use; there are no New Mexico WQCC standards or Federal MCLs available for either of these two compounds.

TPH

TPH was detected in groundwater sampled from 12 of the 19 soil borings. TPH results (GRO+DRO+ORO) for eleven of the boring locations exceeded the state TPH (unknown oil) screening guideline of 0.2 milligrams per Liter (mg/L) for potable groundwater. The greatest TPH result was reported for SB01 at 11.09 mg/L, followed by SB17 at 4.02 mg/L; the remaining TPH results were less than 2 mg/L.

Dissolved Metals

Dissolved manganese results were detected above the New Mexico WQCC standard (200 µg/L) in groundwater sampled from eight borings at concentrations raging from 232 to 643 µg/L. Barium exceeded both the New Mexico WQCC standard (1,000 µg/L) and Federal MCL in drinking water (2,000 µg/L) in groundwater sampled from SB01 (3,750 µg/L), SB12 (2,580 µg/L), and SB17 (7,230 µg/L). Dissolved thallium exceeded the Federal

MCL in drinking water (2 µg/L) in groundwater sampled from SB01 at an estimated concentration of 2.2 J µg/L.

4.3 Groundwater Monitoring Well Sample Results

Only one groundwater monitoring well (MW-6) was sampled during the Phase II ESA. The analytical results for MW-6 (also identified as MW-D in laboratory reports) are summarized below and presented in Table 4-3.

VOCs

Acetone, benzene, ethylbenzene, and methyl ethyl ketone were detected above the laboratory RL in groundwater sampled from MW-6. Benzene exceeded the Federal MCL in drinking water (5 µg/L) at a concentration of 6.6 µg/L. In addition, naphthalene was detected at an estimated concentration (2.3 J µg/L) above the state tap water screening level for domestic use (1.43 µg/L); there is no New Mexico WQCC standard or Federal MCL for naphthalene. No other VOCs were reported at concentrations exceeding state or federal standards, or screening levels.

PAHs

Two PAHs (1-methylnaphthalene and phenanthrene) were detected above the RL in groundwater sampled from MW-6. The New Mexico WQCC groundwater standard for PAHs (30 µg/L), which consists of naphthalene plus monomethylnaphthalenes, was exceeded by PAH results (1-methylnaphthalene result of 146 µg/L and 2-methylnaphthalene estimated result of 14.6 J µg/L for a total of 160.6 µg/L; naphthalene was non-detect) for MW-6. Phenanthrene was detected below the state tap water screening level for domestic use; there is no New Mexico WQCC standard or Federal MCL available for phenanthrene.

TPH

GRO and DRO were detected in groundwater sampled from MW-6 at 0.438 J mg/L and 151 mg/L, respectively; ORO was not detected. The TPH (GRO+DRO+ORO) result for MW-6 (151.4 mg/L) exceeded the state TPH (unknown oil) screening guideline of 0.2 mg/L for potable groundwater.

4.4 ACM Sample Results

Of the materials sampled during the asbestos survey, the following were identified as asbestos containing: thermal system insulation (elbows and fittings), window caulking (20 linear feet), linoleum (approximately 140 square feet), and plaster walls (approximately 100 square feet). The laboratory analytical report is provided in Appendix C along with the asbestos inspection report prepared by Acme.

4.5 LBP Sample Results

Findings of the LBP survey indicate that the residence does not have lead-based painted materials. However, lead containing paint (paint with lead but not considered lead-based painted) was found on materials throughout the building. LBP is defined by HUD and EPA as paint containing lead in amounts greater than or equal to 1.0 mg/cm^2 when analyzed by XRF. The LBP inspection report prepared by Acme and lead concentrations reported during the survey are presented in Appendix C.

4.6 IDW

All detections were reported as estimated concentrations below the RL. None of the TCLP results exceed the TCLP regulatory limits. Therefore, IDW is not considered a hazardous waste.

5.0 SUMMARY AND CONCLUSIONS

5.1 Summary of Findings

A brief summary of the findings from the field investigation conducted during this Phase II ESA are presented below.

5.1.1 Soil

Both contaminated surface and subsurface soils were detected at the site. Six surface soil samples (SS02 and SS06 through SS10) reported TPH concentrations above the state screening guideline of 200 mg/kg for unknown oil. TPH results were significantly greater than 200 mg/kg in surface soil samples collected from stained soil present in an area with empty discarded containers labeled as heavy duty motor oil (18,690 mg/kg in sample SS02) and from stained soil near the two 860,000 gallon diesel ASTs (10,800 and 19,705 mg/kg in samples SS06 and SS10, respectively). Surface soil sample SS10 also reported arsenic (6.0 mg/kg) above the state residential SSL (3.9 mg/kg). Manganese was detected at a concentration above the state construction worker SSL (463 mg/kg) in surface soil samples SS08 (495 mg/kg) and SS09 (465 mg/kg), located in the northern portion of Area B.

Residential SSLs were exceeded by naphthalene detected in soil sampled from 6.5 to 8 feet bgs in SB13 (located near the diesel fueling islands in Area B) and by arsenic detected in soil sampled from 5 to 7 feet bgs in SB17 (located near the four gasoline USTs in Area A). Manganese was detected above the state construction worker SSL in soil samples collected from five borings, three of which were located at the site and two were north of the site on the other side of West Tucumcari Blvd. Results for 1-methylnaphthalene exceeded the EPA RSL for Residential Soil in samples collected from borings SB01, SB12, and SB13. Seven of the 38 subsurface soil samples reported TPH concentrations above the state screening guideline of 200 mg/kg for unknown oil. TPH concentrations were significantly higher in soil sampled from borings SB01, SB12, and SB13 at concentrations ranging from 3,044 to 7,235 mg/kg.

The majority of subsurface soil contamination was encountered in the central area of the site (Area B). Specifically, contaminated soil is present at the following locations:

1) SB01, near the Area B storm water drainage grate and in an area of depression relative the surrounding site,

2) SB12, adjacent to the diesel supply pipeline that runs from the 860,000 gallon ASTs to the diesel fueling islands in Area B, and

3) SB13, near the diesel fueling islands in Area B.

Signs of contamination, observed while logging soil at these three borings, included hydrocarbon odors, staining, and elevated headspace readings (greater than a 100 ppm). Based on field observations, SB01 appeared to be the most contaminated location with fuel-impacted soils noted from approximately 3 feet bgs to total depth of boring (25 feet bgs). Strong hydrodocarbon odors, black staining, and fuel soaked soils with a sheen were observed in cuttings and samples recovered from SB01. Soil contamination was also observed from near surface (or a few feet bgs) to depth of groundwater at SB12 and SB13, although the degree of contamination seemed to significantly decrease with depth at SB13.

5.1.2 Groundwater

Benzene, PAHs consisting of naphthalene plus monomethylnaphthalenes, and two dissolved metals (manganese and barium) were detected above New Mexico WQCC standards in groundwater sampled from soil borings. PAH concentrations also exceeded the WQCC standard in groundwater sampled from MW-6. Benzene, 1,2-dichloroethane, barium, and thallium were detected above Federal MCLs in drinking water for groundwater sampled from soil borings. Benzene was the only analyte detected above the Federal MCL in groundwater sampled from MW-6, however it should be noted that there was insufficient sample volume at MW-6 for metals analysis.

Groundwater samples with VOC, PAH, or metals concentrations above state and/or federal standards were mostly associated with SB01, SB12, SB17, and MW-6 (see Figure 4-2). TPH contamination, however, is widespread with detections reported above 0.2 mg/L for the western, central, and southeastern portions of the site (Areas A, B, and C, respectively), as well as offsite along the north side of West Tucumcari Blvd. TPH (GRO+DRO+ORO) was significantly higher in groundwater sampled from MW-6 (151 mg/L), than groundwater samples collected from the soil borings (with a maximum TPH concentration of 11 mg/L in SB01). Between 0.03 and 1.08 feet of free product was detected in three of the monitoring wells in Area A.

5.1.3 ASTs and USTs

Liquids (diesel, gasoline, used diesel fuel, and/or water) remain in the existing ASTs and USTs present at the site in Areas A and B. The depth of liquid was recorded for each tank and the quantity of tank contents were estimated as presented in Section 3.4. A total of approximately 29,000 gallons of liquids remain in tanks at the site.

5.1.4 Abandoned Site Residence

The following materials sampled from the abandoned residence during the asbestos survey were identified as asbestos containing: thermal system insulation, window caulking, linoleum, and plaster on walls. Findings of the LBP survey indicate materials with lead containing paint (but not lead-based paint) present throughout the building.

5.2 Conclusions and Recommendations

5.2.1 Conclusions

Groundwater contamination still exists in the portion of Area A that was once being remediated through the operation of a SVVS, and LNAPL is still present in monitoring wells. However, soil and groundwater contamination is not just limited to the area the SVVS targeted during previous site investigations. There are additional areas of soil and groundwater contamination present at the site that have not been investigated prior to this Phase II ESA. Some of these areas correspond to historical accounts of fuel spills and leaking USTs.

Although the majority of the contamination is present in the central portion of the site at locations in close proximity to tanks, fuel piping, and fuel dispensing islands, TPH contamination in groundwater is widespread with detections above the most conservative value of the NMED TPH Screening Guidelines (for unknown oil) from one end of the site to the other (west to east). TPH has also migrated offsite evident by TPH detected in groundwater sampled from two borings cross-gradient and downgradient of the site, on the other side of West Tucumcari Blvd. TPH was also detected offsite in a surface soil sample (527 mg/kg) collected from a location where water is discharged

from the culvert that runs underneath West Tucumcari Blvd. from the storm water drainage grate located in Area B of the site.

Lead containing painted materials are present at the abandoned residence that was inspected and pose a potential lead exposure hazard to construction workers. Some of the materials sampled from the residence were identified as asbestos containing and also pose a potential hazard to construction workers.

5.2.2 Recommendations

Based on the findings of this Phase II ESA, Innovar recommends the following:

- Additional site characterization is needed to determine the extent of petroleum contamination present at the site.
- Contaminated soil will need to be excavated or remediated prior to any future development activities for the site.
- Passive and/or active fuel recovery activities should be performed, as necessary, at the monitoring wells in Area A. LNAPL may be removed from the site wells via passive fuel absorbent socks, skimmers (passive fuel recovery canisters), and/or by hand bailing.
- The contents of the ASTs and USTs present should be disposed of prior to development of the site. Underground fuel lines, which may be a potential ongoing source of contamination, should also be drained and removed.
- All trash and debris (especially littered area east of the repair shop in Area C), which could pose a physical hazard and potential for environmental contamination, should be removed from the site. The abandoned fuel tank truck in Area A and the blue drums (labeled as Chevron Ultra-Duty Grease) in Area B should also be removed.
- Construction workers should be notified of hazards associated with potential exposure to lead containing paint materials and asbestos containing materials during any demolition activities performed at the abandoned residence and comply with elements of applicable OSHA standards. Lead containing paint materials should be segregated from other construction debris and evaluated for hazardous waste toxicity prior to disposal. ACBM should be disposed of at a landfill that is certified to receive asbestos.

6.0 REFERENCES

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Tables

Table 4-1. Summary of Surface Soil Analytical Results

Sample ID:	SS01	SS02	SS03	SS04	SS05	SS06	SS07	SS17*	SS08	SS09	SS10
Date Sampled:	9/7/2010	9/7/2010	9/8/2010	9/8/2010	9/8/2010	9/8/2010	9/8/2010	9/8/2010	9/8/2010	11/15/2010	11/15/2010
Sample Depth (feet bgs):	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
TPH by SW846 8015C (mg/kg)											
GRO (C6-C10)	2.4 U	1.9 U	2.2 U	2.6 U	3.5 U	2.2 U	3.1 U	3.2 U	2.6 U	2.1 U	**345**
DRO (C10-C28)	**63.3**	**5,890**	**37 J**	**54.5**	**8.54 J**	**10,800**	**181 J**	**202**	**59.4 J**	**46.5 J**	**17,300**
ORO (>C28-C40)	**80.5**	**12,800**	**118**	**138**	**36.3**	2,800 U	**346**	**447**	**287**	**220**	**2,060 J**
TPH (total)	**143.8**	**18,690**	**155**	**192.5**	**44.84**	**10,800**	**527**	**649**	**346.4**	**266.5**	**19,705**
Metals by SW846 6010B (mg/kg)											
Aluminum	**5,100**	**3,850**	**3,410**	**4,350**	**5,950**	**5,510**	**3,300**	**2,630**	**3,200**	**2,350**	**3,850**
Antimony	0.091 UJ	0.086 U	0.12 J	0.073 U	0.11 U	0.1 U	**0.71 J**	**0.19 J**	**0.25 J**	**0.16 J**	0.075 U
Arsenic	**1.8 J**	**2.4**	**3.7**	**2.1**	**1.8**	**3.2**	**2.7**	**3.0**	**3.8**	**2.8**	**6.0**
Barium	**326 J**	**503**	**484**	**335**	**197**	**749**	**608**	**647**	**865**	**913**	**258**
Beryllium	**0.26**	**0.19 J**	**0.21**	**0.21**	**0.29**	**0.29**	**0.19 J**	**0.16 J**	**0.20**	**0.15 J**	**0.26**
Cadmium	**0.2 J**	**0.23**	**0.29**	**0.43**	**1.9**	**0.78**	**0.38**	**0.35**	**0.39**	**0.28**	**0.28**
Calcium	**21,300**	**21,300**	**47,400**	**66,000**	**24,800**	**36,000**	**30,100**	**34,700**	**33,400**	**53,700**	**47,600**
Chromium	**4.1**	**3.5**	**6.4**	**4.7**	**4.6**	**9.5**	**9.5**	**6.5**	**7.4**	**4.6**	**4.4**
Cobalt	**2.6**	**2.5**	**3.7**	**2.7**	**2.9**	**4.1**	**2.8 J**	**3.1**	**3.5**	**2.8**	**3.2**
Copper	**6.9**	**6.3**	**21.2**	**10.2**	**8.6**	**9.6**	**53.1**	**15.7**	**14.2**	**19.1**	**18.8**
Iron	**5,000**	**5,940**	**7,510**	**4,310**	**5,220**	**8,230**	**6,780**	**6,640**	**6,330**	**5,090**	**8,730**
Lead	**9.6**	**11.1**	**14**	**14.2**	**10.5**	**10.9**	**17**	**19.1**	**17.9**	**12.9**	**13.4**
Magnesium	**2350 J**	**1,680**	**2,180**	**2,270**	**2,260**	**2,330**	**1,980**	**1,750**	**1,970**	**2,340**	**2,510**
Manganese	**111**	**176**	**421**	**272**	**149**	**307**	**253**	**274**	**495**	**465**	**224**
Nickel	**5.4**	**4.8**	**9.9**	**5.6**	**8.0**	**8.0**	**6.5**	**7.4**	**9.3**	**5.8**	**5.5**
Potassium	**1,310**	**1,040**	**783**	**1,210**	**1,680**	**1,060**	**686**	**550**	**873**	**540**	**922**
Selenium	0.18 UJ	**0.22 J**	0.64 U	0.58 U	0.21 U	0.4 U	**0.4 J**	**0.36 J**	0.31 U	0.62 U	**0.75 J**
Silver	0.046 U	0.043 U	0.04 U	**0.11 J**	0.053 U	0.05 U	0.067 U	0.042 U	0.039 U	0.039 U	0.037 U
Sodium	**59.5 J**	**73.9 J**	**95.8 J**	**40.1 J**	**39.7 J**	38 U	**174 J**	**167 J**	**104 J**	**122 J**	41 U
Thallium	**0.28 J**	**0.16 J**	**0.22 J**	**0.073 J**	0.11 U	**0.38 J**	**0.42 J**	0.085 U	**0.22 J**	0.10 U	**0.24 J**
Vanadium	**10.5 J**	**9.8**	**15.3**	**9.0**	**10.1**	**14.6**	**12.6**	**10.3**	**10.5**	**9.5**	**26.2**
Zinc	**28.7**	**321**	**30.7**	**57.6**	**73.1**	**30.9**	**123**	**124**	**226**	**154**	**148**
Wet Chemistry by Method SM19 2540B M											
Solids (%)	96.8	96.7	94.3	98.2	95.2	89	73.7	75.1	99.5	85.9	91.8

*Note: SS17 is a duplicate sample of SS07

bgs = below ground surface

DRO = diesel range organics

GRO = gasoline range organics

mg/kg = milligrams per kilogram

ORO = oil range organics

TPH = total petroleum hydrocarbons

highlighted value only exceeds the NMED soil screening level (SSL) for the migration to groundwater pathway using a dilution attenuation factor (DAF) of 1.

highlighted value exceeds the NMED SSLs for the migration to groundwater pathway using a DAF of 1 and a DAF of 20.

highlighted value exceeds the NMED SSL for Residential exposure and the SSLs for a DAF of 1 and a DAF of 20.

highlighted value exceeds the NMED SSL for Construction Worker exposure and the SSLs for a DAF of 1 and a DAF of 20.

highlighted value exceeds EPA Regional Screening Level - Risk Based SSL (USEPA May 2010)

highlighted value exceeds NMED TPH screening guideline (unknown oil) of 200 mg/kg for residential and industrial direct exposure.

Data Qualifiers:

J = estimated concentration; reported value is less than the reporting limit and greater than the method detection limit

U = non-detect result; number preceding "U" qualifier is the method detection limit

