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FINAL
SITE ASSESSMENT REPORT
TRUCK WASH DRAIN SYSTEM

ARTESIA, NEW MEXICO

BJ SERVICES COMPANY, U.S.A.

AUGUST 9, 1996

FINAL SITE ASSESSMENT REPORT TRUCK WASH DRAIN SYSTEM ARTESIA, NEW MEXICO FACILITY

Prepared for

BJ Services Company, U.S.A. 8701 New Trials Drive The Woodlands, Texas 77381

BC Project Number: 2988-27

Timothy Jenkins
Associate Engineer

August 9, 1996

Brown and Caldwell

1415 Louisiana, Suite 2500 Houston, Texas 77002 - (713) 759-0999

[&]quot;This report was prepared in accordance with the standards of the environmental consulting industry at the time it was prepared. It should not be relied upon by parties other than those for whom it was prepared, and then only to the extent of the scope of work which was authorized. This report does not guarantee that no additional environmental contamination beyond that described in this report exists at this site."

CONTENTS

1.0	INT	RODUCTION	1			
2.0	SITE	E ASSESSMENT	2			
	2.1	General Site Characteristics				
	2.2	Site Scoring	3			
	2.3	Excavation Activities	3			
		2.3.1 Removal of Drain Line, Tank, and Leach Lines	4			
		2.3.2 Stockpiling of Excavated Soils	5			
		2.3.3 Land Spreading of Stockpiled Soils				
3.0	CON	ICLUSIONS AND RECOMMENDATIONS	7			
	3.1	Conclusions	7			
	3.2	Recommendations	7			
FIG	URES					
1.	Site 1	Location Map				
2	Site 1	Plan				
3	Site	Plan with Excavation Location and Land Spread Location	-			
TAB	LES					
1	TWI	OS Analytical Results and OCD Action Levels				
2	TWI	OS Metals Results				
3	TWI	OS Stockpile - Analytical Results				
APP:	ENDIC	CES				
Α	Clos	ure Plan Summary: Truck Wash Drain Line and Tank (1/10/96)				
В	Land	Spreading of Excavated Soil: Truck Wash Drain System (2/26/96)				
C		ned Surface Impoundment Closure Guidelines				
D	Analytical Reports and Chain-of-Custody Forms					

1.0 INTRODUCTION

Brown and Caldwell, under contract to BJ Services Company, U.S.A., conducted a site assessment for the closure of the Truck Wash Drain System (TWDS) from February 2 through February 6, 1996. The site assessment was conducted in accordance with the "Closure Plan Summary: Truck Wash Drain Line and Tank" (Closure Plan), submitted to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) on January 10, 1996. The Closure Plan is found in Appendix A. Changes have been made to the figure in this appendix to reflect current facility operations. The Artesia facility is located in Eddy County, in the SE/4, Section 32, Township 16 South, Range 26 East. The facility address is 2401 Sivley, Artesia, New Mexico, 88210. A site location map and site plan are attached as Figures 1 and 2, respectively.

Between February 2 and February 6, 1996, Brown and Caldwell supervised the permanent removal of the TWDS, consisting of a single underground storage tank, approximately 25 feet of drain line, and two 95 foot leaching lines. The TWDS was located northeast of the Artesia District facility's Truck Wash Bay (see Figure 3). Brown and Caldwell also provided field oversight for the land spreading of excavated soils and confirmation sampling, which occurred on March 14, 1996. A letter report, "Land Spreading of Excavated Soils: Truck Wash Drain System", was submitted to the OCD on February 26, 1996, and is included as Appendix B. Changes have been made to the figures in this appendix to reflect current facility operations. Closure activities were conducted in accordance with Brown and Caldwell's Closure Plan. The objectives were: (1) to remove potential sources for hydrocarbon-affected soil, and (2) to achieve clean closure of the TWDS.

The following sections summarize the site activities, site assessment and scoring, closure verification methods utilized, and the results of both field and laboratory analyses. Section 3 requests approval for final closure based on the results of the site assessment.

2.0 SITE ASSESSMENT

BJ Services performed the site assessment to determine the potential for site soils/groundwater to have been impacted by the operation of the Truck Wash Drain System (TWDS). The results of the site assessment were used for evaluating the need for remediation and the type of closure best suited for the site.

2.1 General Site Characteristics

BJ Services determined the depth to groundwater to be approximately 20 to 25 feet below the ground surface based on previous groundwater investigations conducted at the site.

Depth to Groundwater		Ranking Score
	•	
< 50 feet		Yes - 20

Brown and Caldwell personnel conducted a water well search at the State Engineer's office in Roswell, New Mexico on February 21, 1993. This search determined that no water wells were identified within a one-half mile radius of the facility.

Wellhead Protection Area	Ranking Score
< 1000 feet from a water source, or	No - 0
< 200 feet from a private domestic water source:	No - 0

The distance from the site to the Pecos River (nearest downgradient surface water body), was determined to be more than 1,000 feet by reviewing a USGS topographic map for the area.

Distance to Surface Water Body	Ranking Score
> 1,000 feet	Yes - 0

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2

2.2 Site Scoring

Groundwater is present at a depth of less than 50 feet below grade. Flow direction is east-southeast, as determined from wells previously installed at the facility. Therefore, the site scoring procedure outlined above calls for a depth to groundwater Ranking Score of 20. No water wells were identified within a 2,000 ft. radius of the site. Therefore, the wellhead protection Ranking Score is 0. A review of a USGS map indicates the nearest water body (Eagle Creek) is approximately 7,000 ft. south of the site. The Pecos River is several miles from the facility. Therefore, the distance to surface water body Ranking Score is 0.

The site ranking score of 20 is greater than 19. This determination was made based on physical site characteristics as described above. According to the OCD guidance document attached as Appendix C, "Unlined Surface Impoundment Closure Guidelines, 2/93", a total ranking score of greater than 19 yields action levels as outlined in Table 1.

2.3 Excavation Activities

The TWDS received effluent water from an in-ground oil/water separator connected to the Truck Wash Bay as shown in Figure 3. This separator, which is still in operation, handles water used for truck cleaning. The TWDS consisted of a drain line leading from the truck wash oil/water separator to a single underground tank. Two leaching lines which were connected to the tank spanned 95 feet in length.

The TWDS tank, drain line, and leach lines were removed based on the Closure Plan (Appendix A). Using field TPH screening, overexcavation and stockpiling of potentially affected soils were accomplished concurrent with the removal of the tank and lines. Field screening results are listed in Table 1. Approximately 350 cubic yards of soil were excavated and stockpiled for laboratory testing and eventual disposal. The excavation was then backfilled with imported fill material similar to existing site soil and compacted using rubber-tired machinery. The stockpiled soil was

later land spread on-site after receiving OCD approval of the land spreading plan (see Appendix B). The land spreading activities were accomplished on March 14, 1996.

2.3.1 Removal of Drain Line, Tank, and Leach Lines

Closure activities for the TWDS tank, drain line, and leach lines began on February 2, 1996. Rhino Environmental Services, Inc. (Rhino) removed the underground tank, the drain line leading from the oil/water separator, and two previously unknown leaching lines leading from the tank. The two leaching lines were approximately 95 feet in length, ran east from the tank at approximately 4 feet below grade, and were spaced about 10 feet apart. These lines and the surrounding soils were removed after receiving approval from the OCD.

Confirmation samples were collected from the center point of the drain line and from beneath the tank footprint. These samples were collected in plastic bags, and then transferred to a labeled, laboratory-supplied glass jar and immediately placed in an ice chest. Upon completion of sampling activities, the samples were delivered via overnight delivery service to ERMI Environmental Laboratories in Allen, Texas, using chain-of-custody procedures and analyzed as described in the Closure Plan. An additional sample was composited from the mid-point of the leach line excavations in a plastic bag. This sample was also transferred to a laboratory-supplied glass jar, placed on ice in an ice chest, and delivered via overnight delivery service to ERMI Environmental Laboratories in Allen, Texas, using chain-of-custody procedures.

Confirmation samples were analyzed for TPH, BTEX, total benzene, and Total RCRA metals, as required by the Closure Plan. Both field-analyzed and laboratory-analyzed TPH concentrations were below the OCD action levels as shown in Table 1. Total BTEX and total benzene concentrations were also below the OCD guidelines. Some metals were detected in the samples, but did not exceed RCRA Toxicity Characteristic Leaching Procedure (TCLP) standards, assuming that 5% of the total metal concentration is leachable using TCLP methods. Analytical results for metals analyses are listed in Table 2.

2.3.2 Stockpiling of Excavated Soils

A total of 350 cubic yards of soil was excavated and stockpiled on-site. The stockpile consisted of soil generated during the removal of the tank, drain line, and leaching lines that were part of the drain system, as described above. Soil excavated from around the leaching lines constituted the majority of the material that was stockpiled. Tank concrete and drain line piping were disposed separately from the stockpiled soil material.

A composite sample of the stockpiled material was collected by Brown and Caldwell personnel to determine which, if any, hazardous constituents were present. Laboratory results of the composite sample indicated that the material was non-hazardous based on a full TCLP and R.C.I. analysis, that TPH levels were non-detect, and that BTEX levels were also below OCD action levels. Tables 1 and 3 present the stockpile analytical results along with a comparison to OCD action levels for this facility.

2.3.3 Land Spreading of Stockpiled Soils

Based on the stockpile analytical results, Brown and Caldwell requested a one time land spread of stockpiled soil to BJ Services and to the OCD in a letter dated February 26, 1996 (Appendix B). This disposal option is described in the OCD guidance document for unlined surface impoundments, page 12 (see Appendix C). The area along the eastern property line, as shown in Figure 3, was selected as the location for the land spreading of stockpiled soils. Upon receiving OCD approval, Brown and Caldwell coordinated the land spreading of stockpiled material, with Rhino performing the work. The soil was moved using belly dumps, and was spread into an approximately six inch thick layer of loosely compacted soil using a grader. The final dimensions of the land spread area were roughly 50 feet by 330 feet.

Once the land spread area was established, a sampling grid was placed at 30 feet intervals both north and east. Twenty samples were collected, and a composite sample was created using approximately equal volumes of soil from each sample location. The composite sample was then placed in laboratory supplied jars and submitted to a laboratory for TPH, total BTEX, and total benzene analysis. The results are summarized in Table 1. The results were below OCD action levels, and no further action was required.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 Conclusions

The site assessment report has demonstrated that:

- Field and laboratory analyses of the soil samples obtained during the site investigation indicate that soils potentially impacted by TPH constituents and associated with the Truck Wash Drain System (TWDS) have been removed, based on confirmation sampling and analysis, as well as field TPH analysis.
- The TWDS has been sufficiently remediated to meet or exceed the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division requirements for TPH, benzene, and total BTEX concentrations. By this comparison, the TWDS now meets the requirements for a clean, final closure.
- The land spread facility, as indicated by laboratory analyses, has been sufficiently remediated to meet or exceed OCD requirements for TPH, benzene, and total BTEX concentrations. By this comparison, the land spread area now meets the requirements for a clean, final closure.

3.2 Recommendations

Based on the findings of the Site Assessment, no further remediation is necessary, and that no further remedial action is required to meet OCD action levels. This status applies to the TWDS and to the land spread area. BJ Services, under the advisement of Brown and Caldwell, requests the final closure of both facilities.

DISTRIBUTION

Final
Site Assessment Report
Truck Wash Drain System
Artesia, New Mexico Facility

August 9, 1996

1 copy to:

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division

2040 S. Pacheco

Santa Fe, New Mexico 87505

Attention:

Mr. Mark Ashley

1 copy to:

BJ Services Company, U.S.A.

8701 New Trails Drive

The Woodlands, Texas 77381

Attention:

Ms. Jo Ann Cobb

1 copy to:

BJ Services Company, U.S.A.

2401 Sivley

Artesia, New Mexico 88210

Attention:

Mr. Mike Wiggins

1 copy to:

Brown and Caldwell

File

QUALITY CONTROL REVIEWER

Robert N. Jennings, P.E.

Vice President

TJ:elg

FIGURES

FIGURE 1

Site Location Map

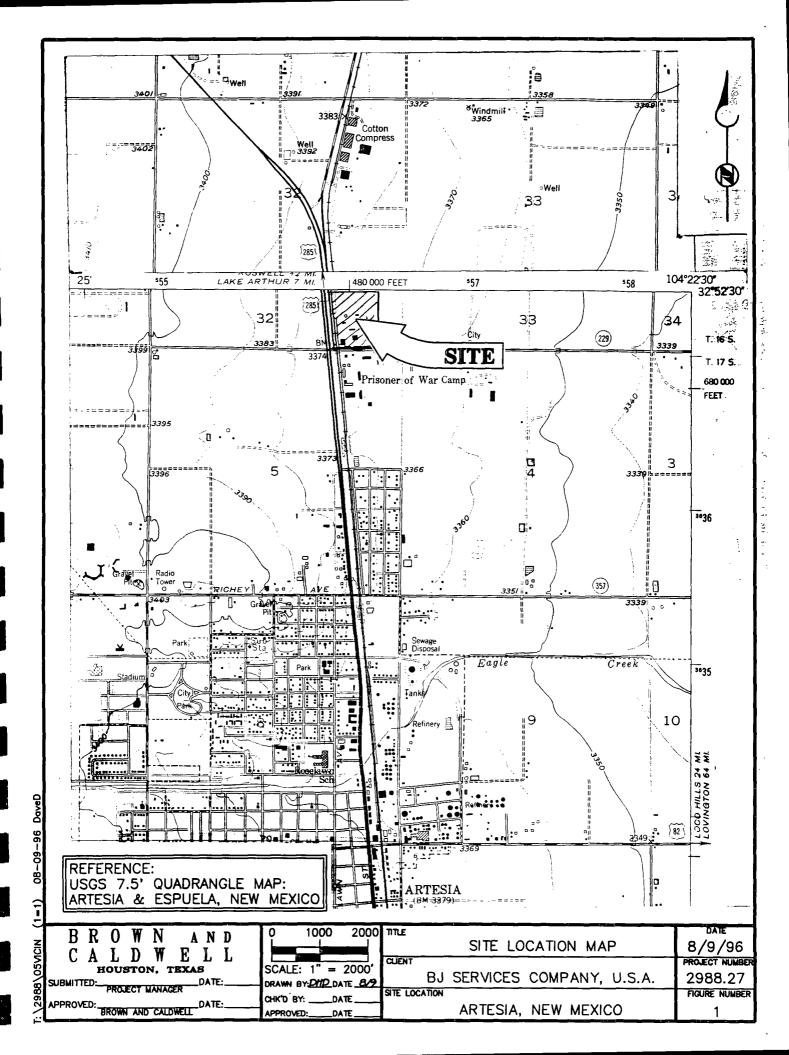


FIGURE 2

Site Plan

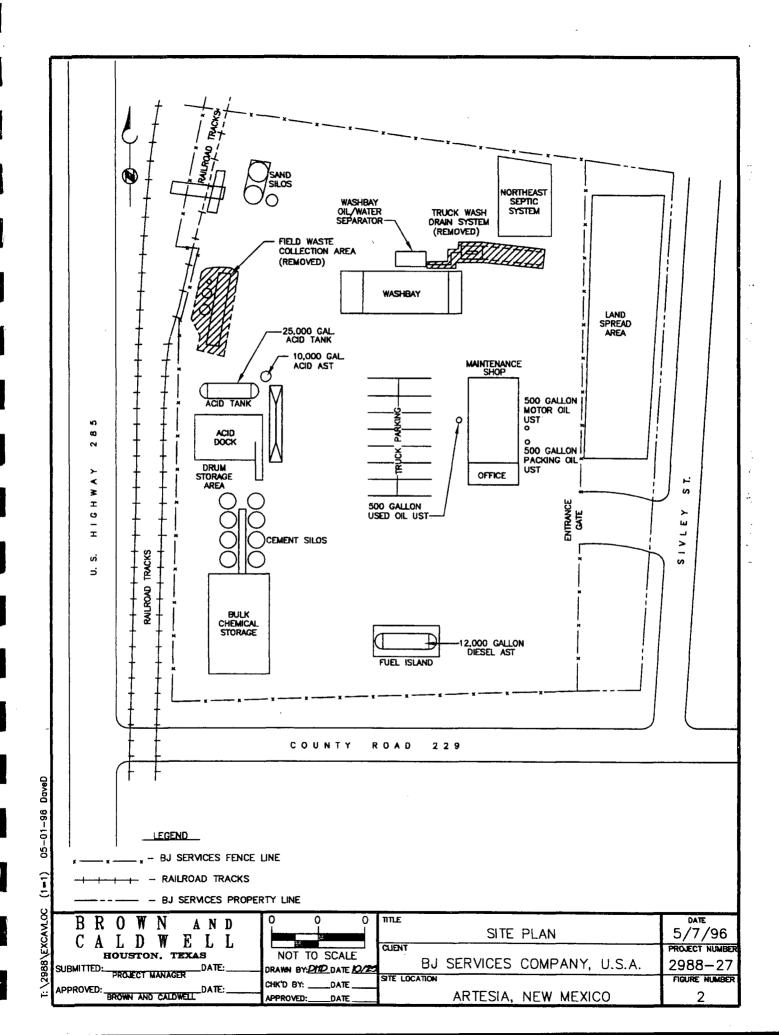
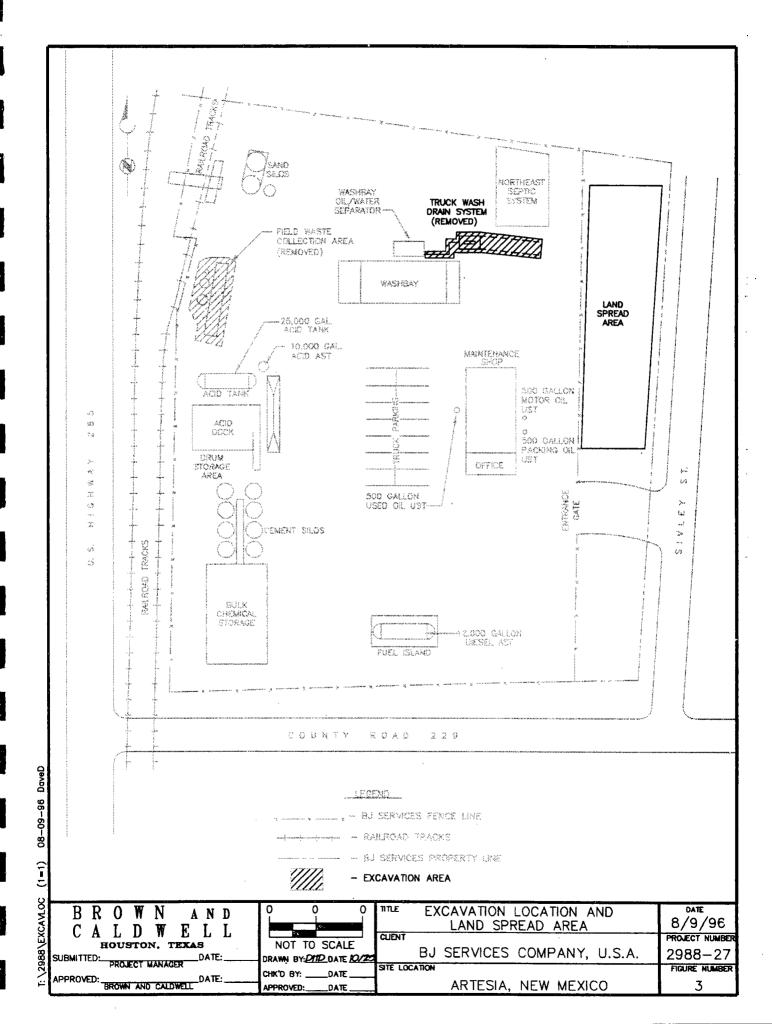


FIGURE 3

Excavation Location and Land Spread Area



TABLES

TABLE 1

TWDS - Analytical Results and OCD Action Levels

Sample I.D.	TPH Diesel mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	Total BTEX (Calculated) mg/kg
LABORATORY ANALYS	SES:					
Tank Footprint	6.3	< 0.010	< 0.010	< 0.010	< 0.030	< 0.060
Midpoint of Drain Line	6.2	< 0.010	< 0.010	< 0.010	< 0.030	< 0.060
Midpoint of Leach Lines	45	< 0.010	< 0.010	< 0.010	0.069	0.069
Stockpile Composite	< 5.0	< 0.010	0.016	< 0.010	< 0.010	0.016
Land Spread Composite	< 5.0	0.010	0.016	0.010	0.041	0.077
FIELD ANALYSES:						
Tank Footprint	26	NA	NA	NA	NA	NA
Midpoint of Drain Line	5	NA	NA	NA	NA	NA
Midpoint of Leach Lines - North Sidewall	70	NA	NA	NA	NA	NA
Midpoint of Leach Lines - South Sidewall	81	NA	NA	NA	NA	NA
OCD ACTION LEVEL	100	10	NS	NS	NS	50

NA = Not Analyzed NS = Not Specified

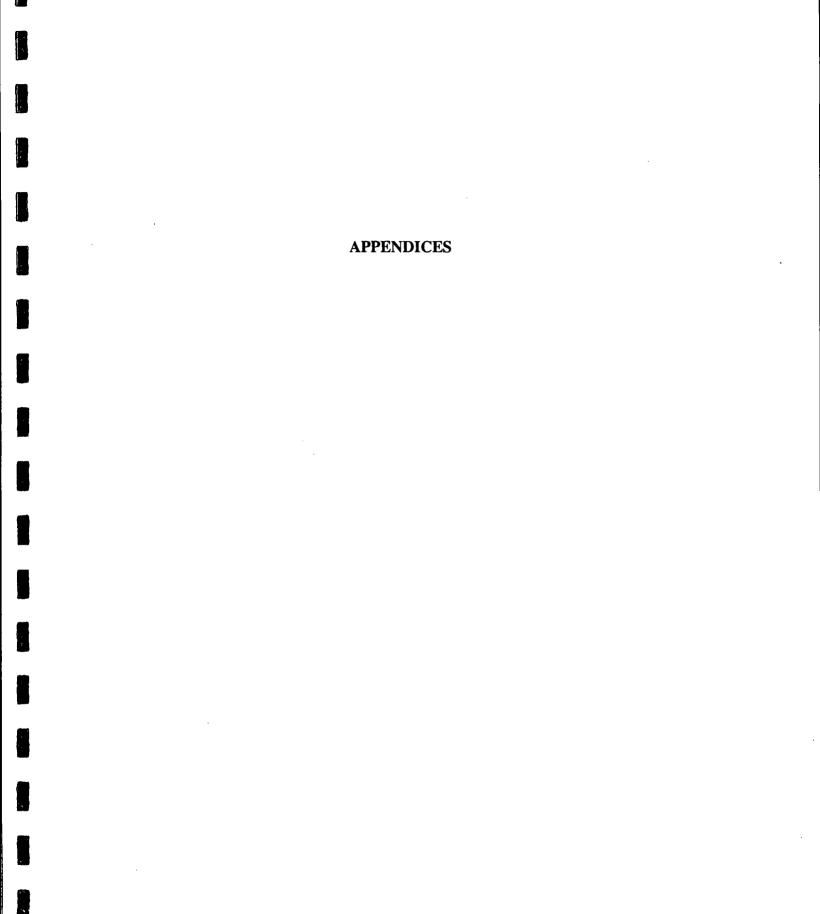
TABLE 2

TWDS - Metals Results

Sample I.D.	Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	Silver mg/kg
Tank Footprint	< 1.0	13	0.54	6.7	2.8	< 0.02	< 0.75	< 0.35
Midpoint Drain Line	2.0	130	0.55	5.6	3.6	< 0.02	< 0.75	< 0.35
Midpoint Leach Lines	< 1.0	138	0.91	6.7	2.6	< 0.02	< 0.75	< 0.35

TABLE 3
RCRA Analytical Results - TWDS-Stockpile

Parameter	Observed Concentration	Units	Regulatory Limits	
RCI		- 1		
Flashpoint	Not Ignitable	°C	< 60	
pH	7.9	standard units	2.0≤pH≤12.5	
Cyanides	< 1.0	mg/kg	≤ 250	
Sulfides	< 4.0	mg/kg	≤ 500	
TCLP Metals		•		
Arsenic	< 0.20	mg/L	< 5.0	
Barium	0.43	mg/L	< 100.0	
Cadmium	< 0.04	mg/L	< 1.0	
Chromium	< 0.05	mg/L	< 5.0	
Lead	< 0.10	mg/L	< 5.0	
Mercury	< 0.004	mg/L	< 0.2	
Selenium	< 0.15	mg/L	< 1.0	
Silver	< 0.07	mg/L	< 5.0	
TCLP Volatiles				
Benzene	< 0.003	mg/L	< 0.5	
Carbon Tetrachloride	< 0.003	mg/L	< 0.5	
Chlorobenzene	< 0.003	mg/L	< 100.0	
Chloroform	< 0.003	mg/L	< 6.0	
1,4-Dichlorobenzene	< 0.003	mg/L	< 7.5	
1,2-Dichloroethane	< 0.003	mg/L	< 0.5	
1,1-Dichloroethylene	< 0.003	mg/L	< 0.7	
Methyl ethyl ketone	< 0.010	mg/L	< 200.0	
Tetrachloroethylene	< 0.003	mg/L	< 0.7	
Trichloroethylene	< 0.003	mg/L	< 0.5	
Vinyl Chloride	< 0.005	mg/L	< 0.2	
TCLP Semivolatiles				
2,4-Dinitrotoluene	< 0.003	mg/L	< 0.13	
o-Cresol	< 0.003	mg/L	< 200.0	
m-Cresol	< 0.003	mg/L	< 200.0	
p-Cresol	< 0.003	mg/L	< 200.0	
Cresol	< 0.003	mg/L	< 200.0	
Hexachlorobenzene	< 0.003	mg/L	< 0.13	
Hexachlorobutadiene	< 0.003	mg/L	< 0.5	
Hexachloroethane	< 0.003	mg/L	< 3.0	
Nitrobenzene	< 0.003	mg/L	< 2.0	
Pentachlorophenol	< 0.003	mg/L	< 100.0	
Pyridine	< 0.003	mg/L	< 5.0	
2,4,5-Trichlorophenol	< 0.003	mg/L	< 400.0	
2,4,6-Trichlorophenol	< 0.003	mg/L	< 2.0	



APPENDIX A

CLOSURE PLAN SUMMARY TRUCK WASH DRAIN LINE AND TANK (JANUARY 10, 1996)

BROWN AND CALDWELL

January 10, 1996

Mr. Mark Ashley
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Subject: Closure Plan Summary

Truck Wash Drain Line and Tank

BJ Services Facility in Artesia, New Mexico

Dear Mr. Ashley:

During field activities at the BJ Services Company U.S.A. (BJ Services) Artesia, NM facility, site personnel identified the location of a drainage system connected to the truck wash facility. This Truck Wash Drain System consists of a drain line leading from the truck wash oil/water separator to a single tank. Figure 1 shows the approximate location of the Truck Wash Drain System.

BJ Services intends to close the system by removing both the drain line and the tank. Excavated soils will be tested for ultimate disposal in an OCD approved facility. The excavated tank and piping will also be disposed of in an OCD approved facility. Field personnel will verify closure by collecting samples from the soils beneath the center point of the drain line and beneath the tank footprint. These samples will be split for field screening and for submission to a laboratory. Field screening for TPH will be conducted using a field test kit. Laboratory samples will be analyzed for TPH and total BTEX, total benzene, and total metals (8 RCRA metals). The TPH, BTEX and benzene results will be compared to previously determined OCD action levels for these parameters, as specified by site scoring criteria. Table 1 lists the OCD action levels for TPH, BTEX and benzene when site scoring is greater that 19. Total metal results will be multiplied by 5% for an estimated comparison to RCRA TCLP standard action levels.

Once the drain line and tank are removed, the discharge point from the oil/water separator will be plugged. BJ Services will then discharge truck wash water from the oil/water separator to an above-ground frac tank. The frac tank liquid will be periodically disposed of at an OCD approved disposal facility.