UJ = estimated as a non-detect

Table 4-2. Summary of Subsurface Soil Analytical Results

Sample ID:	SB01-S-05/10	SB01-S-12/15.5	SB02-S-4/7.3	SB02-S-15/16	SB03-S-4/7	SB03-S-15/16	SB04-S-4/7	SB04-S-10/15	SB05-S-4/7	SB05-S-15/17.5	SB06-S-4/9	SB06-S-10/15*	SB06-S-10/12	SB07-S-5/9	SB07-S-20/24	SB08-S-5/8	SB08-S-22/24	SB09-S-5/8	SB09-S-30/35*
Date Sampled:	9/6/2010	9/6/2010	9/6/2010	11/11/2010	9/6/2010	40496	9/6/2010	11/11/2010	9/6/2010	11/8/2010	9/7/2010	9/7/2010	11/13/2010	11/8/2010	11/9/2010	11/9/2010	11/9/2010	11/10/2010	11/10/2010
Sample Depth (feet bgs):	5-10	12-15.5	4-7.3	15-16	4-7	15-16	4-7	10-15	4-7	15-17.5	4-9	4-9	10-12	5-9	20-24	5-8	22-24	5-8	5-8
VOCs by SW846 8260B (ug/kg)																			
Benzene	53 U	41 U	46 U	1.1 U	43 U	1.1 U	46 U	1.1 U	49 U	**8.6**	1.2 UJ	0.96 UJ	1.8 U	1.3 U	1.1 U	1.1 U	1.2 U	1.4 U	1.2 UJ
Ethylbenzene	**616**	**3,630**	51 U	0.73 U	47 U	0.76 U	51 U	0.74 U	54 U	0.8 U	1.3 UJ	1.1 UJ	1.2 U	0.87 U	0.75 U	0.72 U	0.83 U	0.93 U	0.77 UJ
Methylene chloride	**318 J**	**1,310 J**	**302 JBQ**	3.4 U	**383 JBQ**	3.5 U	**282 JBQ**	3.4 U	**288 JBQ**	**4.9 JB**	6.0 UJ	4.8 UJ	5.5 UQ	4.0 U	3.4 U	3.3 UQ	3.8 UQ	**6.8 JBQ**	**13.0 BQ**
Naphthalene	**5,120**	**12,900**	92 U	1.5 U	86 U	1.5 U	92 U	1.5 U	98 U	1.6 U	2.4 UJ	1.9 UJ	2.4 U	1.7 U	1.5 U	1.4 U	1.7 U	1.9 UQ	1.5 UJ
1,1,2,2-Tetrachloroethane	68 U	54 U	60 U	0.88 U	56 U	0.92 U	60 U	0.89 U	64 UQ	0.95 U	1.6 UJ	1.2 UJ	1.4 U	1.0 U	0.9 U	0.87 U	0.99 U	1.1 U	0.93 UJ
Toluene	63 U	50 U	55 U	0.88 U	52 U	0.92 U	55 U	0.89 U	59 U	**1.6 J**	1.4 UJ	1.1 UJ	1.4 U	1.0 U	0.9 U	0.87 U	0.99 U	1.1 U	0.93 UJ
Xylene (total)	120 U	**4,870**	100 U	2.3 U	95 U	2.4 U	100 U	2.4 U	110 U	**5.4 J**	2.6 UJ	2.1 UJ	3.8 U	2.8 U	2.4 U	2.3 U	2.6 U	3.0 U	2.5 UJ
PAHs by SW846 8310 (ug/kg)																			
Acenaphthene	930 U	1,700 U	180 U	150 U	180 U	160 U	180 U	150 U	180 U	140 U	180 U	180 U	170 U	140 U	150 U	140 U	150 U	140 U	140 U
Fluorene	**3,130**	**4,910**	180 U	150 U	180 U	160 U	180 U	150 U	180 U	140 U	180 U	180 U	170 U	140 U	150 U	140 U	150 U	140 U	140 U
Naphthalene	**3,490**	**6,630**	180 U	150 U	180 U	160 U	180 U	150	180	140 U	180 U	180 U	170 U	140 U	150 U	140 U	150 U	140 U	140 U
1-Methylnaphthalene	**13,700**	**22,600**	92 U	76 U	91 U	81 U	89 U	74 U	88 U	70 U	92U	91 U	84 U	70 U	74 U	69 U	74 U	70 U	70 U
2-Methylnaphthalene	**18,800**	**31,900**	92 U	76 U	91 U	81 U	89 U	74 U	88 U	70 U	92 U	91 U	84 U	70 U	74 U	69 U	74 U	70 U	70 U
Phenanthrene	**11,500**	**20,000**	180 U	150 U	180 U	160 U	180 U	150 U	180 U	140 U	180 U	180 U	170 U	140 U	150 U	140 U	150 U	140 U	140 U
Pyrene	470 U	870 U	92 U	76 U	91 U	81 U	89 U	74 U	88 U	70 U	92 U	91 U	84 U	70 U	74 U	69 U	74 U	70 U	70 U
TPH by SW846 8015 M (mg/kg)																			
GRO (C6-C10)	**247 J**	**305**	2.3 U	2.1 U	2.1 U	2.4 U	2.3	2.0 U	2.4 U	2.6 U	2.6 U	2.7 U	3.8 U	2.2 U	2.1 U	2.0 U	2.4 U	2.3 U	2.1 U
DRO (C10-C28)	**4,830**	**6,930**	5.7 U	3.8 U	5.5 U	4.1 U	5.2 U	3.7 U	5.3 U	**3.63 J**	5.6 U	5.5 U	**5.88 J**	3.5 U	3.7 U	**4.79 J**	3.7 U	**19.5**	**19.2**
ORO (>C28-C40)	550 U	530 U	5.7 U	3.8 U	5.5 U	4.1 U	5.2 U	3.7 U	5.3 U	3.5 U	5.6 U	5.5 U	**11.5**	3.5 U	3.7 U	**6.61 J**	3.7 U	**10.4 J**	**15.8 J**
TPH (total)	**5,077**	**7,235**	--	--	--	--	--	--	--	**3.63 J**	--	--	**17.38**	--	--	**11.4**	--	**29.9**	**35**
Metals by SW846 6010B (mg/kg)																			
Aluminum	**5,990**	**2,860**	**3,290**	**3,670**	**2,340**	**3,820**	**3,760**	**4,170**	**3,920**	**3,130**	**11,600**	**12,300**	**16,200**	**5,750**	**2,940**	**4,530**	**12,200**	**2,950**	**3,000**
Antimony	0.086 U	0.072 U	0.09 U	0.098 U	0.11 U	0.087 U	0.075 U	0.092	0.075 U	0.076 U	0.11 U	**0.28 J**	**0.7 J**	0.093 U	0.079 U	0.069 U	**0.16 J**	0.072 U	**0.16 J**
Arsenic	**2.2**	**2.0**	**0.58**	**0.39 J**	**0.28 J**	**1.7**	**0.65**	**0.41 J**	**0.57**	**0.23 J**	**3.0**	**3.0**	**3.5**	**0.98**	**0.15 J**	**2.2**	**1.8**	**0.89**	**0.53**
Barium	**489**	**496**	**63.7**	**173**	**51.1**	**15.3**	**96.6**	**242**	**318**	**314**	**255**	**255**	**392**	**222**	**246**	**93.3**	**58.5**	**110**	**87.2**
Beryllium	**0.28**	**0.16 J**	**0.15 J**	**0.15 J**	**0.096 J**	**0.17 J**	**0.18 J**	**0.16 J**	**0.16 J**	**0.13 J**	**0.6**	**0.66**	**0.85 J**	**0.27**	**0.11 J**	**0.29**	**0.64 J**	**0.14 J**	**0.13 J**
Cadmium	**0.16 J**	**0.13 J**	0.045 U	0.049 U	0.053 U	0.043 U	**0.071 J**	0.046 U	**0.053 J**	0.038 U	**0.18 J**	**0.15 J**	0.23 U	**0.1 J**	0.04 U	**0.14**	**0.19 J**	**0.065 J**	**0.047 J**
Calcium	**65,800**	**28,400**	**11,200**	**3,650**	**11,900**	**5,770**	**34,500**	**18,900**	**31,900**	**18,700**	**29,200**	**27,100**	**29,100**	**30,200**	**8,850**	**30,300**	**27,600**	**29,400**	**27,500**
Chromium	**5.8**	**2.8**	**3.7**	**2.7**	**1.8**	**3.9**	**4.2**	**3.1**	**3.4**	**2.8**	**10.4**	**11.6**	**11.1**	**6.1**	**2.4**	**4.2**	**11.3**	**2.8**	**2.8**
Cobalt	**3.2**	**2.1**	**1.5 J**	**1.4 J**	**1.0 J**	**1.6 J**	**1.9**	**1.7 J**	**2.0**	**1.7 J**	**4.9**	**4.8**	**7.7**	**3.7**	**1.4 J**	**2.0**	**7.0**	**1.4 J**	**1.3**
Copper	**6.2**	**5.9**	**2.3**	**5.1**	**1.6**	**3.9**	**9.9**	**9.9**	**4.0**	**24**	**8.6**	**10.8**	**14.2**	**53.6**	**4.0**	**7.2**	**13.7**	**3.8**	**3.6**
Iron	**4,830**	**4,120**	**2,860**	**2,870**	**2,130**	**3,120**	**2,800**	**3,150**	**2,510**	**2360 B**	**10,800**	**10,700**	**12,700**	**4,790 B**	**1,950 B**	**4,750**	**14,600**	**2,800**	**2,450**
Lead	**4.9**	**3.6**	**1.9**	**2.0**	**1.4**	**2.2**	**2.8**	**2.5**	**2.1**	**2.3**	**8.8**	**10.2**	**11.7**	**5.1**	**0.69 J**	**5.3**	**8.3**	**1.7**	**16.5**
Magnesium	**3,360**	**2,250**	**1,700**	**2,210**	**1,510**	**2,350**	**4,030**	**2,760**	**2,590**	**2,380**	**4,130**	**4,290**	**6,390**	**4,380**	**2110**	**5,150**	**6,910**	**1,700**	**1,700**
Manganese	**151**	**257**	**134**	**49.9**	**133**	**72.6**	**73.5**	**126**	**199**	**132**	**322**	**284**	**615**	**186**	**65.3**	**125**	**491**	**140**	**166**
Nickel	**5.6**	**2.9**	**2.8**	**2.5**	**1.7 J**	**2.8**	**3.5**	**3.3**	**3.5**	**3.2**	**9.7**	**10.4**	**15.6**	**6.9**	**2.4**	**3.8**	**16.8**	**2.7**	**2.6**
Potassium	**1,350**	**690**	**732**	**796**	**462 J**	**880**	**854**	**949**	**653**	**765**	**2,630**	**2,720**	**3,840**	**1,430**	**672**	**1,280**	**3,060**	**608**	**627**
Selenium	0.69 U	0.29 U	0.18 U	0.2 U	0.21 U	**0.22 J**	0.3 U	**0.19 J**	0.3 U	0.15 U	0.21 U	0.38 U	**1.1 J**	**0.37 J**	**0.19 J**	0.28 U	**0.50 J**	**0.29 U**	0.38 U
Silver	0.043 U	0.036 U	0.045 U	0.049 U	0.053 U	0.043 U	0.038 U	0.046 U	0.038 U	0.038 U	0.054 U	0.095 U	0.23 U	0.047 U	0.04 U	0.034 U	0.25 U	0.036 U	0.047 U
Sodium	**95.9 J**	**35 J**	34 U	**70.3 J**	40 U	48 U	**40.2 J**	**91 J**	**131 J**	**107 J**	**311 J**	**376 J**	**250**	**433 J**	**73.8 J**	**455**	**824 J**	**74.2 J**	**80.3 J**
Thallium	0.086 U	0.072 U	0.09 U	0.13 U	0.11 U	0.11 U	0.075 U	0.12 U	0.075	0.099 U	**0.12 J**	**0.16 J**	0.12 U	0.12 U	0.1 U	0.090 U	0.13 U	0.093 U	0.12 U
Vanadium	**12.4**	**10.7**	**8.1**	**6.8**	**6.2**	**11.8**	**7.1**	**6.3**	**6.6**	**5.1**	**18**	**20.6**	**18.3**	**12.1**	**5.3**	**12.3**	**20.9**	**7.7**	**6.8**
Zinc	**15.2**	**8.8**	**7.2**	**7.6**	**6.0**	**8.4**	**9.0**	**8.3**	**9.7**	**7.7**	**19.8**	**28**	**38.9**	**17.4**	**7.1**	**16.7**	**24.9**	**8.3**	**7.2**
Wet Chemistry by Method SM19 2540B M																			
Solids (%)	90.1	94.2	89	88.4	90.3	81.3	94.5	91	94.7	94	90.5	90.5	80.5	94.7	88.6	94.8	90.4	94.2	95.2

*Note: SB06-S-10/15 is a duplicate sample of SB06-S-4/9
SB09-S-30/35 is a duplicate sample of SB09-S-5/8
SB14-S-30/32 is a duplicate sample of SB14-S-5/8
SB16-S-30/32 is a duplicate sample of SB16-S-5/7.5

bgs = below ground surface
DRO = diesel range organics
GRO = gasoline range organics
ug/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ORO = oil range organics
PAHs = polycyclic aromatic compounds
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds

highlighted value only exceeds the NMED soil screening level (SSL) for the migration to groundwater pathway using a dilution attenuation factor (DAF) of 1.
highlighted value exceeds the NMED SSLs for the migration to groundwater pathway using a DAF of 1 and a DAF of 20.
highlighted value exceeds the NMED SSL for Residential exposure and the SSLs for a DAF of 1 and a DAF of 20.
highlighted value exceeds the NMED SSL for Construction Worker exposure and the SSLs for a DAF of 1 and a DAF of 20.
highlighted value only exceeds EPA Regional Screening Level (RSL) - Risk Based SSL (USEPA, November 2010)
highlighted value exceeds EPA RSL for Residential Soil and the Risk Based SSL (USEPA, November 2010)
highlighted value exceeds NMED TPH screening guideline (unknown oil) of 200 mg/kg for residential and industrial direct exposure.

Data Qualifiers:
B = also detected in blank sample at similar concentration
J = estimated concentration; reported value is less than the reporting limit and greater than the method detection limit
JB = estimated concentration, also detected in blank sample at similar concentration
JBQ= estimated concentration, also detected in blank sample at similar concentration, there was a quality control failure during analysis
JQ = estimated concentration, there was a quality control failure during analysis
U = non-detect result; number preceding "U" qualifier is the method detection limit
UJ = estimated as a non-detect
UQ = non-detect result, there was a quality control failure during analysis that may indicate a false negative

Table 4-2. Summary of Subsurface Soil Analytical Results

SB09-S-20/21.5 11/10/2010 20-21.5	SB10-S-5/8 11/10/2010 5-8	SB10-S-15/18 11/10/2010 15-18	SB11-S-5/6.5 11/10/2010 5-6.5	SB11-S-15/16 11/10/2010 15-16	SB12-S-5/8 11/11/2010 5-8	SB12-S-10/15 11/11/2010 12-15	SB13-S-6.5/8 11/12/2010 6.5-8	SB13-S-15/16 11/12/2010 15-16	SB14-S-5/8 11/12/2010 5-8	SB14-S-30/32* 11/12/2010 5-8	SB14-S-10/16 11/12/2010 10-16	SB15-S-5/6.5 11/13/2010 5-6.5	SB15-S-10/15.5 11/13/2010 10-15.5	SB16-S-5/7.5 11/13/2010 5-7.5	SB16-S-30/32* 11/13/2010 5-7.5	SB16-S-12/13 11/13/2010 12-13	SB17-S-5/7 11/14/2010 5-7	SB17-S-15/16.5 11/14/2010 15-16.5	SB18-S-5/8 11/14/2010 5-8	SB18-S-15/16.5 11/14/2010 15-16.5	SB19-S-5/6.5 11/14/2010 5-6.5	SB19-S-12/16 11/14/2010 12-16
1.5 U	1.4 U	1.1 U	1.1 U	1.0 U	70 U	89 U	56 U	68 U	1.3 U	1.7 U	1.3 U	1.2 UQ	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.3 U	1.3 U	0.97 U	1.3 U	1.1 U
1.0 U	0.93 U	0.72 U	0.7 U	0.69 U	**520**	**883**	**1,520**	**261**	0.9 U	1.1 U	0.84 U	0.82 U	0.83 U	0.82 U	0.76 U	0.79 U	0.8 U	0.84 U	0.85 U	0.64 U	0.89 U	0.72 U
4.6 UQ	**5.7 JQ**	3.3 UQ	3.2 UQ	3.2 U	220 UQ	270 UQ	170 U	210 U	**9.1 JB**	5.1 U	3.9 U	3.8 UQ	3.8 UQ	3.8 U	3.5 U	3.6 U	3.7 U	3.8 U	3.9 U	3.0 U	**5.2 JBQ**	**3.7 JBQ**
2.0 U	1.9 U	1.4 UQ	1.4 UQ	1.4 U	**36,700**	**37,700**	**64,200**	**8,350**	1.8 U	2.2 U	1.7 U	1.6 U	1.7 U	1.6 U	1.5 U	1.6 U	1.6 U	1.7 U	1.7 U	1.3 U	1.8 U	1.4 U
1.2 U	1.1 U	0.86 U	0.84 U	0.82 U	**439**	72 U	45 U	55 U	1.1 UJ	1.3 U	1.0 U	0.99 U	0.99 U	0.99 U	0.91 U	0.95 U	0.96 U	1.0 U	1.0 U	0.77 U	1.1 U	0.86 U
1.2 U	1.1 U	0.86 U	0.84 U	0.82 U	56 U	72 U	45 U	55 U	1.1 U	1.3 U	1.0 U	0.99 U	0.99 U	0.99 U	0.91 U	0.95 U	0.96 U	1.0 U	1.0 U	0.77 U	1.1 U	0.86 U
3.2 U	3.0 U	2.3 U	2.2 U	2.2 U	150 U	190 U	120 U	150 U	2.9 U	3.5 U	2.7 U	2.6 U	2.6 U	2.6 U	2.4 U	2.5 U	2.6 U	2.7 U	2.7 U	2.1 U	2.9 U	2.3 U
140 U	150 U	150 U	160 U	150 U	**5,230 J**	**5,900**	**7,260 J**	**185 J**	140 U	150 U	140 U	140 U	150 U	140 U	140 U	140 U	140 U	180 U	140 U	150 U	150 U	140 U
140 U	150 U	150 U	160 U	150 U	**3,070 J**	**2,630**	**3,660 J**	**229 J**	140 U	150 U	140 U	140NU	150 U	140 U	140 U	140 U	140 U	180 U	140 U	150 U	150 U	140 U
140 U	150 U	150 U	160 U	150 U	**16,400 J**	**9,400**	**23,800 J**	**304 J**	140 U	150 U	140 U	140 U	150 U	140 U	140 U	140 U	140 U	180 U	140 U	150 U	150 U	140 U
71 U	74 U	73 U	79 U	75 U	**36,000 J**	**31,900**	**45,300 J**	**1,330**	72 U	74 U	72 U	70 U	74 U	68 U	69 U	71 U	72 U	88 U	69 U	77 U	74 U	72 U
71 U	74 U	73 U	79 U	75 U	**59,800 J**	**43,100**	**81, 500 J**	**1,640**	72 U	74 U	72 U	70 U	74 U	68 U	69 U	71 U	72 U	88 U	69 U	77 U	74 U	72 U
140 U	150 U	150 U	160 U	150 U	**16,700 J**	**14,200**	**17,600 J**	**1,140**	140 U	150 U	140 U	140 U	150 U	140 U	140 U	140 U	140 U	180 U	140 U	150 U	150 U	140 U
71 U	74 U	73 U	79 U	75 U	**6,890 J**	360 U	380 U	73 U	72 U	74 U	72 U	70 U	74 U	68 U	69 U	71 U	72 U	88 U	69 U	77 U	74 U	72 U
3.0 U	2.5 U	2.0 U	2.1 U	2.0 U	**63.6**	**115**	**140**	**45.4**	2.2 U	2.5 U	2.7 U	2.2 U	1.9 U	1.8	1.7 U	2.1 U	2.2 U	2.9 U	2.1 U	2.6 U	2.2 U	**4.57**
4.54 J	**4.57 J**	**4.5 J**	3.9	3.8 U	**2,980**	**3,970**	**4,530**	**212**	3.7 U	3.7 U	3.6 U	3.5 U	3.7 U	3.4 U	3.4 U	**53.3**	3.6 U	4.4 U	3.5 U	3.8 U	3.7	**214**
5.27 J	**9.44**	**6.65 J**	**6.01 J**	3.8 U	360 U	360 U	380 U	37 U	3.7 U	3.7 U	3.6 U	**6.76 J**	3.7 U	3.4 U	3.4 U	3.5 U	**8.03 J**	4.4 U	**4.72 J**	3.8 U	**7.15 J**	14 U
9.81	**14.01**	**11.15**	**6.01 J**	--	**3,044**	**4,085**	**4,670**	**257.4**	--	--	--	**6.76 J**	--	--	--	**53.3**	**8.03 J**	--	**4.72 J**	--	**7.15 J**	**218.57**
6,390	**8580 J**	**5,310**	**17,900**	**4,940**	**6,860**	**3,340**	**7,880**	**6,130**	**8,060**	**7,450**	**4,730**	**6,870**	**4,280**	**3,120**	**3,130**	**3,090**	**2,420**	**5,900**	**4,480**	**1,270**	**5,570**	**4,610**
0.087 U	0.084 UJ	**0.15 J**	**0.21 J**	**0.12 J**	**0.11 J**	**0.10 J**	0.096 U	0.082 U	0.099 U	**0.098 J**	0.088 U	**0.18 J**	**0.21 J**	**0.09 J**	**0.083 J**	**0.13 J**	**0.28 J**	**0.16 J**	**0.11 J**	**0.11 J**	**0.18 J**	0.11 U
0.48	**2.4 J**	**0.59**	**2.7**	**0.39 J**	**2.1**	**0.45 J**	**2.4**	**0.7**	**1.5**	**1.1**	**0.69**	**1.8**	**2.8**	**0.34 J**	**0.32 J**	**0.37 J**	**5.4**	**0.78**	**1.7**	0.076 U	**2.2**	**0.64**
108	**198 J**	**124**	**278**	**28.1**	**283**	**148**	**291**	**135**	**34.5**	**29.6**	**127**	**332**	**213**	**111**	**118**	**166**	**194**	**313**	**276**	**101 J**	**551**	**275**
0.31	**0.36**	**0.21**	**0.81 J**	**0.19 J**	**0.31**	**0.13 J**	**0.35**	**0.3**	**0.36**	**0.32**	**0.2 J**	**0.31**	**0.23 J**	**0.13 J**	**0.12 J**	**0.13 J**	**0.24 J**	**0.28**	**0.22**	**0.068 J**	**0.26**	**0.20 J**
0.083 J	**0.092 J**	0.042 U	**0.076 J**	0.048 U	**0.044 J**	0.048 U	0.048 U	0.041 U	0.05 U	0.049 U	0.044 U	**0.13**	**0.15 J**	0.036 U	0.038 U	0.045 U	**0.16 J**	0.047 U	**0.10 J**	0.038 U	**0.19**	0.054 U
15,900	**19,900 J**	**8,850**	**14,800**	**2,000**	**17,600**	**17,000**	**31,900**	**10,800**	**15,500**	**18,900**	**14,500**	**60,300**	**65,900**	**26,700**	**29,500**	**41,700**	**40,900**	**8,880**	**37,800**	**17,300**	**94,000**	**12,400**
5.9	**4.6 J**	**4.1**	**11.5**	**3.5**	**4.6**	**2.6**	**6.2**	**4.7**	**5.9**	**5.5**	**3.7**	**6.5**	**21.4**	**3.2**	**2.9**	**3.4**	**3**	**4.8**	**4.5**	**1.2**	**6.6**	**3.9**
4.3	**3.4**	**2.5**	**6.7**	**2.2 J**	**3.1**	**1.3 J**	**3.6**	**3.1**	**3.8**	**3.7**	**2.2**	**4.1**	**3.2**	**1.4 J**	**1.3 J**	**1.5 J**	**2.5 J**	**2.9**	**2.8**	**0.50 J**	**3.3**	**2.2 J**
86.7	**5.8 J**	**7.1**	**10.5**	**6.3**	**5.3**	**6.4**	**6.3**	**24.2**	**12.3**	**11.3**	**11.9**	**6**	**7.9**	**7.2**	**6.9**	**8.8**	**5.4**	**13.3**	**4.0**	**0.98**	**6.5**	**7.8**
4,470	**5,750 J**	**4,350**	**12,900**	**3,710**	**5,320**	**2,740**	**6,740**	**5,320**	**7,300**	**6,640**	**4,030**	**4,850**	**6,440**	**2,360**	**2,040**	**2,290**	**8,450**	**5,240**	**4,270**	**835**	**4,810**	**4110**
5.1	**4.9 J**	**3.5**	**9.7**	**2.7**	**4.4**	**2**	**5.2**	**5.5**	**6.4**	**6.2**	**3.9**	**6.1**	**5.4**	**2.5**	**2.2**	**2.2**	**5.0**	**5.4**	**4.5**	**0.44 J**	**5.9**	**4.8**
4,820	**3,030 J**	**3,860**	**5,690**	**3,260**	**2,400**	**1,910**	**2,580**	**4,440**	**5,910**	**5,850**	**3,170**	**3,240**	**5,860**	**3,090**	**3,520**	**2,130**	**2,210**	**3,780**	**6,150**	**823**	**2,710**	**3,120**
120	**185 J**	**66.5**	**412**	**87.2**	**129**	**175**	**171**	**65.9**	**70.8**	**71.2**	**139**	**250**	**468**	**174**	**143**	**318**	**614**	**103**	**211**	**93.8**	**505**	**134**
8.3	**6.1 J**	**4.3**	**12.7**	**3.9**	**6.5**	**2.5**	**7.0**	**6.3**	**6.9**	**6.6**	**4**	**7.5**	**6.7**	**2.6**	**2.5**	**2.7**	**4.0**	**5.1**	**4.7**	**0.91 J**	**6.0**	**3.8**
1,570	**2,160 J**	**1,080**	**4,280**	**1,010**	**1,390**	**762**	**1,720**	**1,350**	**1,860**	**1,700**	**1,050**	**1,700**	**943**	**663**	**676**	**664**	**544**	**1350**	**1070**	**309 J**	**1,370**	**1,030**
0.25 J	**0.18 J**	**0.39 J**	**0.44 J**	**0.21 J**	0.15 U	0.19 U	0.38 U	**0.29 J**	**0.39 J**	**0.24 J**	**0.27 J**	0.54 U	0.88 U	0.29 U	0.3 U	0.36 U	0.84 U	**0.19 J**	0.31 U	0.15 U	0.88 U	**0.28 J**
0.044 U	0.042 UJ	0.042 U	0.055 U	0.048 U	0.036 U	0.048 U	0.048 U	0.041 U	0.05 U	0.049 U	0.044 U	0.034 U	0.055 U	0.036 U	0.038 U	0.045 U	0.053 U	0.047 U	0.038 U	0.038 U	0.044 U	0.054 U
235 J	**71.2 J**	**158 J**	240 U	**67.8 J**	**60.1 J**	53 U	**98.9 J**	**78.2 J**	**261 J**	**235 J**	**79.8 J**	37 U	**135 J**	**95.2 J**	**95.6 J**	**60.5 J**	58 U	**89.3 J**	**230**	42 U	**73.7 J**	**79.2 J**
0.11 U	0.11	0.11 U	0.14 U	0.12 U	0.095 U	0.13 U	**0.12 J**	0.11 U	0.13 U	0.13 U	0.11 U	0.087 U	0.14 U	0.094 U	0.098 U	0.12 U	**0.35 J**	0.12 U	0.1 U	0.099 U	0.11 U	0.14 U
11.3	**11.4 J**	**8.1**	**22.7**	**8.1**	11.2	**6.8**	**13.1**	**9.4**	**13.2**	**12.4**	**7.7**	**11.3**	**12.8**	**6.0**	**5.3**	**4.9**	**34.9**	**9.9**	**11.6**	**3.0**	**12.6**	**9.0**
15.8	**14.3 J**	**11.5**	**26.3**	**10.1**	13.4	**7.0**	**17.2**	**13.3**	**16.9**	**16.5**	**9.8**	**19.4**	**14.4**	**7.8**	**7.1**	**7.3**	**17.1**	**13.1**	**12.4**	**2.9**	**19.1**	**10.7**
91.8	91.4	91.1	84.8	88.7	93.9		89.4	91.5	91.4	91	92.9	94.7	90.9	98.1	98.3	95.3	93.1	75.2	96.7	87.3	90.7	92.9

*Note: SB06-S-10/15 is a duplicate sample of SB06-S-4/9
SB09-S-30/35 is a duplicate sample of SB09-S-5/8
SB14-S-30/32 is a duplicate sample of SB14-S-5/8
SB16-S-30/32 is a duplicate sample of SB16-S-5/7.5

bgs = below ground surface
DRO = diesel range organics
GRO = gasoline range organics
ug/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ORO = oil range organics
PAHs = polycyclic aromatic compounds
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds

highlighted value only exceeds the NMED soil screening level (SSL) for the migration to groundwater pathway using a dilution attenuation factor (DAF) of 1.
highlighted value exceeds the NMED SSLs for the migration to groundwater pathway using a DAF of 1 and a DAF of 20.
highlighted value exceeds the NMED SSL for Residential exposure and the SSLs for a DAF of 1 and a DAF of 20.
highlighted value exceeds the NMED SSL for Construction Worker exposure and the SSLs for a DAF of 1 and a DAF of 20.
highlighted value only exceeds EPA Regional Screening Level (RSL) - Risk Based SSL (USEPA, November 2010)
highlighted value exceeds EPA RSL for Residential Soil and the Risk Based SSL (USEPA, November 2010)
highlighted value exceeds NMED TPH screening guideline (unknown oil) of 200 mg/kg for residential and industrial direct exposure.