New Mexico Energy Minerals and Natural Resources Department January 10, 1996 Page 2

Closure activities will commence upon your approval of the closure approach discussed above. If you have any questions concerning the contents of this letter, please call either Tim Jenkins or Bob Jennings at 713-759-0999.

Very Truly Yours,

BROWN AND CALDWELL

Timothy L. Jenkins Associate Engineer

Enclosures:

Table 1 OCD Action Levels

Figure 1 Site Plan and Drain System Location

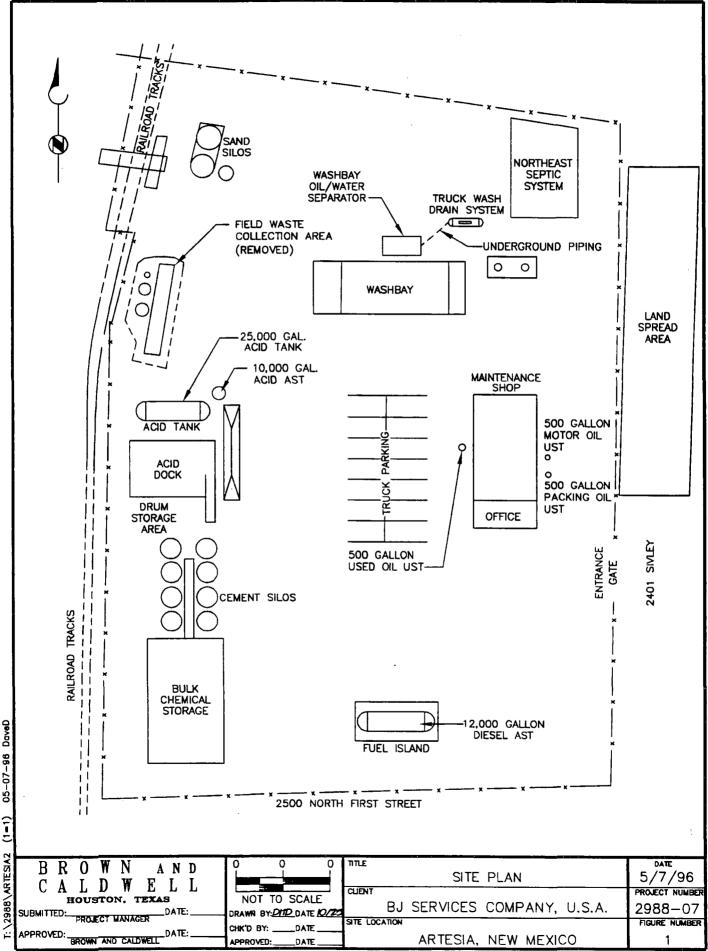
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TABLE 1

OCD Action Levels

	TPH (mg/kg)	Total BTEX (mg/kg)	Benzene (mg/kg)
OCD Action Level	100	50	10

Note: OCD Action Levels assume a site scoring of > 19. The Artesia Facility was previously scored at 20.



APPENDIX B

LAND SPREADING OF EXCAVATED SOILS TRUCK WASH DRAIN SYSTEM (FEBRUARY 26, 1996)

BROWN AND CALDWELL

February 26, 1996

Mr. Mark Ashley
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

2988.27

Subject: Land Spreading of Excavated Soils

Truck Wash Drain System

BJ Services Facility in Artesia, New Mexico

Dear Mr. Ashley:

Beginning February 2, 1996, Brown and Caldwell removed the tank and drain line to fulfill the Truck Wash Drain System closure at the BJ Services Company U.S.A. (BJ Services) Artesia, NM facility, in accordance with Brown and Caldwell's letter of January 10, 1996. During removal activities, two previously unknown leaching lines were found to be connected to the tank. Upon approval from the NMOCD, these lines and the surrounding soil were subsequently removed as well. Approximately 300 cubic yards of soil were excavated and stockpiled on-site. Based on the laboratory results summarized in this letter, Brown and Caldwell proposes to dispose of these excavated soils in a one-time application of an on-site land spreading operation. A complete closure report will be submitted to the OCD at a future date describing the closure activities for the Truck Wash Drain System.

The stockpile consists of soil generated during the removal of the tank, drain line, and leaching lines that were part of the drain system. Soil excavated from around the leaching lines constitutes the majority of the material to be spread. The stockpiled material is located south of the leaching lines and east of Truck Wash Bay. See Figure 1 for the approximate locations of the stockpile and Truck Wash Drain System. Tank concrete and drain line piping were disposed of separately, and therefore have not been incorporated into the stockpile.

Laboratory results of the stockpile composite sample indicated that the material was non-hazardous based on a full TCLP and R.C.I. analysis, that TPH levels were non-detect, and that

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"This report was prepared in accordance with the standards of the environmental consulting industry at the time it was prepared. It should not be relied upon by parties other than those for whom it was prepared, and then only to the extent of the scope of work which was authorized. This report does not guarantee that no additional environmental contamination beyond that described in this report exists at this site."

February 26, 1996 Mr. Mark Ashley NMOCD Page 2

BTEX levels were also below OCD action levels. Table 1 presents the stockpile analytical results along with a comparison to OCD action levels for this facility.

BJ Services intends to move the stockpiled soil from its present location to a land spreading area as shown in Figure 2. Once the land spread area is established, actual dimensions will be measured, and a sampling grid placed at 30 feet intervals both north and east as shown in Figure 3. Based on the anticipated dimensions, 12 samples locations will be created by the grid. A composite sample will be collected using approximately equal volumes of soil from each sample location. The composite sample will then be placed in laboratory supplied jars and submitted to a laboratory for TPH, total BTEX, and total benzene analysis. If the results are below the action levels for these parameters (refer to Table 1), then no further action will be required, and the land spread closure report will be prepared.

If levels of TPH, total BTEX, or total benzene exceed the OCD action levels, then bioenhancement activities such as periodic aeration, moisture control, and fertilization will commence. When the results are below the action levels in Table 1, no further action will be required, and the closure report will be prepared.

Land spreading activities will commence upon your approval of the approach discussed above. If you have any questions concerning the contents of this letter, please call either Tim Jenkins or Bob Jennings at 713-759-0999.

Very Truly Yours,

BROWN AND CALDWELL

Ruhard Rayroad for

Timothy L. Jenkins

Associate Engineer

Robert N. Jennings, P.E.

Vice President

Enclosures: Table 1 OCD Action Levels

Figure 1 Site Plan and Stockpile Location Figure 2 Proposed Landspread Location

Figure 3 Proposed Grid Sampling

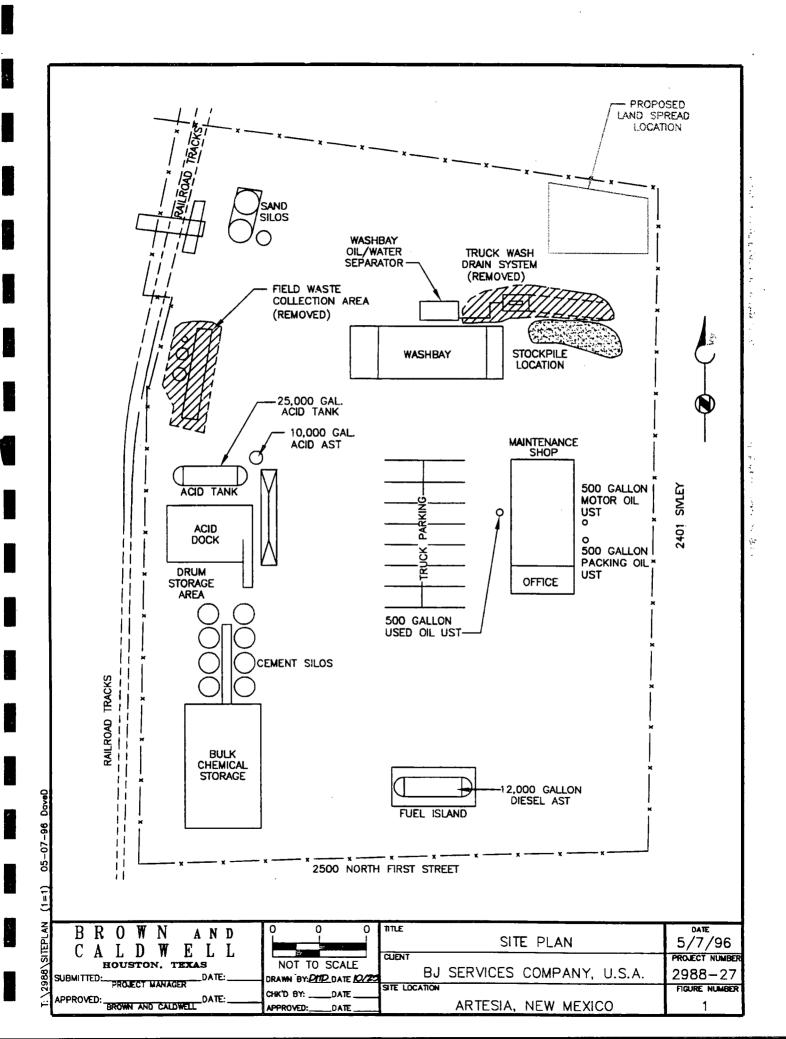
TABLE 1

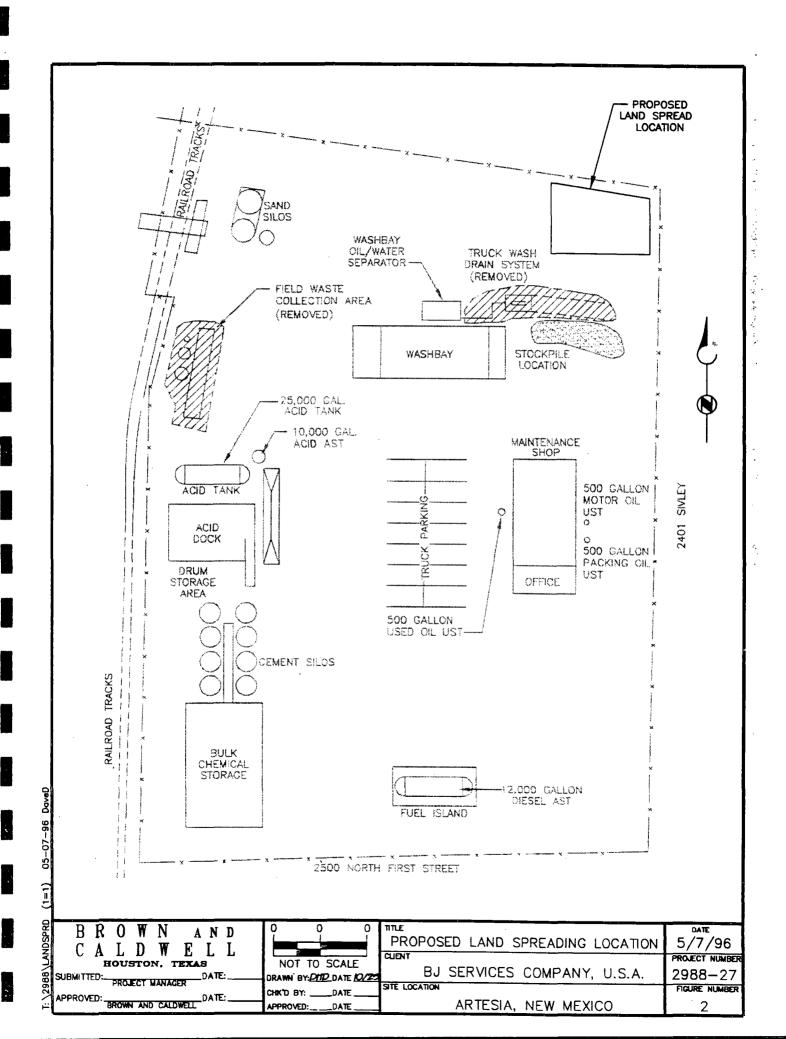
Analytical Results and Regulatory Action Levels

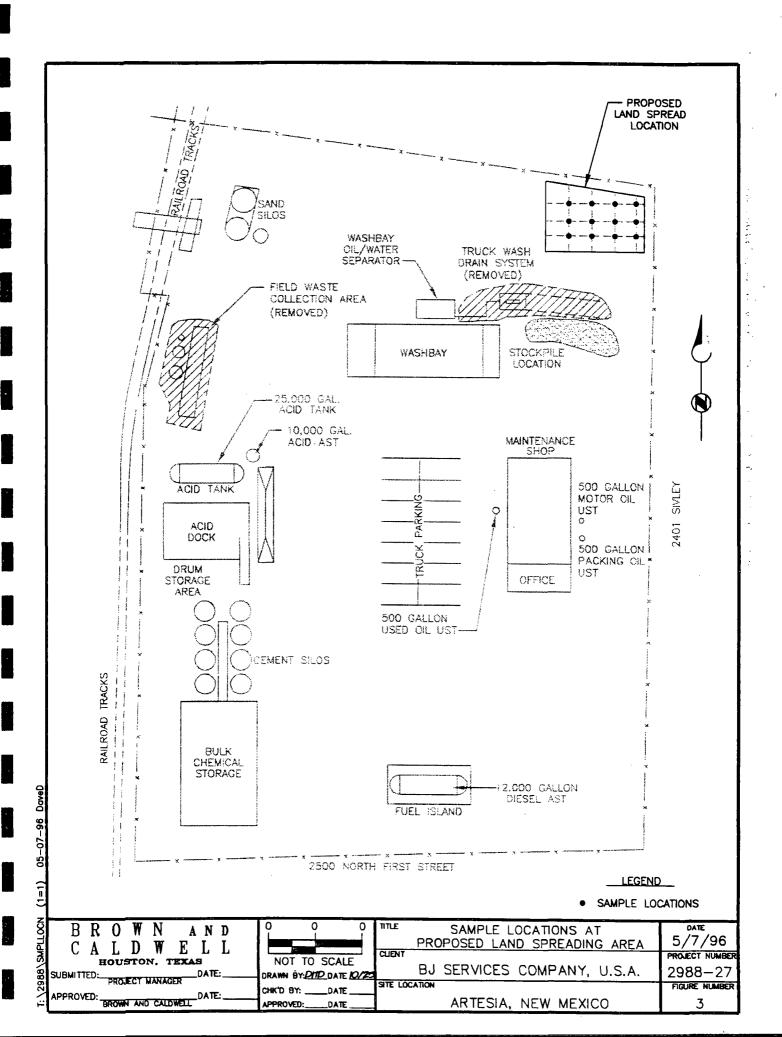
	 	Total BTEX (mg/kg)	Benzene (mg/kg)	TCLPBarium (b)*** (mg/L)
TWDS - Piles	<5	0.016	< 0.01	0.43
OCD Action Level (a)	100	50	10	
RCRA Action Level			·	100

Notes:

- OCD Action Levels assume a site scoring of > 19. The Artesia Facility was previously scored at 20.
- (b) RCRA Regulatory limits for all other TCLP parameters are not summarized since the analytical results showed that these parameters were not detected in the composite sample collected from the stockpile.







APPENDIX C

UNLINED SURFACE IMPOUNDMENT CLOSURE GUIDELINES, 2/93

UNLINED

SURFACE IMPOUNDMENT

CLOSURE

GUIDELINES

(FEBRUARY 1993)

New Mexico Oil Conservation Division State Land Office Building P.O. Box 2088 Santa Fe, New Mexico 87504-2088

TABLE OF CONTENTS

PREFACE

INTRODUCTION

I. SITE ASSESSMENT

- A. GENERAL SITE CHARACTERISTICS
 - 1. Depth To Ground Water
 - 2. Wellhead Protection Area
 - 3. Distance To Nearest Surface Water Body
- B. SOIL/WASTE CHARACTERISTICS
 - 1. Highly Contaminated/Saturated Soils
 - 2. Unsaturated Contaminated Soils
- C. GROUND WATER QUALITY

II. SOIL AND WATER REMEDIATION LEVELS

- A. SOILS
 - 1. Highly Contaminated/Saturated Soils
 - 2. Unsaturated Contaminated Soils
 - a. Ranking Criteria
 - b. Recommended Remediation Level
- B. GROUND WATER

III. SOIL AND WATER SAMPLING PROCEDURES

- A. HIGHLY CONTAMINATED OR SATURATED SOILS
 - 1. Physical Observations
- B. UNSATURATED CONTAMINATED SOILS
 - 1. Soil Sampling Procedures for Headspace Analysis
 - 2. Soil Sampling Procedures For Laboratory Analysis
 - a. Sampling Procedures
 - b. Analytical methods

- C. GROUND WATER SAMPLING
 - 1. Monitor Well Installation/Location
 - 2. Monitor Well Construction
 - 3. Monitor Well Development
 - 4. Sampling Procedures
 - 5. Ground Water laboratory Analysis
 - a. Analytical Methods

IV. REMEDIATION

- A. SOIL REMEDIATION
 - 1. Contaminated Soils
 - 2. Soil Management Options
 - a. <u>Disposal</u>
 - b. Soil Treatment and Remediation Techniques
 - i. Landfarming
 - ii. Insitu Soil Treatment
 - iii. Alternate Methods
- B. GROUND WATER REMEDIATION
 - 1. Remediation Requirements
 - a. Free Phase Contamination
 - b. <u>Dissolved Phase Contamination</u>
 - c. Alternate Methods
- V. TERMINATION OF REMEDIAL ACTION
 - A. SOIL
 - B. GROUND WATER
- VI. FINAL CLOSURE
- VII. CLOSURE REPORTS

PREFACE

The following document does not require that currently operating or permitted unlined surface impoundments be closed. This document is to be used <u>only</u> as a guide when closing unlined surface impoundments used for the containment of exploration, production, processing and storage wastes regulated by the New Mexico Oil Conservation Division (OCD).

OCD requires submission and approval of plans and procedures for closure prior to the actual closure of any unlined surface impoundment. Procedures may deviate from the following guidelines if it can be shown that the proposed procedure will remove or isolate contaminants in such a manner that fresh waters, public health and the environment will not be impacted by remaining contaminants. Specific constituents and/or requirements for soil and ground water analysis and/or remediation may vary depending on site specific conditions.

If a number of unlined impoundments are to be closed by a single company, the company may submit one area-wide plan stating the specific location of each unlined impoundment to be closed, along with the procedures to be used during closure. Deviations from approved plans will require OCD notification and approval.

INTRODUCTION

These guidelines are intended to provide guidance for closure of unlined surface impoundments in a manner that assures protection of fresh waters, public health and the environment.

The New Mexico State Engineer has designated fresh waters as all surface waters and ground waters of the state containing 10,000 milligrams per liter or less of total dissolved solids (TDS) for which there is a present or reasonably foreseeable beneficial use. As stated in New Mexico Oil Conservation Commission (OCC) Order No. R-3221-D, "reasonably foreseeable" generally has been taken to mean a time period of not less than 200 years into the future. An unlined surface impoundment is defined as any unlined below grade feature which receives anything other than fresh water. The term "unlined surface impoundment" includes but is not limited to the following types of unlined features: produced water pits, dehydrator pits, blowdown pits, tank drain pits, pipeline drip collector pits, compressor scrubber pits, flare pits, and all other unlined pits which receive exploration, production and processing wastes regulated by the OCD. Excluded from this definition are pits constructed exclusively for drill cuttings and drilling fluids which are regulated under OCD Rule 105.

Prior to commencing closure of an unlined surface impoundment, a closure plan must be submitted to and approved by OCD. A closure plan may apply to more than one unlined impoundment. At a minimum, a closure plan should include the following elements:

- 1. The locations of all pits to be closed by township, range, section, unit letter and footages or other OCD approved methods.
- The procedures which will be used to conduct the soil and ground water assessments and the circumstances under which an assessment of ground water will be conducted.
- 3. The procedures which will be used to manage, remediate, or dispose of contaminated soil and ground water.

I. SITE ASSESSMENT

Prior to final closure (Section VI), the party responsible for an unlined surface impoundment should perform an assessment to determine the extent to which soils and/or ground water may have been impacted by the operation of the impoundment. Assessment results will form the basis of any required remediation. The sites will be assessed for the severity of contamination and potential environmental and public health threats using a risk based ranking system.

The following characteristics must be determined in order to evaluate a sites potential risks, the need for remedial action and, if necessary, the level of cleanup required at the site:

A. GENERAL SITE CHARACTERISTICS

1. Depth To Ground Water

The operator should determine the depth to ground water at each site. The depth to ground water is defined as the vertical distance from the lowermost contaminants to the seasonal high water elevation of the ground water. If the exact depth to ground water is unknown, the ground water depth can be estimated using either local water well information, published regional ground water information, data on file with the New Mexico State Engineer Office or the vertical distance from adjacent ground water or surface water.

2. Wellhead Protection Area

The operator should determine the horizontal distance from all water sources and private, domestic water sources. A water source shall mean wells, springs or other sources of fresh water extraction. Private, domestic water sources shall mean those water sources used by less than five households for domestic or stock purposes.

3. Distance To Nearest Surface Water Body

The operator should determine the horizontal distance to all downgradient surface water bodies. Surface water bodies are defined as perennial rivers, streams, creeks, irrigation canals and ditches, lakes and ponds.

B. SOIL/WASTE CHARACTERISTICS

Soils/wastes within and beneath the unlined surface impoundment should be evaluated to determine the type and extent of contamination at the site. In order to assess the level of contamination at the unlined impoundment, observations should be made of the soils at the surface and a

sample of the potentially impacted soils should be taken from the interval at least 3 feet into the undisturbed native soils beneath the bottom of the pit. Samples should be obtained according to the sampling procedures in Sections III.A. and III.B. This may be accomplished using a backhoe, drill rig, hand auger, shovel or other means.

Initial assessment of soil contaminant levels is not required if an operator proposes to determine the final soil contaminant concentrations after a soil removal or remediation pursuant to section IV.A.

Varying degrees of contamination described below may co-exist at an individual site. The following sections describe the degrees of contamination that should be documented during the assessment of the level of soil contamination:

1. Highly Contaminated/Saturated Soils

Highly contaminated/saturated soils are defined as those soils which contain a free liquid hydrocarbon phase or exhibits gross hydrocarbon staining.

2. Unsaturated Contaminated Soils

Unsaturated contaminated soils are those soils which are not highly contaminated or saturated, as described above, but contain measurable concentrations of benzene, toluene, ethylbenzene and xylenes (BTEX) and total petroleum hydrocarbons (TPH). Sampling and analytical methods for determining contaminant concentrations are described in detail in Section III.A. and III.B.

(NOTE: The above definitions apply only to oilfield contaminated soils which are exempt from federal RCRA Subtitle C hazardous waste provisions. Unlined impoundments receiving non-exempt wastes are subject to evaluation for RCRA hazardous waste characteristics.)

C. GROUND WATER QUALITY

If ground water is encountered during the soil/waste characterization of the impacted soils, a sample should be obtained to assess potential impacts on ground water quality. Ground water samples should be obtained using the sampling procedures in Section III.C. If there is a reasonable probability of ground water contamination based upon the level of contaminants in the soils directly beneath the pit or the extent of soil contamination defined during remedial activities, monitor wells may be required to assess potential impacts on ground water and the extent of ground water contamination.

II. SOIL AND WATER REMEDIATION LEVELS

A. SOILS

1. Highly Contaminated/Saturated Soils

Highly contaminated/saturated soils should be remediated insitu or excavated to the maximum extent practicable and remediated using techniques described in Section IV.A.

2. Unsaturated Contaminated Soils

The general site characteristics obtained during the site assessment (Section I.A.) will be used to determine the appropriate soil remediation levels using a risk based approach. Soils which are contaminated by petroleum constituents will be scored according to the ranking criteria below to determine their relative threat to public health, fresh waters and the environment.

a. Ranking Criteria

Depth To Ground Water	Ranking Score
<50 feet	20
50 - 99	10
>100	0

Wellhead Protection Area

<1000 feet from a water source,or;
<200 feet from private domestic water source
Yes 20
No 0

Distance To Surface Water Body

<200 horizontal feet	20
200 - 1000 horizontal feet	10
>1000 horizontal feet	0

b. Recommended Remediation Level

The total ranking score determines the level of remediation that may be required at any given site. The total ranking score is the sum of all four individual ranking criteria listed in Section II.A.2.a. The table below lists the remediation level that may be required for the appropriate total ranking score.

(NOTE: The OCD retains the right to require remediation to more stringent levels than those proposed below if warranted by site specific conditions (ie. native soil type, location relative to population centers and future use of the site or other appropriate site specific conditions.)

Total Ranking Score

	<u>>19</u>	10 - 19	0 - 9
Benzene(ppm)*	10	10	10
BTEX(ppm) *	50	50	50
TPH (ppm) **	100	1000	5000

- A field soil vapor headspace measurement (Section III.B.1) of 100 ppm may be substituted for a laboratory analysis of the Benzene and BTEX concentration limits.
- ** The contaminant concentration for TPH is the concentration above background levels.

B. GROUND WATER

Contaminated ground water is fresh ground water which contains free phase products, measurable concentrations of dissolved phase volatile organic constituents or other dissolved constituents in excess of the natural background water quality. Ground water contaminated in excess of the New Mexico Water Quality Control Commission (WQCC) ground water standards or natural background water quality will require remediation.

III. SOIL AND WATER SAMPLING PROCEDURES

Below are the sampling procedures for soil and ground water contaminant investigations of unlined surface impoundments that have received RCRA Subtitle C exempt oil field exploration and

production wastes. Unlined surface impoundments that have received non-exempt RCRA wastes will be required to be tested to demonstrate that the wastes are not characteristically hazardous according to RCRA regulations.

A. HIGHLY CONTAMINATED OR SATURATED SOILS

The following method is used to determine if soils are highly contaminated or saturated:

1. Physical Observations

Study a representative sample of the soil for observable free petroleum hydrocarbons or immiscible phases and gross staining. The immiscible phase may range from a free hydrocarbon to a sheen on any associated aqueous phase. A soil exhibiting any of these characteristics is considered highly contaminated or saturated.

B. UNSATURATED CONTAMINATED SOILS

The following methods may be used for determining the magnitude of contamination in unsaturated soils:

1. Soil Sampling Procedures for Headspace Analysis

A headspace analysis may be used to determine the total volatile organic vapor concentrations in soils (ie. in lieu of a laboratory analysis for benzene and BTEX but not in lieu of a TPH analysis). Headspace analysis procedures should be conducted according to OCD approved industry standards or other OCD-approved procedures. Accepted OCD procedures are as follows:

- a) Fill a 0.5 liter or larger jar half full of sample and seal the top tightly with aluminum foil or fill a one quart zip-lock bag one-half full of sample and seal the top of the bag leaving the remainder of the bag filled with air.
- b) Ensure that the sample temperature is between 15 to 25 degrees Celsius (59-77 degrees Fahrenheit).
- Allow aromatic hydrocarbon vapors to develop within the headspace of the sample jar or bag for 5 to 10 minutes. During this period, the sample jar should be shaken vigorously for 1 minute or the contents of the bag should be gently massaged to break up soil clods.
- d) If using a jar, pierce the aluminum foil seal with the probe of either a PID or FID organic vapor meter (OVM), and then record the highest (peak) measurement. If using a bag, carefully open one end of the bag and insert the probe of the OVM into

the bag and re-seal the bag around the probe as much as possible to prevent vapors from escaping. Record the peak measurement. The OVM must be calibrated to assume a benzene response factor.

2. Soil Sampling Procedures For Laboratory Analysis

a. Sampling Procedures

Soil sampling for laboratory analysis should be conducted according to OCD approved industry standards or other OCD-approved procedures. Information on specific industry standards may be obtained from the OCD. Accepted OCD soil sampling procedures and laboratory analytical methods are as follows:

- i) Collect samples in clean, air-tight glass jars supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier.
- ii) Label the samples with a unique code for each sample.
- iii) Cool and store samples with cold packs or on ice.
- iv) Promptly ship sample to the lab for analysis following chain of custody procedures.
- v) All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

b. Analytical Methods

All soil samples must be analyzed using EPA methods, or by other OCD approved methods and must be analyzed within the holding time specified by the method. Below are laboratory analytical methods commonly accepted by OCD for analysis of soil samples analyzed for petroleum related constituents. Additional analyses may be required if the impoundment has been used for anything other than petroleum based fluids or produced water.

- i) Benzene, toluene, ethylbenzene and xylene
 - EPA Method 602/8020
- ii) Total Petroleum Hydrocarbons
 - EPA Method 418.1, or;
 - EPA Method Modified 8015

C. GROUND WATER SAMPLING

If an investigation of ground water quality is deemed necessary, it should be conducted according to OCD approved industry standards or other OCD-approved procedures. Information concerning specific industry standards may be obtained from the OCD. The following methods are standard accepted OCD methods which can be used to sample and analyze ground water at RCRA exempt sites (Note: The installation of monitor wells is not required if the OCD approves of an alternate ground water investigation or sampling technique):

1. Monitor Well Installation/Location

One monitor well should be installed adjacent to and hydrologically down-gradient from the unlined surface impoundment to determine if protectable fresh water has been impacted by the disposal activities. Additional monitor wells, located up-gradient and down-gradient of the impoundment, may be required to delineate the full extent of ground water contamination if ground water near the pit has been found to be contaminated.

2. Monitor Well Construction

- a) Monitor well construction materials should be:
 - i) selected according to industry standards;
 - ii) chemically resistant to the contaminants to be monitored; and
 - iii) able to be installed without the use of glues or adhesives.
- b) Monitor wells should be constructed according to OCD approved industry standards to prevent migration of contaminants along the well casing, and with a minimum of five feet of well screen above the water table to accommodate seasonal fluctuations in the static water table.

3. Monitor Well Development

When ground water is collected for analysis from monitoring wells, the wells should be developed prior to sampling. The objective of monitor well development is to repair damage done to the formation by the drilling operation so that the natural hydraulic properties of the formation are restored and to remove any fluids introduced into the formation that could compromise the integrity of the sample. Monitoring well development is accomplished by purging fluid from the well until the pH and specific conductivity have stabilized and turbidity has been reduced to the greatest extent possible.

4. Sampling Procedures

Ground water should be sampled according to OCD accepted standards or other OCD approved methods. Samples should be collected in clean containers supplied by the laboratory which will conduct the analysis or from a reliable laboratory equipment supplier. Samples for different analyses require specific types of containers. The OCD or the laboratory can provide information on the types of containers required for sample collection. The following procedures are accepted by OCD as standard sampling procedures:

- a) Monitor wells should be purged of a minimum of three well volumes of ground water using a clean bailer prior to sampling to ensure that the sample represents the quality of the ground water in the formation and not stagnant water in the well bore.
- b) Collect samples in appropriate sample containers containing the appropriate preservative for the analysis required. No bubbles or headspace should remain in the sample container.
- c) Label the sample containers with a unique code for each sample.
- d) Cool and store samples with cold packs or on ice.
- e) Promptly ship sample to the lab for analysis following chain of custody procedures.
- f) All samples must be analyzed within the holding times for the laboratory analytical method specified by EPA.

5. Ground Water Laboratory Analysis

Samples should be analyzed for potential ground water contaminants contained in the waste stream, as defined by the New Mexico Water Quality Control Commission (WQCC). All ground water samples must be analyzed using EPA methods, or by other OCD approved methods and must be analyzed within the holding time specified by the method. Below are OCD accepted laboratory analytical methods for analysis of ground water samples analyzed for petroleum related constituents. Additional analyses may be required if the impoundment has been used for anything other than petroleum based fluids or produced water.

a. Analytical Methods

- i.) Benzene, Toluene, Ethylbenzene and Xylene
 - EPA Method 602/8020

- ii.) Major Cations and Anions
 - Various EPA or standard methods
- iii.) Heavy Metals
 - EPA Method 6010, or;
 - Various EPA 7000 series methods
- iv.) Polynuclear Aromatic Hydrocarbons
 - EPA Method 8100

IV. REMEDIATION

The following discussion summarizes alternatives for remediation of contaminated soil and ground water as defined in Section II.A. and II.B. All procedures used are to be approved by OCD prior to commencement of remediation activities. Separate OCD-approval for remediation is not required if OCD has approved a closure plan which includes the site remediation technique for a particular site. All procedures which deviate from the closure plan, however, must be approved by OCD prior to commencement of remediation activities.

In lieu of remediation, OCD may accept an evaluation of risk which demonstrates that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh waters, public health and the environment.

A. SOIL REMEDIATION

When RCRA exempt or RCRA nonhazardous petroleum contaminated soil requires remediation, it should be remediated and managed according to the criteria described below or by other OCD approved procedures which will remove, treat, or isolate contaminants in order to protect fresh waters, public health and the environment.

1. Contaminated Soils

Highly contaminated/saturated soils and unsaturated contaminated soils exceeding the standards described in Section II.A.2.b. should be either:

- a) Excavated from the ground until a representative sample from the walls and bottom of the excavation is below the contaminant specific remediation level listed in Section II.A.2.b or an alternate OCD approved remediation level, or;
- b) Excavated to the maximum depth and horizontal extent practicable. Upon reaching this limit a sample should be taken from the walls and bottom of

the excavation to determine the remaining levels of soil contaminants, or;

- Treated in place, as described in Section IV.A.2.b.ii. Treatment of Soil in Place, until a representative sample is below the contaminant specific remediation level listed in Section II.A.2.b, or an alternate OCD approved remediation level, or;
- d) Managed according to an OCD-approved alternate method.

2. Soil Management Options

All soil management options must be submitted to and approved by OCD prior to commencement of remediation activities. The following is a list of options for either on-site treatment and off-site treatment and/or disposal of contaminated soils:

a. Disposal

Excavated soils may be disposed of at an off-site OCD-approved facility.

b. Soil Treatment and Remediation Techniques

i. Landfarming

Onetime applications of contaminated soils may be landfarmed on location by spreading the soil in an approximately six inch lift within a bermed area. Only soils which do not contain free liquids can be landfarmed. The soils should be disced regularly to enhance biodegradation of the contaminants. If necessary, upon approval by OCD, moisture and nutrients may be added to the soil to enhance aerobic biodegradation.

In some high risk areas an impermeable liner may be required to prevent leaching of contaminants into the underlying soil.

Landfarming sites that will receive soils from more than one location are considered centralized sites and must be approved separately by OCD prior to operation.

ii. Insitu Soil Treatment

Insitu treatment may be accomplished using vapor venting, bioremediation or other OCD approved treatment systems.

iii. Alternate Methods

The OCD encourages alternate methods of soil remediation including, but not limited to, active soil aeration, composting, bioremediation, solidification, and thermal treatment. Use of alternate methods must be approved by OCD prior to implementation.

B. GROUND WATER REMEDIATION

1. Remediation Requirements

Ground water remediation activities will be reviewed and approved by OCD on a case by case basis prior to commencement of remedial activities. When contaminated ground water exceeds WQCC ground water standards, it should be remediated according to the criteria described below.

a. Free Phase Contamination

Free phase floating product should be removed from ground water through the use of skimming devices, total-fluid type pumps, or other OCD-approved methods.

b. Dissolved Phase Contamination

Ground water contaminated with dissolved phase constituents in excess of WQCC ground water standards can be remediated by either removing and treating the ground water, or treating the ground water in place. If treated waters are to be disposed of onto or below the ground surface, a discharge plan must be submitted and approved by OCD.

c. Alternate Methods

The OCD encourages other methods of ground water remediation including, but not limited to, air sparging and bioremediation. Use of alternate methods must be approved OCD prior to implementation.

V. TERMINATION OF REMEDIAL ACTION

Remedial action may be terminated when the criteria described below have been met:

A. SOIL

Contaminated soils requiring remediation should be remediated so that residual contaminant concentrations meet the recommended soil remediation level for a particular site as specified in Section II.A.2.b. Termination of remedial action will be approved by OCD upon a demonstration of completion of remediation as described above.

If soil action levels cannot practicably be attained, an evaluation of risk may be performed and provided to OCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh water, public health and the environment.

B. GROUND WATER

A ground water remedial action may be terminated if all recoverable free phase product has been removed, and the concentration of the remaining dissolved phase contaminants in the ground water does not exceed New Mexico WQCC water quality standards or background levels. Termination of remedial action will be approved by OCD upon a demonstration of completion of remediation as described in above.

If the water quality standards cannot practicably be attained, an evaluation of risk may be performed and provided to OCD for approval showing that the remaining contaminants will not pose a threat to present or foreseeable beneficial use of fresh waters, human health and the environment.

VI. FINAL CLOSURE

Upon termination of any required soil remedial actions (Section V.) an unlined surface impoundment may be closed by backfilling, contouring to provide drainage away from the site and revegetating the site.

VII. CLOSURE REPORTS

Closure plans should provide a schedule for reporting the results of all closure activities.

O. Box 1980, Hobbs, NM
District II
Drawer DD, Arlesia, NM 88211
Ltrict III
DOO Rio Brazos Rd, Aziec, NM 87410

State of New Mexico Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION P.O. Box 2088

Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

perator:		Telephone:
idress:		
Mell Name		SecTRCounty
		Other, Other
ttach diagram)	Reference: wellhead	ch, width, depth, other e: nce: Degrees East North of
		West South
Depth To Ground Wertical distance Intaminants to so Intigh water elevation ground water)	e from easonal	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 Points)
		Yes (20 points) No (0 points)
(Horizontal distantal kes, ponds, riverigation canals	nce to perennial ers, streams, creeks,	Less than 200 feet (20 points) 200 feet to 1000 feet (10 points) Greater than 1000 feet (0 points)
		RANKING SCORE (TOTAL POINTS):

Date Remediation St	arted:	Date Completed:
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attach sample results and diagram of sample	Sample depth	
cations and depths)	Sample date	Sample time
	Sample Results	
_	Benzene(ppm)	
	Total BTEX(pp	m)
	Field headspa	ce(ppm)
	трн	_
Cround Water Sample	: Yes No	_ (If yes, attach sample results)
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TE		
SIGNATURE	PRINTED ND TITL	

APPENDIX D

ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

February 8, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana St., Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ - Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

See Below

SAMPLE DATE:

February 02, 1996

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED:

9:10AM

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

See Below

RESULTS:

	Sample Number	Sample I.D.	TPH- Gas (mg/kg)	TPH- Diesel (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylene (mg/kg)	Total BTEX
	56836	TWDS-TKFT	<5.0	6.3	<0.010	<0.010	<0.010	<0.030	*ND
	56837	TWDS-DRLN	<5.0	6.2	< 0.010	< 0.010	< 0.010	< 0.030	*ND
	56838	TWDS-LCHLN	14	45	< 0.010	<0.010	< 0.010	0.069	0.069
_	Detection	n Limits.	5.0	5.0	0.010	0.010	0.010	0.030	

Quality Control Information

ample reservation	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery %</u>	Date of Analyses	Analyst
Cool to 4°C	8015				02/06/96	J. Karikari
		22.4	± 0.807	72		
6836						
		N/A	N/A	99		
6837						
		NI/A	NI/A	115		
6838		N/A	IV/A	113		
		N/A	N/A	102		
) (reservation ool to 4°C 6836 6837	reservation Method ool to 4°C 8015 6836 6837	Method C.V.% ool to 4°C 8015 22.4 6836 N/A 6837 N/A	Method C.V.% Deviation	Method C.V.% Deviation Recovery %	Method C.V.% Deviation Recovery % Analyses

Local: (214) 727-1123 Long Dist

Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Tim Jenkins Page 2 February 8, 1996

SAMPLE NUMBERS:

56836-56838

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>		Standard Deviation	Spike <u>Recovery %</u>	Date of Analyses	<u>Analyst</u>
Benzene Toluene Ethyl Benzene Xylene Sample Number:	Cool to 4°C Cool to 4°C Cool to 4°C Cool to 4°C 56836	8020 8020 8020 8020	1.2 2.0 1.4 3.0	± ± ± ±	0.0004 0.0006 0.0004 0.0010	102 108 99 109	02/06/96 02/06/96 02/06/96 02/06/96	J. Karikari J. Karikari J. Karikari J. Karikari
Surrogate: Bromofluorobenze Sample Number:	ene 56837		N/A		N/A	101		
Surrogate: Bromofluorobenze Sample Number:	ene 5 6838		N/A		N/A	97		
Surrogate: Bromofluorobenze	ene		N/A		N/A	99		

*ND = None Detected.

Respectfully submitted,

Cell Le brown

Kendall K. Brown President

Prepared By Shelly Weems Reviewed By L'Cena Glover

Chain-of-Custody

002603

Page ____ of ____

ERMJ

Bethany Tech Center 400 W. Bethany, Suite 190 Allen, Texas 75002 214-727-1123 (Local) *800-228-ERMI (Long Distance) 214-727-1175 (Fax)

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Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

February 9, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins
Brown and Caldwell

1415 Louisiana Street, Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ-Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS-TKFT

SAMPLE DATE:

February 02, 1996

SAMPLE TIME:

12:00PM

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED:

9:10AM

SAMPLE METHOD:

Grab

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

56836

RESULTS:

<u>Parameter</u>	Detection <u>Limits (mg/kg)</u>	Observed Concentration (mg/kg)
Arsenic, Total	1.0	<1.0 (1)
Barium, Total	0.25	13
Cadmium, Total	0.20	0.54
Chromium, Total	0.25	6.7
Lead, Total	0.50	2.8
Mercury, Total	0.02	<0.02
Selenium, Total	0.75	<0.75
Silver, Total	0.35	<0.35

Quality Control Information

_	Sample	EPA		Standard	Spike	Date of	Time of	
<u>Parameter</u>	Preservation	Method	<u>C.V.%</u>	<u>Deviation</u>	Recovery%	<u>Analyses</u>	<u>Analyses</u>	<u>Analyst</u>
Metals Diges	stion - ICP	3050				02/07/96	11:00AM	J. Marconi
Metals Diges	stion - Mercury	7471				02/08/96	11:30AM	J. Marconi
Arsenic	Cool to 4°C	6010	1.3	± 0.01	96	02/07/96	3:01PM	D. Bernhard
Barium	Cool to 4°C	6010	1.4	± 0.01	94	02/07/96	3:01PM	D. Bernhard
Cadmium	Cool to 4°C	6010	0.8	± 0.008	98	02/07/96	3:01PM	D. Bernhard
Chromium	Cool to 4°C	6010	- 1.0	± 0.01	101	02/07/96	3:01PM	D. Bernhard
Lead	Cool to 4°C	6010	8.0	± 0.008	97	02/ 0 7/96	3:01PM	D. Bernhard

Local: (214) 727-1123 Long Distance: (800) 228-ERMI FAX: (214) 727-1175

Mr. Tim Jenkins Page 2 February 9, 1996

SAMPLE NUMBERS:

56836

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
_ Mercury	Cool to 4°C	7471	1.4	± 0.008	104	02/08/96	4:20PM	D. Bernhard
Selenium	Cool to 4°C	6010	4.1	± 0.04	94	02/07/96	3:01PM	D. Bernhard
Silver	Cool to 4°C	6010	1.6	± 0.006	95	02/07/96	3:01PM	D. Bernhard

(1) < = Less than Detection Limit.

Respectfully submitted,

Call K. Broun

Kendall K. Brown

President

Prepared By Shelly Poper Reviewed By Shelly Weems



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. . Allen, Texas 75013

February 9, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana Street, Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ-Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS-DRLN

SAMPLE DATE:

February 02, 1996

SAMPLE TIME:

1:30PM

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED:

9:10AM

SAMPLE METHOD:

Grab

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

56837

RESULTS:

<u>Parameter</u>	<u>Limits (mg/kg)</u>	Concentration (mg/kg)		
Arsenic, Total	1.0	2.0		
Barium, Total	0.25	130		
Cadmium, Total	0.20	0.55		
Chromium, Total	0.25	5.6		
Lead, Total	0.50	3.6		
Mercury, Total	0.02	<0.02 (1)		
Selenium, Total	0.75	<0.75		
Silver, Total	0.35	<0.35		

Detection

Observed

Quality Control Information

	Sample	EPA		Standard	Spike	Date of	Time of	
<u>Parameter</u>	<u>Preservation</u>	<u>Method</u>	<u>C.V.%</u>	<u>Deviation</u>	Recovery%	<u>Analyses</u>	<u>Analyses</u>	<u>Analyst</u>
Metals Diges	stion - ICP	3050				02/07/96	11:00AM	J. Marconi
Metals Diges	stion - Mercury	7471				02/08/96	11:30AM	J. Marconi
Arsenic	Cool to 4°C	6010	1.3	± 0.01	96	02/07/96	3:08PM	D. Bernhard
Barium	Cool to 4°C	6010	1.4	± 0.01	94	02/07/96	3:08PM	D. Bernhard
Cadmium	Cool to 4°C	6010	8.0	± 0.008	98	02/07/96	3:08PM	D. Bernhard
Chromium	Cool to 4°C	6010 -	1.0	± 0.01	101	02/07/96	3:08PM	D. Bernhard
Lead	Cool to 4°C	6010	8.0	± 0.008	97	02/07/96	3:08PM	D. Bernhard

Long Distance: (800) 228-ERMI Local: (214) 727-1123 FAX: (214) 727-1175 Mr. Tim Jenkins Page 2 February 9, 1996

SAMPLE NUMBERS:

56837

Quality Control Information (Continued)

Parameter	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
Mercury	Cool to 4°C	7471	1.4	± 0.008	104	02/08/96	4:21PM	D. Bernhard
Selenium	Cool to 4°C	6010	4.1	± 0.04	94	02/07/96	3:08PM	D. Bernhard
Silver	Cool to 4°C	6010	1.6	± 0.006	95	02/07/96	3:08PM	D. Bernhard

(1) < = Less than Detection Limit.

Respectfully submitted,

Dall K. Birun

Kendall K. Brown

President

Prepared By Shelly Pope Reviewed By Shelly Weems



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

February 9, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana Street, Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ-Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS-LCHLN

SAMPLE DATE:

February 02, 1996

SAMPLE TIME:

2:00PM

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED:

9:10AM

SAMPLE METHOD:

Grab

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

56838

RESULTS:

<u>Parameter</u>	Detection <u>Limits (mg/kg)</u>	Observed Concentration (mg/kg)
Arsenic, Total	1.0	<1.0 (1)
Barium, Total	0.25	138
Cadmium, Total	0.20	0.91
Chromium, Total	0.25	6.7
Lead, Total	0.50	2.6
Mercury, Total	0.02	<0.02
Selenium, Total	0.75	<0.75
Silver, Total	0.35	<0.35

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	<u>Analyst</u>
Metals Diges	tion - ICP	3050				02/07/96	11:00AM	J. Marconi
Metals Diges	tion - Mercury	7471				02/08/96	11:30AM	J. Marconi
Arsenic	Cool to 4°C	6010	1.3	± 0.01	96	02/07/96	3:15PM	D. Bernhard
Barium	Cool to 4°C	6010	1.4	± 0.01	94	02/07/96	3:15PM	D. Bernhard
Cadmium	Cool to 4°C	6010	8.0	± 0.008	98	02/07/96	3:15PM	D. Bernhard
Chromium	Cool to 4°C	6010 ·	1.0	± 0.01	101	02/07/96	3:15PM	D. Bernhard
Lead	Cool to 4°C	6010	0.8	± 0.008	97	02/07/96	3:15PM	D. Bernhard

FAX: (214) 727-1175

Long Distance: (800) 228-ERMI Local: (214) 727-1123

Mr. Tim Jenkins Page 2 February 9, 1996

SAMPLE NUMBERS:

56838

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of Analyses	<u>Analyst</u>
Mercury	Cool to 4°C	7471	1.4	± 0.008	104	02/08/96	4:23PM	D. Bernhard
Selenium	Cool to 4°C	6010	4.1	± 0.04	94	02/07/96	3:15PM	D. Bernhard
Silver	Cool to 4°C	6010	1.6	± 0.006	95	02/07/96	3:15PM	D. Bernhard

(1) < = Less than Detection Limit.

Respectfully submitted,

Cell K. Brenn

Kendall K. Brown

President

Prepared By Shelly Pope Reviewed By Shelly Weems



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

February 12, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana Street, Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ-Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS-Piles*

SAMPLE DATE:

February 05, 1996

SAMPLE TIME:

4:00PM

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED: SAMPLE METHOD:

9:10AM Composite

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

56839

RESULTS:

RESULTS:	· <u> </u>								
1	Regulatory	Detection	Observed						
<u>Parameter</u>	<u>Limits</u>	<u>Limits</u>	Concentration						
IGNITABILITY									
Flashpoint	>60°C (140°F)	0.5°C	**						
CORROSIVITY									
рH	pH ≥ 2.0 pH units	0.1 units	7.9 units						
	pH ≤12.5 pH units		7.00 01.1110						
REACTIVITY									
Cyanides, mg/kg	≤250	1.0	<1.0 (1)						
Sulfides, mg/kg	≤500	4.0	<4.0						
	TCLP MET	ALS							
_ Arsenic, mg/l	<5.0	0.20	<0.20						
Barium, mg/l	<100.0	0.05	0.43						
Cadmium, mg/l	<1.0	0.04	< 0.04						
Chromium, mg/l	<5.0	0.05	< 0.05						
Lead, mg/l	<5.0	0.10	<0.10						
Mercury, mg/l	<0.2	0.004	< 0.004						
Selenium, mg/l	<1.0	0.15	<0.15						
Silver, mg/l	· <5.0	0.07	< 0.07						

FAX: (214) 727-1175

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

Mr. Tim Jenkins Page 2 February 12, 1996

SAMPLE NUMBER:

56839

	Regulatory	Detection	Observed
<u>Parameter</u>	<u>Limits</u>	_ <u>Limits</u> _	Concentration
	TCLP VOLATIL	LE ORGANICS	
Benzene, mg/l	<0.5	0.003	< 0.003
Carbon tetrachloride, mg/l	<0.5	0.003	<0.003
Chlorobenzene, mg/l	<100.0	0.003	< 0.003
Chloroform, mg/l	<6.0	0.003	< 0.003
1,4-Dichlorobenzene, mg/l	<7.5	0.003	< 0.003
1,2-Dichloroethane, mg/l	<0.5	0.003	< 0.003
1,1-Dichloroethylene, mg/l	<0.7	0.003	<0.003
Methyl ethyl ketone, mg/l	<200.0	0.010	<0.010
Tetrachloroethylene, mg/l	<0.7	0.003	< 0.003
Trichloroethylene, mg/l	<0.5	0.003	<0.003
Vinyl chloride, mg/l	<0.2	0.005	<0.005
	TCLP SEMIN	VOLATILES	
2,4-Dinitrotoluene, mg/l	<0.13	0.003	<0.003
o-Cresol, mg/l	<200.0	0.003	<0.003
m-Cresol, mg/l	<200.0	0.003	<0.003
p-Cresol, mg/l	<200.0	0.003	<0.003
Cresol, mg/l	<200.0	0.003	< 0.003
Hexachlorobenzene, mg/l	<0.13	0.003	< 0.003
Hexachlorobutadiene, mg/l	<0.5	0.003	< 0.003
Hexachloroethane, mg/l	<3.0	0.003	< 0.003
Nitrobenzene, mg/l	<2.0	0.003	< 0.003
Pentachiorophenol, mg/l	<100.0	0.003	< 0.003
Pyridine, mg/l	<5.0	0.003	<0.003
2,4,5-Trichlorophenol, mg/l	<400.0	0.003	< 0.003
2,4,6-Trichlorophenol, mg/l	<2.0	0.003	<0.003
	TCLP HEF	RBICIDES	
2,4-D, mg/l	<10.0	0.003	< 0.003
2,4,5-TP (Silvex), mg/l	<1.0	0.003	<0.003
	TCLP PES	STICIDES	
Chlordane, mg/l	< 0.03	0.030	<0.030
Endrin, mg/l	<0.02	0.003	<0.003
Heptachlor, mg/l	· <0.008	0.003	< 0.003
Heptachlor epoxide, mg/l	<0.008	0.003	<0.003
		·	

Mr. Tim Jenkins Page 3 February 12, 1996

SAMPLE NUMBER:

56839

<u>Parameter</u>	Limits	Detection <u>Limits</u>	Observed <u>Concentration</u>
	TCLP PESTICIO	DES (Continued)	
Lindane, mg/l	<0.4	0.003	< 0.003
Methoxychlor, mg/l	<10.0	0.003	< 0.003
Toxaphene, mg/l	<0.5	0.030	< 0.030

Quality Control Information

	Sample	EPA ⁽²⁾		S	tandard	Spike	Date of	Time of	
<u>Parameter</u>	Preservation	<u>Method</u>	<u>C.V.%</u>	D	eviation	Recovery%	<u>Analyses</u>	<u>Analyses</u>	<u>Analyst</u>
Ignitability	None Required	7.1.2.2	0.0		0.00	NA	02/09/96	12:00PM	S. Isaac
Corrosivity	None Required	9045	0.0	±	0.00	100	02/09/96	3:30PM	S. Isaac
Reactivity							0200,00	0.001 101	O. ISBAC
Cyanides	None Required	7.3.3.2	0.0	±	0.00	22	02/09/96	1:30PM	S. Freeman
Sulfides	None Required	7.3.4.2	0.0	±	0.00	103	02/09/96	1:30PM	S. Freeman
TCLP Metals									o. i rooman
Extraction		1311					02/07/96	2:15PM	D. Bernhard
Metals Digestion	n - ICP	3010					02/09/96	10:00AM	D. Bernhard
Metals Digestion	n - Mercury	7470					02/08/96	11:30AM	J. Marconi
Arsenic	Cool to 4°C	6010	2.1	±	0.02	98	02/09/96	1:04PM	D. Bernhard
Barium	Cool to 4°C	6010	1.5	±	0.01	94	02/09/96	1:04PM	D. Bernhard
Cadmium	Cool to 4°C	6010	1.7	±	0.02	95	02/09/96	1:04PM	D. Bernhard
Chromium	Cool to 4°C	6010	1.2	±	0.01	99	02/09/96	1:04PM	D. Bernhard
Lead	Cool to 4°C	6010	0.7	±	0.007	98	02/09/96	1:04PM	D. Bernhard
Mercury	Cool to 4°C	7470	3.4	±	0.004	99	02/08/96	3:21PM	
Selenium	Cool to 4°C	6010	3.5	±	0.03	94	02/09/96	1:04PM	D. Bernhard
Silver	Cool to 4°C	6010	1.3	±	0.005	97	02/09/96	1:04PM	D. Bernhard D. Bernhard

Mr. Tim Jenkins Page 4 February 12, 1996

SAMPLE NUMBER:

56839

Quality Control Information (Continued)

	Sample	EPA (2)		St	andard	Spike	Date of	Time of	
<u>Parameter</u>	Preservation	<u>Method</u>	C.V.%	<u>D</u> (eviation	Recovery%	<u>Analyses</u>	<u>Analyses</u>	<u>Analyst</u>
				_					
TCLP Volatiles	Cool to 4°C	8260					02/09/96	12:33PM	K. Richmond
ZHE Extraction		1311					02/08/96	1:25PM	K. Richmond
Matrix Spikes:	·								
Benzene			3.18	±	0.679	107			
Carbon Tetrae	chloride		4.06	±	0.841	104			
Chlorobenzer	ne		3.72	±	0.792	107			
Chloroform			2.58	±	0.559	108			
1,4-Dichlorob	enzene		0.71	± .		105			
1,2-Dichloroe	thane		4.07	±	0.877	108.			
1,1-Dichloroe	thylene		2.17	±	0.467	108			
Methyl ethyl k	etone		2.47	±	0.502	102			
Tetrachloroet	hylene		0.03	±	0.007	102			
Trichloroethyl	ene		4.86	±	1.011	104			
Vinyl chloride			5.18	±	0.933	90			
Surrogates:									
Fluorobenzen	ne		N/A		N/A	105			
Toluene-d ₈			N/A		N/A	98			
Bromofluorob	enzene		N/A		N/A	109			
TCLP									
SemiVolatiles	Cool to 4°C	8270					02/08/96	4:40PM	F. Coskey
Extraction		1311					02/07/96	2: 15PM	D. Bernhard
Liquid-Liquid Ex	draction	3510					02/08/96	10:00AM	E. Boateng
_ Matrix Spikes:									
o-Cresol			4.0	±	6.28	71			
m-Cresol & p			6.0		11.44	98			
2,4,5-Trichlor	-		5.0	±	4.07	45			
2,4,6-Trichlor	•		0.0	±	0.12	41			
Pentachlorop			4.0	±	4.02	46			
1,4-Dichlorob	enzene		4.0	±	5.62	63			
2,4,-Dinitrotol			6.0		11.63	91			
Hexachlorobe			7.0		13.33	97			
Hexachlorobu			5.0	±	6.42	62			
Hexachloroet	thane		4.0	±	4.08	58			
Nitrobenzene	•		4.0	±	6.44	78			
Pyridine			5.0	±	7.79	86			

Mr. Tim Jenkins Page 5 February 12, 1996

SAMPLE NUMBER:

56839

Quality Control Information (Continued)

Parameter	Sample Preservation	EPA (2) Method	<u>C.V.%</u>	Standa <u>Deviat</u>		Date of Analyses	Time of <u>Analyses</u>	Analyst
TCLP								
SemiVolatiles	Cool to 4°C	8270				02/08/96	4:40PM	F. Coskey
Surrogates:								
2-Fluoropheno	l		N/A	N/A				
Phenoi-d ₆			N/A	N/A	A 39			
Nitrobenzene-	d ₅		N/A	N/A	A 64			
2-Fluorobiphe	nyl		N/A	N/A	A 67			
2,4,6-Tribromo	phenol		N/A	· N/A	\ 96			
Terphenyl-d ₁₄	L		N/A	N/A	N 99			
TCLP								
Herbicides	Cool to 4°C	8270				02/09/96	11:42AM	F. Coskey
Matrix Spikes:								
2,4-D			8.0	± 5.	35 32			
2,4,5-TP (Silve	ex)		8.0	± 3.	65 23			
Surrogate:								
Methyl 2,4-dic	hiorophenylacetate		N/A	N/A	\ 68			
TCLP								
Pesticides	Cool to 4°C	8270				02/08/96	4:40PM	F. Coskey
Matrix Spikes:								
Endrin			7.0	± 16.	42 110			
Heptachlor			5.0	± 11.	17 104			
Heptachlor ep	oxide		5.0	± 10.	97 107			
Lindane			6.0	± 12.				
Methoxychlor			4.0		73 109			
Chlordane			3.0		54 101			
Toxaphene			2.0	± 3.	19 103			

- Using the criteria of Ignitability, Reactivity, Corrosivity and Toxicity characteristics, this sample of waste is not hazardous.
- Not ignitable using the criteria applied for not a liquid sample. (Section 7.1.2.2)

Mr. Tim Jenkins Page 6 February 12, 1996

SAMPLE NUMBER:

56839

- (1) < = Less than Detection Limit.
- (2) EPA. 1986. Test Methods for Evaluating Solid Waste. SW-846, 3rd Edition.