Data Qualifiers:
B = also detected in blank sample at similar concentration
J = estimated concentration; reported value is less than the reporting limit and greater than the method detection limit
JB = estimated concentration, also detected in blank sample at similar concentration
JBQ= estimated concentration, also detected in blank sample at similar concentration, there was a quality control failure during analysis
JQ = estimated concentration, there was a quality control failure during analysis
U = non-detect result; number preceding "U" qualifier is the method detection limit
UJ = estimated as a non-detect
UQ = non-detect result, there was a quality control failure during analysis that may indicate a false negative

Table 4-3. Summary of Groundwater Analytical Results

Sample ID:	MW-D (MW-6)	SB01-GW	SB02-GW	SB03-GW	SB04-GW	SB05-GW	SB06-GW	SB07-GW	SB08-GW	SB09-GW	SB10-GW	SB11-GW	SB12-GW	SB32-GW*	SB13-GW	SB14-GW	SB15-GW	SB16-GW	SB17-GW	SB18-GW	SB19-GW	SB29-GW*
Date Sampled:	9/8/2010	11/13/10	11/11/10	11/15/10	11/12/10	11/9/10	11/13/10	11/9/10	11/10/10	11/10/10	11/11/10	11/10/10	11/11/10	11/11/10	11/12/10	11/12/10	11/13/10	11/14/10	11/14/10	11/14/10	11/14/10	11/14/10
VOCs by SW846 8260B (ug/L)																						
Acetone	**205**	**15.9 J**	**10.2 J**	10 U	10 U	10 U	10 U	**25.3**	10 U	10 U	10 U	10 U	**23.1 J**	**24.6 J**	**12 J**	**23.2 J**	10 U	10 U	200 U	**21.5 J**	**14.3 J**	**14.3 J**
Benzene	**6.6**	**10.7**	0.2 U	0.2 U	0.2 U	**2.7**	0.2 U	**1.2**	0.2 U	0.2 U	0.2 U	0.2 U	**24.1**	**25.2**	**0.4 J**	**0.31 J**	0.2 U	0.2 U	**1,060**	**0.85 J**	**0.4 J**	**0.41 J**
Bromoform	0.24 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**0.4 J**	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	4.0 U	0.2 U	0.2 U	0.2 U
1,1-Dichloroethylene	0.29 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	**1.5**	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	4.6 U	0.23 U	0.23 U	0.23 U
1,2-Dichloroethane	0.33 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	**6.3**	0.2 U	**1.1**	4.0 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	**1.1**	**91.5**	0.2 U	0.2 U	0.2 U	**2.5**	0.2 U	0.2 U	**0.24 J**	0.2 U	0.2 U	0.2 U	**15.8**	**17**	**3.4**	0.2 U	0.2 U	0.2 U	**241**	**0.31 J**	0.2 U	0.2 U
2-Hexanone	5.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	**4.1 J**	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	80 U	4.0 U	4.0 U	4.0 U
Methyl chloride	0.5 U	0.5 U	0.5 U	**1.5 JQ**	0.5 U	0.5 U	**0.58 JQ**	0.5 U	0.5 U	**1.3 JB**	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	**0.56 JQ**	0.5 U	0.5 U	10 U	**0.85 JQ**	0.5 U	0.5 U
Methyl ethyl ketone	**5.1**	**5.8**	**2.6 J**	2.0 U	2.0 U	2.0 U	2.0 U	**9.6**	2.0 U	2.0 U	2.0 U	2.0 U	**8.3**	**8.5**	**3.8 J**	**10.3**	2.0 U	2.0 U	40 U	**5.5**	**2.9 J**	**2.9 J**
Naphthalene	**2.3 J**	**101**	1.0 U	1.0 U	**1.1 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**173**	**202**	**53.4**	**1.9 J**	1.0 U	1.0 U	20 U	1.0 U	1.0 U	1.0 U
Toluene	0.20 U	**0.3 J**	**0.27 J**	0.20 U	**0.20 J**	**5.5**	0.2 U	**0.7 J**	**0.38 J**	0.2 U	**0.25 J**	0.2 U	**0.44 J**	**0.49 J**	**0.33 J**	**0.77 J**	0.2 U	0.2 U	**6.4 J**	**0.39 J**	0.2 U	0.2 U
Xylene (total)	**0.77 J**	0.52 U	0.52 U	0.52 U	0.52 U	**13.6**	0.52 U	0.52 U	**1.1 J**	0.52 U	0.52 U	0.52 U	**1.7 J**	**1.7 J**	0.52 U	**0.7 J**	0.52 U	0.52 U	**14.7 J**	0.52 U	0.52 U	0.52 U
PAHs by SW846 8310 (ug/L)																						
Acenaphthene	**31.9 J**	3.8 U	0.76 U	0.76 U	0.76 U	0.77 U	0.76 U	0.78 U	0.78 U	0.77 U	0.76 U	0.77 U	1.5 U	1.5 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Fluorene	**33.3 J**	**11.1**	0.76 U	0.76 U	0.76 U	0.77 U	0.76 U	0.78 U	0.78 U	0.77 U	0.76 U	0.77 U	**3.2**	**4.0**	**1.6 J**	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
Naphthalene	19 U	**88.5**	0.76 U	0.76 U	0.76 U	**1.5 J**	0.76 U	0.78 U	0.78 U	0.77 U	0.76 U	0.77 U	**102**	**107**	**66**	0.76 U	0.76 U	0.76 U	**19.1**	0.76 U	0.76 U	0.76 U
1-Methylnaphthalene	**146**	**98.5**	0.38 U	0.38 U	0.38 U	**1.5 J**	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	**98**	**105**	**38.9**	**0.5 J**	0.38 U	0.38 U	**11.2**	0.38 U	0.38 U	0.38 U
2-Methylnaphthalene	**14.6 J**	**105**	0.38 U	0.38 U	0.38 U	**2.8**	0.38 U	0.39 U	0.39 U	0.38 U	0.38 U	0.38 U	**84.3**	**87.9**	**58.3**	**0.54 J**	0.38 U	0.38 U	**3.7**	0.38 U	0.38 U	0.38 U
Phenanthrene	**91.9**	**22.4**	0.76 U	0.76 U	0.76 U	0.77 U	0.76 U	0.78 U	0.78 U	0.77 U	0.76 U	0.77 U	**8.1**	**8.7**	**4.1**	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
TPH by SW846 8015M (mg/L)																						
TPH-GRO (C6-C10)	**0.438 J**	**0.394**	**0.0597 J**	0.05 U	0.05 U	**0.154**	0.05 U	**0.0729 J**	0.05 U	0.05 U	0.05 U	0.05 U	**0.285**	**0.301**	**0.0711 J**	**0.101**	0.05 U	0.05 U	**3.04**	**0.0876 J**	0.05 U	0.05 U
TPH-DRO (C10-C28)	**151 J**	**10.7**	0.095 U	0.096 U	0.095 U	**0.13 J**	**0.287**	**0.179 J**	0.096 U	0.095 U	0.095 U	0.095 U	**1.65**	**1.6**	**0.539**	**0.979**	0.095 U	**0.345**	**0.975**	**0.412**	**0.873**	**0.893**
TPH-ORO (>C28-C40)	19 U	0.96 U	0.095 U	0.096 U	0.095 U	0.095 U	**0.184 J**	0.095 U	0.096 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	**0.0964 J**	0.095 U	**0.164 J**	0.095 U	0.095 U	**0.183 J**	**0.208 J**
TPH (total)	**151, 438**	**11.09**	**0.0597 J**	--	--	**0.28**	**0.47**	**0.25**	--	--	--	--	**1.94**	**1.90**	**0.61**	**1.18**	--	**0.67**	**4.02**	**0.50**	**1.06**	**1.10**
Metals by SW846 6010B (ug/L)																						
Aluminum	NA	25 U	25 U	25 U	25 U	**223**	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Arsenic	NA	**3.3 J**	2.0 U	2 U	2 U	2 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**7.9 J**	**9.8 J**
Barium	NA	**3,750**	**44.3 J**	**46.5 J**	**28.5 J**	**60.2 J**	**242**	**80.5 J**	**17.4 J**	**57.6 J**	**63.5 J**	**53.5 J**	**2,580**	**2,540**	**176 J**	**54.6 J**	**57 J**	**188 J**	**7,230**	**35.5 J**	**271**	**288**
Calcium	NA	**77,700**	**102,000**	**80,900**	**40,700**	**60,000**	**99,600**	**103,000**	**68,800**	**67,400**	**65,400**	**98,700**	**83,900**	**83,800**	**45,000**	**51,800**	**101,000**	**43,000**	**45,000**	**67,500**	**48,500**	**49,700**
Chromium	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.0 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cobalt	NA	1.0 U	1.0 U	1.0 U	1.0 U	**2.0 J**	**1.1 J**	1.0 U	1.0 U	1.0 U	**1.2 J**	**1.9 J**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.6 J**	1.0 U	1.0 U	**2.7 J**	**2.8 J**
Copper	NA	2.0 U	**2.0 J**	2.0 U	2.0 U	2.0 U	**4.7 J**	**2.5 J**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.0 J**	2.0 U	2.0 U	2.0 U	2.0 U
Iron	NA	**375**	**35.1 J**	35 U	35 U	**237 J**	35 U	35 U	35 U	35 U	**84.7 J**	35 U	**104 J**	**98.9 J**	35 U	35 U	35 U	35 U	**479**	35 U	**786**	**855**
Magnesium	NA	**58,000**	**72,700**	**31,700**	**46,900**	**47,300**	**101,000**	**63,400**	**131,000**	**85,800**	**84,800**	**82,700**	**88,900**	**87,700**	**35,300**	**22,600**	**95,500**	**95,400**	**69,100**	**41,200**	**93,700**	**99,400**
Manganese	NA	**440**	**151**	**10.7 J**	**57**	**120**	**232**	**40.1**	**15.2**	**59.3**	**263**	**518**	**643**	**636**	**122**	**39.1**	**40.6**	**360**	**479**	**43.7**	**349**	**363**
Nickel	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.9 J**	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Potassium	NA	**4,560 J**	**6,420 J**	**5,590 J**	**4,640 J**	**15,000**	**5,500 J**	**10,300**	**2,840 J**	**13,100**	**5,490 J**	**8,370 J**	**6,330 J**	**6,300 J**	**6,320 J**	**12,100**	**6,780 J**	**8,600 J**	**7,540 J**	**5800 J**	**8,700 J**	**9,070 J**
Selenium	NA	**4.3 J**	2.0 U	2.0 U	2.0 U	**3.5 J**	**4.2 J**	**3.7 J**	**39.6**	2.0 U	**2.9 J**	2.0 U	2.0 U	2.0 U	**2.5 J**	2.0 U	**2.8 J**	**2.3 J**	2.0 U	2.0 U	**2.1 J**	**3.2 J**
Sodium	NA	**180,000**	**80,900**	**76,200**	**166,000 J**	**72,500**	**133,000**	**111,000**	**576,000**	**168,000**	**106,000**	**79,900**	**99,900**	**101,000**	**181,000**	**245,000**	**86,500**	**260,000**	**174,000**	**79,900**	**247,000**	**267,000**
Thallium	NA	**2.2 J**	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U
Vanadium	NA	**1.2 J**	**6.7 J**	**6.2 J**	**9.9 J**	**1.7 J**	**26.8 J**	**5.4 J**	**14.2 J**	**13.9 J**	**3.8 J**	**8.4 J**	**3.0 J**	**3.1 J**	**4.5 J**	**4.8 J**	**13.2 J**	**5.8 J**	**1.2 J**	**3.8 J**	**2.9 J**	**2.9 J**
Zinc	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	**5.2 J**	**7.1 J**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

*Note: SB32-GW is a duplicate sample of SB12-GW and SB29-GW is a duplicate of SB19-GW.

DRO = diesel range organics

GRO = gasoline range organics

ug/L = micrograms per Liter

mg/L = milligrams per Liter

NA = not analyzed

ORO = oil range organics

PAHs = polycyclic aromatic compounds

TPH = total petroleum hydrocarbons

VOCs = volatile organic compounds

highlighted value exceeds the New Mexico Water Quality Control Commission (WQCC) groundwater standard (20.6.2.3103 NMAC)

highlighted value exceeds the Federal Maximum Contaminant Level (MCL) in drinking water

highlighted value exceeds both the New Mexico WQCC standard and Federal MCL in drinking water

highlighted value exceeds the New Mexico Environment Department (NMED) tap water screening level for domestic use

highlighted value exceeds NMED TPH (unknown oil) screening guideline of 0.2 mg/L for potable groundwater (GW-1 standards, Table 2a in NMED TPH Screening Guidelines, October 2006)

Data Qualifiers:

B = also detected in blank sample at similar concentration

J = estimated concentration; reported value is less than the reporting limit and greater than the method detection limit

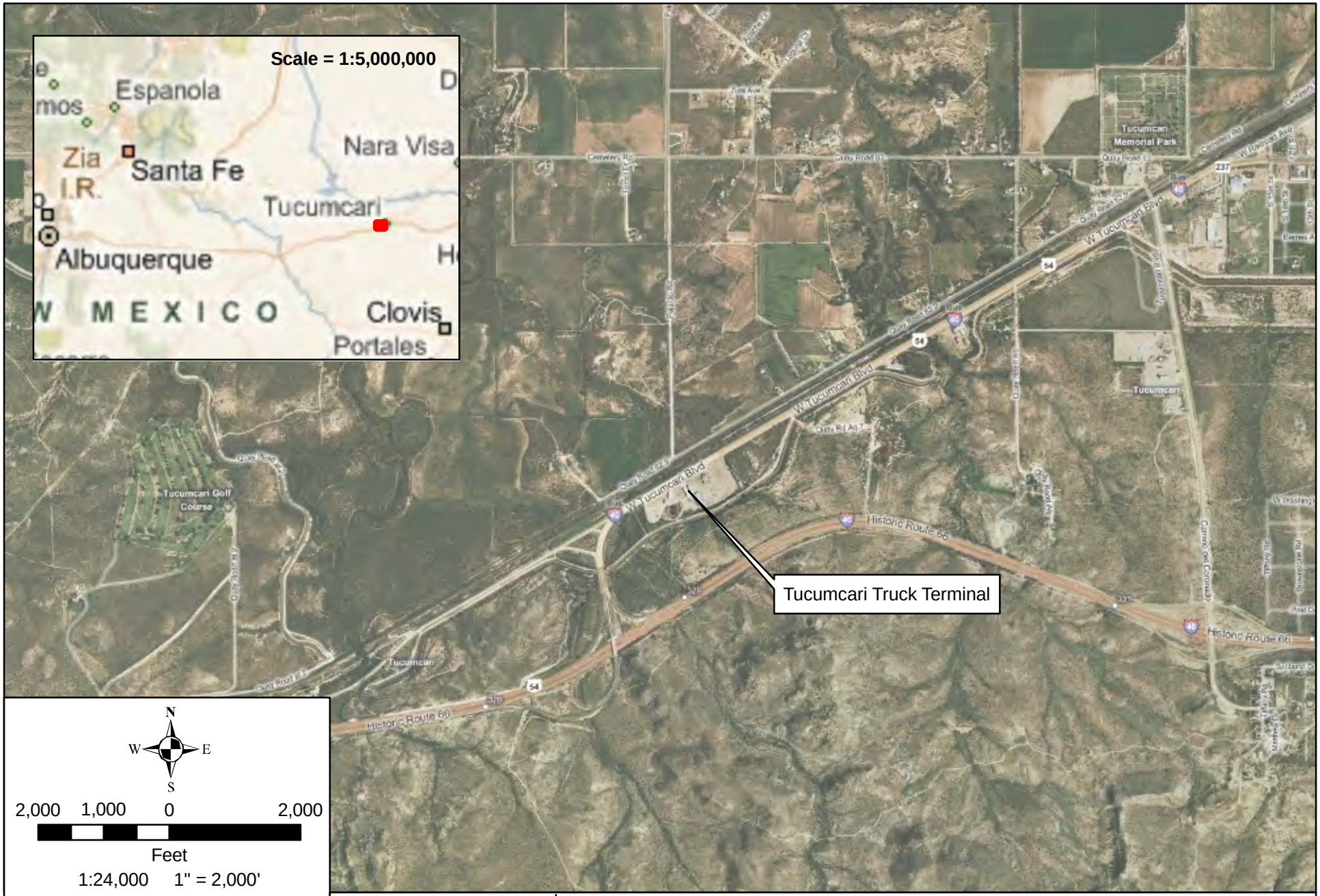
JB = estimated concentration, also detected in blank sample at similar concentration

JQ = estimated concentration, there was a quality control failure during analysis

U = non-detect result; number preceding "U" qualifier is the method detection limit

UQ = non-detect result, there was a quality control failure during analysis that may indicate a false negative

Figures



Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Figure 2-1
Site Location Map
Tucumcari Truck Terminal, Tucumcari, New Mexico



Legend

Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Site Layout and Features

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, QUAY COUNTY, NEW MEXICO

FIGURE 2-2

Data Sources: Microsoft Bing Maps; RMC Consultants, Inc.



Legend

- Diesel Line
- Gasoline Line
- Culvert
- Diesel UST
- Gasoline UST
- Building
- Area Boundary

Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Historical Details and Approximate Fuel Piping Locations

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, QUAY COUNTY, NEW MEXICO

FIGURE 2-3

Data Sources: Microsoft Bing Maps; RMC Consultants, Inc.



Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Sample Locations

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, QUAY COUNTY, NEW MEXICO

FIGURE 3-1

Data Sources: Microsoft Bing Maps; RMC Consultants, Inc.

Note: Analytical results are only shown for concentrations that exceed the NMED TPH screening guideline of 200 mg/kg for unknown oil, the NMED Residential SSL, or the USEPA Regional Screening Level for residential soil (November 2010) if a state screening level is unavailable.
1-MN = 1-Methylnaphthalene
NAPH = Naphthalene

SS07	
TPH	527 mg/kg

SS09	
TPH	266.5 mg/kg

SS08	
TPH	346.4 mg/kg

SB01-S-5/10	
TPH	5,077 mg/kg
SB01-S-12/15.5	
1-MN	22,600 ug/kg
TPH	7,235 mg/kg

SB13-S-6.5/8	
NAPH	64,200 ug/kg
1-MN	45,300 ug/kg
TPH	4,670 mg/kg
SB13-S-15/16	
TPH	257.4 mg/kg

SB19-S-12/16	
TPH	218.57 mg/kg

SB17-S-5/7	
Arsenic	5.4 mg/kg

SB12-S-5/8	
1-MN	36,000 ug/kg
TPH	3,043.6 mg/kg
SB12-S-10/15	
1-MN	31,900 ug/kg
TPH	4,085 mg/kg

SS10	
TPH	19,705 mg/kg
Arsenic	6 mg/kg

SS06	
TPH	10,800 mg/kg

SS02	
TPH	18,690 mg/kg

SB15, SS07, Culvert, SB06, SB11, SS09, SB16, SS08, SB01, MW-7, Area B, MW-14, MW-6 (MWD), MW-16, SB13, SB19, MW-15, MW-17, SB14, SB04, SS03, SB17, SB12, Area A, SB18, SS10, SB02, SS02, SS06, SS01, SB03, Area C, SB05, SS04, SB07, SS05, SB08, SB09

N, W, E, S

200 100 0 200
Feet

1 inch = 150 feet 1:1,800

Legend

- Culvert
- Monitoring Well
- Soil Boring Location
- Surface Soil Sample Location
- Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Soil Analytical Results Above State Standards

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, QUAY COUNTY, NEW MEXICO

FIGURE 4-1

Data Sources: Microsoft Bing Maps; RMC Consultants, Inc.

Note: Analytical results that exceed the NMED TPH (unknown oil) screening guideline of .2 mg/L for potable groundwater, New Mexico WQCC standards, and/or federal MCLs in drinking water are listed on figure.
PAH total results consist of naphthalene plus monomethylnaphthalenes.

SB06-GW	
TPH	0.471 mg/L
Manganese	232 ug/L

SB16-GW	
TPH	0.67 mg/L
Manganese	360 ug/L

SB14-GW	
1,2-DCE	6.3 ug/L
TPH	1.72 mg/L

MWD	
Benzene	6.6 ug/L
PAHs	160.6 ug/L
TPH	151.44 mg/L

SB19-GW	
TPH	1.06 mg/L
Manganese	349 ug/L

SB18-GW	
TPH	0.499 mg/L

SB17-GW	
Benzene	1,060 ug/L
PAHs	34 ug/L
TPH	4.02 mg/L
Barium	7,230 ug/L
Manganese	479 ug/L

SB01-GW	
Benzene	10.7 ug/L
PAHs	292 ug/L
TPH	11.09 mg/L
Barium	3,750 ug/L
Manganese	440 ug/L
Thallium	2.2 J ug/L

SB07-GW	
TPH	0.25 mg/L

SB05-GW	
TPH	0.28 mg/L

SB11-GW	
Manganese	518 ug/L

SB10-GW	
Manganese	263 ug/L

SB13-GW	
PAHs	163.2 ug/L
TPH	0.61 mg/L

SB12-GW	
Benzene	24.1 ug/L
PAHs	284.3 ug/L
TPH	1.94 mg/L
Barium	2,580 ug/L
Manganese	643 ug/L

SB15, SS07, Culvert, SB06, SB16, SS08, SB01, SB11, SS09, SB05, SS04, SB07, SS05, SB08, SB10, MW-7, Area B, SB09, MW-14, SB13, MW-6 (MWD), MW-16, SB14, SB19, MW-15, MW-17, SB04, SS03, SB17, SB12, Area A, SB18, SS10, SB02, SS06, SS02, SS01, SB03, Area C

N, W, E, S

200 100 0 200
Feet

1 inch = 150 feet 1:1,800

Legend

- Culvert
- Monitoring Well
- Soil Boring Location
- Surface Soil Sample Location
- Area Boundary

Imagery: Microsoft Bing Maps

Date:	Drawn by:	Checked by:
12/21/2010	CMB	JLH

INNOVAR ENVIRONMENTAL, INC.

Groundwater Analytical Results Above State and Federal Standards

TUCUMCARI TRUCK TERMINAL
TUCUMCARI, QUAY COUNTY, NEW MEXICO

FIGURE 4-2

Data Sources: Microsoft Bing Maps; RMC Consultants, Inc.