Respectfully submitted,

_ call Li Beirer

Kendall K. Brown

President

Prepared By Shelly Pope Reviewed By Shelly Weems



Bethany Tech Center 400 W. Bethany, Suite 190 Allen, Texas 75002 214-727-1123 (Local) * 800-228-ERMI (Long Distance) 214-727-1175 (Fax)

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3v:	A Single					118-41163		TMD5-12HIM		TWOSIDELN		ナMバス-ナスドト		I.D.	Field Sample	7	IA	0) STULEY	Project Name: BJ-ARTESTA: TIMDS	er Number: 2995			(if different):	SAME AS ABOVE	13) 759-0999	NOISI	- 7	_	ne: DRIMME CALDINE
Date:	Date:	• Date:				7574 16.00		17/ax 14:00	_	7/2/1/2 13:30		2/2/1/2 12:00		Date Time O O	Sample	Signature:	State:		ÞŚ	5-27		State:		VE		State:	STE		DWELL
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Method of Shipment:

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Сору

Date:

Received for ERMI By:
See Reverse for Terms and Conditions

Date:



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

February 16, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins

Brown and Caldwell

1415 Louisiana St., Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ - Artesia: TWDS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS-PILES

SAMPLE DATE:

February 05, 1996

SAMPLE TIME:

4:00PM

SAMPLE RECEIVED:

February 06, 1996

TIME RECEIVED:

9:10AM

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

56839

RESULTS:

Sample	Sample	TPH-Diesel	Benzene	Toluene	Ethyl Benzene	Xylene	Total
Number	I.D.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX
56839 Detectio	TWDS-PILES on Limits	<5.0 5.0	<0.010 0.010	0.016 0.010	<0.010 0.010	<0.030 0.030	

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>		Standard Deviation	Spike <u>Recovery %</u>	Date of <u>Analyses</u>	Analyst
TPH - Gasoline Surrogate:	Cool to 4°C	8015	2.0	±	0.101	102	02/15/96	K. Richmond
Trifluorotoluene			N/A		N/A	76		
Benzene	Cool to 4°C	8020	13.7	±	0.0045	109	02/15/96	K. Richmond
Toluene	Cool to 4°C	8020	13.8	±	0.0045	108	02/15/96	K. Richmond
Ethyl Benzene	Cool to 4°C	8020	15.1	±	0.0048	106	02/15/96	K. Richmond
Xylene	Cool to 4°C	8020	13.0	±	0.0042	107	02/15/96	K. Richmond

Local: (214) 727-1123

Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Tim Jenkins Page 2 February 16, 1996

SAMPLE NUMBER:

56839

Quality Control Information (Continued)

	Sample	EPA	Standard	Spike	Date of	
<u>Parameter</u>	<u>Preservation</u>	Method C.V	<u>%</u> <u>Deviation</u>	Recovery %	<u>Analyses</u>	<u>Analyst</u>

Surrogate:

Bromofluorobenzene

N/A

N/A

74

Le Poll L. Geren

Respectfully submitted,

Kendall K. Brown

President

Prepared By S. Doster > Reviewed By L'Cena Glover



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

March 19, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana St., Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ - Artesia, TWDS-LS

2401 Sivley

Artesia, NM 88210

PROJECT NUMBER:

2988-27

SAMPLE I.D.:

TWDS, LS-1

SAMPLE DATE:

44 4 4000

SAMPLE RECEIVED:

March 14, 1996 March 15, 1996

TIME RECEIVED:

9:00AM

SAMPLE COLLECTED BY:

Tim Jenkins - Customer

SAMPLE NUMBER:

58266

RESULTS:

Sample	Sample	TPH-Diesel	Benzene	Toluene	Ethyl Benzene	Xylene	Total
Number	I.D.	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	BTEX
58266 Detectio	TWDS, LS-1 n Limits	<5.0 5.0	0.010 0.010	0.016 0.010	0.010 0.010	0.041 0.030	

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	_	tandard eviation	Spike Recovery %	Date of <u>Analyses</u>	Analyst
TPH - Diesel Surrogate:	Cool to 4°C	8015	4.1	±	0.1846	90	03/17/96	J. Karikari
Trifluorotoluene			N/A		N/A	85		
Benzene	Cool to 4°C	8020	11.4	\pm	0.0038	113	03/17/96	J. Karikari
Toluene	Cool to 4°C	8020	11.8	<u>+</u> ·	0.0039	110	03/17/96	J. Karikari
Ethyl Benzene	Cool to 4°C	8020	11.2	\pm	0.0034	100	03/17/96	J. Karikari
Xylene	Cool to 4°C	8020	12.0	\pm	0.0044	121	03/17/96	J. Karikari

Local: (214) 727-1123 Long Distance

Long Distance: (800) 228-ERMI FAX: (214) 727-1175

Mr. Tim Jenkins Page 2 March 19, 1996

SAMPLE NUMBER:

58266

Quality Control Information (Continued)

Sample EPA Standard Spike Date of

Parameter Preservation Method C.V.% Deviation Recovery Analyses Analyst

Surrogate:

Bromofluorobenzene

N/A

N/A

85

Dall K. Buren

Respectfully submitted,

Kendall K. Brown

President

Prepared By S. Doster & Reviewed By Shelly Weems

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Bethany Tech Center 400 W. Bethany, Suite 190 Allen, Texas 75002 214-727-1123 (Local) * 800-228-ERMI (Long Distance) 214-727-1175 (Fax) ERW]

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FINAL SITE ASSESSMENT REPORT FIELD WASTE COLLECTION SYSTEM AND BRINE STORAGE TANKS

ARTESIA, NEW MEXICO

BJ SERVICES COMPANY, U.S.A.

APRIL 2, 1996

A Report Prepared for:

BJ Services Company, U.S.A. 8701 New Trials Drive The Woodlands, Texas 77381

FINAL SITE ASSESSMENT REPORT FIELD WASTE COLLECTION SYSTEM AND BRINE STORAGE TANKS ARTESIA, NEW MEXICO FACILITY

Project Number: 2988-26

Timothy Jenkins

Associate Engineer

Brown and Caldwell 1415 Louisiana, Suite 2500 Houston, Texas 77002

April 2, 1996

"This report was prepared in accordance with the standards of the environmental consulting industry at the time it was prepared. It should not be relied upon by parties other than those for whom it was prepared, and then only to the extent of the scope of work which was authorized. This report does not guarantee that no additional environmental contamination beyond that described in this report exists at this site."

LIST OF TABLES

Table 1	Analytical Results and OCD Action Levels
Table 2	FWT Area - Metals Results
Table 3	FWT Area - Field Analytical Results

LIST OF FIGURES

Figure 1	Site location Map
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Figure 2 Site Plan

Figure 3 Site Plan with Excavation Location

Figure 4 FWT Excavation

1.0 INTRODUCTION

Brown and Caldwell, under the authority of BJ Services Company, U.S.A., conducted a site assessment for the closure of the existing field waste collection system (field waste tank [FWT] area), the associated spinout bay, and the adjacent brine storage tanks from November 14 to November 16, 1995. A second investigation to delineate the extent of total petroleum hydrocarbons (TPH) impacted soils was performed on December 27, 1995, with final overexcavation and confirmation sampling occurring from January 31 through February 2, 1996.

Site assessment activities were conducted in accordance with the site-specific "Closure Plan: Field Waste Tanks and Old Steel Brine Tanks" (Closure Plan), and the conditions for approval of same set forth by the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division (OCD) on November 2, 1995. The Closure Plan and OCD approval notice are found as Appendices A and B, respectively. BJ Services Artesia District facility is located in Eddy County, in the SE/4, Section 32, Township 16 South, Range 26 East. The facility address is 2401 Sivley, Artesia, New Mexico, 88210. A site location map and site plan are included as Figures 1 and 2, respectively.

Between November 14 and November 16, 1995, Brown and Caldwell observed the removal of three underground storage tanks, a concrete spinout bay, and two brine storage tanks located at the Artesia District facility's FWT area. These activities were conducted in accordance with Brown and Caldwell's Closure Plan.

The following sections summarize the site activities, site assessment and scoring, closure verification methods utilized, and the results of both field and laboratory analyses. Section 3 will request approval for final closure based on the results of the Site Assessment Report.

2.0 SITE ASSESSMENT

BJ Services performed the site assessment to determine the potential that site soils/groundwater may have been impacted by the operation of the field waste collection system. The results of the site assessment were used for evaluating the need for remediation and the type of closure best suited for the site.

2.1 General Site Characteristics

BJ Services determined the depth to groundwater to be approximately 20 to 25 feet below the ground surface based on previous groundwater investigations conducted at the site.

Depth to Groundwater	Ranking Score
< 50 feet	Yes - 20

Brown and Caldwell personnel conducted a water well search at the State Engineer's office in Roswell, New Mexico on February 21, 1993. This search determined that no water wells were identified within a one-half mile radius of the facility.

Wellhead Protection Area	Ranking Score
< 1000 feet from a water source, or	No - 0
< 200 feet from a private domestic water source:	No - 0

The distance from the site to the Pecos River (nearest downgradient surface water body) was determined to be more than 1,000 feet by reviewing a USGS topographic map for the area. A tributary of the Pecos River (Eagle Creek) is the nearest surface water body, and is located approximately 7,000 ft. south of site.

Distance to Surface Water Body	Ranking Score
> 1,000 feet	Yes - 0

2.2 <u>Site Scoring</u>

Groundwater is present at a depth of less than 50 feet below grade. Flow direction is east-southeast, as determined from wells previously installed at the facility. Therefore, the site scoring procedure outlined above calls for a depth to groundwater Ranking Score of 20. No water wells were identified within a 2,000 ft. radius of the site. Therefore, the wellhead protection Ranking Score is 0. A review of a USGS map indicates the nearest water body (Eagle Creek) is approximately 7,000 ft. south of the site. The Pecos River is several miles from the facility. Therefore, the distance to surface water body Ranking Score is 0.

The site ranking score of 20 is greater than 19. This determination was made based on physical site characteristics as described above. According to the OCD guidance documents, a total ranking score of greater than 19 yields action levels as outlined in Table 1.

2.3 Field Investigation Activities

The Field Waste Tank (FWT) area (see Figure 3) received waste from activities associated with oil and gas well servicing. The system, closed to operation for several years, consisted of a concrete, drive-through dump station (spinout bay) with an enclosed sump (see CS-1 on Figure 4), three in-ground field waste tanks (FWT-1, FWT-2, and FWT-3), and two brine storage tanks (BST-1, and BST-2). During its operation, waste entered the spinout bay sump, and was transferred via underground PVC pipe to FWT-1, the first of three tanks connected in series. FWT-1, acting as a sand trap, was a fiberglass-lined steel tank with an estimated capacity of 1,000 gallons. Tanks FWT-2 and FWT-3 were large, vertical underground tanks piped together with HDPE piping. The estimated capacity of the second and third field waste tanks was 10,000 gallons each. The two brine tanks (BST-1 and BST-2) were aboveground steel tanks, and received brine water associated with oil and gas well servicing. The estimated volume of each brine storage tanks was 5,000 gallons each.

The removal of the FWT was accomplished in three phases. Phase 1 involved the removal of the two brine storage tanks and residual crystalline material, and the removal of the residual material from within the three field waste tanks. Phase 2 consisted of the destruction and removal of the concrete spinout bay, and the removal of the in-ground field waste tanks. Once the tanks were removed, approximately 350 cubic yards of potentially impacted soil was excavated and stockpiled for testing and eventual disposal. Phase 3 involved the delineation and overexcavation of TPH-impacted soils from the excavation sidewalls and bottom. The stockpile, totaling approximately 700 cubic yards of excavated TPH-affected soils was disposed at an OCD approved facility.

Phase 1

Closure activities at the FWT area began on November 14, 1995. Rhino Environmental Services, Inc. (Rhino) removed the brine storage tanks and their contents (BST-1 and BST-2). The sand from within the three in-ground field waste tanks (FWT-1, FWT-2, and FWT-3) was tested for TPH and benzene, toluene, ethylbenzene, and xylene (BTEX) prior to commencing excavation of the FWT system. The results are shown in Table 1. FWT-1 contents were also analyzed for metals, and appeared to have an elevated concentration for total barium. An additional analysis of FWT-1 solids showed a barium concentration in the Toxicity Characteristic Leaching Procedure (TCLP) extract to be below Resource Conservation and Recovery Act (RCRA) guidelines. Metals results are shown on Table 2. The waste sand from within all of the tanks was disposed of during Phase 3 activities as Class I non-hazardous waste.

Phase 2

The fiberglass field waste tanks FWT-1, FWT-2 and FWT-3 were excavated and removed. The tanks were stockpiled separately from the excavated soil and tank contents, and were disposed at an OCD approved facility.

The concrete pad for the old spinout bay was broken into large pieces and removed for eventual disposal from November 14 to November 17, 1995. Approximately 200 cubic yards of concrete were disposed in a nearby construction debris landfill.

Excavation of potentially impacted soils was performed following tank removal. Soils approximately 2 to 3 ft. beyond the tank dimensions were excavated. Hydrocarbon staining was observed around tank FWT-1 on the north end of the excavation. An exploratory hole was advanced in the area of FWT-1. Water was apparently encountered at a nominal depth of 20 feet. The general grade of the main excavation varied from approximately 12 to 14 feet below grade.

Phase 3

A test trench was excavated on the north side of the FWT area to determine the extent of overexcavation which may be required. The trench was excavated to a depth of approximately ten feet and extended north approximately ten feet from the original north excavation sidewall. Soil samples were collected from the bottom of the trench, split with a laboratory, and analyzed using a field TPH analyzer. The field TPH results were then used to determine extent of the TPH impacted soil. These results, as listed in Table 3, were below the agreed OCD action level for field analyzed TPH of 200 parts per million (ppm).

Overexcavation proceeded approximately 10 feet to the north, as delineated in the field investigation. The south wall was also overexcavated at the request of the OCD an additional 5 feet to the south end to a depth of approximately 14 feet below the ground surface. A soil sample was collected on each new face of the excavation, both north and south, and field analyzed for TPH. As requested by the OCD, a sample collected from the FWT-1 tank footprint was also analyzed for field TPH. These results are summarized in Table 3. The nominal dimensions of the excavation and soil sampling locations for the FWT area removal are shown on Figure 4.

Upon completion of tank removal, overexcavation, and soil sampling and confirmation activities, the excavation was backfilled with native material from an off-site source beginning February 2, 1996. Starting at approximately 10 feet below grade the backfill was compacted in nominal eight to twelve inch lifts using a vibratory sheepsfoot roller. As requested by the OCD, the backfill was mounded slightly above grade.

Approximately 900 tons of excavated soil was trucked to the Goo-Yea Landfarm in Lea County, a facility owned and operated by Rhino Environmental Services, Inc. The permit

for the disposal of this soil was obtained February 5, 1996, and is included as Appendix C. Waste disposal manifests are included as Appendix D.

2.4 Soil/Waste Characterization

ERMI Environmental Laboratories tested the soil/waste samples collected by Brown and Caldwell from the former location of the field waste tanks to evaluate the nature and extent of contamination. Brown and Caldwell personnel coordinated excavation activities using the field screening procedures as outlined in the closure plan.

2.4.1 Sampling Locations and Methodology

On November 15, 1995, composite samples were collected from locations within the excavation, as required by the Closure Plan. Brown and Caldwell personnel collected soil samples from each of the four walls and from the excavation floor within each of the tank footprints. Each soil sample collected from the side walls was composited from the depth that appeared to be most impacted by hydrocarbons (as indicated by visual and field photoionization detector [PID] readings). Soil samples collected from the bottom of the excavation were composited from five grab samples retrieved using the back-hoe from each of the tank footprints (total of three). Brown and Caldwell personnel field measured volatile organic compound (VOC) levels using a PID. Based on PID readings and visual staining the FWT-1 floor composite and the north sidewall composite samples were selected for TCLP metals analysis, as required in the Closure Plan.

Soil samples from the three phases of the FWT removal were collected with the assistance of a back-hoe, and deposited in plastic bags. Once composited, a sufficient quantity of sample was transferred to a labeled, laboratory-supplied glass jar and immediately placed in an ice chest. Upon completion of sampling activities, the samples were delivered via overnight delivery service to ERMI Environmental Laboratories in Allen, Texas, using chain-of-custody procedures.

2.4.2 Laboratory Analytical Results

The seven composite samples collected were analyzed for BTEX using EPA Method 8020 and TPH using EPA Method 8015 modified for diesel range organics, as indicated in the Closure Plan. These results are summarized in Table 1. Analytical results for both total metals and TCLP metals are summarized in Table 2. Please note that all TCLP analyses other than metals were non-detect, and, therefore, are not listed. Complete analytical reports and chain-of-custody forms are included in Appendix E.

DISTRIBUTION

1 copy to:

New Mexico Energy, Minerals and Natural Resources Department

Oil Conservation Division

2040 S. Pacheco

Santa Fe, New Mexico 87505

Attention:

Mr. Mark Ashley

1 copy to:

BJ Services Company, U.S.A.

8701 New Trails Drive

The Woodlands, Texas 77381

Attention:

Ms. Jo Ann Cobb

1 copy to:

BJ Services Company, U.S.A.

2401 Sivley

Artesia, New Mexico 88210

Attention:

Mr. Mike Wiggins

1 copy to:

Brown and Caldwell

File

QUALITY CONTROL REVIEWER

Robert N. Jennings, P.E.

Vice President

TJ:elg

TABLE 1

FWT - Analytical Results and OCD Action Levels

Sample I.D.	TPH Diesel mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	Total BTEX (Calculated) mg/kg
North Tank, Contents	1,902	0.120	0.920	1.1	5.5	7.6
Middle Tank, Contents	8.0	< 0.010	< 0.010	< 0.010	< 0.030	< 0.060
South Tank, Contents	128	< 0.010	< 0.010	< 0.010	0.044	0.059
North Tank, Floor	1,059	< 0.050	< 0.050	0.145	1.3	1.5
Middle Tank, Floor	276	< 0.050	< 0.050	< 0.050	0.28	0.36
South Tank, Floor	213	< 0.050	< 0.050	< 0.050	0.465	0.54
North Sidewall	5,045	< 0.500	< 0.500	< 0.500	9.2	9.95
South Sidewall	652	< 0.250	< 0.250	< 0.250	0.825	1.2
East Sidewall	52	< 0.050	< 0.050	< 0.050	< 0.150	< 0.30
West Sidewall	81	< 0.050	< 0.050	< 0.050	< 0.150	< 0.30
North Delineation- 10'	16	NA	NA	NA	NA	NA
Stockpile Sample	54	NA	NA	NA	NA	NA
OCD Action Levels	100	10	NS	NS	NS	50

NA = Not Analyzed NS = Not Specified

TABLE 2

FWT - Metals Results

Sample I.D.	Arsenic mg/kg	Barium mg/kg	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Mercury mg/kg	Selenium mg/kg	Silver mg/kg
North Tank, Contents	< 1.0	2300	< 0.20	0.71	1.2	< 0.020	< 0.75	< 0.35
North Tank, Floor	1.5	210	0.87	7.2	4.3	< 0.020	< 0.75	< 0.35
North Sidewall	1.7	210	0.57	7.8	9.5	< 0.020	< 0.75	< 0.35
	TCLP Arsenic mg/L	TCLP Barium mg/L	TCLP Cadmium mg/L	TCLP Chromium mg/L	TCLP Lead mg/L	TCLP Mercury mg/L	TCLP Selenium mg/L	TCLP Silver mg/L
North Sidewall	< 0.20	0.40	< 0.04	< 0.05	< 0.10	< 0.004	< 0.15	< 0.07
Stockpile Sample	< 0.20	1.0	< 0.04	< 0.05	< 0.10	< 0.004	< 0.15	< 0.07

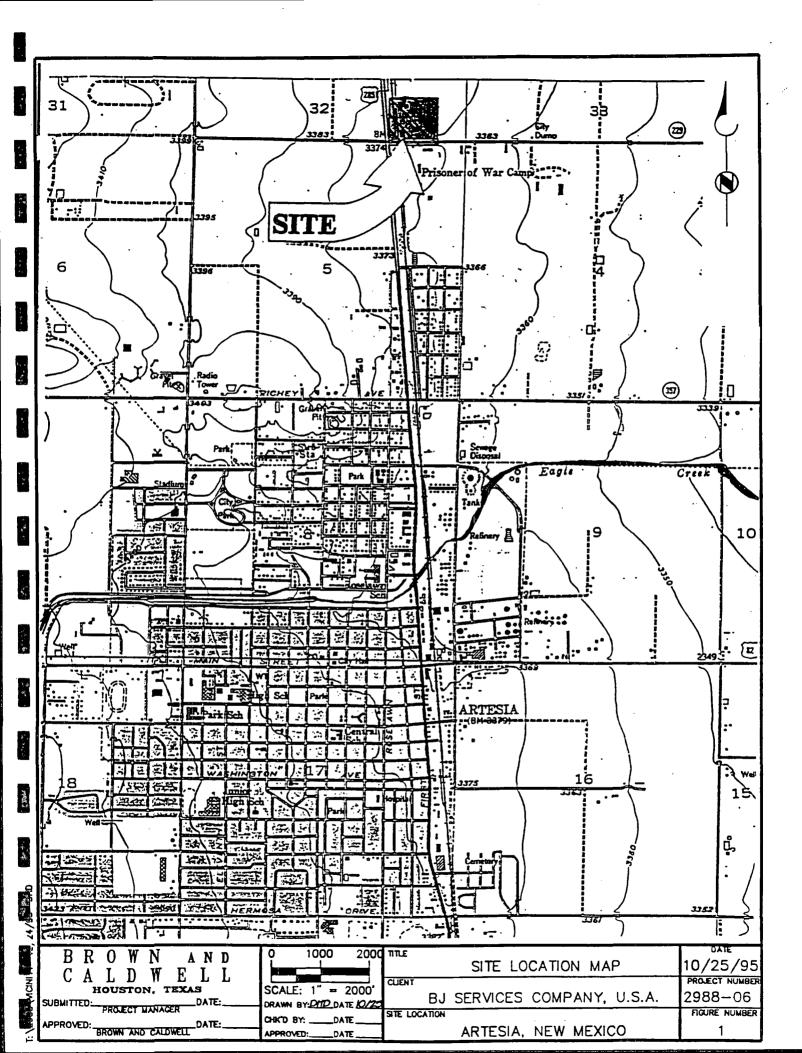
TABLE 3

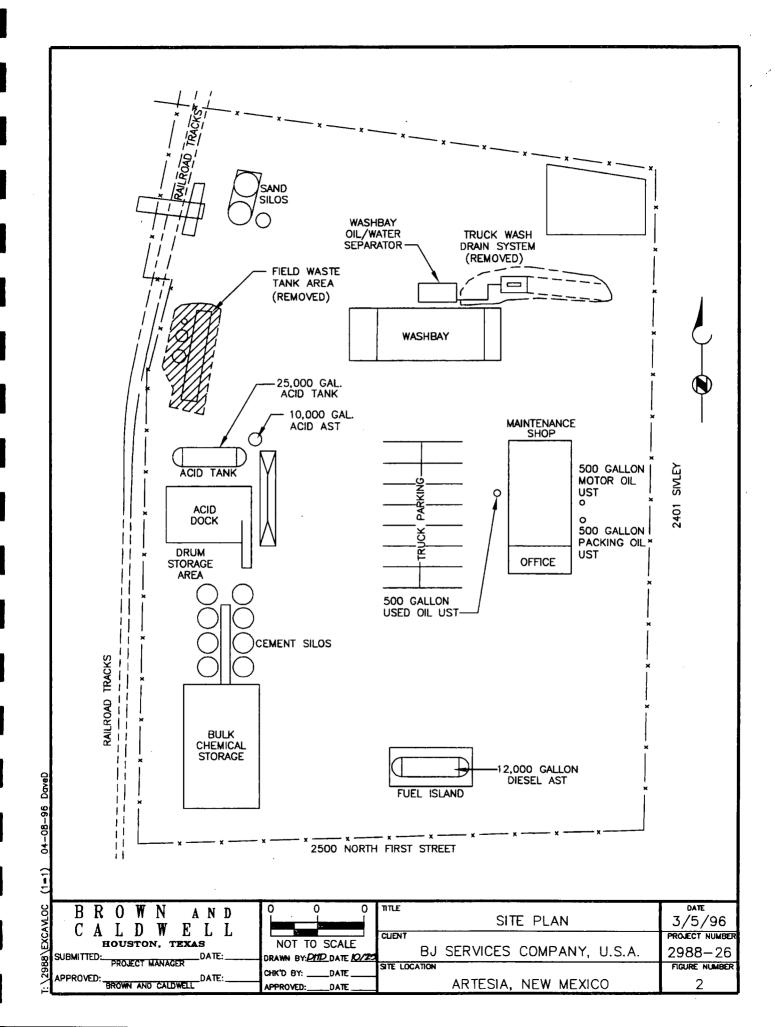
FWT - Field Analytical Results and Approved OCD Field Closure Levels

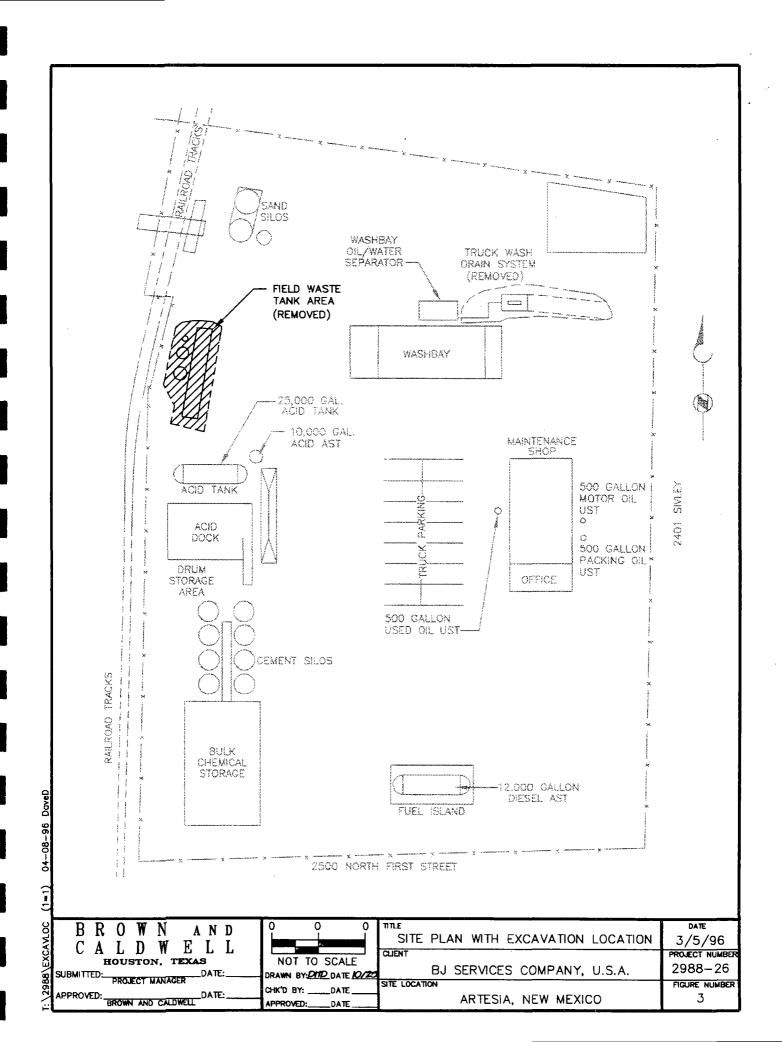
Sample I.D.	Field TPH Analysis mg/kg	Laboratory TPH mg/kg
North Delineation- 10'	27	16
Stockpile Sample	89	54
North Sidewall	54	NA
South Sidewall	176	NA
North Footing	187	NA
OCD Approved Action Levels	200	100

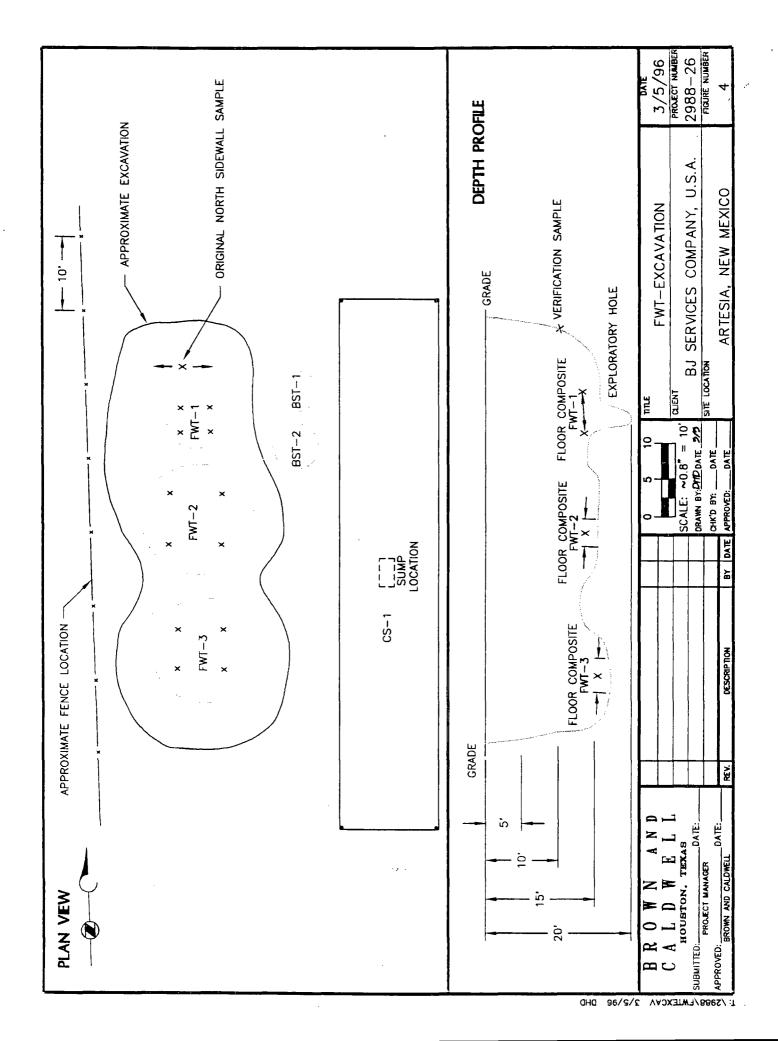
NA = Not Analyzed

FIGURES









APPENDICES

APPENDIX A

CLOSURE PLAN - FIELD WASTE TANKS AND OLD STEEL BRINE TANKS

CLOSURE PLAN
FIELD WASTE TANKS AND
OLD STEEL BRINE TANKS

BJ SERVICES COMPANY, U.S.A.

ARTESIA, NEW MEXICO FACILITY

Prepared by

BROWN AND CALDWELL

October 26, 1995

TABLE OF CONTENTS

SECTION 1	INTRODUCTION	1-1
SECTION 2	SITE ASSESSMENT	2-1
	Preliminary Site Scoring	2-2
SECTION 3	SITE ASSESSMENT REPORT	
	Cleanup Goals	
TABLES		•
FIGURES		

LIST OF TABLES

Soil Cleanup Goals

LIST OF FIGURES

Site Location Map Site Plan

SECTION 1

INTRODUCTION

BJ Services has developed this closure plan for three (3) fiberglass field waste tanks and two (2) steel brine tanks for the facility in Artesia, New Mexico, for OCD approval. The Artesia facility is located in Eddy County, in the SE/4, Section 32, Township 16 South, Range 26 East. The facility address is 2401 Sivley, Artesia, New Mexico, 88210. A site location map and site plan map are attached as Figures 1 and 2, respectively.

The field waste collection system received wastewater from activities associated with oil and gas well servicing. The closure of the field waste collection system will include the removal of three field waste tanks. The field waste collection system is no longer in service.

The brine tanks are no longer is service. Closure of the brine tanks will include cleaning to remove crystalline salt, and disposal of metal tank parts.

This closure plan is prepared in general accordance with a guidance document prepared by the OCD entitled Unlined Surface Impoundment Closure Guidelines (February 1993), and the Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993). In accordance with these guidance documents, this closure plan contains the following elements:

- The procedures that will be used to collect soil verification samples for closure of the field waste tanks.
- The procedures that will be used to manage, remediate, or dispose of contaminated soil and groundwater.
- Reporting procedures that will be used to document the closure activities and obtain approval for final closure from the OCD.

SECTION 2

SITE ASSESSMENT

BJ Services will perform a site assessment to determine general site characteristics, soil/waste characteristics, and groundwater quality, if groundwater is encountered.

General Site Characteristics

Based on OCD guidance documents, BJ Services will determine the depth to groundwater, defined as the vertical distance from the lowermost contaminants to the seasonal high water elevation of the groundwater. Depth to groundwater will be determined by reviewing reports of previous groundwater investigations at the site and regional and local groundwater reports published by state and federal agencies such as the USGS and the New Mexico Bureau of Mines and Mineral Resources. Information on groundwater quality may also be researched through local and state agencies.

Depth to Groundwater:	Ranking Score:
< 50 feet	20
50 - 99 feet	10
> 100 feet	0

If necessary, BJ Services will determine the proximity of drinking water sources by performing a search of water wells within a one mile radius of the facility. The search would provide information (as available) such as the distance from the site to each well, well depth, water quality data and the purpose of the well.

Wellhead Protection Area:	Ranking Score:
< 1000 feet from a water sour	ce, or;
< 200 feet from a private dom	estic water source:
Yes	20
No	0

The distance to nearby downgradient surface water bodies will be determined by review of a USGS topographic map for the area. Surface water bodies include rivers, creeks, ponds, lakes, irrigation canals and ditches. Site drainage patterns and off-site receptors of surface drainage will be determined from field observations and discussions with site personnel.

Distance to Surface Water Body:	Ranking Score:
< 200 horizontal feet	20
200 - 1000 feet	10
> 1000 feet	0

Preliminary Site Scoring

Groundwater is present at a depth of less than 50 feet below grade, and flow direction is east-southeast, determined from wells previously installed at the facility. Therefore, the site scoring procedure outlined above calls for a groundwater Ranking Score of 20, since the groundwater is less than 50 feet below the ground surface, and hence less than 50 ft. below the bottom of the tanks. BJ Services may confirm groundwater elevation and flow direction prior to tank removal and verification sampling by measuring water levels in the existing wells, if available.

The site ranking is greater than 19. This determination was made based on physical site characteristics as described above. According to the OCD guidance documents, a total ranking score of >19 yields action levels as outlined in the Site Assessment Report section, Table 1.

Soil/Waste Characteristics

Following tank removal, BJ Services will sample the soils beneath the field waste collection system. Soil samples will be collected from each of the excavation sidewalls, and from the base of the excavation at each tank footprint. The sidewall samples should be collected from the lower 1/3 of the excavation.

Based on visual observation, highly contaminated/saturated soils will be excavated for treatment or disposal, in accordance with the OCD guidance documents. Highly contaminated/saturated soils are those soils which contain observable free petroleum hydrocarbons or immiscible phases and gross staining. The immiscible phase may range from a free hydrocarbon to a sheen on any associated aqueous phase.

Unsaturated contaminated soils encountered during field waste tank removal will be evaluated and remediated in accordance with OCD guidance documents. Unsaturated contaminated soils are those that are not highly contaminated as described above, but contain measurable concentrations of contaminants.

Verification samples will be collected following the removal of the tanks. One sample from each tank footprint will be composited from five grabs taken from the 0 - 6 inch interval of soil from the excavation floor. Samples will be field composited and placed in jars. One sample from each sidewall of the field waste collection system excavation will also be composited from five grab samples collected from the lower 1/3 of the sidewall.

Samples will be collected with decontaminated sampling equipment, field composited, placed in labeled jars, and shipped on ice overnight using chain of custody procedures to the off-site laboratory. Decontamination fluids (non-toxic degreasers and water) will be collected for subsequent disposal by BJ Services. Decontamination solids will be placed on plastic and covered near the field waste collection system, pending the results of

sample analysis. Final disposition of the solids will be determined as part of the remedial evaluation included in the site assessment report.

The samples will be analyzed for TPH by EPA Method 8015 modified for diesel range organics, BTEX by EPA Method 8020, and pH. Two excavation samples, one bottom and one sidewall, will be selected for RCRA metals analysis. These RCRA samples will be chosen based on visual staining and the field-determined highest organic vapor measurements and/or corrosivity (pH) measurements.

In accordance with the OCD guidance documents, all highly contaminated/saturated soils encountered during tank removal will be remediated in-situ or excavated to the maximum extent practicable. Unsaturated contaminated soils may require remediation based on the general site characteristics obtained during the site assessment. These site characteristics will be used to determine the appropriate soil remediation levels using a risk based approach. Soils which are contaminated by petroleum constituents will be scored according to the ranking criteria presented in the OCD guidance document (depth to groundwater, distance to water sources, and distance to nearest surface water body). Soils contaminated with substances other than petroleum hydrocarbons may be required to be remediated based upon the nature of the contamination and its potential to impact fresh waters, public health and the environment (see Table 1).

Closure activities are planned to commence within 10 days of approval of this Closure Plan by the New Mexico Oil Conservation Division (NMOCD). The closure of tanks are planned to be completed within 14 days of start-up.

SECTION 3

SITE ASSESSMENT REPORT

The field procedures and analytical results documenting closure of the field waste and brine tanks will be presented in a site assessment report to the OCD within 20 days after field activities are completed. The sample results will be used in conjunction with the ranking score, to verify final closure determined according to the OCD closure guidance documents. BJ Services will present the ranking score in the site assessment report and propose further activities, such as additional investigation of groundwater or soil remediation, if needed.

The ranking score will establish the OCD recommended cleanup level for benzene, total BTEX, and TPH for those soils contaminated with petroleum constituents. If the site assessment indicates additional investigation or remediation is not necessary, the report will propose no further action and BJ Services will request approval for final closure of the site.

Cleanup Goals

Soil cleanup goals for the field waste collection system removal and excavation are listed below in Table 1.

Upon removal of the tanks as described above, BJ Services will determine the extent of the contaminated soils, if any, using results from the samples collected from the excavation. Once the sample analytical results are obtained, they will be compared to the cleanup goals for particular constituents. These cleanup goals are listed below in Table 1.

If soil analytical results exceed clean-up goals, BJ Services may propose alternate cleanup levels for OCD approval or propose no further action by conducting a risk-based evaluation of the site assessment data.

Cleanup Alternatives

If remediation is necessary, feasible cleanup alternatives will be presented in the site assessment report. Alternatives include further excavation and off-site disposal, landfarming or other in-situ treatment such as vapor sparging, bioremediation, and bioattenuation. BJ Services will not commence further remediation until the OCD has reviewed and approved the recommended cleanup alternatives.

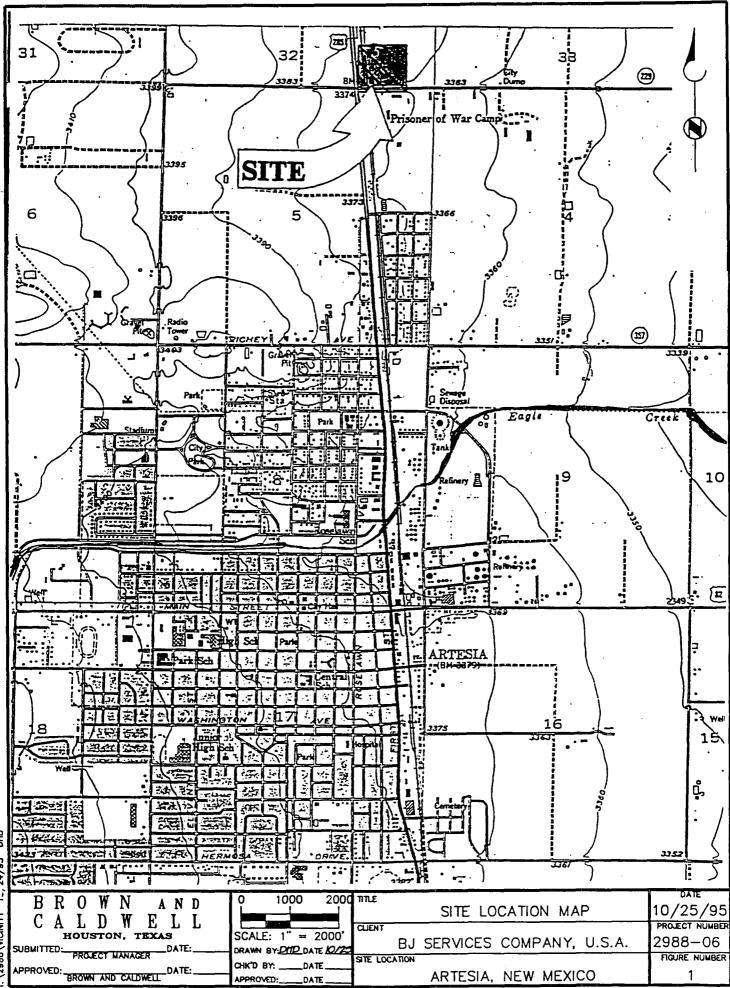
TABLES

Table 1
Soil Cleanup Goals

Contaminant (mg/kg)	Regulatory Remediation Action Levels
Benzene	*10 ppm
BTEX, Total	*50 ppm
ТРН	*100 ppm
pH (Std. Units) for Corrosivity	2.0 <ph measured<12.5<="" td=""></ph>
RCRA Metals (if necessary):	
Arsenic	<5.0 (mg/L TCLP)
Barium	<100.0 (mg/L TCLP)
Cadmium	<1.0 (mg/L TCLP)
Chromium	<5.0 (mg/L TCLP)
Lead	<5.0 (mg/L TCLP)
Mercury	<0.2 (mg/L TCLP)
Selenium	<1.0 (mg/L TCLP)
Silver	<5.0 (mg/L TCLP)

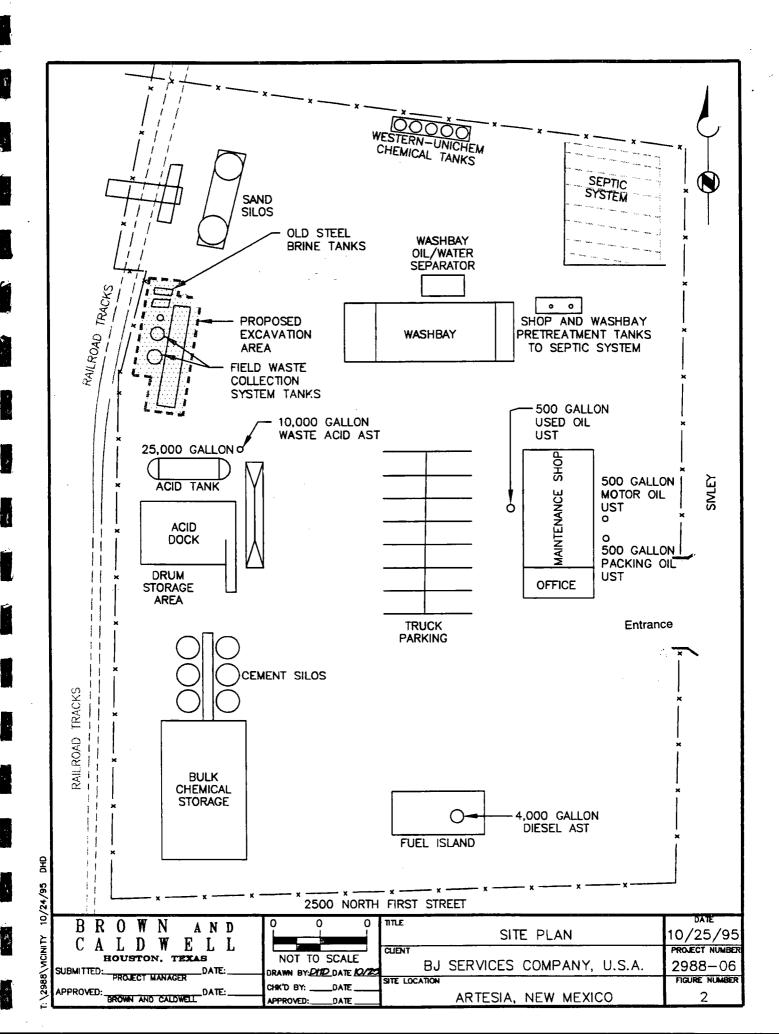
^{*} These limits based on a ranking score >19, and are outlined in the NMOCD guidance documents.

FIGURES



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APPENDIX B CLOSURE PLAN APPROVAL NOTICE

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

November 2, 1995

CERTIFIED MAIL RETURN RECEIPT NO. Z-765-962-892

Mr. C.L. Smith BJ Services Company, U.S.A. 8701 New Trails Drive The Woodlands, Texas 77381

RE: Field Waste and Steel Brine Tank Closure Plan
Artesia Facility
Eddy County, New Maries

Eddy County, New Mexico



Dear Mr. Smith:

The New Mexico Oil Conservation Division (OCD) has completed a review of BJ Services' (BJ) October 26, 1995 "Closure Plan Field Waste Tanks and Old Steel Brine Tanks BJ Services Company, U.S.A. Artesia, New Mexico Facility." This document contains BJ's work plan to remediate and determine the extent of potential soil contamination related to the operation of the tank system.

The above referenced work plan is approved with the following conditions:

- 1. Crystalline salt and any salt contaminated soils will be disposed of at an OCD approved site.
- 2. BJ will submit a report on the investigation to the OCD by January 12, 1996. The report will contain:
 - a. A description of all activities which occurred during the investigation, conclusions and recommendations.
 - b. A summary of the laboratory analytic results of soil samples.

Mr. C.L. Smith November 2, 1995 Page 2

3. All documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Artesia District Office.

Please be advised that OCD approval does not relieve BI of liability if contamination exists which is beyond the scope of the work plan or if the activities fail to adequately determine the extent of contamination related to BI's activities. In addition, OCD approval does not relieve BI of responsibility for compliance with any other federal, state or local laws and/or regulations.

If you have any questions, please call me at (505) 827-7155.

Sincercly,

Mark Ashley Geologist

xc: OCD Artesia Office

APPENDIX C PERMIT FOR SOIL DISPOSAL

FAX_NO. 5057489720

1/29/76

EEB 2.80 IC:42

District 1 - (505) 393-6161 P. O. Box 1940 Tobbs, NM 88241-1980 115c III - (505) 748-1283 11 S. Fiert Arteria, NM 88210 District III - (505) 334-6178

1000 Rio Brazos Road

Aziec NM 87410

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division

Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505 (505) 827-7131 Form C-138 Originated 4/18/95

> Submit Original Plus 1 Copy to appropriate District Office

District IV - (505) 827-7131 REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE 4. Generator 8.5 Seravice s 1. RCRA Exempt: Non-Exampt: P Verbal Approval Received: Yes 🗌 No 🗆 5. Originating Site @Jesia GWV. ROLLINGE 2. Management Facility Destination 600-YEA 6. Transporter 3. Address of Facility Operator 4000 Louise 8. State 7. Location of Material (Street Address or ULSTR) 9. Circle One: A. All requests for approval to accept diffield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved." All transporters must certify the wastes delivered are only those consigned for transport. BRIEF DESCRIPTION OF MATERIAL: Touche used in on frotal servicing JAN 2 8 1998 FLAGGETTO ALERGIA さいじ まてませか cy Knows Volume (to be entered by the operator at the end of the haul) .. SIGNATURE: TELEPHONE NO. 50 C 30 TYPE OR PRINT NAME: (This space for State Use) APPROVED BY: peologist APPROVED BY:

70 'd

FAX NO. 5058278177

TO SO SO USE OF SELECTION DIA SERVILLON DIA



CERTIFICATE OF WASTE STATUS: OILFIELD NON-EXEMPT WASTE MATERIAL

Originating Location:	BJ Services Company, U.S.A Artesia District, Artesia, NM
	Field Waste Tank Area Excavation
Disposal Location:	Rhino E.S.I. Goo-Yea Facility, Lea County, NM

"As a condition of acceptance for disposal, I hereby certify that this waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, to verify the nature as non-hazardous. I further certify that, to my knowledge, no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3(b)."

I, the undersigned, as the agent for <u>BJ Services Company</u>, <u>U.S.A.</u> concur with the status of the waste from the subject site.

Name:_	Mike W	iggins
Title:_	District	Manager
Addres	s: 2401 Si)ien
Ar+	esia Nin	88210
Signatu	ire: Mil	Livygii
Date:	2-1-96	20

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

ORIGINATION LOCATION: BJ Services
2401 Sivley
Artesia, NM
SOURCE: Soils from around removed underground storage tanks used as collection basins from cleaning out trucks used in oilfield servicing.
DISPOSAL LOCATION: Goo Yea Landfarm
Permit #NM-01-0015
SE/4 OF SECTION 14, TOWNSHIP 11 SOUTH, RANGE 38 EAST, NMPM,
LEA COUNTY, NM 1-800-762-0241
As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, section 261.3." I, the undersigned as the agent for concur with the status of the waste from the subject site.
Name:
Title:
Address:
Signature:
Date:

APPENDIX D WASTE DISPOSAL MANIFESTS

GOO YEA LANDFARM #NM-01-0015 SE/4 OF SECTION 14, TOWNSHIP 11 SOUTH RANGE 38 EAST, NMPM, LEA COUNTY, NM CONTAMINATED SOIL DOCUMENTATION SUMMARY

GENERATOR'S NAME/ADDRESS ADDRESS OF FACILITY (IF DIFFERENT)

BJ Services, Inc. 2401 Sivley Artesia, NM

TRANSPORTER'S NAME/ADDRESS

Valley Construction 505-746-2761

DATE DELIVERED:

002/06/96 thru 02/13/96

TOTAL VOLUME OF SOIL FROM SITE: 919.60 tons

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		Valley Construction	n .	N/A						
	7.	Transporter 2 Company Name		8. US EPA ID	Number					
	9.	Designated Facility Name and Site Address		10. US EPA ID	Number	A. Tran	sporter's Ph	none		
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A		Generator's Name and Mailing Address BJ Serives 2401 Sivley Generator Aftersia, NM			1					
	5.	Transporter 1 Company Name Valley Construction	6.	US EPA ID N N/A	umber					
	7.	Transporter 2 Company Name	8. 	US EPA ID N						
	9.	Designated Facility Name and Site Address Goo Yea Landfarm #NM-0	01-0015	US EPA ID N	umber	A. Trans	sporter's P sporter's P	hone hone	5-746-27	61.
		SE/4 OF SECTION 14, TO RANGE 38 EAST, NMPM, 1	DWINSHIP II SU LEA COUNTY, N	M Min		C. Facil	ity's Phone	505	5-392-48	98
	11	. Waste Shipping Name and Description					12. Cont	.	13. Total Quantity	14. Unit Wt/Vol
	a.	Non-exempt soils from tanks used as collect:	around under	ground sto	orage og out			Bulk	Guantity	VVVVOI
	L	truck used in oilfield	d servicing					·	21-3	· TN
G E N	b.									
ENERA	c.	4						·		·
A T O R										
	d.								·	
	_	<u> </u>								
	D.	Additional Descriptions for Materials Listed Above				E. Hand	ling Codes	s for Was	tes Listed Abo	ve
	15	. Special Handling Instructions and Additional Informa	tion		\cap		<u></u>			
	16	. GENERATOR'S CERTIFICATION: I certify the mater Printed/Typed Name	ials described above on th	is manifest are not sur Signature	bject to foreral regula	tions for re	porting prop	er dispos		Waste. Day Year
¥	-	Joe GREENWOUX	:-1-	por	Hen		\rightarrow	_	12	6 96
-RANSPORTER		Transporter 1 Acknowledgement of Receipt of Mater Printed/Typed Name	WEY CONST.	Signature	5 1 /2				Month L	Day Year
P OR F	18	. Transporter 2 Acknowledgement of Receipt of Mater	rials	Signatura	M	/				~ 1/5
Ė		Printed/Typed Name		Signature					Month L	Day Year
F A C	19	. Discrepancy Indication Space								
Ĭ	20	. Facility Owner or Operator: Certification of receipt of		d by this manifest e	xcept as noted in Ite	em 19.				
ţ	-	Printed/Typed Name		Signature ,	, ,				Month (Day Year
L		MAX W. HUDSON		Signature	Just 50				2-	6 96