Field Trip Report
Remediation Oversight Section – State Cleanup Program

Start Date: April 30,2022 **Time:** 13:40 **End Date:** April 30, 2022 **Time:** 14:45 pm

Facility Information

Facility Name: Tucumcari Shell Truck Plaza restaurant

Type of Operation: Former truck stop w/

Address: I-40 exit 329

Contact: N/A, orphan site

City: Tucumcari, New Mexico

Telephone: N/A

Inspector(s): Paul Chamberlain, 505-670-2571

Inspection Summary:

Site is abandoned and in disrepair with obvious vandalism and illegal dumping. I was able to locate six out of ten monitoring wells but could not locate MW-9 through MW-12, which were at one time located across County Highway 54, north of the site. MW-7 was dry, and MW-6, MW-17, and MW-15 were vandalized, damaged, and filled in with dirt and litter and could not be accessed for a water level measurement. I encountered product in MW-14 at 24.90 feet below TOC; no water was encountered, with a tagged TD of 25.87 ft for 0.97 ft of product. DTW in MW-16 measured 23.64 ft below TOC, and TD was tagged at 23.90 below TOC, for a water column of 0.26 feet. No product was encountered in MW-16, but the oi/water interface probe smelled strongly of petroleum hydrocarbons.

On-going regional drought conditions have lowered the elevation of the water table since the last site visit in 2019. At the time of the site visit, the canal to the south of the site was not flowing. It is hypothesized that shallow groundwater could be influenced by irrigation water flowing in the canal.

Activities Performed: Photographs, monitoring well gaging

Observations and Information (Samples) Obtained: No samples taken; MWs were either dry, inaccessible, had product, or did not have sufficient volume to sample. Nonetheless, I would urge caution with collecting future groundwater samples due to the likelihood of extremely high concentrations of petroleum hydrocarbons that could potentially damage laboratory equipment.

Subject Item ID	Analysis	Media	Condition

Comments on sampling:

Actions Required: Without a viable RP or a federal or state funding source, no actions can be taken at this time aside from periodic site visits and possible groundwater sampling.

Violations Cited:

Photos:




Food Mart
Shell


Self
Shell
Self
Shell
Self


Food Mart
SALE







C. ENVIRONMENTAL INCIDENT AND RESPONSE – September 18, 2023

8. On the evening of September 18, 2023, New Mexico State Police ("NMSP") notified the NMED Hazardous Waste Bureau's Incident Response Coordinator of a release of a large quantity of used oil from two damaged Aboveground Storage Tanks ("ASTs") at the

Property. No contact information for property ownership could be located at that time. NMED and NMSP coordinated with the New Mexico Department of Transportation and City of Clovis hazardous materials team to perform initial spill containment.

9. On September 19 and 20, 2023, NMED attempted contact with Ortega's Shell Plaza, but could not locate any valid contacts for Ortega's Shell Plaza.

10. On September 21, 2023, NMED performed a Compliance Evaluation Inspection ("Inspection").

11. During the Inspection, NMED observed a large area of spilled oil and oil-stained soil that had emanated from two damaged 1,500-gallon ASTs. The oil traveled approximately 235 feet across the property before turning and running parallel to the highway for about 30 feet before entering a culvert underneath the Route 66 highway. The oil exited the culvert and traveled down the surface water drainage area between the Route 66 highway and the adjacent railway tracks before terminating in the vegetation.

12. On September 22, 2023, NMED obtained contact information for the attorney representing Property ownership and attempted contact via phone and email. NMED did not receive a response to this attempt to contact Ortega's Shell Plaza.

13. On September 24, 2023, the NMED Secretary authorized and directed cleanup of the Property, using the Hazardous Waste Emergency Fund and a remediation firm under contract with NMED, for the purpose of responding to an Environmental Incident that could threaten human health or the environment pursuant to the authority granted the Department in NMSA 1978, Section 74-4-7.

14. On September 28, 2023, NMED's contracted remediation firm began site assessment and cleanup activities to ensure protection of human health and the environment.

15. On October 3, 2023, the attorney representing Ortega's Shell Plaza contacted NMED, stating that Ortega's Shell Plaza was not aware of the release at the Property.

16. On October 23, 2023, NMED sent Ortega's Shell Plaza via attorney representation a Request for Information ascertaining several remaining points of information, including additional information regarding the controlling entity and Respondent's knowledge of the environmental condition of the property and the nature of the incident on September 18, 2023.

17. On November 7, 2023, Ortega's Shell Plaza via attorney representation sent NMED a response to the Request for Information. This response provided additional information regarding the ownership of the property, provided a statement that no tenants had been authorized to occupy the property, stated that Respondent did not have any knowledge of the incident in question until October 3, 2023, and stated that Respondent did not have adequate financial resources to perform cleanup of the used oil release.

18. On November 17, 2023, NMED's contracted remediation firm completed cleanup of the Property related to the release of used oil from September 18, 2023. As a result of these cleanup efforts, NMED HWB expended a total of $333,891.13 to protect human health and the environment from this release that occurred on Respondent's Property.

PETROLEUM STORAGE TANK BUREAU - INITIAL INCIDENT REPORT

(For reporting confirmed and suspected releases including those related to failures from periodic testing)

Form Date: 2/25/2021

Facility ID	**31248**
Owner ID	**76592**
Release ID	
AI ID	

Contact Information County: Quay District: 2 Date Received: 02/28/2025

Caller Name: Richard Flores Phone: +1 (505) 470-5370

Facility Name: Tucumcari Truck Terminal A

Facility Physical Address: 3900 W Tucumcari Blvd

Facility City/Zip Code: Tucumcari, 88401

Owner Information

Responsible Tank Owner: Hana Truck Sport Tucumcari LLC Phone: +1 (817) 771-3327

Address: PO Box 1012 City: Weatherford

State: TX Zip Code: 76086 Contact Name: N/A

Contact Name Phone #: N/A E-mail: selawii2018@gmail.com

Operator Information (if different than tank owner)

Responsible Tank Operator: Same as above Phone:

Address: City:

State: Zip Code: Contact Name:

Contact Name Phone #: E-mail:

Release Information

☑ Confirmed ☐ Suspected Leaking Tank Type? AST

Product Lost(1)? Unleaded Gas Product Lost(2)? Waste oil Product Lost(3)?

Date of Release: 02/27/2025 Duration: Unkown Volume released: Excess of 25 gallons

Has further release been prevented? Yes Further release prevented by removing tank system.

Fire Authorities notified? No Contact Name: N/A Phone: N/A

Has responsible party been informed of their responsibilities? Yes

Contaminated saturated soils present? Yes

Describe any removal: D&H United removed waste oil contaminated water and the saturated soils nearby.

Hydro-geological Information

Depth to groundwater: 11-20ft Direction of GW flow: Surface waters endangered? Yes

Actual/Possible Impacts

Well locations, depths, types: Unknown

Utility Corridors: Conchas Canal

Vapors in building: N/A

Source Information - Where did the release come from?

☑ Tank ☑ Piping ☐ Spill Prevention ☐ Containment Sump ☐ Dispenser/Loading Rack

☐ Flex Connector ☐ Submersible turbine pump area ☐ Delivery Problem

☑ Other, please describe in comment section below.

Comments: (Please provide as much information as possible about the probable source(s) of the release.)
A) This facility has known prior confirmed releases.

B) A 7,000 Gallon Vertical AST Tank # 39335 on the south end of the property was noted to have a very strong odor of unknown petroleum products. Soil sample # 19 taken from beneath the vertical AST shows a result of 8800 PPM of TPH via EPA method 8015 for MRO, GRO, & DRO.

C) A second location was identified due to petroleum saturated soil with strong olfactory evidence being found during the removal of the piping and sumps. Which had been filled with what appeared to be used motor oil mixed with water. The contractor D&H United attempted to mitigate the release by catching and drumming the liquid. The total amount of liquid was in excess of 25 gallons.

D) 3 additional soil samples were returned to the PSTB Inspector which indicate confirmed releases.
1) Sample 9 SW UDC 11/12 had a result of 507 PPM TPH.
2) Sample 2 NW corner UDC 3/4 had a result of 800 PPM TPH.
3) Sample 6 W UDC 7/8 had a result of 4200 PPM TPH.

Cause Information - Why did the release occur?

☐ Spill ☐ Overfill ☐ Corrosion (if corrosion is the only apparent cause of the release)

☐ Installation Problem ☐ Physical or Mechanical Damage ☑ Other, please specify in comment field below.

Comments: (Please provide as much information as possible about the cause(s) of the release.)
E) The used motor oil is assumed to have come from outside of the system as it has been abandoned for some time and appears to have been used as a dump site.

F) The soil samples beneath the auto dispenser canopy show results for GRO & MRO so additional releases appear to have been occurring throughout the years of this facility being in use.

G) A site sketch of the piping run and where soil samples were taken is attached to the Compliance Inspection report.

Unknown (If cause and source of release is not known, please state why below):

FOR NMED USE ONLY

Assignment Information

Report received by: Michael Leger Date: 06/02/25 Phone: (505) 372-8337

Assigned to: D. Renee Romero Date: _____ Phone: _____

PI SCSR ID #: _____

☐ Suspected release referred to Remedial Action Program for Site Check.

☐ Suspected release referred to Remedial Action Program as confirmed release.

☐ Suspected release with Remedial Action Program is determined to be a confirmed release.

Date Referred: _____

Notification of Permanent Closure
Of
Petroleum Storage Tank Systems

The purpose of this form is for owners to notify the Tank Fee Program of the Petroleum Storage Tank Bureau of the permanent closure of the petroleum storage tank systems listed below. The owner must submit the form within 30 days of permanent closure of the petroleum storage tank systems, regardless of whether the systems are underground storage tank systems or above ground storage tank systems. Once the completed form is submitted to the Bureau, the owner will no longer be invoiced for yearly registration fees unless fees and/or penalties are still owned, or the petroleum storage tank systems have not been properly closed in accordance with Sections 1502 to 1504 of 20.5.115 NMAC. **This form will not be accepted by local program inspectors as a 30-day notification of an impending closure as required in Subsection A of 20.5.115.1500 NMAC.** Mail the completed form to:

New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505

I. Ownership of Tank(s)

Hana Truck Sport Tucumcari LLC			76592
Owner Name			Owner ID Number
PO Box 1012			Weatherford
Street Address			City
Texas	76086	Parker	+1 (817) 771-3327
State	Zip Code	County	Phone Number

II. Location of Tank(s)

Tucumcari Truck Terminal A			31248
Facility Name			Facility ID Number
3900 W Tucumcari Blvd	Tucumcari	88401	Quay
Street Address	City	Zip Code	County

2	**Number of Tank(s) still in service at this location.**	**Closure Date:**	**February 27, 2025**

III. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate, and complete.

No response from owner
Name and Official Title of Owner or Owner's Authorized Representative

Signature

Date Signed

IV. Description of Petroleum Storage Tank Systems - Facility ID Number: 31248

Tank Registration Number	39329	39330	39331	39332	39335
A. Estimated Age of Tank (years)					
B. Estimated Capacity of tank (gallons)	10,000	10,000	10,000	10,000	7,000
C. Tank Placement					
Above-ground	✓	✓	✓	✓	✓
Underground					
D. Tank Construction					
Steel	✓	✓	✓	✓	✓
Fiberglass Reinforced Plastic					
FRP Clad Steel					
Single-walled	✓	✓	✓	✓	✓
Double-walled					
Farm Tank					
UL Listed					
E. Piping Construction					
Steel					✓
Black Steel					
Fiberglass Reinforced Plastic	✓	✓	✓	✓	
Flexible					
Other					
Underground	✓	✓	✓	✓	✓
Above-ground					
F. Content or Substance Last Stored					
Gasoline	✓	✓	✓	✓	
Diesel					
Kerosene					
New Oil					
Waste /Used Oil					
Other					✓
Unknown					✓
G. Estimated Date of Last Used					
I. Tank Closed in Place					
Filled with Concrete					
Filled with Sand					
Above-ground					
Inert at Closure					

New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505
(505) 476-4397

Certification of Compliance

Date: 02-Jun-25

I. Facility, Ownership, and Operator Information

Facility Name: Tucumcari Truck Terminal A	**Facility Number: 31248**	Phone: (817)771-3327
Facility Address: 3900 W Tucumcari Blvd	City:Tucumcari	Zip Code: 88401

Owner Name: Hana Truck Sport Tucumcari LLC	**Owner Number: 76592**	Phone: (817)771-3327	
Owner Address: PO Box 1012	City:Weatherford	State: Texas	Zip Code: 76086

Operator Name: Hana Truck Sport Tucumcari LLC			Phone: (817)771-3327
Operator Address: PO Box 1012	City:Weatherford	State: Texas	Zip Code: 76086

II. Notice of Violation / Field Compliance Order / LCAV Number: 36 20240131 0028

III. Violation(s) Not Applicable - Tank System(s) Permanently Closed.

Tank ID	Penalty Code	Occurrences Per Tank	Description
39329,39330, 39331,39332, 39335	20.5.110.1001 NMAC	1	Failure to adopt and implement Operations and Maintenance Plan.
39329,39330, 39331,39332, 39335	20.5.110.1008.A NMAC	1	Failure to conduct periodic walkthrough inspections.
39329,39330, 39331,39332, 39335	20.5.110.1008.D NMAC	1	Failure to maintain records of O&M and walk-through inspections.
39329,39330, 39331,39332, 39335	20.5.117.1703.A [1] NMAC	1	Failure to demonstrate third party financial responsibility on petroleum storage tanks.
39329,39330, 39331,39332, 39335	20.5.104.400.A [1] NMAC	1	Failure to designate a trained operator at a facility for each class of operator.
39329,39330, 39331,39332, 39335	20.5.109.902.A [1] NMAC	1	Failure to protect AST system from corrosion.
39329,39330, 39331,39332, 39335	20.5.109.908.C [2] NMAC	1	Failure to permanently close an existing single walled ASTs that has not been upgraded..
39329, 39330, 39331, 39332	20.5.109.917 NMAC	1	Failure to install a containment sump underneath each dispenser system associated with an AST.

New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505
(505) 476-4397

Certification of Compliance

IV. For Petroleum Storage Tank Bureau Staff Only.

☒ Yes	☐ No	☐ N/A	I conducted an inspection at the above-named facility and found the violation(s) specified in Section III have been corrected or are no longer applicable because the tank system(s) have been permanently closed.
☐ Yes	☐ No	☒ N/A	I have received documentation indicating the owner or his authorized representative have corrected the violation(s) listed in Section III above.
☐ Yes	☐ No	☒ N/A	I have retrained the Class A/B Operator for this facility on the violation(s) listed in Section III above.

Compliance Officer Print Name: Richard Flores

Compliance Officer's Signature: Richard Flores Digitally signed by Richard Flores Date: 2025.06.02 11:10:21 -06'00'

Date: 06/02/2025

Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Bldg. 1
Santa Fe, NM 87505
Phone: 505.476.4397
Fax: 505.476.4374

Aboveground Storage Tank Systems Inspection Report

Inspection Type: Closure	**Case Number: 38 20250227 0114**	Inspection Start Time: 10:30:00 AM	Date: 27-Feb-25

I. Facility Name: Tucumcari Truck Terminal A	**Facility ID: 31248**	Phone: (817) 771-3327
Address: 3900 W Tucumcari Blvd	City: Tucumcari	Zip Code: 88401
E-mail: N/A	Access to property authorized by: N/A	LUST Site: Priority

II. Owner Name: Hana Truck Sport Tucumcari LLC		**Owner ID: 76592**	Phone: (817) 771-3327
Address: PO Box 1012	City: Weatherford	State: TX	Zip Code: 76086
Contact Name: N/A	E-mail: N/A		

III. Operator Name: Hana Truck Sport Tucumcari LLC		**Operator ID: O14488**	Phone: (817) 771-3327
Address: PO Box 1012	City: Weatherford	State: TX	Zip Code: 76086
Contact Name: N/A	E-mail: N/A		

IV. Class A/B Operator Name: None Provided	Phone: N/A	E-mail: N/A	
Address: N/A	City: N/A	State: N/A	Zip Code: N/A
Who trained Class A/B Operator: N/A		Date Trained: N/A	

V. NMED Compliance Officer's Name: Richard Flores	Phone: (505) 470-5370	E-mail: Richard.Flores@env.nm.gov	
Address: 2905 Rodeo Park Dr East, Building 1	City: Santa Fe	State: NM	Zip Code: 87505

VI. Tank Number	39329	39330	39331	39332	39333	39334	39335
Size/Capacity:	10,000	10,000	10,000	10,000	1,480	1,480	7,000
Contents:	B84	B03	B03	B85	B06	B06	B16
Installation Date:	6/14/2002	6/14/2002	6/14/2002	6/14/2002	6/14/2002	6/14/2002	6/14/2002
Tank Construction:	A01,12,15	A01,12,15,32	A01,12,15,32	A01,12,15	A01,13,15	A01,13,15,32	A01,13,15
Tank Secondary Containment:	S03	S03	S03	S03	S15	S15	S15
Piping Construction:	F03,90	F03,90	F03,90	F03,90	F01	F01	F03,90
Piping Secondary Containment:	S17	S17	S17	S17	S15	S15	S15
Other Secondary Containment / Ancillary:	S06	S06	S06	S06	S15	S15	S15
Corrosion/Cathodic Protection:	C19,20	C19,20	C19,20	C19,20	C19,20	C19,20	C19,20
Tank Release Detection:	H11	H11	H11	H11	H07	H07	H07
Piping Release Detection:	G08,09	G08,09	G08,09	G08,09	G16	G16	G16
Spill Prevention:	I03	I03	I03	I03	I05	I05	I05
Overfill Prevention:	I05	I05	I05	I05	I05	I05	I05
Tank Status & Usage:	TOS	TOS	TOS	TOS	TOS	TOS	TOS

Facility ID Number: 31248 Case Number: 38 20250227 0114

1. Registration	Yes	No	Unk	N/A
A. All applicable tanks are registered? (20.5.102 NMAC)	✓			
B. UST was taken out of service prior to January 1, 1974?		✗		
C. AST was taken out of service prior to July 1, 2001?		✗		
2. Notifications				
A. Notification received 30 days prior. (20.5.115.1500 NMAC)	✓			
B. Notification contained all required information. (20.5.115.1500 NMAC)	✓			
C. 24-hour notification received. (20.5.115.1500 NMAC)	✓			
3. Temporary Closure				
A. Tank emptied to one inch or less of regulated substances?	✓			
B. Release detection methods operated & maintained as required. (20.5.115.1501.A NMAC)				✓
C. Cathodic protection meets requirements. (20.5.115.1501.A/B NMAC)				✓
D. Vent lines have been left open? (20.5.115.1501 NMAC)				✓
E. Lines, man-ways, pumps, and ancillary equipment capped and/or secured. (20.5.115.1501 NMAC)		✗		
F. AST Piping disconnected & capped after three months in temporary closure. (20.5.115.1501 NMAC)		✗		
G. Proof of Financial Responsibility provided. (20.5.117.1703.A NMAC)		✗		
4. Permanent Closure/Removal				
A. Regulated substance removed from piping prior to removal.		✗		
B. Tank(s) emptied and cleaned prior to removal (20.5.115.1502.A NMAC)	✓			
C. UST excavated using all safety procedures.	✓			
D. Tank fixtures removed.	✓			
E. Tank rendered inert prior to removal from where it was installed.	✓			
F. Tank properly vented while rendering it inert.	✓			
G. Ground equipment used when forced air purging is used.				✓
H. Tank cleaned and inspected for holes.	✓			
I. Regulated substances & sludges disposed of per 20.5.115.1502.A NMAC.	✓			
J. Requirement for a site assessment for AST system has been waived.		✗		
K. Tank disposed of properly.	✓			
L. Date tank(s) removed (if multiple dates, add to comments): 02/27/2025				
M. Date piping removed (if multiple dates, add to comments): 02/28/2025				
5. Bureau provided with opportunity to inspect existing piping prior to removal. (20.5.115.1500.B NMAC)	✓			
6. Permanent Closure/Closed-in-place. (20.5.115.1502 NMAC)				
A. UST filled with inert solid material.				✓
B. Total number of yards of inert material used to fill UST: N/A				
C. Piping has been purged of liquids and rendered inert.				✓
D. Piping filled with inert material.				✓
E. AST rendered inert.	✓			
F. AST has been marked per regulations.	✓			
G. AST Vents left open.	✓			
H. All AST access openings secured.	✓			
I. Date tank(s) was closed in place (if multiple dates, add to comments): N/A				
J. Date piping closed in place (if multiple dates, add to comment): N/A				
7. Evidence of Release or Spill.	✗			

Facility ID Number: 31248 Case Number: 38 20250227 0114

8. Site Assessment.				
A. Site assessment where contamination is most likely. (20.5.115.1504 NMAC)	✓			
B. Site assessed for Change-in-Service. (20.5.115.1503 NMAC)				✓
C. Date site assessment was conducted (if multiple dates, add to comments): 02/28/2025				
D. Date analytical report for site assessment was received. 05/07/2025				
9. Change-in-Service.				
A. Notification received for AST/UST system for change-in-service. (20.5.115.1503.B NMAC)				✓
B. Tank emptied and cleaned of regulated substances before change-in-service. (20.5.115.1503.C NMAC)				✓

10. Comments:
Closure Inspection:

A) This inspection was conducted through the 27th and 28th of February 2025.

B) The tanks were removed from the vault, along with one vertical AST along the southern end of the property on February 27, 2025 with piping being removed afterwards.

C) During the piping removal the Petroleum Storage Tank Bureau (PSTB) Inspector noticed what appeared to be used motor oil mixed with water flowing out of both of the product lines. At the time of the removal of the piping the contractors D&H United attempted to mitigate the situation by catching and removing as much of the contaminated water and soil as possible. The liquid was placed into a drum and the soil was placed onto a tarp. The Inspector was told it would be disposed of properly. However, no disposal manifest has been provided as of yet.

D) The PSTB Inspector verified that the liquid was a mixture of waste oil and water via tank stick with water/fuel finding paste.

E) Upon removal of the Eastern most transition sump the surrounding area was also noted to have a large area of black stained soil with a strong odor of petroleum products.

F) This facility has a known confirmed release of waste oil from two vertical AST's along the Eastern side of the property. Which have both been moved from their original location but have yet to be permanently closed pursuant to 20.5.115 NMAC.

G) The visual indication of stained soil, along with very strong olfactory evidence, and multiple soil samples which are above action levels (See attached lab report) indicate a separate confirmed release. As such an additional Initial Incident Report (IIR) will be attached to this report. The location of this release is on the Western side of the property under the auto canopy and the Southern portion of the property on the hill where a solvent tank was located just to the East of the two very large unregulated tanks.

H) 23 soil samples were taken from the tank pit, each piping joint, and underneath each sump.

I) The soil sample taken underneath the vertical AST showed a result of 8800 PPM for Total Petroleum Hydrocarbons (TPH) which is above New Mexico Environment Department (NMED) action levels of 100 PPM.

J) The sample underneath dispenser 11/12 SW corner showed a result of 507 PPM TPH.

K) The sample underneath dispenser 3/4 NW Corner showed a result of 800 PPM TPH.

L) The sample underneath dispenser 7/8 W Center showed a result of 4200 PPM TPH.

M) All other soil samples taken were either Non Detect (ND) or were below NMED action levels for TPH.