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	EPA ID No.	G. Mario	2. Page of	1			
 	3.	Generator's Alemos and Mailing Address								
Name of the last		2401 Sivley								
	4.	Artesia, NM Generator's Phone (
	5.	Transporter Construction		6. USAFAID	Number					
Negative N	7.	Transporter 2 Company Name		8. US EPA ID	Number					
Ž	9.	Designated Facility Name and Site Address #N	1-01-0015	10. US EPA ID) Number	A. Trans	porter's P	hone 50	5-746-276	51
		SE/4 OF SECTION 14,	TOWNSHIP 1			B. Trans	porter's P ty's Phone	hone		
		RANGE 38 EAST, NMPM,	, LEA COUNT	TY, NM		C. Facili	ty's Priorie	50	5-392-489	98
	11.	Waste Shipping Name and Description		<u> </u>			12. Cont	ainers	13. Tetal	14. Unit
		Non-exempt soils fro	om around u	inderground s	torage		No.	BIYPR	Total Quantity	Wt/Vol
	a.	tanks used as collect					_		-3:	
		truck used in oilfic	eld servici	ing	_				22.1	ton
	_						 -	<u> </u>		
G E N	b.									
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	d.									
	D.	Additional Descriptions for Materials Listed Above	•			E. Hand	ling Codes	s for Was	stes Listed Abov	е
5	15.	Special Handling Instructions and Additional Infor	mation							
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V										_
		GENERATOR'S CERTIFICATION: I certify the re	alerials described abo		subject to federal regul	ations for rep	oorting prop	er dispos	al of Hazardous V	Vaste.
	•	Printed/Typed Name	\checkmark	Signature	X			/		ay Year
	17	Transporter 1 Acknowledgement of Receipt of Ma	atoriale		- Live	~~~	\rightarrow			94
Ŕ	17.	Transporter 1 Acknowledgement of Receipt of Ma Printed/Typed Name		Signature	7 \			7	Month Di	ay Year
N		VAILEY CONSTRUCTION	n)		3111 Dy	مرح				7 96
g	18.	Transporter 2 Acknowledgement of Receipt of Ma								
		Printed/Typed Name		Signature					Month D.	ay Year
	19	Discrepancy Indication Space	······································					·		L
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FACIL										
T	20.	Facility Owner or Operator: Certification of receip			· .	tem 19.				
Y		Printed/Typed Name		Signature	1 . 3				Month D	ay Year
E C	ritria con	Printed/Typed Name	<u></u>	Signature 700	- Charle	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			121	7 [7]

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		NON-HAZARDOUS WASTE MANIFEST	Generator's US EPA ID		Manifest (POD 21 No.	2. Page	i 4	+1-	7 Laga	#8
1		Generator's Name and Mailing Address BJ Serives 2401 Sivley GeneratorAphoesia, NM								
	5.	Transporter 1 Company Name Valley Construction	6. 	US EPA ID I N/A	Number					
		Transporter 2 Company Name	8. 	US EPA ID I						
	9.	Designated Facility Name and Site Address Goo Yea Landfarm #NM SE/4 OF SECTION 14,		US EPA ID 1	Number	B. Trans	sporter's Ph sporter's Ph ity's Phone	-505	-746-276]	
		RANGE 38 EAST, NMPM, Waste Shipping Name and Description	LEA COUNTY, N	<u>4 </u>		<u> </u>	12. Conta	505	-392-4898 	14.
		Non-exempt soils fro	m around under	ground sto	orage		No.	Type ulk	Total Quantity	Unit Wt/Vol
	a.	tanks used as collec truck used in oilfie	tion basins fr						23,4	TN
GEN	b.									
ERATO	C.							·	, .	
O R	d.								, .	
	D.	Additional Descriptions for Materials Listed Above	•			E. Hand	lling Codes	for Wasi	tes Listed Above	
	15.	Special Handling Instructions and Additional Infor	mation		·					
	16.	GENERATOR'S CERTIFICATION: I certify the m. Prioted/Typed Name	aterials described above on thi	s manifest are not su Signature	bject to federal regula	ations for re	porting prop	er disposa	al of Hazardous W	
¥		Diane GRIFFIN		Lua	u D	uff	<u> </u>		12 17	196
T R A N S	17.	Transporter 1 Acknowledgement of Receipt of Ma Printed/Typed Name		Signature/	In H	1		<u> </u>	Month Da	
TRANSPORTER	18.	Transporter 2 Acknowledgement of Receipt of Ma Printed/Typed Name		Signature					Month Da	y Year
FACI	19.	Discrepancy Indication Space		,			<u>, , , , , , , , , , , , , , , , , , , </u>			
LIT	20.	Facility Owner or Operator: Certification of receip	t of waste materials covered	d by this manifest e	except as noted in It	em 19.				
Y		Printed/Typed Name		Signature	July:				Month Da	y Year

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	EPA ID No.	G-C	Manifest Unent No.	2. Page	1 7	+18	**************************************	19.
A		Generator's Name and Mailing Address BJ Serives 2401 Sivley Generator'Affectia, NM						·			
8	5.	Transporter 1 Company Name			EPA ID Number						
		Valley Construction			'		ļ				
	7.	Transporter 2 Company Name		1	EPA ID Number						
	9.	Designated Facility Name and Site Address		10. US	EPA ID Number			sporter's P			
		Goo Yea Landfarm #N		_						-746-276	1
		SE/4 OF SECTION 14,					C. Facili	ity's Phone		202 400	•
		RANGE 38 EAST, NMPM	, LEA COUNT	Y, NM		· · ·	<u>L</u> ,	10 Cont		-392-489	
	11	Waste Shipping Name and Description						12. Cont	,	13. Total	14. Unit
	_	Non-exempt soils fro	m around 11	ndergroum	d storage			No.	Type Bulk	Quantity	Wt/Vol
	a.	tanks used as collection					Ì	.	Buik	- 0	<u>/</u>
Charles		truck used in oilfie			caining of	uc	İ			22.5	2 774
1	b.	CIUCK USEU III OIIII	LIG SCIVICE	119							
G	J .										
N E							- 1		.		
R	c.										
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	d.										
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	U.	Additional Descriptions for Materials Listed Abov					E. Hariu	illing Codes	o ioi wasi	es Listed Above	
	15	. Special Handling Instructions and Additional Info	rmation								
4	16	GENERATOR'S CERTIFICATION: I certify the m	naterials described abo			federal regula	itions for re	porting prop	er disposal	of Hazardous W	/aste.
V		Printed/Typed Name Diane GRIFF	inf	Signatu	Clau	<u>L. S</u>	lef	<u></u>		Month Da	y Year
T	17	. Transporter 1 Acknowledgement of Receipt of M	aterials				70				
Ä		Printed/Typed Name		Signatur		У	901	1		Month Da	
SP	_	Valley Const			serne	-X) zz	fX1)			2 196
R	18	. Transporter & Acknowledgement of Receipt of M	laterials	 -		//					
RAZSPORTER		Printed/Typed Name		Signatui	e					Month Da	y Year
FAC		. Discrepancy Indication Space									HEADING CHARACTER CONTRACTOR
LLIT	20	. Facility Owner or Operator: Certification of receip ののレーグを名 ムタルの printed/Typed Name	ot of waste materials	covered by this r	nanifest except a	as noted in It	em 19.				No.
Υ		Printed/Typed Name		Signatur)				Month Da	y Year
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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US		Man Docume • G • 0	ifest ent No.	2. Page of	1 1			
$\overline{\mathbf{A}}$	3.	Generator's Name and Mailing Address		*,						······································	
IT		BJ Serives		•							
	,	Generator's Phone (
	5	Generator's Phone (Sia NM) Transporter 1 Company Name		6. US E	PA ID Number						
Ш	J.			•	N/A						
	7.	Transporter 2 Company Name	·		PA ID Number						
	L				<u> </u>						
	9.	Designated Facility Name and Site Address		10. US E	PA ID Number	•		sporter's Ph		- 046 0	
Ш		Goo Yea Landfarm #1		11				sporter's Phone)5-746-2	/eT
		SE/4 OF SECTION 14, RANGE 38 EAST, NMPN	TOWNSHIP	II SOUTH			C. Facil	ity's Prione)5-39 2-4	898
Ш	11	. Waste Shipping Name and Description	1. LEA COO	411.161	· · · · · · · · · · · · · · · · · · ·		<u> </u>	12. Conta		13.	14.
П	' '							No.	Туре	Total Quantity	Unit Wt/Vol
	a.	Non-exempt soils fi	com around	undergrou	nd storage	3		1	Bul	K	1
		tanks used as colle			leaning ou	ıt				_ク/	m
	-	truck used in oilfi	leld servi	cing					- 	· · · · · ·	
GENER	b.										
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R A	c.										
A T O							i				
R	 -								· ·		·
	d.										
	D.	Additional Descriptions for Materials Listed Above)				E. Hand	lling Codes	for Was	tes Listed Abov	re
	15	. Special Handling Instructions and Additional Infor	mation								
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						<u> </u>)		
	16	GENERATOR'S CERTIFICATION: I certify the ma	aterials described abo	1		erai regula	itions for re	porting prop	er dispos		
I.		Printed/Typed Name Reenwood	/	Signature	to N	am	stre	1		1 - 1	ay Year
Ţ	17	Transporter 1 Acknowledgement of Receipt of Ma	aterials			277/0		 		است ا	, , , 0
Ŕ	1	Printed/Typed Name		Signature	1. //		1			Month E	ay Year
S	V	Alley Cont -			for	<i>f</i> +-	~ f.	fy		2/2	7 92
Ŕ	18	Transporter 2 Acknowledgement of Receipt of Ma	aterials		-	-		V			
RANSPORTER		Printed/Typed Name		Signature						Month E	ay Year
۲	19	. Discrepancy Indication Space	-			-					
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A C I	_										10 10 10
L	20). Facility Owner or Operator: Certification of receip	t of waste materials	s covered by this ma	anifest except as n	oted in It	em 19.				
ĮΫ́	-	Printed/Typed Name		Signature		7.3		 -		Month D	ay Year
		Printed/Typed Name MAX 10 14U.75U.A		Signature	of w. ch	15				Month L	7 96
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	2000	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA		Manifest Document No. G-0006	2. Page 1		Lood: 22	/ .
Å	3.	Generator's Name and Mailing Address BJ Serives 2401 Sivley			10 0000				
		Generator's Presia, NM Transporter 1 Company Name	6.	US EPA ID	Number				
	7.	Valley Construction Transporter 2 Company Name	8.	US EPA ID	Number				
	9.	Designated Facility Name and Site Address	10.	US EPA ID	Number	A. Transporte			
		Goo Yea Landfarm #NN SE/4 OF SECTION 14, RANGE 38 EAST, NMPM,	TOWNSHIP 11 S			C. Facility's P	hone	5-746-27 5-392-48	
	11	. Waste Shipping Name and Description				12.	Containers	13. Total Quantity	14. Unit Wt/Vol
	a.	Non-exempt soils fro tanks used as collec- truck used in oilfie	tion basins f			1	Bulk	22.1	tov
- GENER	b.								
R A T O R	c.								
	d.								
	D.	Additional Descriptions for Materials Listed Above				E. Handling C	codes for Was	tes Listed Abov	e ii
	15	. Special Handling Instructions and Additional Infor	mation						
	16	. GENERATOR'S CERTIFICATION: I certify the ma	ptorials deposited shows on t	this on Direct are not		ations for round		al of Hazardson N	Nonte .
V		Printed/Typed NAne OR OREENWOOD		Signature	Jac .		proper vispos		ay Year
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ORTER	18	. Transporte 2 Acknowledgement of Receipt of Ma Printed/Typed Name	aterials	Signature				Month D	ay Year
FACI	19	. Discrepancy Indication Space		-1					
-L-TY	20	Printed/Typed Name	t of waste materials cover	Signature	·				
	7.00	mit a News	MAX W NUDSEN	Signature	moder class	3:		Month D	ay Year 7 7 9 (

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		1. Generator's US EF		Manifest Document No. G-0022	2. Page of	1 1		23.	8
	BJ Serives 2401 Sivley Generator Afresia, NM								
	. Transporter 1 Company Name	6.	US EPA ID	Number	1				
	Valley Construction	1	N/A		1				
7	. Transporter 2 Company Name	8.	US EPA ID	Number					
g	. Designated Facility Name and Site Address	10	. US EPA ID	Number	A. Trans	porter's Pt	none		
	Goo Yea Landfarm #NM SE/4 OF SECTION 14,		SOUTH		B. Trans C. Facilit			-746-27	51
	RANGE 38 EAST, NMPM,	LEA COUNTY	, NM		<u> </u>			-392-489	
1	Waste Shipping Name and Description				i i	12. Conta		13. Total	14. S Unit
-	Non-exempt soils from	n around inc	derground st	orage		No.	Type Bulk	Quantity	Wt/Vol
	tanks used as collect truck used in oilfie	tion basins	from cleaning				Juin	23.8	ten
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	Additional Descriptions for Materials Listed Above				E. Handi	ing Codes	for was	tes Listed Abo	ve
	5. Special Handling Instructions and Additional Infor	nation							
╢┟	6. GENERATOR'S CERTIFICATION: 1 certify the ma	terials described above		ubject to federal regul	ations for rep	porting prop	er dispos		- 3
	Printed/Typed Name P(A) C SPIFF	-11	Signature	u I	Liff			Month L	7 Plan
Į	7. Transporter 1 Acknowledgement of Receipt of Ma	terials		\sim	00				
: AZSD	Printed/Typed Name UA/IEU OVST		Signature	ystuces	of the second			Month L	7 74
TRANSPORTER	8. Transporter 2 Acknowledgement of Receipt of Ma Printed/Typed Name	terials	Signature	/				Month L	Day Year
_	9. Discrepancy Indication Space	<u></u>							
F A C -									
L 2	20. Facility Owner or Operator: Certification of receipt	of waste materials co	overed by this manifest	except as noted in I	tem 19.				
Υ	Printed/Typed Name MA × In J. DS. J		Signature,	112				Month L	Day Year

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	NON-HAZARDOUS WASTE MANIFEST	Generator's US EPA ID No. G	Manifest Document No. G-0025	2. Page 1 of 1		202	7 .
	3. Generator's Name and Mailing Address BJ Serives 2401 Sivley 4. Generator's Processia, NM						
	5. Transporter 1 Company Name Valley Construction	6. US EPA ID I	Vumber				
	7. Transporter 2 Company Name	8. US EPA ID	Number		·		
	Designated Facility Name and Site Address	10. US EPA ID	Vumber	A. Transporter's	Phone		
	Goo Yea Landfarm #NN			B. Transporter's	Phon 50 !	5-746-27	61
	SE/4 OF SECTION 14, RANGE 38 EAST, NMPM,			C. Facility's Pho		5-392-48	98
	11. Waste Shipping Name and Description		<u> </u>	12. Co	ntainers	13. Total	14. Unit
	Non-exempt soils fro	m around underground st	orage	No. 1	Type Bulk	Quantity	Wt/Vol
	tanks used as collec	ction basins from cleani			Duin	207	
lua I	truck used in oilfie	eld servicing			<u> · </u>		. /
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1	D. Additional Descriptions for Materials Listed Above			E. Handling Cod	no for Wor	too Listed Abo	
	15. Special Handling Instructions and Additional Info	mation					
3	16. GENERATOR'S CERTIFICATION: I certify the m.	7	ubject to federal regula	ations for reporting pr	oper dispos		
	Printed/Typed Name GEIFF	Signature	'au	Julle	\sim	Month I	Day Year
T R	17. Transporter 1 Acknowledgement of Receipt of Ma	aterials		- 10			
RANSPORTER	Printed/Typed Name	Signature		from the	21	7 2 1	Pay Year
NSP OR	18. Transporter 2 Acknowledgement of Receipt of Ma	·			/		
T E R	Printed/Typed Name	Signature				Month L	Day Year
FACI	19. Discrepancy Indication Space						
L	20. Facility Owner or Operator: Certification of receip	t of waste materials covered by this manifest	except as noted in It	em 19.			
Y	BOU Usa Jan Fram Printed/Typed Name MAX W HUDSON	Sįgnature /	. 1 :2	,		Month L	Day Year
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ase print or type irm designed for use on effic (12-pitch) typewnler).			4	$\Rightarrow \omega$	LOWG	17
NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No.	Manifest Document No. G-0027	2. Page 1 of 1		220	10
Generator's Name and Mailing Address			<u> </u>			
BJ Serives						
2401 Sivley	•					
4. Generator's Arresia, NM						
5. Transporter 1 Company Name	6. US E	PA ID Number				
Valley Construction	,	I/A	1			
7. Transporter 2 Company Name		PA ID Number	 			
Section 2 Company Hame	J					
Designated Facility Name and Site Address		PA ID Number	A. Transporter	s Phone		
Goo Yea Landfarm #					5-746-276]	լ 👭
	, TOWNSHIP 11 SOUTH		C. Facility's Ph		<u> </u>	- 8
RANGE 38 EAST, NMPA					5-392-4898	3
	i, man compi, mi	<u> </u>	12 0	ontainers	13.	14.
11. Waste Shipping Name and Description			No.	. 1	Total Quantity	Unit Wt/Vol
Non-cumut sails f-	rom around undergroun	nd storage	1	Bulk		
a. Non-exempt soils in	rom around undergroup ection basins from cl	eaning out	1	June	77 1 1	L_
		conning out			24.61	1' 4
truck used in oilfi	reid Servicing		 		-	
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D. Additional Descriptions for Materials Listed Above	/e		E. Handling Co	des for Wast	tes Listed Above	
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15. Special Handling Instructions and Additional Info	ormation		1			
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16. GENERATOR'S CERTIFICATION: I certify the n			ations for reporting (proper disposa		ste.
Printed/Typed Name	Signature	1 Mil	4		Month Day	ر توجع
Diane GRIFF.		y			<u> 104187</u>	176
17. Transporter 1 Acknowledgement of Receipt of M		1				
Printed/Typed Name	Signature	1. A	.4		Month Day	Year
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18. Transporter 2 cknowledgement of Receipt of N		/	-			
Printed/Typed Name	Signature	-			Month Day	Year
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19. Discrepancy Indication Space						- 1
20. Facility Owner or Operator: Certification of recei	pt of waste materials covered by this ma	anifest except as noted in It	'em 19.			,
600 /EA Fundtur	<u>~</u>					
Printed/Typed Name	Signature	1 / 1 /7			Month Day	Year
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B. Tra	ansporter's F cility's Phon 12. Con No.	e 50 tainers	5-392-4896 13. Total Quantity	8
B. Tra	ansporter's F cility's Phon 12. Con No.	e 50 tainers	5-392-4896 13. Total Quantity	8
C. Fa	12. Con	50.	5-392-4896 13. Total Quantity	8
.	12. Con	tainers	13. Total Quantity	
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F Ha	ndling Code	s for Was	tes Listed Above	1
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egulations for	reporting pro	per dispos	al of Hazardous Wa	aste.
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	5.	Transporter 1 Company Name Valley Construction	6. US EPAID N	lumber 					S. A. C. A.
	7.	Transporter 2 Company Name	8. US EPA ID N	lumber					
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	11. Was	te Shipping Name and Description	, LEA CON	LI., INPL.		<u> </u>	12. Con		13. Total	14. Unit
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	a.	Non-exempt soils fr tanks used as colle	om around	underground:	storage		1	Bulk	23 D	ر نیا
		tanks used as colle truck used in oilfi	eld servic	ing						Fa
G E N	b.			_						
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GENERATOR	.									
	d.									
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		itional Descriptions for Materials Listed Abov								
		cial Handling Instructions and Additional Info								
		ted/Typed Name	naterials described abo	Signature	subject to rederal regu	ations for re	porting proj	per disposi	Month Day	
¥		iane Gritter	n	Na	m I	reff	<u></u>		1216	2/26
T R A		nsporter 1 Acknowledgement of Receipt of M ted/Typed Name	laterials	Signature	- l	1200	·/		Month Day	Year
N S P		aller Const		Bes	nie Dy	JEHL.	 -		12/2	2 26
TRANSPORTER	<u> </u>	nsporter Acknowledgement of Receipt of Med Typed Name	laterials	Signature	//				Month Day	Year
H	19. Disc	repancy Indication Space	<u> </u>							Ļ
FAC		Deto Tel	Lar	NFIII						
L T Y	20. Fac	Ity Owner or Operator: Certification of receip	of di was e materials	covered by this manife	st except as moted in I	tem 19.	>			
201	/Print	(ed/) yped Name		Signature	Lay (2	V	PRO	1	Month Day	21) K
			ORIGINAL	- RETURN TO C	ENERATOR			12-	BLS-C5 Re	v./4/94
		CANDIDATE TO THE PROPERTY OF T	OHIGINAL.	- UFIONIA IO	LILLIATOR					

Hea For	ase print or type m. designed for use on elite (12-pith) typelyriter):					420 1.0000#2						
		Generator's US EPA ID	No	Manifest Document No. G-0035	2. Page of	e 1 1		23.7	7 .			
A	Generator's Name and Mailing Address											
П	BJ Serives 2401 Sivley		•									
П	4. Generator's Artesia, NM											
	5. Transporter 1 Company Name Valley Construction	6. I	US EPA ID	Number				•				
	7. Transporter 2 Company Name	8.	US EPA ID		-							
П				<u> </u>	<u> </u>							
	9. Designated Facility Name and Site Address	10. -0.100.1 5	US EPA ID	Number	1	sporter's P		5-746-276	1			
						B. Transporter's Phone 505-746-2761 C. Facility's Phone						
	RANGE 38 EAST, NMPM,			<u> </u>	J	505~392~4898 12. Containers 13. 14.						
	11. Waste Shipping Name and Description					No.	Type	13. Total Quantity	14. Unit Wt/Vol			
	a. Non-exempt soils from	n around unde	rground s	torage		1	Bulk					
	tanks used as collect		rom clean	ing out				23.7	ta			
G.	truck used in oilfiel	<u>a servicing</u>		<u></u> .								
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									1			
	. Additional Descriptions for Materials Listed Above			E. Handling Codes for Wastes Listed Above								
	15. Special Handling Instructions and Additional Informa	tion			1							
									23/17/25			
									2			
	16. GENERATOR'S CERTIFICATION: I certify the mater	ials described above on thi	s manifest a re not s	ubject to federal requ	ations for n	eportina pror	oer dispos	al of Hazardous Wa	ste.			
	Printed/Typed Name		Signature	44 14	1 . 1	/ \		Month Day	. Year			
†	Diane GRIFF in		and	m V	y	(m)		12/2	16			
RA	17. Transporter 1 Acknowledgement of Receipt of Mater	rais	Signature	A-17				Month Day	- Xear			
TRANSPORTER	Up//EU Coust.		Du	Stypine	eif			21/2	286			
Ř	18. Transporter/2 Acknowledgement of Receipt of Mater Printed/Typed Name	rials	Signature					Marth Dav				
É	rimed Typed Name		Signature					Month Day	Year			
-	19. Discrepancy Indication Space		2 (<u> </u>					4			
F	A = A = A = A = A = A = A = A = A = A =											
A C I	Jos 4-0a	and t	14									
Ļ		. Facility Owner or Operator. Certification of receipt of waste materials covered by this manifest except as noted in Item 19.										
Y	Pripted/Typeg/Name/		Signarura	/	-)			Mont <u>h</u> Day	Year			
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ORIGINAL - RETURN TO GENERATOR

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	int of type signed for use on elite (172-pitch) type writing)	#	18	<i>*</i>	<i>Corol</i>		Š
	NON-HAZARDOUS WASTE MANIFEST 1. Generator'S US EPA ID No. Manifest Documents of the product o	2. Page of	1		23.	9	A
3.	Generator's Name and Mailing Address BJ Serives		, , , , , , , , , , , , , , , , , , , 				
	2401 Sivley						
4.	Generator's Partesia, NM						
5.	Transporter 1 Company Name 6. US EPA ID Number Valley Construction N/A						
7.	Transporter 2 Company Name 8. US EPA ID Number						
9.	Designated Facility Name and Site Address 10. US EPA ID Number	A. Tran	sporter's Pl	hone			
	Goo Yea Landfarm #NM-01-0015	B. Tran	sporter's Pl	hone 5	05-746-	276	1
	SE/4 OF SECTION 14, TOWNSHIP 11 SOUTH RANGE 38 EAST, NMPM, LEA COUNTY, NM	C. Facil	ity's Phone	5	05-392-	489	8
11.	Waste Shipping Name and Description		12. Conta	ainers	13. Total		1
	Non-exempt soils from around underground storage		No.	Type Bul	Quantity		Wt
a.	tanks used as collection basins from cleaning out	i	-	Dui			,
	truck used in oilfield servicing				23.9		7
b.							
C.							
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D.	Additional Descriptions for Materials Listed Above	E. Hand	 Iling Codes	for Was	stes Listed Ab	· ove	
	Additional Descriptions for Materials Listed Above Special Handling Instructions and Additional Information	E. Hand	· · · · · · · · · · · · · · · · · · ·	for Was	tes Listed Ab	ove	
		E. Hand	dling Codes	for Was	tes Listed Ab	ove	
15.							te.
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular Project/Typed Name Signature						He.
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular Printed/Typed Name Signature Signature				al of Hazardou	s Wast	ie.
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular Project/Typed Name Signature				al of Hazardou	s Wast	2
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 Certify the materials described above on this manifest are not subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectory and the subject to federal regular protectors and the subject to federal regular protectors and the subject to federal regular protectors and the subject to federal regular protectors and the subject to federal regular protectors and the subject to federal regular protectors are subject to federal regular protectors.				ial of Hazardou Month	s Wast	2
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular protect/Typed Name Signature Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature Signature				Month	s Wast	<u>ک</u> ا کا
15.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular Printed/Typed Name Signature Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature Signature Signature				ial of Hazardou Month	s Wast	<u>ک</u> ا کا
15. 16. 17.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regular protect/Typed Name Signature Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature Signature				Month	s Wast	\ \frac{2}{2}
15. 16. 17.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 Certify the materials described above on this manifest are not subject to federal regular to the control of the co				Month	s Wast	\ \frac{2}{2}
15. 16. 17. 18.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 Certify the materials described above on this manifest are not subject to federal regular to the control of the co	lations for re			Month	s Wast	\ \ \ !
15. 16. 17. 18.	Special Handling Instructions and Additional Information GENERATOR'S CERTIFICATION: 1 certify the materials described above on this manifest are not subject to federal regulation of the materials described above on this manifest are not subject to federal regulation. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature Signature Signature Discrepancy Indication Space	lations for re			Month	s Wast	

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	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	S EPA ID No.	Gar0€87 Document No.	2. Page	1 1		20.0	
	3. Generator's Name and Mailing Address 2401 Sivley Artesia, NM 4. Generator's Phone (A DE COMPANIA DE LA COMPANIA DE COMPANIA D
	5. Transporter 1 Company Name Construction	n	6. US E	Number					
	7. Transporter 2 Company Name		8. US EPA	ID Number					
	9. Designated Facility Name and Site Address #: SE/4 OF SECTION 14	, TOWNSHIP	11 SOUTH	ID Number	B. Trans	sporter's P	none	05-746-27	
	RANGE 38 EAST, NMP	M, LEA COU	NTY, NM		C. Facil	ity's Phone		505-392-48	
	11. Waste Shipping Name and Description Non-exempt soils f	rom around	underground	d storage		12. Conta		13. Total k Quantity	14. Unit Wt/Vol
	tanks used as coll truck used in oilf			eaning out				27.9	}~
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	D. Additional Descriptions for Materials Listed Above	9	, <u>, , , , , , , , , , , , , , , , , , </u>		E. Hand	lling Codes	for Was	stes Listed Above	
	15. Special Handling Instructions and Additional Infor	mation				***			
	16. GENERATOR'S CERTIFICATION: 1 certify the m Printed/Typed Name	aterials described abo	ove on this manifest are	not subject to federal regula	ations for re	porting prop	er dispos		
/	· · · · · · · · · · · · · · · · · · ·		Signature					Month Day	Year
7	17. Transporter 1 Acknowledgement of Receipt of Ma	ZIN	Sigratule	ano Sh	M	_		Month Day	17°
ה ה ה ה	18. Transporter 2 Acknowledgement of Receipt of Ma Printed/yged vame		Signature	Dist		7		Month Day	719/
FACI	19. Discrepancy Indication Space 20. Facility Owner or Operator: Ceptification of receipt	d waste materials	s covered by this mani	test except as noted in It	lem 19.				<i>-</i> ₩
7	Primar Typed Name		Signature	46 01	M		Name and April 2	Month Day	10
C		ORIGINAL	- RETURN TO	GENERATOR			* 12	BLS-C5-Rev	v. 4/94