N) During the removal of the piping and Under Dispenser Containment (UDC) & Transition Sumps an additional 4" chase pipe was found which appeared to run North-South directly to the very large AST's on the South end and to a concrete filled UDC sump on the North end of the auto dispenser island. D&H United cut a small "V" into the top of the piping and determined that it is indeed fiberglass fuel piping within. However, as the piping appears to have been connected to the unregulated tanks it is not under the jurisdiction of the PSTB.

Facility ID Number: 31248 Case Number: 38 20250227 0114

Certificates Of Compliance:

O) This report serves to clear all previous violations associated with tanks 39329, 39330, 39331, 39332, & 39335 that are properly permanently closed via this inspection.

Continuing Enforcement:

P) Violation 20.5.110.1011.C[2] NMAC associated with inspection # 38 20250122 0063 remains in effect. To clear this violation please submit a notification of permanent closure for the remaining 2 tanks at this facility, and allow the PSTB Inspector the opportunity to inspect the tank and surrounding area during removal. Tank 39333 & 39334 have been moved from their original place but have yet to be permanently closed per 20.5.115 NMAC.

Facility ID Number: 31248 Case Number: 38 20250227 0114

11. Closing Conference and Signatures.

Closing Conference Date: Jun 2, 2025 Closing Conference Time: 8:30:00 AM

Richard Flores

Compliance Officer - Print Name

Richard Flores

Digitally signed by Richard Flores
Date: 2025.06.02 13:40:52 -06'00'

Compliance Officer's Signature

06/02/2025

Date

I, hereby, acknowledge receipt of this inspection report.

On-Site Representative - Print Name

None provided, see attached email chain

On-site Representative's Signature

06/02/2025

Date

Flores, Richard, ENV

From: Flores, Richard, ENV
Sent: Tuesday, May 20, 2025 11:37 AM
To: selawii2018@gmail.com
Subject: FW: Tucumcari Truck Terminal A (FID-31248)
Attachments: Signature Page.pdf; 2018 10 09 Perm Closure Form.pdf

Good Morning,

I am reaching out once again to verify that this email was received.
As I cannot permanently close these tanks without the filled out and returned permanent closure form, these tanks will remain active in our system.
That means tank fees will continue to be generated including penalties and interest.
Please return the attached permanent closure form as soon as possible to avoid any additional tank fees.

Thank you,

Richard Flores
Environmental Scientist and Specialist-Operational
New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East Building #1
Santa Fe, NM 87505
Cell # (505) 470-5370
Richard.Flores@env.nm.gov

From: Flores, Richard, ENV
Sent: Friday, May 9, 2025 10:52 AM
To: selawii2018@gmail.com
Subject: Tucumcari Truck Terminal A (FID-31248)

Good Morning,

I have attached a permanent closure form that I will need filled out to complete the closure of 5 tanks that were removed from Tucumcari Truck Terminal A (FID-31248).

Please fill it out to the best of your knowledge and return it as soon as possible.

Also please sign and return the attached signature page so I can complete this report.

The signature page is simply acknowledging that I was physically on site and conducted an inspection, it does not affect the actual outcome of what is contained in the report.

As such it is not required that you sign. However, you have been provided with the opportunity to do so.

Much Obliged,

Richard Flores
Environmental Scientist and Specialist-Operational
New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East Building #1
Santa Fe, NM 87505
Cell # (505) 470-5370
Richard.Flores@env.nm.gov



Facility Name: Tucumcari Truck Terminal A Facility Number: 31248



Picture Number: 1

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 10:39 AM

Description:
Vaulted AST system, tanks 39329, 39330, 39331, & 39332 pictured.



Picture Number: 2

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 11:00 AM

Description:
Removal of tank 39329



Picture Number: 3

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 3:26 PM

Description:
Removal of tank 39335

Facility Name: Tucumcari Truck Terminal A Facility Number: 31248



Picture Number: 4

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 1:39 PM

Description:
Contaminated water and soil in piping trench, due to piping being filled with used motor oil.



Picture Number: 5

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 1:52 PM

Description:
Tank gauging stick used to determine depth of liquid with fuel & water finding paste.



Picture Number: 6

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 11:29 AM

Description:
Motor oil saturated soil found surrounding East Transition sump.

Facility Name: Tucumcari Truck Terminal A Facility Number: 31248



Picture Number: 7

Photographer: Richard Flores

Date: Feb 27, 2025 Time: 10:53 AM

Description:
Contaminated saturated soil surrounding East transition sump.



Picture Number: 8

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 10:56 AM

Description:
Contaminated saturated soil surrounding UDC sump 11/12 SW corner.



Picture Number: 9

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 1:02 PM

Description:
Soil Sampling in tank pit.

Facility Name: Tucumcari Truck Terminal A Facility Number: 31248



Picture Number: 10

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 11:09 AM

Description:
Additional concrete filled UDC sump on north end of auto dispenser island.



Picture Number: 11

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 11:20 AM

Description:
4" PVC chase which appears to run from very large unregulated tanks to concrete filled UDC sump.



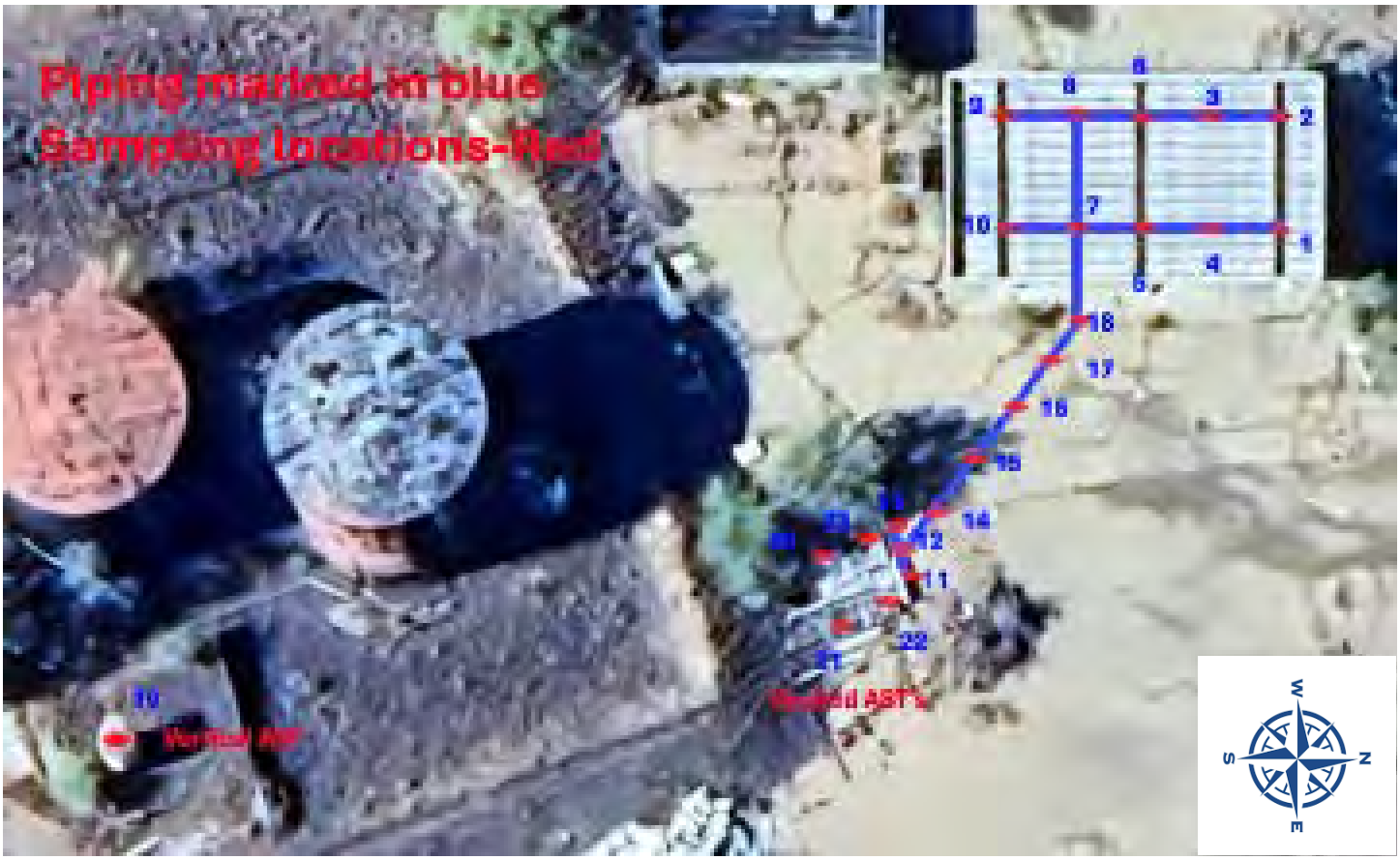
Picture Number: 12

Photographer: Richard Flores

Date: Feb 28, 2025 Time: 12:41 PM

Description:
Fiberglass product piping found within aforementioned 4" PVC chase.

Note: as this portion of piping and UDC sump appear to connected to the very large tanks, they are unregulated by the PSTB and remained in place.



Facility Number: 31248 Photograph Number: 13 Photographer: Richard Flores

Date Taken: May 9, 2025 Time Taken: 1:19:00 PM

Description:

Soil sample diagram.

Blue lines denote piping run.
Red dots denote soil sample taken.

Sample 1 NE corner of auto island dispenser 1/2
Sample 2 NW corner dispenser ¾
Sample 3 nw center of north end auto dispensers
Sample 4 NE center of north end auto dispensers
Sample 5 east center dispenser 5/6
Sample 6 west center dispenser 7/8
Sample 7 SE transition sump
Sample 8 SW transition sump
Sample 9 SW udc 11/12
Sample 10 SE udc 9/10
Sample 11 W tank pit
Sample 12 center tank pit
Sample 13 E tank pit
Sample 14 1st joint from tanks
Sample 15 2nd joint
Sample 16 3rd joint
Sample 17 4th joint
Sample 18 5th joint corner
Sample 19 vertical ast
Sample 20 SW vault
Sample 21 SE vault
Sample 22 NE vault
Sample 23 NW vault

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Arnold Saenz
D&H United Fueling Solutions, Inc.
4401 Anahiem NE
Albuquerque, New Mexico 87113

Generated 3/12/2025 6:13:47 PM

JOB DESCRIPTION

Tucumcari Travel Plaza

JOB NUMBER

885-20709-1

Eurofins Albuquerque
4901 Hawkins NE
Albuquerque NM 87109

See page two for job notes and contact information.

myEOL

Eurofins Albuquerque

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

Authorization



Generated
3/12/2025 6:13:47 PM

Authorized for release by
Cheyenne Cason, Project Manager
cheyenne.cason@et.eurofinsus.com
(505)345-3975

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
QC Sample Results 29
QC Association Summary 35
Lab Chronicle 39
Certification Summary 45
Chain of Custody 46
Receipt Checklists 48

Client: D&H United Fueling Solutions, Inc.
Job ID: 885-20709-1
Project/Site: Tucumcari Travel Plaza

Qualifiers

GC VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 885-20709-1 Eurofins Albuquerque

Job Narrative
885-20709-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 3/3/2025 8:11 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -5.4°C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: Center Tank Pit (885-20709-1), 2nd Joint Sample # 15 (885-20709-2), Dis # 9/10 SE Corner (885-20709-3), Sample # 11 W Tank Pit (885-20709-4), 5th Joint Corner (885-20709-5), 1st Joint Sample # 14 (885-20709-6), Sample # 3 NW Center (885-20709-7), Vertical AST (885-20709-8), Sample # 4 NE Center (885-20709-9), Dis # 5/6 East Center (885-20709-10), Disp # 1/2 NE Corner (885-20709-11), Disper # 11/12 SW Corner (885-20709-12), SW transition (885-20709-13), SE transition (885-20709-14), Dis # 3/4 NW Corner (885-20709-15), Dis # 7/8 W Center (885-20709-16), NW Vault (885-20709-17), SE Vault (885-20709-18), SW Vault (885-20709-19), NE Vault (885-20709-20), 3rd Joint Sample # 16 (885-20709-21), 4th Joint Sample # 17 (885-20709-22) and E tank Pit Sample # 13 (885-20709-23). This does not meet regulatory requirements. The client was asked about this issue at the time of sample drop-off, and the laboratory was instructed to proceed with analysis.

The Field Sampler was not listed on the Chain of Custody.

Gasoline Range Organics
Method 8015D_GRO: Surrogate recovery for the following sample was outside control limits: Vertical AST (885-20709-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
Method 8015D_DRO: The following samples were diluted due to the nature of the sample matrix: Vertical AST (885-20709-8) and Dis # 7/8 W Center (885-20709-16)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Center Tank Pit
Date Collected: 02/28/25 12:02
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-1
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/06/25 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/04/25 10:59*	*03/06/25 18:00*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
Benzene	ND		0.025		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
m&p-Xylene	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 18:00	1
Xylenes, Total	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*03/04/25 10:59*	*03/06/25 18:00*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.7		mg/Kg		03/05/25 11:35	03/05/25 20:19	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*111*		*62 - 134*	*03/05/25 11:35*	*03/05/25 20:19*	*1*

Client: D&H United Fueling Solutions, Inc.
Job ID: 885-20709-1
Project/Site: Tucumcari Travel Plaza

Client Sample ID: 2nd Joint Sample # 15
Lab Sample ID: 885-20709-2
Date Collected: 02/28/25 12:17
Matrix: Solid
Date Received: 03/03/25 08:11

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		03/04/25 10:59	03/06/25 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*03/04/25 10:59*	*03/06/25 19:06*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.096		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
Ethylbenzene	**0.11**		0.048		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
Toluene	**0.14**		0.048		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
m&p-Xylene	**0.32**		0.096		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
o-Xylene	**0.17**		0.048		mg/Kg		03/04/25 10:59	03/06/25 19:06	1
Xylenes, Total	**0.50**		0.096		mg/Kg		03/04/25 10:59	03/06/25 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*48 - 145*	*03/04/25 10:59*	*03/06/25 19:06*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.9		mg/Kg		03/05/25 11:35	03/05/25 20:51	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		03/05/25 11:35	03/05/25 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*03/05/25 11:35*	*03/05/25 20:51*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Dis # 9/10 SE Corner

Date Collected: 02/28/25 11:54
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-3

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/06/25 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*35 - 166*	*03/04/25 10:59*	*03/06/25 20:11*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
m&p-Xylene	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:11	1
Xylenes, Total	ND		0.098		mg/Kg		03/04/25 10:59	03/06/25 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*48 - 145*	*03/04/25 10:59*	*03/06/25 20:11*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**16**		9.7		mg/Kg		03/05/25 11:35	03/05/25 21:02	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		03/05/25 11:35	03/05/25 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*100*		*62 - 134*	*03/05/25 11:35*	*03/05/25 21:02*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Sample # 11 W Tank Pit

Lab Sample ID: 885-20709-4

Date Collected: 02/28/25 11:59

Matrix: Solid

Date Received: 03/03/25 08:11

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/06/25 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*35 - 166*	*03/04/25 10:59*	*03/06/25 20:32*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
m&p-Xylene	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 20:32	1
Xylenes, Total	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 20:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*48 - 145*	*03/04/25 10:59*	*03/06/25 20:32*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		03/05/25 11:35	03/07/25 12:22	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:35	03/07/25 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*107*		*62 - 134*	*03/05/25 11:35*	*03/07/25 12:22*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: 5th Joint Corner

Date Collected: 02/28/25 12:37
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-5

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		03/04/25 10:59	03/06/25 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*03/04/25 10:59*	*03/06/25 21:16*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.096		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
Ethylbenzene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
Toluene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
m&p-Xylene	ND		0.096		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
o-Xylene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:16	1
Xylenes, Total	ND		0.096		mg/Kg		03/04/25 10:59	03/06/25 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*03/04/25 10:59*	*03/06/25 21:16*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		03/05/25 11:35	03/05/25 21:23	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 21:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*03/05/25 11:35*	*03/05/25 21:23*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: 1st Joint Sample # 14

Date Collected: 02/28/25 12:12
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-6

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/06/25 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*35 - 166*	*03/04/25 10:59*	*03/06/25 21:38*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
m&p-Xylene	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 21:38	1
Xylenes, Total	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*03/04/25 10:59*	*03/06/25 21:38*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		03/05/25 11:35	03/05/25 21:34	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:35	03/05/25 21:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*105*		*62 - 134*	*03/05/25 11:35*	*03/05/25 21:34*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Sample # 3 NW Center
Date Collected: 02/28/25 11:13
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-7
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		03/04/25 10:59	03/06/25 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*03/04/25 10:59*	*03/06/25 21:59*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
Ethylbenzene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
Toluene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
m&p-Xylene	**0.11**		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
o-Xylene	**0.058**		0.048		mg/Kg		03/04/25 10:59	03/06/25 21:59	1
Xylenes, Total	**0.17**		0.097		mg/Kg		03/04/25 10:59	03/06/25 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*	*03/04/25 10:59*	*03/06/25 21:59*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		03/05/25 11:35	03/05/25 21:44	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*03/05/25 11:35*	*03/05/25 21:44*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Vertical AST

Date Collected: 02/28/25 12:48
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-8
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**4600**		480		mg/Kg		03/04/25 10:59	03/07/25 17:58	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*868*	*S1+*	*35 - 166*	*03/04/25 10:59*	*03/07/25 17:58*	*100*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.95		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
Benzene	ND		0.24		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
Ethylbenzene	**1.9**		0.48		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
Toluene	ND		0.48		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
m&p-Xylene	**6.9**		0.95		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
o-Xylene	**9.6**		0.48		mg/Kg		03/04/25 10:59	03/06/25 22:21	10
Xylenes, Total	**16**		0.95		mg/Kg		03/04/25 10:59	03/06/25 22:21	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*172*	*S1+*	*48 - 145*	*03/04/25 10:59*	*03/06/25 22:21*	*10*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**4200**		98		mg/Kg		03/05/25 11:35	03/07/25 12:33	10
Motor Oil Range Organics [C28-C40]	ND	D	490		mg/Kg		03/05/25 11:35	03/07/25 12:33	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*D S1-*	*62 - 134*	*03/05/25 11:35*	*03/07/25 12:33*	*10*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Sample # 4 NE Center

Lab Sample ID: 885-20709-9

Date Collected: 02/28/25 11:16

Matrix: Solid

Date Received: 03/03/25 08:11

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/07/25 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*35 - 166*	*03/04/25 10:59*	*03/07/25 16:29*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
m&p-Xylene	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/06/25 22:43	1
Xylenes, Total	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*03/04/25 10:59*	*03/06/25 22:43*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		03/05/25 11:35	03/05/25 22:06	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:35	03/05/25 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*113*		*62 - 134*	*03/05/25 11:35*	*03/05/25 22:06*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Dis # 5/6 East Center

Date Collected: 02/28/25 11:22
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-10

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	6.5		4.8		mg/Kg		03/04/25 10:59	03/06/25 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*03/04/25 10:59*	*03/06/25 23:26*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
Ethylbenzene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
Toluene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
m&p-Xylene	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
o-Xylene	ND		0.048		mg/Kg		03/04/25 10:59	03/06/25 23:26	1
Xylenes, Total	ND		0.097		mg/Kg		03/04/25 10:59	03/06/25 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*48 - 145*	*03/04/25 10:59*	*03/06/25 23:26*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	87		9.5		mg/Kg		03/05/25 11:35	03/05/25 22:17	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:35	03/05/25 22:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*96*		*62 - 134*	*03/05/25 11:35*	*03/05/25 22:17*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Disp # 1/2 NE Corner

Lab Sample ID: 885-20709-11

Date Collected: 02/28/25 11:06

Matrix: Solid

Date Received: 03/03/25 08:11

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/07/25 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*03/04/25 10:59*	*03/07/25 17:13*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.097		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
m&p-Xylene	ND		0.097		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 17:13	1
Xylenes, Total	**0.097**		0.097		mg/Kg		03/04/25 10:59	03/07/25 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*48 - 145*	*03/04/25 10:59*	*03/07/25 17:13*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**43**		9.3		mg/Kg		03/05/25 11:35	03/05/25 15:06	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		03/05/25 11:35	03/05/25 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*90*		*62 - 134*	*03/05/25 11:35*	*03/05/25 15:06*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Disper # 11/12 SW Corner

Date Collected: 02/28/25 11:51
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-12

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/04/25 10:59	03/07/25 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*35 - 166*	*03/04/25 10:59*	*03/07/25 00:10*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.099		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
Benzene	ND		0.025		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
Ethylbenzene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
Toluene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
m&p-Xylene	ND		0.099		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
o-Xylene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:10	1
Xylenes, Total	ND		0.099		mg/Kg		03/04/25 10:59	03/07/25 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*	*03/04/25 10:59*	*03/07/25 00:10*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**430**		10		mg/Kg		03/05/25 11:35	03/05/25 15:29	1
Motor Oil Range Organics [C28-C40]	**77**		50		mg/Kg		03/05/25 11:35	03/05/25 15:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*03/05/25 11:35*	*03/05/25 15:29*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: SW transition

Date Collected: 02/28/25 11:46
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-13

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	5.8		5.0		mg/Kg		03/04/25 10:59	03/07/25 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*03/04/25 10:59*	*03/07/25 00:32*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.10		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
Benzene	ND		0.025		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
Ethylbenzene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
Toluene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
m&p-Xylene	ND		0.10		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
o-Xylene	ND		0.050		mg/Kg		03/04/25 10:59	03/07/25 00:32	1
Xylenes, Total	ND		0.10		mg/Kg		03/04/25 10:59	03/07/25 00:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*48 - 145*	*03/04/25 10:59*	*03/07/25 00:32*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	27		9.8		mg/Kg		03/05/25 11:35	03/05/25 15:52	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		03/05/25 11:35	03/05/25 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*03/05/25 11:35*	*03/05/25 15:52*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: SE transition

Date Collected: 02/28/25 11:39
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-14

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		03/04/25 10:59	03/07/25 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*35 - 166*	*03/04/25 10:59*	*03/07/25 00:53*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.094		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
Ethylbenzene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
Toluene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
m&p-Xylene	ND		0.094		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
o-Xylene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 00:53	1
Xylenes, Total	ND		0.094		mg/Kg		03/04/25 10:59	03/07/25 00:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*03/04/25 10:59*	*03/07/25 00:53*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**11**		9.7		mg/Kg		03/05/25 11:35	03/05/25 16:16	1
Motor Oil Range Organics [C28-C40]	ND		49		mg/Kg		03/05/25 11:35	03/05/25 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*99*		*62 - 134*	*03/05/25 11:35*	*03/05/25 16:16*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Dis # 3/4 NW Corner

Date Collected: 02/28/25 11:10
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-15

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**290**		47		mg/Kg		03/04/25 10:59	03/07/25 01:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*144*		*35 - 166*	*03/04/25 10:59*	*03/07/25 01:37*	*10*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.95		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
Benzene	ND		0.24		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
Ethylbenzene	**0.48**		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
Toluene	ND		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
m&p-Xylene	**8.4**		0.95		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
o-Xylene	**5.9**		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:37	10
Xylenes, Total	**14**		0.95		mg/Kg		03/04/25 10:59	03/07/25 01:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*48 - 145*	*03/04/25 10:59*	*03/07/25 01:37*	*10*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**510**		9.7		mg/Kg		03/05/25 11:35	03/05/25 16:40	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 16:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*106*		*62 - 134*	*03/05/25 11:35*	*03/05/25 16:40*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Dis # 7/8 W Center