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	WASTE MANIFEST	<u> </u>		G-0023	of of	1		H.	_
3.	Generator's Name and Mailing Address BJ Serives								
	2401 Sivley		•						
4.	Generator AP toes (i.a., NM)								
	Transporter 1 Company Name	·	6. US EPA I	D Number					
	Valley Construction		N/A						
7.	Transporter 2 Company Name		8. US EPA I	D Number					
9.	Designated Facility Name and Site Address Goo Yea Landfarm #NM	(-01-001E	10. US EPA I	D Number		insporter's P		7.46 07	
	SE/4 OF SECTION 14,		1 COLUMN			cility's Phone		-746-27	ρŢ
	RANGE 38 EAST, NMPM,				1	omity of thoric		-392-48	98
11	Waste Shipping Name and Description		F.72			12. Cont		13.	
						No.	Туре	Total Quantity	
a.						1 F	ulk		
	tanks used as collect			ing out				21:)
	truck used in oilfie	eld servici	ng				ļ		•
b.									
c.									
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D.	. Additional Descriptions for Materials Listed Abov	ve			E. Hai	ndling Codes	for Was	tes Listed Ab	ove
15	5. Special Handling Instructions and Additional Info	ormation							
16	6. GENERATOR'S CERTIFICATION: I certify the n	naterials described ab	ove on this manifestere no	ot subject to federal	regulations for	reporting p	er dispos	sal of Hazardou	ıs Was
	Printed/Typed Name	``	Signature	- 1	IJ,	, /		Month	Day
	DIANE GIRIF	FIN		aue_	//r	15	_	12	18
17	7. Transporter 1 Acknowledgement of Receipt of M	Materials				· ·			
	Printed/Typed Name		Signature	o_ /	1B	#		Month	Day
11	8. Transporter 2 Acknowledgement of Receipt of N	Antoriolo		meg L	Husp				KO
14	Printed/Typed Name	naterials	Signature			· · · · · · · · · · · · · · · · · · ·		Month	Day
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19	Discrepancy Indication Space								
15	9. Discrepancy indication Space								
15	9. Discrepancy Indication Space								
	O. Facility Owner or Operator: Certification of received to the control of the c	pt of waste materials	s covered by this manife	est except as note	d in Item 19.			. <u></u> -	

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	NON-HAZARDOUS 1. Generat	or's US EPA ID No.	Manifest Document No. G-0039	2. Page 1		225	
Ā	3. Generator's Name and Mailing Address						1
	BJ Serives	•					
	2401 Sivley 4. Generator's Phone (Artesia, NM						
Н	5. Transporter 1 Company Name	6. US EPA ID I	Number				
П	Valley Construction	N/A					
	7. Transporter 2 Company Name	8. UŚ EPA ID I					
Н	Designated Facility Name and Site Address	10. US EPA ID I		A. Transporte	r's Phone		
П	Goo Yea Landfarm #NM-01-			B. Transporte		505-746-2	761
	SE/4 OF SECTION 14, TOWN			C. Facility's P	hone		
Ш	RANGE 38 FAST, NMPM, LEX	COUNTY NM	<u> </u>	<u> </u>		505-392-4	
Н	11. Waste Shipping Name and Description				Containers	13. Total Quantity	Unit
	a. Non-exempt soils from an	ramd imderground	storage	No		ulk	Wt/Vol
	tanks used as collection	hasins from clea	ning out				
	truck used in oilfield s					22.5	172-
Ģ	b.	•			1		
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	d.						
	D. Additional Descriptions for Materials Listed Above			E. Handling C	odes for Wa	stes Listed Above	
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	15. Special Handling Instructions and Additional Information						
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	16. GENERATOR'S CERTIFICATION: I certify the materials descri	bed above on this manifest are not s	ubject to federal regula	tions for reporting	proper dispo		
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Ĭ		Δ		10			
A	Printed/Typed/Name	Signature	1	-1+		Month Day	
SP	10 Transporter 2 Adjanual of Granita of Materials	Pa	skymi	er _		12/3	196
TRANSPORTER	18. Transporter 2 Act nowledgement of Receipt of Materials Printed/Typed Name	Signature	<i></i>			Month Day	Year
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	19. Discrepancy Indication Space						
F							
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FACILITY	20. Facility Owner or Operator: Certification of receipt of waste m	aterials covered by this manifest	except as noted in It	em 19.			
T	600 Per Land Farm		,				2 2 3 3
Y	Printed/Typed Name MAX w. Luista	Signature /	11/2	_		Month Day	Year
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	NON-HAZARDOUS	1. Generator's US			Manifest Document No.	2. Page of			21 ~	1	4
	WASTE MANIFEST 3. Generator's Name and Mailing Address				G-0048		1		11.		
Ī	BJ Serives			•							
	2401 Sivley 4. Generator's Phone (Artesia NM										
	5. Transporter 1 Company Name		6.	US EPA ID Nu	ımber						
	Valley Construction	, 1		N/A		1					
	7. Transporter 2 Company Name		8. i	US EPA ID No							in the second
	Designated Facility Name and Site Address		10.	US EPA ID Nu		A. Tran	sporter's P	hone		_	
	Goo Yea Landfarm #N	M-01-0015				B. Tran	sporter's P	hone 50	5-746-	2761	
	SE/4 OF SECTION 14,			TH		C. Facil	ity's Phone				
	RANGE 38 FAST, NMPM 11. Waste Shipping Name and Description	I, LEA COUN	NTY, NM			1	12. Cont		15-392- 13.	4898	14.
	11. Waste Shipping Name and Description						No.	Туре	Total Quantity	,	Unit (
	a. Non-exempt soils fr	om around	underg	round st	orage		1	Bull		_	S. C.
	tanks used as colle			m cleani	ng out		, .		21.	/	12
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A	c.										103.10%
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	d.										## ##
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	D. Additional Descriptions for Materials Listed Above	9				E. Hand	lling Codes	for Was	tes Listed At	ove	
	15. Special Handling Instructions and Additional Info	rmation									3220476
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	16. GENERATOR'S CERTIFICATION: I certify the m	aterials described abo	ove on this ma	nifest are not sub	ject to federal regula	ations for re	porting prop	er dispos	al of Hazardoi	ıs Wast	e.
	Printed/Typed Name	,	Sig	nature				_	Month	Day	Year
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T R A	17. Transporter 1 Acknowledgement of Receipt of Me	ateriais	Sig	nature	1		1		Month	Day	Year
RANSPORTER	VAHEY GUST,	<u> </u>		Dec	Elydis	ait			[-2]	13	19%
O R	18. Transporter 2 Acknowledgement of Receipt of Mi	aterials	1 2.							•	
ER	Printed/Typed Name		Sig	nature					Month .	Day	Year
	19. Discrepancy Indication Space	<u></u>	l .								
F											
A											1
L	20. Facility Owner or Operator: Certification of receip	t of waste materials	s covered by	this manifest ex	cept as noted in It	tem 19.					
ΙΤΥ	20. Facility Owner or Operator: Certification of receip COUNCE LAND FARM Printed/Typed Name MAX W.NUSEON		······································								
1	Printed/Typed Name		Sig	nature	12				Month	Day /	Year
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ORIGINAL - RETURN TO GENERATOR

ORIGINAL - RETURN TO GENERATOR

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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US		Manifest Document No. G-0019	2. Page 1			2	2.3	<u> </u>
A	3.	Generator's Name and Mailing Address BJ Serives	<u> </u>								
İ		2401 Sivley		4							
Ш		Generator Artbestia, NM .									
	5.	Transporter 1 Company Name Valley Construction		6. US EPA ID	Number						S.
	7.	Transporter 2 Company Name		8. US EPA ID							
	9.	Designated Facility Name and Site Address		10. US EPA ID	Number	A. Transp	orter's Pl	hone			
		Goo Yea Landfarm #NM				B. Transp			-746-2	2761	
		SE/4 OF SECTION 14,				C. Facility	y's Phone	•			y.
	11	RANGE 38 EAST, NMPM,	LEA COUNT	<u> </u>	· · · · ·	1	12. Conta		- 392-4		14.
		Waste Shipping Name and Description					No.	Туре	Tota Quan	al	Unit Wt/Val
II.	a.	Non-exempt soils fro	m around u	nderground sto	orage _.		1 B	ulk	~>~	_	
		tanks used as collec truck used in oilfie	ld servici	s irom cleanir Nog	ng out	Ì			22	> 5	
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l	d.										
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	D.	Additional Descriptions for Materials Listed Abov	e			E. Handli	ng Codes	for Wast	tes Listed	Above	
	15	. Special Handling Instructions and Additional Info	rmation					_			
	16	GENERATOR'S CERTIFICATION: I certify the or	naterials described abo	ove on this manifest are not s	subject to federal regula	ations for rep	orting prop	er disposa	al of Hazaro	dous Was	te.
		Printed Typed Name		Signature	111 4	, <u> </u>	/		Montt	Day	13/
Ţ	17	Transporter 1 Acknowledgement of Receipt of M	-i						مين ا	- 17 - 7	
TRANSPORTER		Printed/Typed Name		Signature	Denjagn	~ <	P		Ment	Day	137
S P O	18	Transporter 2 Acknowledgement of Receipt of M	aterials		rengassu	1	and	₾	10		1/4
R T E		Printed/Typed Name		Signature					Month	Day	Year
F	19	Discrepancy Indication Space								1.	1
F											
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Ļ		Facility Owner or Operator: Certification of receip	ot of waste materials	s covered by this manifest	except as noted in It	tem 19.	-				
Ϋ́	\vdash	Printed Typed Name MAX U. NUDSUN	UNTARI	Signature /	1 1				Month	n Day	Year 🗧
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ORIGINAL - RETURN TO GENERATOR

Please print or type (Committee) (12 pire) (previous) NON-HAZARDOUS WASTE MANIFEST 1. Generator's US EPA ID No. WASTE MANIFEST 3. Generator's Name and Mailing Address PL Sori years PL Sori years	10000#3
	da 1A
3. Generator's Name and Mailing Address	•
2401 Sivley	
4. Generator's Artesia, NM	•
5. Transporter 1 Company Name 6. US EPA ID Number	
Valley Construction N/A 7 Transporter 2 Company Name 8. US EPA ID Number	
7. Transporter 2 Company Name 8. US EPA ID Number	
9. Designated Facility Name and Site Address 10. US EPA ID Number A. Transporter's Phone	
Goo Yea Landfarm #NM-01-0015 B. Transporter's Phone	
Goo Yea Landfarm #NM-01-0015 SE/4 OF SECTION 14 TYMINSHIP 11 SOFTH C. Facility's Phone	505-746-2761
SE/4 OF SECTION 14, TOWNSHIP 11 SOUTH RANGE 38 EAST, NMPM, LEA COUNTY, NM C. Facility's Phone	505 000 1000
11. Waste Shipping Name and Description	
No. Typ	Total Unit
a. Non-exempt soils from around underground storage 1 Bul	
Non-exempt soils from around underground storage 1 Bull tanks used as collection basins from cleaning out	720
truck used in oilfield sequicing	
G b. E	
L · · L ·	
E	
285 d.	
d. D. Additional Descriptions for Materials Listed Above E. Handling Codes for Waterials Listed Above	<u> </u>
D. Additional Descriptions for Materials Listed Above	Vastes Listed Above
15. Special Handling Instructions and Additional Information	
16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disc. Printed/Typed Name Signature 17. Transporter 1 Acknowledgement of Receipt of Materials	posal of Hazardous Waste.
Printers/Typed Name Signature	Month Day Year
V Diane GKIFFIN Men Stress	12/446
T Transporter 1 Acknowledgement of Receipt of Materials	
	Month Day Year
Printed/Typed Name VAlley Const. Signature Beyonin Fasce	2 14 96
AN Printed/Typed Name VAIVEY Const. 18. Transporter: 2 Acknowledgement of Receipt of Materials Respectively. Signature Signature Signature Signature Signature Signature	
TT Printed/Typed Name Signature	Month Day Year
19. Discrepancy Indication Space	
T40 1	
20. Facility Owner or Operator: Centification of receipt of waste materials covered by this manifest except as noted in Item 19.	
1 600-Ba Land Farm	Month Day V
	Month Day Year

Plat	50 P	rint or type signed for use at ellis (12 olich) typewriter)					#	<i>20</i>		00d#	#	3 <i>‡[</i> /
	nut d	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US			Manifest Document No. G-0017	2. Page			21.6	2	
A	4.	Generator's Name and Mailing Address BJ Serives 2401 Sivley Generators Presia, NM										
Bross	5.	Transporter 1 Company Name		6. I	US EPA ID N							
	_	Valley Construction			N/A	<u> </u>	 					
		Transporter 2 Company Name		8. 				-				
	9.	Designated Facility Name and Site Address		10.	US EPA ID N	umber	<u> </u>	sporter's Ph				
		Goo Yea Landfarm #N								-746-27	51_	
		SE/4 OF SECTION 14, RANGE 38 EAST, NAMPM,					C. Facil	lity's Phone		-392-489	20	
			TEA COUNT	I, IMI	· · · · ·		1	12. Conta		13.	5 0	14.
	11	. Waste Shipping Name and Description						No.	Туре	Total Quantity],	Unit Wt/Vol
	a.	Non-exempt soils fro	m around u	ndergro	und stor	age			ulk			
	٠.	tanks used as collect								71.1		<u>,</u>
T T		truck used in oilfie				-				جا البح	. /	
GE	b.									_		
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ER	-											
A	C.											
OR									. 1			ľ
	d.											-
and a	u.										Ì	
	D.	Additional Descriptions for Materials Listed Abo	ve				E. Hand	lling Codes	for Was	stes Listed Ab	ove	
The state of the s												
	15	. Special Handling Instructions and Additional Inf	ormation									
	16	. GENERATOR'S CERTIFICATION: 1 certity the	materials described ab	ove on this mar	nifeet are not sul	pject to federal regula	ations for re	eporting prop	er dispos	al of Hazardou	s Wast	e.
		Printed/Typed Name	71.	Sig	eture 2	o Mi	1/	•)		Month	Day	Year
V	<u> </u>	VIUNE GRITT	1/1		Julin	<u>L</u>	xxu			12	14	74
TRANSPORTER	17	Printed/Typed Name	Materials	Sigr	nature (exten	Sil	, I)	- Month	Dayı	Year A
300	18	Transporter 2 Acknowledgement of Receipt of N	Materials			1/3					φ	16
Ŕ	Ť	Printed/Typed Name		Sign	nature	— V				Month	Day	Year
E R												<u> </u>
FACI	19	Discrepancy Indication Space										
LIT	20	Printed/Typed Name	ipt of waste materials	s covered by t	his manifest e	xcept as noted in It	em 19.					
Y		Printed/Typed Name		Sigr	nature か. ↓ 20 . ∧	1 2.				Month	Day	Year
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625	Pris	NON-HAZARDOUS	1. Generator's US	S EPA ID No.	Manifest Degument No.	2. Page	e 1			
		WASTE MANIFEST			Document No. • G-0044	of	1		\mathcal{X}	シム:
A	3.	Generator's Name and Mailing Address								
		BJ Serives								
	4.	2401 Sivley Generator's Phone (Artesia, NM								
	5	Transporter 1 Company Name	-	6. US EPA ID	Number	+				
		Valley Construction	1	N/A						
	7.	Transporter 2 Company Name		8. US EPA ID	Number		•			
						1				
	9.	Designated Facility Name and Site Address		10. US EPA ID	Number		nsporter's P		OF 746 0	761
		Goo Yea Landfarm #1		11 0~~~			isporter's P		05-746-2	\pT
		SE/4 OF SECTION 14, RANGE 38 EAST, NMPA	, TOWNSHIP	TT SOUTH		U. raci	iiiyə FIIONE		05-392-4	898
	1	1. Waste Shipping Name and Description	T, LEA COU	ULI, IWI			12. Cont		13.	14.
	'	Empping name and boomphon					No.	Туре	Total Quantity	Unit Wt/Vol
	a.	HOLL CACHE DOLLD IN	rom around	underground:	storage		1	Bul	k	
		tanks used as colle	ection bas:	ins from clean	ning out				20.3	tal
	_	truck used in oilfi					· · ·	<u> </u>		· [· -]
G	b.									
N E										
R	c.									
A T O										
Ř	_									·
1	d.									
										.
	D	. Additional Descriptions for Materials Listed Above				E. Hand	dling Codes	for Was	tes Listed Abov	re
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	1									0
	19	5. Special Handling Instructions and Additional Infor	mation						·	
	15	5. Special Handling Instructions and Additional Infor	mation						·	
	1!	5. Special Handling Instructions and Additional Infor	mation						· · · · · · · · · · · · · · · · · · ·	
	1!	5. Special Handling Instructions and Additional Infor	mation						·	
	15	5. Special Handling Instructions and Additional Infor	mation							
	1!	5. Special Handling Instructions and Additional Infor	mation							
		5. Special Handling Instructions and Additional Infor		ove on this mani <i>je</i> s ; are not	subject to federal regula	ations for re	eporting prop	er dispos	al of Hazardous V	Waste.
		6. GENERATOR'S CERTIFICATION: I certify the ma	aterials described abo	ove on this manifest are not	subject to federal regula	ations for re	eporting prop	er dispos		Naste.
	10	6. GENERATOR'S CERTIFICATION: I certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certify the machine of the certification of the certificat	aterials described abo		subject to federal regula	ations for re	eporting prop	er dispos		
▼ TR	10	6. GENERATOR'S CERTIFICATION : I certify the material printed/Typed Name Selffin Company (1997) And Company	aterials described abo	Signature Llau	subject to federal regula	ations for re	eporting prop	er dispos	Month D	5196
TRAZO	10	6. GENERATOR'S CERTIFICATION: I certify the management of Receipt of Ma	aterials described abo		subject to federal regula	ations for re	eporting prop	er dispos	Month D	
▼ TRANSPO	10	G. GENERATOR'S CERTIFICATION: I certify the machine of the certific of the	aterials described abo	Signature Llau	subject to federal regula	ations for re	eporting prop	er dispos	Month D	5196
TRANSPORT	10	6. GENERATOR'S CERTIFICATION: I certify the management of Receipt of Ma	aterials described abo	Signature Llau	subject to federal regula	ations for re	eporting prop	er dispos	Month D	5196
₩ TRANSPORTER	10	GENERATOR'S CERTIFICATION: I certify the management of Receipt of Manag	aterials described abo	Signature Signature	subject to federal regula	ations for re	eporting prop	er dispos	Month D	ay Year
▼ TRANSPORTER	10	GENERATOR'S CERTIFICATION: I certify the management of Receipt of Manag	aterials described abo	Signature Signature	subject to federal regula	ations for re	eporting prop	er dispos	Month D	ay Year
F	18	G. GENERATOR'S CERTIFICATION: I certify the material printed/Typed Name 7. Transporter 1 Acknowledgement of Receipt of Material Printed/Typed Name 8. Transporter 2 Acknowledgement of Receipt of Material Printed/Typed Name	aterials described abo	Signature Signature	subject to federal regula	ations for re	eporting prop	er dispos	Month D	ay Year
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		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	EPA ID No.	Manifest Document No. • G-0043	2. Page 1 of	1		2	1.3	3
\blacktriangle	3.	Generator's Name and Mailing Address									
		BJ Serives									
	4.	Generator's Phone Artesia, NM									
		Transporter 1 Company Name		6. US EPA ID N							
П	,	Valley Construction	nn l								
ŢÌ	7.	Transporter 2 Company Name		8. US EPA ID N	lumber						
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	9.	Designated Facility Name and Site Address		10. US EPA ID N	Number	A. Transpor B. Transpor					
ļ		Goo Yea Landfarm	-			C. Facility's		ione r	505-746	-276	1
		SE/4 OF SECTION 1- RANGE 38 EAST, NM							505-392	-489	18
Ш	11.	Waste Shipping Name and Description		W-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1		12	Conta		13. Total		14. Unit
$\ $		·					No.	Туре	Quantity		Wt/Vol
	a.	Non-exempt soils :					1	Bu	k	2	,
		tanks used as col			ning out				21.	5 \$	ター
1	b.	truck used in oil:	tield servi	cing						_	
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	D.	Additional Descriptions for Materials Listed Above	е			E. Handling	Codes	for Was	tes Listed Ab	ove	
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	15. 	Special Handling Instructions and Additional Info	rmation								
1											
	L_	<u></u>									
1	16	GENERATOR'S CERTIFICATION: I certify the m	naterials described abo	/_	bject to federal regula	tions for reporti	ng prope	er dispos			е.
	_	Printed/Typed Name	-in	Signature	1110 4	7h.			Month 1 71	Day /	Year S/
▼ T	17.	Transporter 1 Acknowledgement of Receipt of M	aterials	- pres	me.		U				1100
R	Γ	Printed Typed Name		Signature	7)				Month	Day	Year
N S P	L_	Vafley Const.		Menn	fromen					<u>/১</u>	196
Q R	18.	Transporter 2 Acknowledgement of Receipt of M	aterials		<u> </u>	· · · · · · · · · · · · · · · · · · ·					
TRANSPORTER		Printed/Typed Name		Signature					Month	Day	Year
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FA											. [
C	_										
FACILITY	20	Facility Owner or Operator: Certification of receip	ot of waste materials	covered by this manifest of	except as noted in Ite	em 19.					
Y	-	Printed/Typed Name MAX W. N. D.S. W.		Signature					Month	 Day	Year
		MAX 12 NOTE (1)		JIL 7 C	Dut-	··-			121	/·5	191
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		1. Generator's US EPA ID I		Manifest Document No.	2. Page	1		22.	3	
A	3. Generator's Name and Mailing Address BJ Serives 2401 Sivley 4. Generator's Phone Sia, NM									
	5. Transporter 1 Company Name Valley Construction 7. Transporter 2 Company Name	6. 8.	US EPA ID N . N/A. . US EPA ID N	umber						
	9. Designated Facility Name and Site Address Goo Yea Landfarm #NN- SE/4 OF SECTION 14,	TOWNSHIP 11 SO	US EPA ID N		B. Tran	sporter's Pl sporter's Pl lity's Phone	hone 50	5-746-2 5-392-48		
	RANGE 38 EAST, NMPM, 11. Waste Shipping Name and Description a. Non-exempt soils from			orage		12. Conta		13. Total Quantity		14. Unit Wt/Vol
G	tanks used as collectruck used in oilfic	ction basins tr	om cleani	ng out				223	ta	
GENERATO	c.				-		·		<u>.</u>	
OR I	d						·	·	.	
	D. Additional Descriptions for Materials Listed Above				E. Hand	dling Codes	for Was	stes Listed Abo	. Dve	
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V	16. GENERATOR'S CERTIFICATION: I certify the ma	in	manies are not sul Signature	oject to federal regul	ations for re	eparting prop	er dispos		Wast	Year
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-ER FAC-	19. Discrepancy Indication Space		Signature 					Month i	Day ·	Year
U-L-TY	20. Facility Owner or Operator: Certification of receipt	of waste materials covered	by this manifest ex	xcept as noted in I	tem 19.			Month	Day	Year
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Page of</th><th>e 1 1</th><th></th><th>22</th><th>7 .</th></tr><tr><th>A</th><th>3.</th><th>Generator's Name and Mailing Address</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th></th><th>BJ Serives</th><th></th><th></th><th>•</th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th>4.</th><th>2401 Sivley Generator's Phone (Artesia NM</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th></th><th>Transporter 1 Company Name</th><th></th><th> 6.</th><th>US EPA ID N</th><th>Number</th><th>-</th><th></th><th></th><th></th><th></th></tr><tr><th></th><th>J .</th><th>Valley Construction</th><th>Ì</th><th></th><th>· N/A</th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th>7.</th><th>Transporter 2 Company Name</th><th></th><th>8.</th><th>US EPA ID N</th><th>Number</th><th></th><th></th><th></th><th></th><th>2</th></tr><tr><th>П</th><th></th><th></th><th></th><th><u> </u></th><th></th><th><u> </u></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th></th><th>9.</th><th>Designated Facility Name and Site Address</th><th>1</th><th>10.</th><th>US EPA ID N</th><th>Number</th><th>1</th><th>nsporter's P</th><th></th><th></th><th></th></tr><tr><th></th><th> </th><th>Goo Yea Landfarm #NM-</th><th>-01-0015</th><th></th><th></th><th></th><th>B. Tran</th><th>sporter's P</th><th>hone 50</th><th>5-746-27</th><th>61</th></tr><tr><th></th><th></th><th>SE/4 OF SECTION 14, 7</th><th></th><th></th><th>H</th><th></th><th>C. Faci</th><th>lity's Phone</th><th>9</th><th></th><th></th></tr><tr><th></th><th><u> </u></th><th>RANGE 38 EAST, NMPM,</th><th>LEA COUNT</th><th>TY, NM</th><th>· · ·</th><th><u> </u></th><th><u></u></th><th>12. Cont</th><th>50</th><th>5-392-48</th><th>98 14.</th></tr><tr><th></th><th> 11</th><th>. Waste Shipping Name and Description</th><th></th><th></th><th></th><th></th><th></th><th>No.</th><th>Type</th><th>Total Quantity</th><th>Unit Wt/Vol</th></tr><tr><th></th><th>a.</th><th>Non amount soils for</th><th></th><th></th><th></th><th></th><th></th><th></th><th> ''- </th><th>quantity</th><th>VAD AOI</th></tr><tr><th></th><th>a.</th><th>Non-exempt soils from tanks used as collect</th><th></th><th></th><th></th><th></th><th></th><th>1</th><th>Bulk</th><th>77 7</th><th>1 4</th></tr><tr><th></th><th></th><th>truck used in oilfie</th><th></th><th></th><th>i Credill</th><th>.r.g Out</th><th></th><th></th><th>. 1</th><th>22.7</th><th>1/2</th></tr><tr><th>G</th><th>b.</th><th></th><th> </th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>5</th></tr><tr><th>GENERAT</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>E</th><th>_</th><th></th><th></th><th></th><th></th><th></th><th></th><th><u> </u></th><th><u> </u></th><th>·</th><th></th></tr><tr><th>A</th><th>C.</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>O R</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>i</th><th>d.</th><th></th><th></th><th></th><th></th><th></th><th></th><th>ļ</th><th> </th><th>· · ·</th><th></th></tr><tr><th></th><th>J u.</th><th>•</th><th></th><th></th><th></th><th></th><th></th><th> </th><th> </th><th></th><th></th></tr><tr><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th> . </th><th></th><th></th></tr><tr><th></th><th>D.</th><th>Additional Descriptions for Materials Listed Above</th><th></th><th></th><th></th><th></th><th>E. 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GENERATOR'S CERTIFICATION: I certify the mate</th><th>mais described abov</th><th></th><th>natue</th><th>ubject to rederal regul</th><th>anons for re</th><th>eporting pro</th><th>per aispos</th><th></th><th>Waste. Pay <u>Year</u></th></tr><tr><th>V</th><th>١,</th><th>Diane (JPIFF</th><th>-/1/</th><th>Sigi</th><th>I lu</th><th>aul 1</th><th>LL</th><th></th><th>····</th><th>2.Y</th><th>5-7%</th></tr><tr><th>Ţ</th><th>17</th><th>. Transporter 1 Acknowledgement of Receipt of Mate</th><th>erials</th><th></th><th>\wedge</th><th></th><th>~~~</th><th>10</th><th></th><th></th><th>- 1- 4</th></tr><tr><th>TRANSPORTER</th><th>Γ</th><th>Printed/Typed/Name</th><th><u> </u></th><th>Sign</th><th>nature</th><th></th><th>)</th><th>-1</th><th></th><th>Month D</th><th>ay Year</th></tr><tr><th>Sp</th><th></th><th>VALLEY ONS</th><th></th><th></th><th>Phe</th><th>supo</th><th>us</th><th>ef</th><th></th><th>121/</th><th>5 196</th></tr><tr><th>Ó</th><th>18</th><th>. Transporter 2 Acknowledgement of Receipt of Mate</th><th>erials</th><th>_</th><th></th><th></th><th></th><th></th><th></th><th></th><th>. ()</th></tr><tr><th>Ĕ</th><th></th><th>Printed/Typed Name</th><th></th><th>Sig</th><th>nature</th><th>/</th><th></th><th></th><th></th><th>Month D</th><th>ay Year</th></tr><tr><th>R</th><th>-</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>ĺ</th><th>19</th><th>Discrepancy Indication Space</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>į</th></tr><tr><th>F</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>A C I</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></tr><tr><th>Ļ</th><th>20</th><th>). Facility Owner or Operator: Certification of receipt o</th><th>f waste materials</th><th>covered by</th><th>this manifest e</th><th>except as noted in I</th><th> tem 19.</th><th></th><th></th><th></th><th></th></tr><tr><th>T</th><th> </th><th>600 4la Land 70</th><th></th><th></th><th></th><th>,</th><th></th><th></th><th></th><th></th><th>117.418 117.418</th></tr><tr><th>Y</th><th></th><th>Printed/Typed Name</th><th></th><th>Sig</th><th>nature</th><th>1 7</th><th></th><th></th><th></th><th>Month D</th><th>ay Year</th></tr><tr><th></th><th></th><th>MAY W. HUDGO</th><th>ر ب</th><th> </th><th>mafa</th><th>e Selse</th><th>-</th><th></th><th></th><th>12/</th><th>5786</th></tr><tr><th>5.773</th><th>4.77.25</th><th>to the control of the</th><th></th><th></th><th></th><th></th><th>200</th><th>MANAGE V 64. A. 180</th><th>OUT TOURSDAY</th><th>venerales a company a company</th><th>The second second second</th></tr></tbody></table>
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ì					•			,	12:50	7	
Ple	150	print or type esigned for use an elite-(12-pitch) (ypgwrits).				4	///		Zoni	4	39
	1923	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US	S EPA ID No.	Manifest Document No. . G~0046	2. Page	1		2	l	7 .
A		Generator's Name and Mailing Address BJ Serives 2401 Sivley Generator's Phartesia, NM									
ST		Transporter 1 Company Name		6. US EPA ID N							
Opening.	-	Valley Constructi Transporter 2 Company Name	on	8. US EPA ID N		-					-
	′	Transporter 2 Company Name		1							
	9.	Designated Facility Name and Site Address		10. US EPA ID N	lumber	A. Trar	sporter's Pl	none			
		Goo Yea Landfarm							05-746-	-276	1
		SE/4 OF SECTION 1				C. Faci	lity's Phone		OF 200	400	
	-	RANGE 38 EAST, NM	PM, LEA COU	JNTY, NM	· · · · · · · · · · · · · · · · · · ·	<u></u>	12. Conta		5 05-392- 13.	403	14.
	'	Waste Shipping Name and Description					No.	Туре	Total Quantity		Unit Wt/Vol
1	a	21000 0220012 0 00000	from around	d underground s	torage		1	Bul	k		
		tanks used as col			ing out				21.7	7	2
	<u> </u> -	truck used in oil	field servi	cing			· ·	·			
G	b.										
N E R							<u> </u>			·	
A	c.										İ
OR							!				ļ
	a										
	-										
	<u> </u>									لن	
		. Additional Descriptions for Materials Listed Abo	we			E. Han	aling Codes	for was	ites Listed Ab	ove	
	1	5. Special Handling Instructions and Additional In	formation								
	1	6. GENERATOR'S CERTIFICATION: 1 certify the	materials described ab	ove on this manifest are not su	bject to federal regula	ations for r	eporting prop	er dispos	al of Hazardou	s Wası	e
		Printed/Typed Name	21/11/	Signature	10 4	, , , , , ,			Month	Day	O'
V	 1	7. Transporter 1 Acknowledgement of Receipt of	Materials	- Facer		7			100	<u>ر ب</u>	17.80
製R	r	Printed/Typed Name		Signature	a 10th	14			Month	Day	Year
S	_	Valley Cost		Lem	2 - Juffy	9 5_			لحط	<u>es</u> -	186
P	1	8. Transpoter 2 Acknowledgement of Receipt of	Materials								
ANSPORTER		Printed/Typed Name		Signature	//				Month	Day	Year
FACIL	1	9. Discrepancy Indication Space									
LIT	2	0. Facility Owner or Operator: Certification of rece	ipt of waste materials	s covered by this manifest e	except as noted in It	em 19.					
Y	1	Printed/Typed Name		Signature	. ?	_			Month	Day	Year
3		MAX W. HUDSON			Suto				2	15	126
. 7	Ç.10				· · · · · · · · · · · · · · · · · · ·			42140		300	