Date Collected: 02/28/25 11:33
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-16

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	**1100**		47		mg/Kg		03/04/25 10:59	03/07/25 01:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*236*	*S1+*	*35 - 166*	*03/04/25 10:59*	*03/07/25 01:59*	*10*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.94		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
Benzene	**0.87**		0.23		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
Ethylbenzene	**1.9**		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
Toluene	ND		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
m&p-Xylene	**8.7**		0.94		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
o-Xylene	**3.9**		0.47		mg/Kg		03/04/25 10:59	03/07/25 01:59	10
Xylenes, Total	**13**		0.94		mg/Kg		03/04/25 10:59	03/07/25 01:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*48 - 145*	*03/04/25 10:59*	*03/07/25 01:59*	*10*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**3100**		96		mg/Kg		03/05/25 11:35	03/07/25 12:44	10
Motor Oil Range Organics [C28-C40]	ND	D	480		mg/Kg		03/05/25 11:35	03/07/25 12:44	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*0*	*D S1-*	*62 - 134*	*03/05/25 11:35*	*03/07/25 12:44*	*10*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: NW Vault
Date Collected: 02/28/25 13:12
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-17
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.8		mg/Kg		03/04/25 10:59	03/07/25 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*03/04/25 10:59*	*03/07/25 16:51*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.096		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
Ethylbenzene	ND		0.048		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
Toluene	ND		0.048		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
m&p-Xylene	ND		0.096		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
o-Xylene	ND		0.048		mg/Kg		03/04/25 10:59	03/07/25 02:20	1
Xylenes, Total	ND		0.096		mg/Kg		03/04/25 10:59	03/07/25 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*03/04/25 10:59*	*03/07/25 02:20*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		03/05/25 11:35	03/05/25 17:27	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*114*		*62 - 134*	*03/05/25 11:35*	*03/05/25 17:27*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: SE Vault

Date Collected: 02/28/25 13:04
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-18

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		03/04/25 10:59	03/07/25 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*35 - 166*	*03/04/25 10:59*	*03/07/25 02:42*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
Ethylbenzene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
Toluene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
m&p-Xylene	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
o-Xylene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 02:42	1
Xylenes, Total	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 02:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*03/04/25 10:59*	*03/07/25 02:42*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		03/05/25 11:35	03/05/25 17:50	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:35	03/05/25 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*98*		*62 - 134*	*03/05/25 11:35*	*03/05/25 17:50*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: SW Vault

Date Collected: 02/28/25 13:00
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-19

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.7		mg/Kg		03/04/25 10:59	03/07/25 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*35 - 166*	*03/04/25 10:59*	*03/07/25 03:04*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
Ethylbenzene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
Toluene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
m&p-Xylene	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
o-Xylene	ND		0.047		mg/Kg		03/04/25 10:59	03/07/25 03:04	1
Xylenes, Total	ND		0.095		mg/Kg		03/04/25 10:59	03/07/25 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*	*03/04/25 10:59*	*03/07/25 03:04*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**16**		9.1		mg/Kg		03/05/25 11:35	03/05/25 18:14	1
Motor Oil Range Organics [C28-C40]	ND		46		mg/Kg		03/05/25 11:35	03/05/25 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*101*		*62 - 134*	*03/05/25 11:35*	*03/05/25 18:14*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: NE Vault
Date Collected: 02/28/25 13:07
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-20
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 10:59	03/07/25 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*35 - 166*	*03/04/25 10:59*	*03/07/25 03:26*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.098		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
Benzene	ND		0.024		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
Toluene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
m&p-Xylene	ND		0.098		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 10:59	03/07/25 03:26	1
Xylenes, Total	ND		0.098		mg/Kg		03/04/25 10:59	03/07/25 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*03/04/25 10:59*	*03/07/25 03:26*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		03/05/25 11:35	03/05/25 18:37	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:35	03/05/25 18:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*97*		*62 - 134*	*03/05/25 11:35*	*03/05/25 18:37*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: 3rd Joint Sample # 16
Date Collected: 02/28/25 12:21
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-21
Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/04/25 12:14	03/06/25 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*35 - 166*	*03/04/25 12:14*	*03/06/25 13:38*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
Benzene	ND		0.025		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
Ethylbenzene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
Toluene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
m&p-Xylene	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
o-Xylene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 13:38	1
Xylenes, Total	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 13:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*03/04/25 12:14*	*03/06/25 13:38*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.6		mg/Kg		03/05/25 11:38	03/05/25 20:11	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:38	03/05/25 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*03/05/25 11:38*	*03/05/25 20:11*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: 4th Joint Sample # 17

Date Collected: 02/28/25 12:29
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-22

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		4.9		mg/Kg		03/04/25 12:14	03/06/25 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*35 - 166*	*03/04/25 12:14*	*03/06/25 14:44*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.098		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
Benzene	ND		0.024		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
Ethylbenzene	ND		0.049		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
Toluene	ND		0.049		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
m&p-Xylene	ND		0.098		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
o-Xylene	ND		0.049		mg/Kg		03/04/25 12:14	03/06/25 14:44	1
Xylenes, Total	ND		0.098		mg/Kg		03/04/25 12:14	03/06/25 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*03/04/25 12:14*	*03/06/25 14:44*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.4		mg/Kg		03/05/25 11:38	03/05/25 21:21	1
Motor Oil Range Organics [C28-C40]	ND		47		mg/Kg		03/05/25 11:38	03/05/25 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*92*		*62 - 134*	*03/05/25 11:38*	*03/05/25 21:21*	*1*

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: E tank Pit Sample # 13

Date Collected: 02/28/25 12:06
Date Received: 03/03/25 08:11

Lab Sample ID: 885-20709-23

Matrix: Solid

Method: SW846 8015M/D - Gasoline Range Organics (GRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/04/25 12:14	03/06/25 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*35 - 166*	*03/04/25 12:14*	*03/06/25 15:49*	*1*

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
Benzene	ND		0.025		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
Ethylbenzene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
Toluene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
m&p-Xylene	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
o-Xylene	ND		0.050		mg/Kg		03/04/25 12:14	03/06/25 15:49	1
Xylenes, Total	ND		0.10		mg/Kg		03/04/25 12:14	03/06/25 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*	*03/04/25 12:14*	*03/06/25 15:49*	*1*

Method: SW846 8015M/D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		9.5		mg/Kg		03/05/25 11:38	03/05/25 21:45	1
Motor Oil Range Organics [C28-C40]	ND		48		mg/Kg		03/05/25 11:38	03/05/25 21:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*102*		*62 - 134*	*03/05/25 11:38*	*03/05/25 21:45*	*1*

Method: 8015M/D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 885-21831/1-A
Matrix: Solid
Analysis Batch: 22055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21831

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/04/25 10:59	03/06/25 17:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*35 - 166*	*03/04/25 10:59*	*03/06/25 17:38*	*1*

Lab Sample ID: LCS 885-21831/2-A
Matrix: Solid
Analysis Batch: 22055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21831

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	23.9		mg/Kg		96	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*182*		*35 - 166*

Lab Sample ID: 885-20709-1 MS
Matrix: Solid
Analysis Batch: 22055

Client Sample ID: Center Tank Pit
Prep Type: Total/NA
Prep Batch: 21831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.6	24.1		mg/Kg		90	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*193*		*35 - 166*

Lab Sample ID: 885-20709-1 MSD
Matrix: Solid
Analysis Batch: 22055

Client Sample ID: Center Tank Pit
Prep Type: Total/NA
Prep Batch: 21831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.5	22.9		mg/Kg		85	70 - 130	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*182*		*35 - 166*

Lab Sample ID: MB 885-21840/1-A
Matrix: Solid
Analysis Batch: 21934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21840

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics [C6 - C10]	ND		5.0		mg/Kg		03/04/25 12:14	03/06/25 01:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*35 - 166*	*03/04/25 12:14*	*03/06/25 01:58*	*1*

Method: 8015M/D - Gasoline Range Organics (GRO) (GC) (Continued)

Lab Sample ID: LCS 885-21840/2-A
Matrix: Solid
Analysis Batch: 21934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21840

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]			25.0	25.3		mg/Kg		101	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*183*		*35 - 166*

Lab Sample ID: 885-20709-21 MS
Matrix: Solid
Analysis Batch: 22016

Client Sample ID: 3rd Joint Sample # 16
Prep Type: Total/NA
Prep Batch: 21840

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics [C6 - C10]	ND		24.7	24.6		mg/Kg		99	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*192*		*35 - 166*

Lab Sample ID: 885-20709-21 MSD
Matrix: Solid
Analysis Batch: 22016

Client Sample ID: 3rd Joint Sample # 16
Prep Type: Total/NA
Prep Batch: 21840

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics [C6 - C10]	ND		24.9	24.1		mg/Kg		97	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*196*		*35 - 166*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 885-21831/1-A
Matrix: Solid
Analysis Batch: 22056

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21831

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methyl-tert-butyl Ether (MTBE)	ND		0.10		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
Benzene	ND		0.025		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
Ethylbenzene	ND		0.050		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
Toluene	ND		0.050		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
m&p-Xylene	ND		0.10		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
o-Xylene	ND		0.050		mg/Kg		03/04/25 10:59	03/06/25 17:38	1
Xylenes, Total	ND		0.10		mg/Kg		03/04/25 10:59	03/06/25 17:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*48 - 145*	*03/04/25 10:59*	*03/06/25 17:38*	*1*

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 885-21831/3-A
Matrix: Solid
Analysis Batch: 22056

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-tert-butyl Ether (MTBE)	1.00	0.890		mg/Kg		89	70 - 130
Benzene	1.00	0.900		mg/Kg		90	70 - 130
Ethylbenzene	1.00	0.893		mg/Kg		89	70 - 130
Toluene	1.00	0.885		mg/Kg		88	70 - 130
m&p-Xylene	2.00	1.77		mg/Kg		89	70 - 130
o-Xylene	1.00	0.879		mg/Kg		88	70 - 130
Xylenes, Total	3.00	2.65		mg/Kg		88	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*48 - 145*

Lab Sample ID: 885-20709-2 MS
Matrix: Solid
Analysis Batch: 22056

Client Sample ID: 2nd Joint Sample # 15
Prep Type: Total/NA
Prep Batch: 21831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-tert-butyl Ether (MTBE)	ND		0.967	0.857		mg/Kg		89	70 - 130
Benzene	ND		0.967	0.902		mg/Kg		93	70 - 130
Ethylbenzene	0.11		0.967	1.15		mg/Kg		107	70 - 130
Toluene	0.14		0.967	1.09		mg/Kg		99	70 - 130
m&p-Xylene	0.32		1.93	2.49		mg/Kg		112	70 - 130
o-Xylene	0.17		0.967	1.26		mg/Kg		112	70 - 130
Xylenes, Total	0.50		2.90	3.75		mg/Kg		112	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*48 - 145*

Lab Sample ID: 885-20709-2 MSD
Matrix: Solid
Analysis Batch: 22056

Client Sample ID: 2nd Joint Sample # 15
Prep Type: Total/NA
Prep Batch: 21831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl-tert-butyl Ether (MTBE)	ND		0.962	0.827		mg/Kg		86	70 - 130	4	20
Benzene	ND		0.962	0.910		mg/Kg		95	70 - 130	1	20
Ethylbenzene	0.11		0.962	1.03		mg/Kg		95	70 - 130	11	20
Toluene	0.14		0.962	1.01		mg/Kg		91	70 - 130	8	20
m&p-Xylene	0.32		1.92	2.19		mg/Kg		97	70 - 130	13	20
o-Xylene	0.17		0.962	1.11		mg/Kg		98	70 - 130	12	20
Xylenes, Total	0.50		2.88	3.31		mg/Kg		97	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*87*		*48 - 145*

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 885-20709-22 MS
Matrix: Solid
Analysis Batch: 22015

Client Sample ID: 4th Joint Sample # 17
Prep Type: Total/NA
Prep Batch: 21840

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-tert-butyl Ether (MTBE)	ND		0.979	0.878		mg/Kg		90	70 - 130
Benzene	ND		0.979	0.922		mg/Kg		94	70 - 130
Ethylbenzene	ND		0.979	0.932		mg/Kg		95	70 - 130
Toluene	ND		0.979	0.925		mg/Kg		94	70 - 130
m&p-Xylene	ND		1.96	1.84		mg/Kg		94	70 - 130
o-Xylene	ND		0.979	0.918		mg/Kg		94	70 - 130
Xylenes, Total	ND		2.94	2.76		mg/Kg		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*

Lab Sample ID: 885-20709-22 MSD
Matrix: Solid
Analysis Batch: 22015

Client Sample ID: 4th Joint Sample # 17
Prep Type: Total/NA
Prep Batch: 21840

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methyl-tert-butyl Ether (MTBE)	ND		0.975	0.856		mg/Kg		88	70 - 130	3	20
Benzene	ND		0.975	0.896		mg/Kg		92	70 - 130	3	20
Ethylbenzene	ND		0.975	0.906		mg/Kg		93	70 - 130	3	20
Toluene	ND		0.975	0.910		mg/Kg		93	70 - 130	2	20
m&p-Xylene	ND		1.95	1.83		mg/Kg		94	70 - 130	1	20
o-Xylene	ND		0.975	0.913		mg/Kg		94	70 - 130	1	20
Xylenes, Total	ND		2.92	2.74		mg/Kg		94	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*48 - 145*

Method: 8015M/D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 885-21913/1-A
Matrix: Solid
Analysis Batch: 21881

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21913

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		03/05/25 11:35	03/05/25 19:58	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		03/05/25 11:35	03/05/25 19:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Di-n-octyl phthalate (Surr)	*94*		*62 - 134*	*03/05/25 11:35*	*03/05/25 19:58*	*1*

Lab Sample ID: LCS 885-21913/2-A
Matrix: Solid
Analysis Batch: 21881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21913

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	50.4		mg/Kg		101	60 - 135

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 885-21913/2-A
Matrix: Solid
Analysis Batch: 21881

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21913

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	81		62 - 134

Lab Sample ID: 885-20709-1 MS
Matrix: Solid
Analysis Batch: 21881

Client Sample ID: Center Tank Pit
Prep Type: Total/NA
Prep Batch: 21913

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	ND		45.7	48.2		mg/Kg		105	44 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Di-n-octyl phthalate (Surr)	94		62 - 134

Lab Sample ID: 885-20709-1 MSD
Matrix: Solid
Analysis Batch: 21881

Client Sample ID: Center Tank Pit
Prep Type: Total/NA
Prep Batch: 21913

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		48.7	48.4		mg/Kg		99	44 - 136	0	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Di-n-octyl phthalate (Surr)	89		62 - 134

Lab Sample ID: MB 885-21916/1-A
Matrix: Solid
Analysis Batch: 21906

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 21916

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		10		mg/Kg		03/05/25 11:38	03/05/25 19:24	1
Motor Oil Range Organics [C28-C40]	ND		50		mg/Kg		03/05/25 11:38	03/05/25 19:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate (Surr)	96		62 - 134	03/05/25 11:38	03/05/25 19:24	1

Lab Sample ID: LCS 885-21916/2-A
Matrix: Solid
Analysis Batch: 21906

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 21916

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			50.0	50.5		mg/Kg		101	60 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Di-n-octyl phthalate (Surr)	79		62 - 134

Method: 8015M/D - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 885-20709-21 MS
Matrix: Solid
Analysis Batch: 21906

Client Sample ID: 3rd Joint Sample # 16
Prep Type: Total/NA
Prep Batch: 21916

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	ND		49.6	50.1		mg/Kg		101	44 - 136		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*86*		*62 - 134*

Lab Sample ID: 885-20709-21 MSD
Matrix: Solid
Analysis Batch: 21906

Client Sample ID: 3rd Joint Sample # 16
Prep Type: Total/NA
Prep Batch: 21916

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		49.8	51.5		mg/Kg		103	44 - 136	3	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Di-n-octyl phthalate (Surr)	*88*		*62 - 134*

GC VOA

Prep Batch: 21831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-1	Center Tank Pit	Total/NA	Solid	5030C	
885-20709-2	2nd Joint Sample # 15	Total/NA	Solid	5030C	
885-20709-3	Dis # 9/10 SE Corner	Total/NA	Solid	5030C	
885-20709-4	Sample # 11 W Tank Pit	Total/NA	Solid	5030C	
885-20709-5	5th Joint Corner	Total/NA	Solid	5030C	
885-20709-6	1st Joint Sample # 14	Total/NA	Solid	5030C	
885-20709-7	Sample # 3 NW Center	Total/NA	Solid	5030C	
885-20709-8	Vertical AST	Total/NA	Solid	5030C	
885-20709-9	Sample # 4 NE Center	Total/NA	Solid	5030C	
885-20709-10	Dis # 5/6 East Center	Total/NA	Solid	5030C	
885-20709-11	Disp # 1/2 NE Corner	Total/NA	Solid	5030C	
885-20709-12	Disper # 11/12 SW Corner	Total/NA	Solid	5030C	
885-20709-13	SW transition	Total/NA	Solid	5030C	
885-20709-14	SE transition	Total/NA	Solid	5030C	
885-20709-15	Dis # 3/4 NW Corner	Total/NA	Solid	5030C	
885-20709-16	Dis # 7/8 W Center	Total/NA	Solid	5030C	
885-20709-17	NW Vault	Total/NA	Solid	5030C	
885-20709-18	SE Vault	Total/NA	Solid	5030C	
885-20709-19	SW Vault	Total/NA	Solid	5030C	
885-20709-20	NE Vault	Total/NA	Solid	5030C	
MB 885-21831/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-21831/2-A	Lab Control Sample	Total/NA	Solid	5030C	
LCS 885-21831/3-A	Lab Control Sample	Total/NA	Solid	5030C	
885-20709-1 MS	Center Tank Pit	Total/NA	Solid	5030C	
885-20709-1 MSD	Center Tank Pit	Total/NA	Solid	5030C	
885-20709-2 MS	2nd Joint Sample # 15	Total/NA	Solid	5030C	
885-20709-2 MSD	2nd Joint Sample # 15	Total/NA	Solid	5030C	

Prep Batch: 21840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-21	3rd Joint Sample # 16	Total/NA	Solid	5030C	
885-20709-22	4th Joint Sample # 17	Total/NA	Solid	5030C	
885-20709-23	E tank Pit Sample # 13	Total/NA	Solid	5030C	
MB 885-21840/1-A	Method Blank	Total/NA	Solid	5030C	
LCS 885-21840/2-A	Lab Control Sample	Total/NA	Solid	5030C	
885-20709-21 MS	3rd Joint Sample # 16	Total/NA	Solid	5030C	
885-20709-21 MSD	3rd Joint Sample # 16	Total/NA	Solid	5030C	
885-20709-22 MS	4th Joint Sample # 17	Total/NA	Solid	5030C	
885-20709-22 MSD	4th Joint Sample # 17	Total/NA	Solid	5030C	

Analysis Batch: 21934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 885-21840/1-A	Method Blank	Total/NA	Solid	8015M/D	21840
LCS 885-21840/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	21840

Analysis Batch: 22015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-21	3rd Joint Sample # 16	Total/NA	Solid	8021B	21840
885-20709-22	4th Joint Sample # 17	Total/NA	Solid	8021B	21840
885-20709-23	E tank Pit Sample # 13	Total/NA	Solid	8021B	21840
885-20709-22 MS	4th Joint Sample # 17	Total/NA	Solid	8021B	21840

GC VOA (Continued)

Analysis Batch: 22015 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-22 MSD	4th Joint Sample # 17	Total/NA	Solid	8021B	21840

Analysis Batch: 22016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-21	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21840
885-20709-22	4th Joint Sample # 17	Total/NA	Solid	8015M/D	21840
885-20709-23	E tank Pit Sample # 13	Total/NA	Solid	8015M/D	21840
885-20709-21 MS	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21840
885-20709-21 MSD	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21840

Analysis Batch: 22055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-1	Center Tank Pit	Total/NA	Solid	8015M/D	21831
885-20709-2	2nd Joint Sample # 15	Total/NA	Solid	8015M/D	21831
885-20709-3	Dis # 9/10 SE Corner	Total/NA	Solid	8015M/D	21831
885-20709-4	Sample # 11 W Tank Pit	Total/NA	Solid	8015M/D	21831
885-20709-5	5th Joint Corner	Total/NA	Solid	8015M/D	21831
885-20709-6	1st Joint Sample # 14	Total/NA	Solid	8015M/D	21831
885-20709-7	Sample # 3 NW Center	Total/NA	Solid	8015M/D	21831
885-20709-10	Dis # 5/6 East Center	Total/NA	Solid	8015M/D	21831
885-20709-12	Disper # 11/12 SW Corner	Total/NA	Solid	8015M/D	21831
885-20709-13	SW transition	Total/NA	Solid	8015M/D	21831
885-20709-14	SE transition	Total/NA	Solid	8015M/D	21831
885-20709-15	Dis # 3/4 NW Corner	Total/NA	Solid	8015M/D	21831
885-20709-16	Dis # 7/8 W Center	Total/NA	Solid	8015M/D	21831
885-20709-18	SE Vault	Total/NA	Solid	8015M/D	21831
885-20709-19	SW Vault	Total/NA	Solid	8015M/D	21831
885-20709-20	NE Vault	Total/NA	Solid	8015M/D	21831
MB 885-21831/1-A	Method Blank	Total/NA	Solid	8015M/D	21831
LCS 885-21831/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	21831
885-20709-1 MS	Center Tank Pit	Total/NA	Solid	8015M/D	21831
885-20709-1 MSD	Center Tank Pit	Total/NA	Solid	8015M/D	21831

Analysis Batch: 22056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-1	Center Tank Pit	Total/NA	Solid	8021B	21831
885-20709-2	2nd Joint Sample # 15	Total/NA	Solid	8021B	21831
885-20709-3	Dis # 9/10 SE Corner	Total/NA	Solid	8021B	21831
885-20709-4	Sample # 11 W Tank Pit	Total/NA	Solid	8021B	21831
885-20709-5	5th Joint Corner	Total/NA	Solid	8021B	21831
885-20709-6	1st Joint Sample # 14	Total/NA	Solid	8021B	21831
885-20709-7	Sample # 3 NW Center	Total/NA	Solid	8021B	21831
885-20709-8	Vertical AST	Total/NA	Solid	8021B	21831
885-20709-9	Sample # 4 NE Center	Total/NA	Solid	8021B	21831
885-20709-10	Dis # 5/6 East Center	Total/NA	Solid	8021B	21831
885-20709-12	Disper # 11/12 SW Corner	Total/NA	Solid	8021B	21831
885-20709-13	SW transition	Total/NA	Solid	8021B	21831
885-20709-14	SE transition	Total/NA	Solid	8021B	21831
885-20709-15	Dis # 3/4 NW Corner	Total/NA	Solid	8021B	21831
885-20709-16	Dis # 7/8 W Center	Total/NA	Solid	8021B	21831
885-20709-17	NW Vault	Total/NA	Solid	8021B	21831

GC VOA (Continued)

Analysis Batch: 22056 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-18	SE Vault	Total/NA	Solid	8021B	21831
885-20709-19	SW Vault	Total/NA	Solid	8021B	21831
885-20709-20	NE Vault	Total/NA	Solid	8021B	21831
MB 885-21831/1-A	Method Blank	Total/NA	Solid	8021B	21831
LCS 885-21831/3-A	Lab Control Sample	Total/NA	Solid	8021B	21831
885-20709-2 MS	2nd Joint Sample # 15	Total/NA	Solid	8021B	21831
885-20709-2 MSD	2nd Joint Sample # 15	Total/NA	Solid	8021B	21831

Analysis Batch: 22153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-11	Disp # 1/2 NE Corner	Total/NA	Solid	8021B	21831

Analysis Batch: 22154

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-8	Vertical AST	Total/NA	Solid	8015M/D	21831
885-20709-9	Sample # 4 NE Center	Total/NA	Solid	8015M/D	21831
885-20709-11	Disp # 1/2 NE Corner	Total/NA	Solid	8015M/D	21831
885-20709-17	NW Vault	Total/NA	Solid	8015M/D	21831

GC Semi VOA

Analysis Batch: 21881

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-1	Center Tank Pit	Total/NA	Solid	8015M/D	21913
885-20709-2	2nd Joint Sample # 15	Total/NA	Solid	8015M/D	21913
885-20709-3	Dis # 9/10 SE Corner	Total/NA	Solid	8015M/D	21913
885-20709-5	5th Joint Corner	Total/NA	Solid	8015M/D	21913
885-20709-6	1st Joint Sample # 14	Total/NA	Solid	8015M/D	21913
885-20709-7	Sample # 3 NW Center	Total/NA	Solid	8015M/D	21913
885-20709-9	Sample # 4 NE Center	Total/NA	Solid	8015M/D	21913
885-20709-10	Dis # 5/6 East Center	Total/NA	Solid	8015M/D	21913
MB 885-21913/1-A	Method Blank	Total/NA	Solid	8015M/D	21913
LCS 885-21913/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	21913
885-20709-1 MS	Center Tank Pit	Total/NA	Solid	8015M/D	21913
885-20709-1 MSD	Center Tank Pit	Total/NA	Solid	8015M/D	21913

Analysis Batch: 21906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-11	Disp # 1/2 NE Corner	Total/NA	Solid	8015M/D	21913
885-20709-12	Disper # 11/12 SW Corner	Total/NA	Solid	8015M/D	21913
885-20709-13	SW transition	Total/NA	Solid	8015M/D	21913
885-20709-14	SE transition	Total/NA	Solid	8015M/D	21913
885-20709-15	Dis # 3/4 NW Corner	Total/NA	Solid	8015M/D	21913
885-20709-17	NW Vault	Total/NA	Solid	8015M/D	21913
885-20709-18	SE Vault	Total/NA	Solid	8015M/D	21913
885-20709-19	SW Vault	Total/NA	Solid	8015M/D	21913
885-20709-20	NE Vault	Total/NA	Solid	8015M/D	21913
885-20709-21	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21916
885-20709-22	4th Joint Sample # 17	Total/NA	Solid	8015M/D	21916
885-20709-23	E tank Pit Sample # 13	Total/NA	Solid	8015M/D	21916
MB 885-21916/1-A	Method Blank	Total/NA	Solid	8015M/D	21916

GC Semi VOA (Continued)

Analysis Batch: 21906 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 885-21916/2-A	Lab Control Sample	Total/NA	Solid	8015M/D	21916
885-20709-21 MS	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21916
885-20709-21 MSD	3rd Joint Sample # 16	Total/NA	Solid	8015M/D	21916

Prep Batch: 21913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-1	Center Tank Pit	Total/NA	Solid	SHAKE	
885-20709-2	2nd Joint Sample # 15	Total/NA	Solid	SHAKE	
885-20709-3	Dis # 9/10 SE Corner	Total/NA	Solid	SHAKE	
885-20709-4	Sample # 11 W Tank Pit	Total/NA	Solid	SHAKE	
885-20709-5	5th Joint Corner	Total/NA	Solid	SHAKE	
885-20709-6	1st Joint Sample # 14	Total/NA	Solid	SHAKE	
885-20709-7	Sample # 3 NW Center	Total/NA	Solid	SHAKE	
885-20709-8	Vertical AST	Total/NA	Solid	SHAKE	
885-20709-9	Sample # 4 NE Center	Total/NA	Solid	SHAKE	
885-20709-10	Dis # 5/6 East Center	Total/NA	Solid	SHAKE	
885-20709-11	Disp # 1/2 NE Corner	Total/NA	Solid	SHAKE	
885-20709-12	Disper # 11/12 SW Corner	Total/NA	Solid	SHAKE	
885-20709-13	SW transition	Total/NA	Solid	SHAKE	
885-20709-14	SE transition	Total/NA	Solid	SHAKE	
885-20709-15	Dis # 3/4 NW Corner	Total/NA	Solid	SHAKE	
885-20709-16	Dis # 7/8 W Center	Total/NA	Solid	SHAKE	
885-20709-17	NW Vault	Total/NA	Solid	SHAKE	
885-20709-18	SE Vault	Total/NA	Solid	SHAKE	
885-20709-19	SW Vault	Total/NA	Solid	SHAKE	
885-20709-20	NE Vault	Total/NA	Solid	SHAKE	
MB 885-21913/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-21913/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-20709-1 MS	Center Tank Pit	Total/NA	Solid	SHAKE	
885-20709-1 MSD	Center Tank Pit	Total/NA	Solid	SHAKE	

Prep Batch: 21916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-21	3rd Joint Sample # 16	Total/NA	Solid	SHAKE	
885-20709-22	4th Joint Sample # 17	Total/NA	Solid	SHAKE	
885-20709-23	E tank Pit Sample # 13	Total/NA	Solid	SHAKE	
MB 885-21916/1-A	Method Blank	Total/NA	Solid	SHAKE	
LCS 885-21916/2-A	Lab Control Sample	Total/NA	Solid	SHAKE	
885-20709-21 MS	3rd Joint Sample # 16	Total/NA	Solid	SHAKE	
885-20709-21 MSD	3rd Joint Sample # 16	Total/NA	Solid	SHAKE	

Analysis Batch: 22035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
885-20709-4	Sample # 11 W Tank Pit	Total/NA	Solid	8015M/D	21913
885-20709-8	Vertical AST	Total/NA	Solid	8015M/D	21913
885-20709-16	Dis # 7/8 W Center	Total/NA	Solid	8015M/D	21913

Lab Chronicle

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: Center Tank Pit

Lab Sample ID: 885-20709-1

Date Collected: 02/28/25 12:02
Date Received: 03/03/25 08:11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 18:00
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 18:00
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 20:19

Client Sample ID: 2nd Joint Sample # 15

Lab Sample ID: 885-20709-2

Date Collected: 02/28/25 12:17
Date Received: 03/03/25 08:11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 19:06
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 19:06
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 20:51

Client Sample ID: Dis # 9/10 SE Corner

Lab Sample ID: 885-20709-3

Date Collected: 02/28/25 11:54
Date Received: 03/03/25 08:11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 20:11
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 20:11
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 21:02

Client Sample ID: Sample # 11 W Tank Pit

Lab Sample ID: 885-20709-4

Date Collected: 02/28/25 11:59
Date Received: 03/03/25 08:11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 20:32
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 20:32
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	22035	MI	EET ALB	03/07/25 12:22

Client Sample ID: 5th Joint Corner

Lab Sample ID: 885-20709-5

Date Collected: 02/28/25 12:37

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 21:16
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 21:16
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 21:23

Client Sample ID: 1st Joint Sample # 14

Lab Sample ID: 885-20709-6

Date Collected: 02/28/25 12:12

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 21:38
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 21:38
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 21:34

Client Sample ID: Sample # 3 NW Center

Lab Sample ID: 885-20709-7

Date Collected: 02/28/25 11:13

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 21:59
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 21:59
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 21:44

Client Sample ID: Vertical AST

Lab Sample ID: 885-20709-8

Date Collected: 02/28/25 12:48

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		100	22154	AT	EET ALB	03/07/25 17:58
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		10	22056	AT	EET ALB	03/06/25 22:21
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		10	22035	MI	EET ALB	03/07/25 12:33

Lab Chronicle

Client: D&H United Fueling Solutions, Inc.
Job ID: 885-20709-1
Project/Site: Tucumcari Travel Plaza

Client Sample ID: Sample # 4 NE Center
Lab Sample ID: 885-20709-9

Date Collected: 02/28/25 11:16
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22154	AT	EET ALB	03/07/25 16:29
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 22:43
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 22:06

Client Sample ID: Dis # 5/6 East Center
Lab Sample ID: 885-20709-10

Date Collected: 02/28/25 11:22
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/06/25 23:26
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/06/25 23:26
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21881	MI	EET ALB	03/05/25 22:17

Client Sample ID: Disp # 1/2 NE Corner
Lab Sample ID: 885-20709-11

Date Collected: 02/28/25 11:06
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22154	AT	EET ALB	03/07/25 17:13
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22153	AT	EET ALB	03/07/25 17:13
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 15:06

Client Sample ID: Disper # 11/12 SW Corner
Lab Sample ID: 885-20709-12

Date Collected: 02/28/25 11:51
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 00:10
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 00:10
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 15:29

Client Sample ID: SW transition

Lab Sample ID: 885-20709-13

Date Collected: 02/28/25 11:46

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 00:32
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 00:32
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 15:52

Client Sample ID: SE transition

Lab Sample ID: 885-20709-14

Date Collected: 02/28/25 11:39

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 00:53
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 00:53
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 16:16

Client Sample ID: Dis # 3/4 NW Corner

Lab Sample ID: 885-20709-15

Date Collected: 02/28/25 11:10

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		10	22055	AT	EET ALB	03/07/25 01:37
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		10	22056	AT	EET ALB	03/07/25 01:37
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 16:40

Client Sample ID: Dis # 7/8 W Center

Lab Sample ID: 885-20709-16

Date Collected: 02/28/25 11:33

Matrix: Solid

Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		10	22055	AT	EET ALB	03/07/25 01:59
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		10	22056	AT	EET ALB	03/07/25 01:59
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		10	22035	MI	EET ALB	03/07/25 12:44

Lab Chronicle

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Client Sample ID: NW Vault

Lab Sample ID: 885-20709-17

Date Collected: 02/28/25 13:12
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22154	AT	EET ALB	03/07/25 16:51
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 02:20
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 17:27

Client Sample ID: SE Vault

Lab Sample ID: 885-20709-18

Date Collected: 02/28/25 13:04
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 02:42
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 02:42
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 17:50

Client Sample ID: SW Vault

Lab Sample ID: 885-20709-19

Date Collected: 02/28/25 13:00
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 03:04
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 03:04
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 18:14

Client Sample ID: NE Vault

Lab Sample ID: 885-20709-20

Date Collected: 02/28/25 13:07
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8015M/D		1	22055	AT	EET ALB	03/07/25 03:26
Total/NA	Prep	5030C			21831	JP	EET ALB	03/04/25 10:59
Total/NA	Analysis	8021B		1	22056	AT	EET ALB	03/07/25 03:26
Total/NA	Prep	SHAKE			21913	MI	EET ALB	03/05/25 11:35
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 18:37

Lab Chronicle

Client: D&H United Fueling Solutions, Inc.
Job ID: 885-20709-1
Project/Site: Tucumcari Travel Plaza

Client Sample ID: 3rd Joint Sample # 16
Lab Sample ID: 885-20709-21

Date Collected: 02/28/25 12:21
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8015M/D		1	22016	AT	EET ALB	03/06/25 13:38
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8021B		1	22015	AT	EET ALB	03/06/25 13:38
Total/NA	Prep	SHAKE			21916	MI	EET ALB	03/05/25 11:38
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 20:11

Client Sample ID: 4th Joint Sample # 17
Lab Sample ID: 885-20709-22

Date Collected: 02/28/25 12:29
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8015M/D		1	22016	AT	EET ALB	03/06/25 14:44
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8021B		1	22015	AT	EET ALB	03/06/25 14:44
Total/NA	Prep	SHAKE			21916	MI	EET ALB	03/05/25 11:38
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 21:21

Client Sample ID: E tank Pit Sample # 13
Lab Sample ID: 885-20709-23

Date Collected: 02/28/25 12:06
Matrix: Solid
Date Received: 03/03/25 08:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8015M/D		1	22016	AT	EET ALB	03/06/25 15:49
Total/NA	Prep	5030C			21840	JP	EET ALB	03/04/25 12:14
Total/NA	Analysis	8021B		1	22015	AT	EET ALB	03/06/25 15:49
Total/NA	Prep	SHAKE			21916	MI	EET ALB	03/05/25 11:38
Total/NA	Analysis	8015M/D		1	21906	MI	EET ALB	03/05/25 21:45

Laboratory References:

EET ALB = Eurofins Albuquerque, 4901 Hawkins NE, Albuquerque, NM 87109, TEL (505)345-3975

Accreditation/Certification Summary

Client: D&H United Fueling Solutions, Inc.
Project/Site: Tucumcari Travel Plaza

Job ID: 885-20709-1

Laboratory: Eurofins Albuquerque

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0682	10-21-25
Texas	NELAP	T104704424-23-16	06-01-25

Chain-of-Custody Record

Client: D&H United fueling Solutions

Mailing Address: 4900 Anaheim Ave NE
Albuquerque NM 87113

Phone #: 505-225-6457

email or Fax#: asaenz@dh-unitedcom

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name:
Tucumcari Travel Plaza

Project #:
WO# 865309

Project Manager:
Arnold Saenz
PO# 523367

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 1 MO1 C

Cooler Temp(including CF): -5.5+0.1=-5.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORAT
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107
885-20709 COC

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/28/25	12:02PM	Soil	Center Tank Pit	4oz	ICE	-1	X	X								
2/28/25	12:11PM	Soil	2nd Joint Sample #15	4oz	ICE	-2	X	X								
2/28/25	11:54AM	Soil	Dis#9/10 SE Corner	4oz	ICE	-3	X	X								
2/28/25	11:59AM	Soil	Sample #11 W Tank Pit	4oz	ICE	-4	X	X								
2/28/25	12:37PM	Soil	5th Joint Corner	4oz	ICE	-5	X	✓								
2/28/25	12:12PM	Soil	1st Joint Sample #14	4oz	ICE	-6	X	X								
2/28/25	11:13AM	Soil	Sample #3 NW Center	4oz	ICE	-7	X	X								
2/28/25	12:48PM	Soil	Vertical AST	4oz	ICE	-8	X	X								
2/28/25	11:16AM	Soil	Sample #4 NE Center	4oz	ICE	-9	X	X								
2/28/25	11:22AM	Soil	Dis#5/6 East Center	4oz	ICE	-10	X	X								
2/28/25	11:06AM	Soil	Disp#1/2 NE Corner	4oz	ICE	-11	X	X								
2/28/25	11:51AM	Soil	Disper#11/12 SW Corner	4oz	ICE	-12	X	X								

Date	Time	Relinquished by	Received by	Via	Date	Time
03/03/25	8:11AM			COC	3/3/25	8:11
Date	Time	Relinquished by	Received by	Via	Date	Time
03/12/2025						

Remarks: Must Frozen Ju 3/3/25

Temp Approved - 03/03/25

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report

Chain-of-Custody Record

Client: DCP United Fueling Solutions

Mailing Address: 4400 Anaheim Ave NE
Albuquerque NM 87113

Phone #: 505-225-6457

email or Fax#: asaenz@dh-united.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Tucumcari Travel Plaza

Project #: WO# 865309

Project Manager: Arnold Saenz
PO# 523367

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 1 Mojo

Cooler Temp(including CF): -1.5+0.1=-1.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

20709

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D GRO / DRO / MRO	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
2/28/25	11:46AM	Soil	SW transition	4oz	ICE	-13	X	X								
2/28/25	11:39AM	Soil	SE transition	4oz	ICE	-14	X	X								
2/28/25	11:10AM	Soil	Dis# 3/4 NW Corner	4oz	ICE	-15	X	X								
2/28/25	11:53AM	Soil	Dis# 7/8 W Center	4oz	ICE	-16	X	X								
2/28/25	1:12PM	Soil	NW vault	4oz	ICE	-17	X	X								
2/28/25	1:04PM	Soil	SE vault	4oz	ICE	-18	X	X								
2/28/25	1:00PM	Soil	SW vault	4oz	ICE	-19	X	X								
2/28/25	1:07PM	Soil	NE vault	4oz	ICE	-20	X	X								
2/28/25	12:21PM	Soil	3rd Joint sample #16	4oz	ICE	-21	X	X								
2/28/25	12:29PM	Soil	4th Joint sample #17	4oz	ICE	-22	X	X								
2/28/25	12:00PM	Soil	E tank Pit sample #18	4oz	ICE	-23	X	X								

Date	Time	Relinquished by	Received by	Via	Date	Time
03/03/25	8:11AM			UPS	3/3/25	8:11
Date	Time	Relinquished by	Received by	Via	Date	Time

Remarks: Not Frozen Jw 3/3/25

Tem approved - 03/03/25

If necessary samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility Any sub-contracted data will be clearly notated on the analytical report.

Page 47 of 48

3/12/2025

Login Sample Receipt Checklist

Client: D&H United Fueling Solutions, Inc.

Job Number: 885-20709-1
SDG Number:

Login Number: 20709
List Number: 1
Creator: Proctor, Nancy

List Source: Eurofins Albuquerque

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
TCEQ Mtd 1005 soil sample was frozen/delivered for prep within 48H of sampling.	N/A	

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 9, 2025

Mike Adell
Hana Truck Sport Tucumcari LLC
PO Box 1012
Weatherford, Texas 76086
mikeadell81@gmail.com

Re: Confirmed Release at the Tucumcari Truck Terminal A Site, 3900 W. Tucumcari Blvd, Tucumcari, New Mexico

Facility #: 31248 Release ID #: 5009

Dear Mr. Adell,

On February 28, 2025, the New Mexico Environment Department (Department) confirmed a release from a petroleum storage tank (PST) system at the above address. The New Mexico Petroleum Storage Tank Regulations (20.5 NMAC) outline steps that must be taken to investigate and clean up this release. The regulations tell you exactly what information to gather and report at each step.

You must follow the twenty-four hour verbal notification report with a seventy-two hour verbal report (20.5.119.1903.A NMAC) summarizing abatement procedures taken and the results of the initial investigation. Within 14 days, you must send a written report (20.5.119.1903.B NMAC), which includes this same information to the Department.

A preliminary investigation (20.5.119.1908 NMAC and 20.5.119.1909 NMAC) is then required to characterize the extent and magnitude of subsurface petroleum hydrocarbon contamination at this site. The preliminary investigation report must be submitted within 60 days of confirmation of the release. Owners and operators shall provide notice that includes the contaminants identified, as well as the horizontal and vertical extent of those contaminants, to all property owners within the horizontal extent of contamination (20.5.119.1909.F NMAC).

Some of your expenses for investigating and cleaning up a release of petroleum products may be reimbursable. PST owners and operators must adhere to certain requirements for costs of corrective action to be eligible for reimbursement from the Corrective Action Fund (Fund). These requirements include Department pre-approval of workplans and budgets, adherence to competitive contractor selection procedures, and use of a Department qualified firm. In addition, reimbursement shall not be made from the Fund to, or on behalf of, PST owners or operators for corrective action, other than a minimum site assessment or sampling, where the corrective action was conducted by affiliate firms or entities of the responsible party.

Enclosed you will find 20.5.119 NMAC and 20.5.123 NMAC. If you find that you cannot meet a deadline prescribed by the regulations, you may apply for an extension as long as you do so before the deadline passes. See 20.5.119.1931 NMAC for more details.

Please direct all correspondence concerning corrective action at this facility to me. All correspondence must be by electronic submission and hard copy submissions. Please submit electronic correspondence and reports to PSTB.Inbox@env.nm.gov and cc me, and submit hard copy correspondence and reports to my attention at 1914 W. Second St., Roswell, NM 88201 (Roswell office). If you have questions or need a complete copy of 20.5 NMAC, please call me at (505) 372-8332 or email me at d.renee.romero@env.nm.gov. The Department appreciates your voluntary cooperation and prompt attention to this matter.

Sincerely,

D. Renee Romero

Digitally signed by D. Renee Romero
Date: 2025.07.09 09:49:01 -06'00'

D. Renee Romero
Water Resource Professional IV
Petroleum Storage Tank Bureau

DRR:ns

encl: 20.5.119 NMAC
20.5.123 NMAC

cc: Michael Ortiz, Bureau Chief (via email)
Mark Murphy, Manager, Remedial Action Program (via email)
Richard Flores, Inspector, Prevention and Inspection Program (via email)
PSTB Master File Santa Fe

Certification Number: 7021 1970 0002 0086 0038

Appendix C

Photographs

DBS&A
a Geo-Logic Company



1. Oil and water in lift station vault near generator building



2. Overview of Food Mart and fuel canopy (view to southeast)



3. Monitor well vault (representative of status of monitor wells at site)



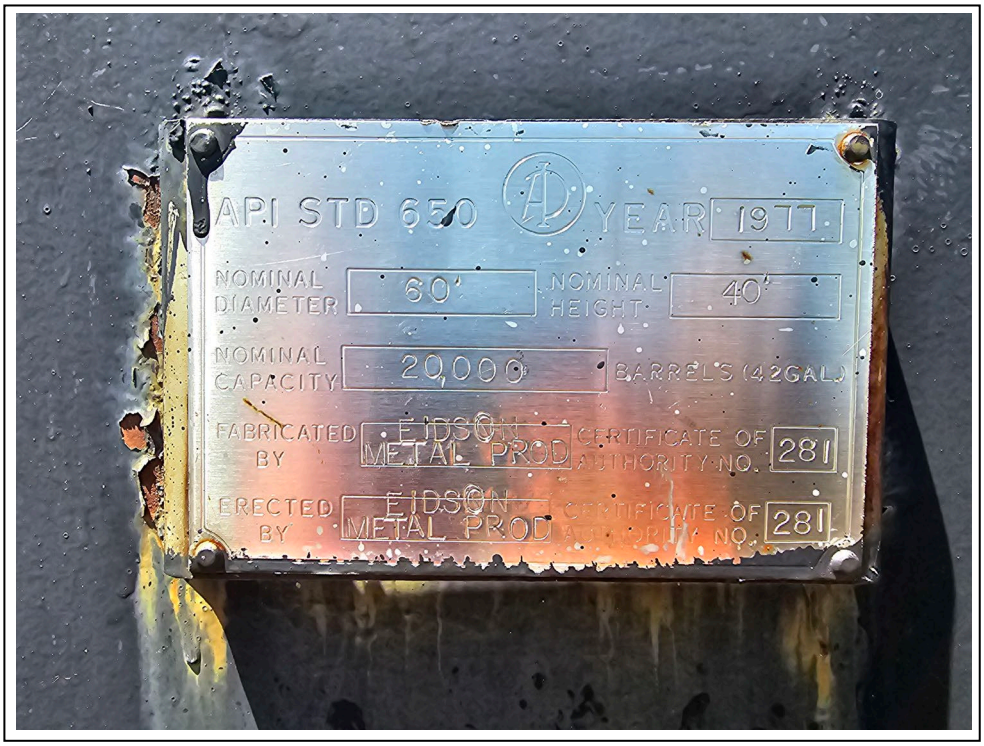
4. Sheen on water and strong hydrocarbon odor at pump location for bulk ASTs



5. Bulk ASTs (view to south)



6. Close-up of southern bulk tank identification plate



7. Close-up of northern bulk tank identification plate



8. Staining on south side of Food Mart (view to north)



9. Pump islands near Food Mart (view to southeast)



10. Standing water in foreground; UST vault and bulk ASTs in background (view to northwest)



11. Fuel canopy north of service center (view to southeast)



12. Destroyed generator building (view to north)



13. Blue structure lift station; lift station vault on left (view to north)



14. Soil appears to have been excavated from oil spill; staining still visible (view to southeast)



15. Staining from AST spill (view to south)



16. AST that leaked; used oil pooled in foreground (view to west)



17. Hole in AST with used oil pooled on ground



18. Fuel pumps appear to be from Food Mart fueling area



19. Overview of service center (view to west)



20. Fiberglass pipe near service center, possibly from AST vault vicinity



21. Service center with security door (view to east)



22. Interior of cafe (photograph taken through broken-out window) (view to north)



23. Abandoned residential structure on east portion of property (view to south)

Appendix D

Interviews

DBS&A
a Geo-Logic Company

DBS&A
a Geo-Logic Company

Telephone Conversation Record

Date of Call 11/20/2025 Project Number DB24.1236

Individual	*Organization*	*Telephone Number*
From Patrice Feltman	DBS&A	817-914-1645
To Sammy Tayseer Asaad		817-629-9168

Subject
Information Gathering for Phase I Update

Notes

Mr. Asaad advised that the ASTs, fuel lines, and dispensers were removed. The diesel lines were not removed and remain onsite. He advised that there are no other changes since the previous Phase I update in 2024.

Actions Required

DBS&A
a Geo-Logic Company

Telephone Conversation Record

Date of Call 6/19/2024 Project Number DB24.1236

Individual	*Organization*	*Telephone Number*
From Eben Jones	DBS&A	505-353-9115
To Sammy Tayseer Asaad		817-629-9168

Subject
Information Gathering for Phase I

Notes

Spoke with Sammy. He is purchasing the Tucumcari Truck Terminal. Does not have much information. Will get in contact with me and respond to an email that was sent on Friday 8/25/2023. Said I should get in contact with Shea (no last name given) who is acting as the current property owners lawyer. Sammy mentioned that the owner is not responding to inquiries about the truck terminal due to the contamination that is ongoing there.

Spoke with Sammy on the phone, he approved the use of the previous interview notes. Sammy also mentioned that the City of Tucumcari is responsible for cleaning up the oil spill from 2023 and that they have not done that. He is referring to the oil in the lift station vault.

Actions Required

DBS&A
a Geo-Logic Company

In Person Conversation Record

Date of Interview 06/17/2024 Project Number DB24.1236

Individual	*Organization*	*Telephone Number*
From Eben Jones	DBS&A	505-353-9115
To Paula Chacon		575-461-3451

Subject

Information Gathering for Phase I

Notes

Spoke with Paula in person. She did not have any information on the Tucumcari Truck Stop other than she used to eat at the cafe when she was growing up. She did mention that the current owner (Mr. Ortega) was deceased and there is no next of kin.

Spoke with Paula in person at the Tucumcari Truck Stop. She agreed to let me use the previous interview. She also mentioned that there is a substantial volume of oil in a lift station vault. Oil in the vault was confirmed with a visual inspection. The oil in the vault appears to be from an AST spill that happened sometime in 2023.

Actions Required

DBS&A
a Geo-Logic Company

In Person Conversation Record

Date of Interview 06/13/2024 Project Number DB24.1236

Individual	*Organization*	*Telephone Number*
From Eben Jones	DBS&A	505-353-9115
To Richard Primrose		575-403-5945

Subject

Information Gathering for Updated Phase I

Notes

Spoke with Mr. Primrose Thursday June 13, 2024 over the phone. We discussed using previous interview notes and information for the update Phase I. See following comments for notes.

Spoke with Richard Primrose at the site on Friday, September 8, 2023. Richard was a former employee of the Tucumcari Truck Terminal for approximately 26 years.

The current Food Mart is on the location of the original truck terminal. The second location was built in approximately 1976 and the food mart was built in the 1980s. The old USTs were removed in the 1980s and a remediation system was put in place. New tanks were installed in a concrete vault east of the Food Mart.

Mr. Primrose mentioned two separate fuel spills. The first was due to a moving accident when a truck knocked over a pump island and a release occurred. The release was remediated. The second spill was when a re-fueling tanker tipped over during refueling processes. Richard did not remember any remediation actions associated with this release.

Actions Required

Appendix E

Statement of Qualifications

DBS&A
a Geo-Logic Company

John Bunch, PG

Senior Geologist



EDUCATION

BA, Geology, University of New Mexico, 1993

BA, Psychology, University of New Mexico, 1988

PROFESSIONAL REGISTRATIONS

Professional Geologist, Wyoming, No. 3051

Construction Industries Division GS-29 Soil Remediation, New Mexico, 943006

PROFESSIONAL AFFILIATIONS

National Ground Water Association

New Mexico Geological Society

Mr. Bunch has nearly 30 years of experience providing geologic, hydrogeologic, and regulatory compliance services to clients in New Mexico, Arizona, and Texas. He specializes in managing removal actions, corrective action/remedial design plans, Phase I and II environmental investigations, preliminary and detailed site investigations, brownfields redevelopment, and reclamation projects.

Environmental Consulting Services On-Call Contract, University of New Mexico, Albuquerque, New Mexico
Program Manager for DBS&A's on-call contract to provide technical assistance related to various environmental concerns at the university. Services have included: oversight of coring and sampling of a historic vault inside an office building on University of New Mexico (UNM) campus removal of underground storage tanks (USTs) on UNM owned property, and development of storm water management plans, various sampling and analysis plans, and development of a pilot program to characterize concentrations SARS-CoV-2 on UNM campus.

PFAS Impacts Extent of Determination at Cannon and Holloman Air Force Bases, New Mexico Environment Department Hazardous Waste Bureau, Curry County and Otero County, New Mexico
Assistant Project Manager for the characterization and monitoring of poly- and perfluoroalkyl substance (PFAS) to determine the extent of impacts to surface water and groundwater in the vicinity of both Cannon and Holloman Air Force Bases. The objectives of the project include: 1) Definition of the existing groundwater plume geometry and predictions of future plume migration, and 2) Investigation of the extent to which small mammals and resident and migratory waterfowl at the Lake Holloman Wetlands Complex are contaminated with or otherwise adversely affected by PFAS (subcontracted with the University of New Mexico [UNM] Museum of Southwestern Biology).

Former Y Station State Lead Site, New Mexico Environment Department, Clovis, New Mexico
Field Team Supervisor for DBS&A's investigation of the lateral and vertical extent of petroleum hydrocarbon contamination from an old gas station that operated from the 1950s to 1981 that has impacted regional groundwater (Ogallala) and threatened the municipal drinking water supply in Clovis. Single- and multi-zone wells were installed to a depth of 365 feet below ground surface (bgs) using sonic drilling technologies. A Bennett pump owned by DBS&A was utilized for collection of groundwater samples. On-site aquifer testing and laboratory testing at the DBS&A Soil Testing Laboratory were performed to characterize aquifer parameters. A dual phase extraction system will be implemented to remediate soil contamination in the vadose zone with a 1,000-standard cubic feet per minute (scfm) thermal oxidizer and in groundwater with a 30- to 40-gallon per minute (gpm) water treatment system. Extracted groundwater will be discharged to the Clovis sanitary

sewer. Managed field staff, and subcontractors, and coordinated with multiple regulatory agencies. Negotiated access with multiple stakeholders, including the City of Clovis, small businesses, attorneys, and big box retail stores. Facilitated public meetings to disseminate information about the contamination and cleanup.

Card Lock Station, 108 N. Ave B, C&S Fuels, Portales, New Mexico
During removal of six underground storage tanks (USTs) in 1998, soil contamination was discovered under one of the diesel tanks that resulted in an investigation to determine the extent of soil and groundwater contamination at the site. It was discovered that a dissolved-phase contaminant plume was migrating off-site and remained undefined. In addition, non-aqueous phase liquid (NAPL) was discovered in multiple wells at the site. Subsequent NAPL pumping and hand bailing over a 10-year span resulted in the recovery of approximately 1,400 gallons of product at the site. Additional monitor wells were recently installed to assist in defining the off-site extent of groundwater contamination and collect data for possible upcoming remediation efforts at the site.

Gas Card A Station, 100 S. Chicago Street, C&S Fuels, Portales, New Mexico
During removal of a waste oil tank in 1994, the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) inspector noted in the tank removal/tank closure inspection report that a release had occurred from an eight-inch hole in the bottom of the tank. A confirmation soil sample collected by the inspector from the bottom of the tank hold showed a total petroleum hydrocarbons (TPH) concentration of 2,494 parts per million (ppm). An investigation was conducted to determine the extent of soil and groundwater contamination at the site, which resulted in the discovery of a dissolved-phase contaminant plume that was migrating off-site and remained undefined. Additional groundwater monitor wells were recently installed in the surrounding neighborhood along with on-going monitoring to determine the full extent of groundwater contamination and possible additional off-site source points.

Phase III Asbestos Abatement Services, Luna Lodge and Sundowner Motel, Albuquerque, New Mexico
Project Manager responsible for oversight of all asbestos-containing building materials, leaded paint, and mold abatement activities for historic property redevelopment as part of the City's neighborhood revitalization initiative. Acted as a liaison between the abatement contractors, architects, and contractors.

Asbestos Abatement Oversight Services, Lincoln Hall, Chavez Hall, DeBaca Hall, Greyhound Arena, Portales, New Mexico
Project Manager responsible for asbestos abatement oversight at three dormitories and the Greyhound Arena, prior to demolition. Reviewed work plans and procedures, conducted visual inspections, and performed general oversight of asbestos abatement activities to ensure compliance with the approved plans.

Site Assessments and Remediation of Petroleum Contamination/Hazardous Materials, New Mexico Department of Transportation, Multiple Sites Throughout New Mexico
Performed numerous Phase I and Phase II investigations and remedial action at various NMDOT patrol yards throughout the state of New Mexico. The assessments and remediation have included hydrogeologic investigations, contaminated soil delineation and removal, remedial action system analysis and feasibility studies, conceptual remedial action design and pilot studies, water quality analysis, mobile mapping and GIS, construction management, and report preparation.

Former Patrol Yard, New Mexico Department of Transportation, Gallup, New Mexico
Performed a removal action at a former NMDOT patrol yard in Gallup, New Mexico. Excavated and disposed of approximately 2,500 cubic yards of petroleum-contaminated soil; removed, treated, and disposed of approximately 10,000 gallons of petroleum-contaminated water. Installed a passive remediation system at the

site that addressed inaccessible petroleum contaminated soil trapped under a building. After completion of remediation activities, the site was given No Further Action (NFA) by the New Mexico Environment Department.

Eagle Picher Carefree Batteries Superfund Site, New Mexico Environment Department and U.S. Environmental Protection Agency, Socorro, New Mexico
Supervised the completion of a remedial investigation (RI) to quantitatively and systematically evaluate the nature and extent of contamination at the site, and to assist in the selection of a remedy that reduces risks to human health and the environment. The existing structures and ancillary equipment were surveyed and tested for the presence of hazardous materials (e.g., lead-based paint [LBP] and asbestos-containing building material [ACBM]), which will dictate disposal options. Soil and groundwater samples were analyzed for parameters that have been selected based on the understanding of previous site use, with analytical reporting limits appropriate for comparison to screening levels set by the NMED and the USEPA. This approach has been employed to characterize the source(s) of contamination, to determine the nature and extent of contamination at the site and surrounding affected areas, and to gather information required for the next stages of the project.

Phase I and II Environmental Site Assessments, Northwest New Mexico Council of Governments, Gallup, New Mexico
Completed multiple Phase I and II ESAs throughout northwest New Mexico including multiple sites for the Navajo Nation and the Pueblo of Laguna. These projects required coordination with multiple federal and state agencies including the Navajo Nation Environmental Protection Agency, the U.S. Environmental Protection Agency, and the New Mexico Environment Department.

Brownfields Redevelopment of the Former Phil Carrell Chevrolet Dealership, New Mexico Environment Department, Carlsbad, New Mexico
This project started with a Phase I and II Environmental Site Assessment involving a large commercial property made up of four separately leased tracts of land. The Phase II revealed extensive soil and groundwater contamination from leaking underground storage tanks (USTs). It was revealed during this investigation that hydrocarbons impacting the soil and groundwater were present beneath the former UST location and the building. Approximately 1,000 cubic yards of soil were removed. Mr. Bunch submitted a remedial action plan to the New Mexico Environment Department's Ground Water Quality Bureau and Petroleum Storage Tank Bureau to address the soil and groundwater contamination at the site. The plan was approved and a dual-phase pump-and-treat/soil vapor extraction system was installed and operated at the site.

Site Assessments and Remediation of Petroleum Contamination, Allsups Petroleum, Inc., Multiple Sites, New Mexico
Managed more than 40 gasoline-contaminated sites that were regulated by the New Mexico Environment Department Petroleum Storage Tank Bureau (PSTB). Work included preliminary and hydrogeologic investigations, monitor well installations, free-product removal, soil excavation, natural attenuation monitoring, groundwater modeling, GPS mobile mapping, remediation systems engineering, field analysis, PSTB documentation, report and permit preparation, and coordination with the client and the PSTB to ensure cost-effective cleanup and site closure.

Carlito Springs Phase II Investigation, Bernalillo County Public Works, Tijeras, New Mexico
Completed a Phase II environmental site assessment for a 198-acre site located near the Village of Tijeras in Bernalillo County, New Mexico. Implemented a sampling and analysis plan (field sampling plan and quality assurance project plan) that was approved by the U.S. Environmental Protection Agency, Region 6. The scope of services included an inspection of the subject property; advancement of soil borings to determine the extent of

volatile and semivolatile organics, lead, polychlorinated biphenyls (PCBs), asbestos, and petroleum hydrocarbon contamination; and completion of a groundwater monitoring well to assess groundwater impact at the subject property.

La Cueva Patrol Yard Stage II Abatement, New Mexico Department of Transportation, La Cueva, New Mexico
As project manager, submitted a Stage II Abatement plan (as directed by the New Mexico Environment Department Ground Water Quality Bureau) to remediate groundwater impacted by salt from a salt storage area at the La Cueva Patrol Yard. The scope included advancing soil borings and monitoring wells to delineate the salt plume and monitoring natural attenuation. Additionally, a water supply well was installed to provide nearby residents with drinking water. The work also included field analysis, documentation, and communications and recommendations to the NMDOT.

General Petroleum Superfund Site, New Mexico Oil Conservation Division, Eunice, New Mexico
Performed Phase I and II investigations and remedial action at the abandoned General Petroleum oil and gas processing and production plant. The assessments and subsequent remediation were performed at the site as a brownfields redevelopment project for the City of Eunice, under the direction of the New Mexico Oil Conservation Division (OCD). Using ASTM and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations, developed a comprehensive Quality Assurance Project Plan (QAPP) for the site. Data quality objectives were included in the field sampling and analysis plan. Also developed a Health and Safety Plan (HASP) that addressed the hazards associated with the site, including a 24-inch buried natural gas pipeline known to contain hydrogen sulfide (H2S), multiple high-pressure natural gas lines and crude oil pipelines, asbestos containing material (ACM) piping, highly contaminated soil, leaking aboveground storage tanks (ASTs), and operating heavy equipment.

Managed multiple project phases and subcontractors at the site. These phases included, but were not limited to: hydrogeologic investigation including soil borings and monitoring well installation, investigation, and cleanup of a 2.5-acre waste pit and oil sludge lagoons (which included the removal of more than 50,000 cubic yards of petroleum-contaminated soils), cleanup and disposal of large aboveground storage tanks, asbestos investigation and abatement, naturally occurring radioactive material (NORM) survey, water quality analysis, mobile mapping and GIS, construction management, and report preparation.

Site Assessments and Remediation of Petroleum Contamination/Hazardous Materials, New Mexico Oil Conservation Division, Multiple Sites, New Mexico
Performed numerous Phase I and Phase II investigations and remedial action at various abandoned oil and gas processing and production sites throughout the state of New Mexico. The assessments and remediation have included the following: investigation and cleanup of large waste pits and oil sludge lagoons, hydrogeologic investigations, cleanup and disposal of large aboveground storage tanks, asbestos investigation and abatement, contaminated soil delineation and removal, NORM surveys, water quality analysis, mobile mapping and GIS, construction management, and report preparation.

Site Assessments and Remediation of Petroleum Contamination, Multiple Sites, New Mexico
Managed multiple gasoline-contaminated sites that were regulated by the New Mexico Environment Department Petroleum Storage Tank Bureau (PSTB). Work included preliminary and secondary investigations, monitor well installations, free-product removal, soil excavation, natural attenuation monitoring, groundwater modeling, GPS mobile mapping, remediation systems engineering, field analysis, PSTB documentation, report and permit preparation, and coordination with the client and the PSTB to ensure cost-effective cleanup and site closure.

Additional Professional Training

Project Management Professional Certification (PMPC) Course, Interface Technical Training, 2006

New Mexico Risk-Based Decision-Making Process for Petroleum Releases at Underground Storage Tank Sites 3-Day Course, RAM Group, Inc., 2002

Principles of Aquifer Testing 3-Day Course, National Ground Water Association, 2002

Principles and Practices of Forced Air Remediation 3-Day Course, National Ground Water Association, 2001

Principles of Ground Water Flow, Transport and Remediation 3-Day Course, National Ground Water Association, 1998

Hazardous Waste Safety Training, Supervisor Training (1910.120), Occupational Health and Safety Administration, 1995

Patrice Feltman, RG

Project Geologist



EDUCATION

BS, Geology, Stephen F. Austin University, 2004

PROFESSIONAL REGISTRATIONS

Registered Geologist, Arizona, No. 69328

PROFESSIONAL TRAINING

OSHA Hazardous Waste Operations and Emergency Response 40-hour training and annual refresher, current

Loss Prevention Systems Training, Leidos, 2012

Ms. Feltman has more than 15 years of experience providing consulting services to state government, mining, and industrial clients. She has extensive experience in project management, environmental sampling, oversight of drilling, monitoring and production well installation, and data interpretation and analysis.

PFAS Impacts at City of Santa Fe Paseo Real Wastewater Reclamation Facility, Santa Fe, New Mexico
Project Geologist responsible for project management and coordination for the investigation and monitoring of poly- and perfluoroalkyl substance (PFAS) to determine the extent of impacts to near surface soils and groundwater in the former land application sludge disposal areas at the facility.

Remedial Services Consulting, Various Locations, Arizona and New Mexico
Project Geologist responsible for project management, environmental sampling, and oversight of monitoring and remediation well installations at multiple contaminated sites being remediated through DBS&A's on-call contract and for private clients. Representative sites include Arroyo Hondo, Former Donut Shop, Big Rock Shopping Center, Springer Auto, McCasland Chevrolet, Former Y Station State Lead Site, Las Vegas Triple Site, C&S Dora Station, Bell Gas, Shamrock #63, and S&L Service Station.

Planning Document Preparation, Various Locations, New Mexico
Project Geologist responsible for preparation of quality assurance project plan (QAPP), community relation plan (CRP), and analysis of brownfields cleanup alternatives (ABCA) documents for asbestos and lead-based paint abatement projects for the New Mexico Environment Department (NMED) and United States Environmental Protection Agency (EPA).

Rio Rancho Landfill, Rio Rancho, New Mexico
Staff Geologist responsible for field oversight and construction quality assurance of well drilling and installation, including data collection for well materials, backfill materials, and refuse temperatures as well as preparation of as-built well logs for replacement of wells for the gas collection and conveyance system.

San Juan County Regional Landfill, San Juan County, New Mexico
Staff Geologist responsible for sampling of the vadose zone monitor wells to monitor water quality in the uppermost water-bearing geologic units underlying the landfill. Oversight of shallow borehole investigation drilling in support of vertical expansion of the landfill through characterization of subsurface conditions.

Albuquerque and Bernalillo County Water Utility Authority Large-Scale Recharge Project, Albuquerque, New Mexico
Staff Geologist responsible for drilling and well construction oversight for aquifer storage and recovery wells at the San Juan Chama Drinking Water

Treatment Plant in Albuquerque, New Mexico.

Preliminary Site Investigations, New Mexico Department of Transportation, Various Locations, New Mexico
Staff Geologist responsible for oversight of geophysical survey crews, environmental drilling and environmental sampling and report preparation at multiple sites. Representative sites include US 285 Project, Artesia; US 528 Project, Rio Rancho; and US 82/NM 83/NM 18 Project, Lovington.

Tubbs/Nuns/Atlas Fires Backfill Program, Sonoma and Napa Counties, California
Staff Geologist responsible for geotechnical and environmental field investigation and report preparation for the California Governor's Office of Emergency Services in support of backfilling residential properties which were over-excavated during wildfire cleanup activities.

Fire Debris Removal Programs, California
Staff Geologist responsible for task force leadership, debris assessment, and report preparation during cleanup of residential and commercial properties that were destroyed by the Butte, Pawnee, and Inland Branch Fires. Ms. Feltman managed a crew of six to eight equipment operators and laborers, implemented health and safety procedures, and documented debris removal progress. Prepared debris removal documentation, worked closely with the general contractor, trucking contractor, CalRecycle, California Office of Emergency Services, and the Federal Emergency Management Agency (FEMA) contractor, assessing site access conditions and work schedule to ensure a smooth, logical, and cost-effective progression of work. Interacted daily with affected residents, negotiating cleanup work schedules and coordinating property recovery efforts. Ms. Feltman also determined the size and content of debris fields prior to mobilization of debris removal task forces and prepared reports for California Office of Emergency Services documenting completed debris removal.

Sample Collection, Chesapeake Energy, Statoil, Onshore Holdings, and Cinco Resources, Colorado, Wyoming, and North Dakota
Staff Geologist who performed schedule coordination and collection of surface and groundwater samples in support of baseline water sampling in areas of oil and gas exploration in Colorado, Wyoming, and North Dakota.

In Situ Bioremediation, Pantex, Texas
Staff Geologist who performed amendment injection activities and well rehabilitation in support of ongoing remediation.

Remediation Support, Chevron Environmental Management Company, Colorado and Utah
Staff Geologist who conducted groundwater monitoring, quarterly sampling, and operations and maintenance in support of ongoing remediation.

Methane Screening, Chesapeake Energy, Colorado
Staff Geologist who conducted residential methane screening in areas of oil and gas exploration in Colorado.

Plume Characterization, Freeport-McMoRan, Arizona
Staff Geologist who conducted plume characterization in mine area. Performed well installation, well testing, and quarterly sampling.

Groundwater Exploration Study, Freeport-McMoRan, Arizona
Staff Geologist who provided oversight of exploration drilling in support of mine operations.

Groundwater Remediation Projects, Freescale Semiconductor and Freeport-McMoRan, Arizona
Staff Geologist who performed groundwater monitoring and sampling.

Aquifer Recharge Study, Salt River Project, Arizona
Staff Geologist who provided interpretation of water monitoring data to determine effectiveness of aquifer recharge efforts. Used historical data, Surfer, and ArcGIS.