ORIGINAL - RETURN TO GENERATOR

						•	1000	140
Pien (For	se print or type: m. desegned. (or disso on silier (12-ptich), ypgiswiter)		·	•	#185	1	130 pr	
	NON-HAZARDOUS WASTE MANIFEST	1. Generator's US E	EPA ID No.	Manifest Document No. G-0040	2. Page 1 of 1	Bles File and Control	19.8	> .
A	Generator's Name and Mailing Address P. Fornivos		,					
	BJ Serives 2401 Sivley 4. Generator's Phone (Artesia, NM		- -					761 898 14. Unit W/Vol
	5. Fransporter 1 Company Name	6.	_					
	7. Transporter 2 Company Name	ON L 8.	. US EPA ID N					
	Designated Facility Name and Site Address	10	0. US EPA ID N	Number	A. Transporter's P			
	Goo Yea Landfarm (SE/4 OF SECTION 1	••			B. Transporter's P C. Facility's Phone		505-746-2	761
	RANGE 38 FAST, NM			<u> </u>	12. Cont		505-392-48	898
	11. Waste Shipping Name and Description			a	No.	Type	Total Quantity	Unit Wt/Vol
	a. Non-exempt soils	from around	underground	storage	1	Bu	lk	220
	tanks used as col			ning out		<u>.</u>	. 19.8.	12-
G E	b.							ST ST ST ST ST ST ST ST ST ST ST ST ST S
GENER						<u> </u>		- Frederick
A	c.							
O R I					<u> </u>	<u> </u>		
	d.							S Farmer
					Te o cara Cada	<u> </u>		
	D. Additional Descriptions for Materials Listed Above)			E. Handling Codes	3 TOT VVas	tes Listed Above	500 1000 1000 1000 1000 1000 1000 1000
	İ							
	15. Special Handling Instructions and Additional Infor	rmation			<u> </u>			- 134
	16. GENERATOR'S CERTIFICATION: Locatify the ma	aterials described above		ubject to federal regula	itions for reporting prop	per dispos		
	Printed/Typed Name GRIFF	in	Signature	eul J	with		Month Day	5 192
Ţ	17. Transporter 1 Acknowledgement of Receipt of Ma	aterials						
TRANSPORTER	Printed/Typed Name	<u> </u>	Signature	1 Jun	<u> </u>		Month Day	Year
OR R	18. Transporter/2 Acknowledgement of Receipt of Ma	aterials	/	<u> </u>	5			
ER	Printed/Typed Name		Signature				Month Day	Year
	19. Discrepancy Indication Space							
F								
AC-								
L	20. Facility Owner or Operator: Certification of receip	t of waste materials o	overed by this manifest o	except as noted in Ite	em 19.			Year
Υ	Printed/Typed Name MAXW. HUDSON	<u>- </u>	Signature Mak w	1.05_			Month Day	Year
l High	MAXW. HUCSON		mat w	· WW72		en e	<u> </u>	<u> </u>

Pla (For	se p	nint or type esigned for use on elite (12-pitch) (typewriter)		<u> </u>		#1	/3	,	loac	1#	41
		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US E	PA ID No.	Manifest Document No. . G-0042	2. Page of	1		12.	3	. 1
A	4.	Generator's Name and Mailing Address BJ Serives 2401 Sivley Generator's PAntesia, NM		÷			·		-		
	5.	Transporter 1 Company Name Valley Construction	6. n		O Number						
	7.	Transporter 2 Company Name	8.	. US EPA I	O Number						
	9.	Designated Facility Name and Site Address	1(O Number	A. Tran	sporter's Pl	none			
		Goo Yea Landfarm #							05-746-	276	1
		SE/4 OF SECTION 14 RANGE 38 EAST, NMP				C. Facil	ity's Phone)5-392-	-489	В
	11	. Waste Shipping Name and Description			<u>-</u>		12. Conta	ainers	13. Total		14. Unit
	a.	Non-exempt soils f	rom around 1	mderground	storage		No. 1	Type Bull	Quantit	у	Wt/Vol 5
	a.	tanks used as coll truck used in oilf	ection basir	ns from clea		į		Dai	13.	3	ter
GEN	b.										n an week of
R	C.							·		-	
A T O R	.										ž
	d.										
	D.	Additional Descriptions for Materials Listed Above	e			E. Hand	lling Codes	for Was	tes Listed A	bove	
	15	5. Special Handling Instructions and Additional Info	ormation								
	16	GENERATOR'S CERTIFICATION: I certify the m	naterials described above		subject to federal regula	ations for re	porting prop	er dispos			
V	J	Phinted/Typed Name () (144	IN	Signature	ue Di	uf			Month 2	Day S	19°C
Į.	17	 Transporter 1 Acknowledgement of Receipt of M Printed/Typed Name 	laterials	Signature OV			1		- Month	Day	
ANNP	6	/n/ky - Can	4	Signature	Thus	Ph	mua	Ú.	Month	/ <u>5</u>	
ORTER	18	 Transporter 2 Acknowledgement of Receipt of M Printed/Typed Name 	laterials	Signature					Month	Day	Year
Ė		Times Types Name		Oignature					·	L .	·
FAC-		Discrepancy Indication Space			· · · · · · · · · · · · · · · · · · ·						
LITY	20	Distant Turned Name				em 19.					
		Printed/Typed Name MAX W. N. D. D. So	.) .	Signature Make	, Suft				Month	Day	Year 96
			ODIONAL	RETURN TO C				12-	BLS-C5	Rev.	4/94

8:00 Am

Plea (For	e pr	int or type signed for use on elite (12-pipt) typewriter).				#1:	Le	rad :	4	2
		NON-HAZARDOUS WASTE MANIFEST	1. Generator's US		Manifest Gewood No.	2. Page 1 of 1		2:	2_'	9
A	4.	Generator's Name and Mailing Address BJ Serives 2401 Sivley Generator's Andresia, NM								
	5.	Transporter 1 Company Name Valley Construction			D Number					
	7.	Transporter 2 Company Name		1	D Number					
	9.	Designated Facility Name and Site Address Goo Yea Landfarm #NN SE/4 OF SECTION 14, RANGE 38 EAST, NMFM	A. Transport B. Transport C. Facility's F	er's Phone 5(Phone	05-746-2 05-392-4					
	11.	Waste Shipping Name and Description					Containers lo. Type	13. Total Quantity	v	14. Unit Wt/Vol
	а.	Non-exempt soils fro tanks used as collectruck used in oilfice	ction b <mark>asi</mark> r	as from clear		1	1 21	1	4	
GENE	b.									SIGNICAL SECTION
ERATO	C.									
R	d.								•	
	D.	Additional Descriptions for Materials Listed Above				E. Handling (Codes for Wa	astes Listed Al	bove	1964
	15.	Special Handling Instructions and Additional Info	mation							
	16	GENERATOR'S CERTIFICATION: I certify the m	aterials described abo	ove on this manifest are no	ot subject to federal regu	ations for reporting	g proper disp	osal of Hazardo	us Was <i>Day</i>	te. Year
Ť	17	DIANE THE TRANSPORTER ACKNOWLEDGEMENT OF MICHAEL	- / //	- De	ane X	reff	<u>~</u>	12	15	120
FRAZWPORFER	17.	Printed/Typed Name	A	Signature	ill Me	erleg		Month	Day /5	Year 1 96
	18	. Transporter 2 Acknowled gement of Receipt of M. Printed/Typed Name	aterials	Signature				Month .	Day	Year
F	19	. Discrepancy Indication Space		<u> </u>						1
ACILI	20	. Facility Owner or Operator: Certification of receip	t of waste materials	covered by this manife	est except as noted in t	 tem 19.				7 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
† Y		Printed/Typed Name		Signature			 	Month	Day_	Year,
		FOACE ASK.	ORIGINAL	- RETURN TO (GENERATOR			2-BLS-C5	Rev	4/94

APPENDIX E ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY FORMS



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 10, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott Lesikar **Brown & Caldwell**

2710 Stemmons Freeway

1100 Tower North Dallas, Texas 75207

PROJECT NAME:

BJ Services

2401 Sivley

Artesia, NM 88210

SAMPLE I.D.:

Tank #1

SAMPLE DATE:

November 07, 1995

SAMPLE TIME:

3:10PM

SAMPLE RECEIVED:

November 08, 1995

TIME RECEIVED:

9:10AM

SAMPLE COLLECTED BY:

Customer

SAMPLE NUMBER:

53641

 RESULTS:	B. Lautian	Observed
<u>Parameter</u>	Detection <u>Limits (mg/kg)</u>	Observed Concentration (mg/kg)
	METALS	
Arsenic, Total	1.0	<1.0
Barium, Total	0.25	2300
Cadmium, Total	0.20	<0.20
Chromium, Total	0.25	0.71
Lead, Total	0.50	1.2
Mercury, Total	0.020	<0.020
Selenium, Total	0.75	<0.75
Silver, Total	0.35	<0.35
	TPH & BTXE	
Total Petroleum Hydrocarbons (Diesel)	50	1902
Benzene	0.100	0.120
Toluene	0.100	0.920
Ethyl Benzene	0.100	1.1
Xylene (Total)	· 0.300	5.5

Local: (214) 727-1123 Long Distance: (800) 228-ERMI FAX: (214) 727-1175

Mr. Scott Lesikar Page 2 November 10, 1995

SAMPLE NUMBER:

53641

Quality Control Information

<u>Parameter</u>	Sample Preservation	EPA <u>Method</u>	<u>C.V.%</u>		andard viation	Spike Recovery%	Date of Analyses	Time of Analyses	Analyst
Metals Digesti	on - ICP	3050			•		11/08/95	12:00PM	J. Marconi
Metals Digesti	on - Mercury	7471					11/08/95	10:00AM	J. Marconi
Arsenic	Cool to 4°C	6010	2.7	±	0.03	102	11/08/95	4:13PM	D. Bernhard
Barium	Cool to 4°C	6010	9.7	±	0.11	98	11/08/95	4:13PM	D. Bernhard
Cadmium	Cool to 4°C	6010	0.5	±	0.004	96	11/08/95	4:13PM	D. Bernhard
Chromium	Cool to 4°C	6010	1.0	±	0.01	99	11/08/95	4:13PM	D. Bernhard
Lead	Cool to 4°C	6010	1.4	±	0.01	98	11/08/95	4:13PM	D. Bernhard
Mercury	Cool to 4°C	7471	0.3	±	0.001	96	11/08/95	11:05AM	J. Marconi
Selenium	Cool to 4°C	6010	2.2	土	0.02	92	11/08/95	5: 25 PM	D. Bernhard
Silver	Cool to 4°C	6010	0.7	±.	0.003	97	11/08/95	4:13PM	D. Bernhard
Matrix Spikes:						**			
TPH - Gas	Cool to 4°C	8015	0.4	土	0.018	91	11/09/95	12:37PM	K. Richmond
Benzene	Cool to 4°C	8020	3.4	±	0.0012	113	11/09/95	12:37PM	K. Richmond
Toluene	Cool to 4°C	8020	3.2	±.	0.0009	94	11/09/95	12:37PM	K. Richmond
Ethyl Benzene	Cool to 4°C	8020	1.7	±	0.0005	101	11/09/95	12:37PM	K. Richmond
Xylene	Cool to 4°C	8020	2.3	±	0.0008	107	11/09/95	12:37PM	K. Richmond
Surrogate:			•						
Bromofluoro	benzene		N/A		N/A	101			

Respectfully submitted,

Odl K. Birun

Kendall K. Brown

President

Prepared By S. Doster SA Reviewed By Shelly Weems



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 10, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott Lesikar Brown & Caldwell

2710 Stemmons Freeway

1100 Tower North Dallas, Texas 75207

PROJECT NAME:

BJ Services

2401 Sivley

Artesia, NM 88210

SAMPLE I.D.:

Tank #2

SAMPLE DATE:

November 07, 1995

SAMPLE TIME:

3:20PM

SAMPLE RECEIVED:

November 08, 1995

TIME RECEIVED:

9:10AM

SAMPLE COLLECTED BY:

Customer

SAMPLE NUMBER:

53642

RESULTS:

<u>Parameter</u>	Limits (mg/kg)	Concentration (mg/kg)
· ·	TPH & BTXE	
Total Petroleum Hydrocarbons (Diesel)	5.0	8.0
Benzene	0.010	<0.010
Toluene	0.010	<0.010
Ethyl Benzene	0.010	<0.010
Xylene (Total)	0.030	<0.030

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike Recovery%	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
Matrix Spikes: TPH - Gas	Cool to 4°C	8015	0.4	± 0.018	91	11/09/95	1:14PM	K. Richmond
Benzene	Cool to 4°C	8020	3.4	± 0.0012	113	11/09/95	1:14PM	K. Richmond
Toluene	Cool to 4°C	8020	3.2	± 0.0009	94	11/09/95	1:14PM	K. Richmond
Ethyl Benzene Xylene	Cool to 4°C Cool to 4°C	8020 8020	1.7 2.3	± 0.0005 ± 0.0008	101 107	11/09/95 11/09/95	1:14PM 1:14PM	K. Richmond K. Richmond
7.7.00	000110 4 0	3020	2.0	_ 0.0000		50, 50	// ///	

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Scott Lesikar Page 2 November 10, 1995

SAMPLE NUMBER:

53642

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
Surrogate: Bromofluoro	benzene		N/A	N/A	88			

Respectfully submitted,

call Kiburun

Kendali K. Brown

President

Prepared By S. Doster Share Reviewed By Shelly Weems



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 10, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott Lesikar Brown & Caldwell

2710 Stemmons Freeway

1100 Tower North Dallas, Texas 75207

PROJECT NAME:

BJ Services

2401 Sivley

Artesia, NM 88210

SAMPLE I.D.:

Tank #3

SAMPLE DATE:

November 07, 1995

SAMPLE TIME:

3:30PM

SAMPLE RECEIVED:

November 08, 1995

TIME RECEIVED:

9:10AM

SAMPLE COLLECTED BY:

Customer

SAMPLE NUMBER:

53643

RESULTS:

Xylene (Total)

<u>Parameter</u>	Detection <u>Limits (mg/kg)</u>	Observed Concentration (mg/kg)
	PH & BTXE	
Total Petroleum Hydrocarbons (Diesel)	5.0	128
Benzene	0.010	<0.010
Toluene	0.010	<0.010
Ethyl Benzene	0.010	<0.010

Quality Control Information

0.030

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike Recovery%	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
Matrix Spikes: TPH - Gas Benzene Toluene	: Cool to 4°C Cool to 4°C Cool to 4°C	8015 8020 8020	0.4 3.4 3.2	± 0.018 ± 0.0012 ± 0.0009	91 113 94	11/09/95 11/09/95 11/09/95	3:58PM 1:51PM 1:51PM	K. Richmond K. Richmond K. Richmond
Ethyl Benzene Xylene	e Cool to 4°C Cool to 4°C	8020 8020	1.7 2.3	± 0.0005 ± 0.0008	101 107	11/09/95 11/09/95	1:51PM 1:51PM	K. Richmond K. Richmond

Local: (214) 727-1123 Long Distance: (800) 228-ERM)

FAX: (214) 727-1175

0.044

Mr. Scott Lesikar Page 2 November 10, 1995

SAMPLE NUMBER:

53643

Quality Control Information (Continued)

Parameter	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	<u>Analyst</u>
Surrogate: Bromofluoro	obenzene		N/A	N/A	72			

Respectfully submitted,

Kendall K. Brown

President

Prepared By S. Doster Share Reviewed By Shelly Weems



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 21, 1995



REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott E. Lesikar Brown & Caldwell

2710 Stemmons Freeway

1100 Tower North Dallas, TX 75207

PROJECT NAME:

BJ Services, FWT Closure

Artesia, NM

PROJECT NUMBER:

2988-25

SAMPLE I.D.:

See Below

SAMPLE DATE:

November 15-16, 1995

SAMPLE RECEIVED:

November 17, 1995

TIME RECEIVED:

9:30AM

SAMPLE COLLECTED BY:

Scott Lesikar - Customer

SAMPLE NUMBER:

See Below

RESULTS:

Sample Number	Sample I.D.	TPH-Diesel (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylene (mg/kg)
54039	T -1, FC	1059	<0.050	<0.050 <0.050	0.145 <0.050	1.3 0.280
 54040 54041	T -3, FC T -2, FC	276 213	<0.050 <0.050	<0.050	<0.050	0.465
Detection Limits		25	0.050	0.050	0.050	0.150
54042	T -1-3, NC	5045	<0.500	<0.500	< 0.500	9.2
Detectio	n Limits	250	0.500	0.500	0.500	1.5
54043	T -1-3, SC	652	<0.250	< 0.250	<0.250	0.825
Detectio	n Limits	125	0.250	0.250	0.250	0.750
 54044	T -1-3, EC	52	< 0.050	< 0.050	< 0.050	< 0.150
54045	T -1-3, WC	81	< 0.050	<0.050	< 0.050	< 0.150
Detectio	n Limits	25	0.050	0.050	0.050	0.150

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery %</u>	Date of <u>Analyses</u>	<u>Analyst</u>
TPH Matrix Spikes:	Cool to 4°C	8015				11/20/95	K. Richmond
TPH - Diesel			0.7	± 0.0365	106		

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Scott E. Lesikar Page 2 November 21, 1995

SAMPLE NUMBERS:

54039-54045

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	_	Standard Deviation	Spike <u>Recovery %</u>	Date of Analyses	<u>Analyst</u>
Sample Numbers:	54039-54044		,					
Benzene	Cool to 4°C	8020	0.3	±	0.0001	119	11/20/95	K. Richmond
Toluene	Cool to 4°C	8020	1.5	±	0.0005	111	11/20/95	K. Richmond
Ethyl Benzene	Cool to 4°C	8020	1.0	±	0.0004	114	11/20/95	K. Richmond
Xylene	Cool to 4°C	8020	2.1	\pm	0.0008	119	11/20/95	K. Richmond
Sample Number:	54045							
Benzene	Cool to 4°C	8020	0.6	±	0.0002	112	11/20/95	K. Richmond
Toluene	Cool to 4°C	8020	0.8	±	0.0002	111	11/20/95	K. Richmond
Ethyl Benzene	Cool to 4°C	8020	3.0	±	0.0010	113	11/20/95	K. Richmond
Xylene	Cool to 4°C	8020	8.0	±	0.0028	116	11/20/95	K. Richmond
Sample Number:	54039							
Surrogate:								
Bromofluorobenze	ene		N/A		N/A	106		
Sample Number:	54040							
Surrogate:	•							
Bromofluorobenze	ene		N/A		N/A	84		
Sample Number:	54041							
Surrogate:								
Bromofluorobenze	ene		N/A		N/A	95		
Sample Number:	54042							
Surrogate:								
Bromofluorobenze	ene		N/A		N/A	105		
Sample Number:	54043							
Surrogate:								
Bromofluorobenze			N/A		N/A	111		
Sample Number:	54044							
Surrogate:						100		
Bromofluorobenzo	ene		N/A		N/A	100		

Mr. Scott E. Lesikar Page 3 November 21, 1995

SAMPLE NUMBERS:

54039-54045

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery %</u>	Date of <u>Analyses</u>	<u>Analyst</u>
Sample Number: Surrogate:	54044				_,		
Bromofluorobenze Sample Number: Surrogate:	ne 54045		N/A	N/A	74		
Bromofluorobenze Sample Number:	ne 5 4045		N/A	N/A	122		
Surrogate: Bromofluorobenze	ne		N/A	N/A	96		

Respectfully submitted,

Call L. Suren

Kendall K. Brown President

Prepared By Shelly Pope Reviewed By Shelly Weems

cc: Tim Jenkins - Brown & Caldwell



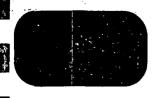
Bethany Tech Center
400 W. Bethany, Suite 190
Allen, Texas 75002
214-727-1123 (Local) * 800-228-ERMI (Long Distance)
214-727-1175 (Fax)

Name: POW	Coldwell			0	Ž Com Com Com	nents:	st st Stript	00 wh	Comments: Print ON white paper four results to S.Lesikar (Ziy)630-9866	0-9866
Address: 2710 Stemmons	Twy, 1100	Noct	>		also	faxto	たな	akins (also fax to T. Jenkins (713)759-0952	-0952
city: Mallas	State: TX	Zip Code:	» 75Z	07	TAT:	Nor	Normal (X)	Ž	Expedite	
Telephone: (214) (30-000)		Fax Number:	ber:(214)	1630-9866			_		(Call for Pricing)	Pricing)
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City:	State:	Zip Code			sel			A		
Telephone:		Fax Number:	ber:		ie.			<u>CR</u>		
Purchase Order Number: 2988-2				0				(R		
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101 SIVI					15	<u>ک</u> ک		eta		
city: Artesia	States) NM	A Zip Code			 30	8		Me		
oler: Scott Lesikor	Signature: ACOUTE	Feriko		0) {	ΣX		al		
ERM) Field Sample	Sample	# 0!		Je Ty	2H	TE	Н	ote		
Use Only I.D. Di	Date Time Matrix 9 9 1 3 0	Bottles	Preservative	Comp. Grab	TA	B	ρ	4		
11 21 PEONS	1.159\$ 09:00 50:1		2sh7	<	<u></u>	<	_	<		
54040 T-3 FC 111	11595 16:30 50:1		くよっ	<	<	<	~			
54041 T-2, FC 11-11	1-15-95 17:00 Soil	_	72h>	<	<	<	1			
54042 T-1-3 NC	1.16-45 10:00 Soil		2,45	<	<	\	<	<		
54043 T-1-3'SC W	45 10:15 Soil		2007	<	<u>_</u>	<	~			
54044 T-1-3, EC			2,42	<	<	<	<			
54045 F-1-3, WC	-		7400	<	<	<	<	.7		
					Ī					
									-	
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				1	F			<u>, </u>		!
Relinquished By: OWW YWWO	₩ Date: [[-]6-13	I Ime: I):W	Hecelved by.	y. Jewox				Date:	e. IIIII S	Time:
Relinquished By:	Date:	! Ime:	Received by:); 				Date.	; c	Time:
Relinquished By:	Date:	Time:	Heceived B		?			Date		Time. CO 2
Method of Shipment:	Date:	Received for ERMI By: C	r ERMI By:/	711000	THOME (Date	Date:\\\\\\\	lime:U~L2

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See Reverse for Terms and Conditions

WHITE: Or



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 27, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott E. Lesikar Brown & Caldwell

2710 Stemmons Freeway

1100 Tower North Dallas, TX 75207

PROJECT NAME:

BJ Services, FWT Closure

Artesia, NM

PROJECT NUMBER:

2988-25

SAMPLE I.D.:

See Below

SAMPLE DATE:

See Below

SAMPLE TIME:

See Below

SAMPLE RECEIVED:

November 17, 1995

TIME RECEIVED:

9:30AM

SAMPLE COLLECTED BY:

Scott Lesikar - Customer

SAMPLE NUMBER:

See Below

RESULTS:

	Sample Number	Sample I.D.	Sample Date	Sample Time	Corrosivity (units)
	54039	T -1, FC	11/15/95	11:30AM	8.0
	54040	T -3, FC	11/15/95	4:30PM	7.9
r 4	54041	T -2, FC	11/15/95	5:00PM	7.6
,	54042	T -1-3, NC	11/16/95	10:00AM	7.5
	54043	T -1-3, SC	11/16/95	10:15AM	7.7
	54044	T -1-3, EC	11/16/95	10:30AM	7.4
	54045	T -1-3, WC	11/16/95	10:45AM	7.5
	Detection	•			0.1

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA (1) <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	Analyst
Corrosivity	None Required	9045	0.0	± 0.00	N/A	11/20/95	11:00AM	M. McGaugh

Local: (214) 727-1123

Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Scott E. Lesikar Page 2 November 27, 1995

SAMPLE NUMBERS:

54039-54045

- * Using the criteria of Corrosivity characteristics, these samples of waste are not hazardous.
- (1) EPA. 1986. Test Methods for Evaluating Solid Waste. SW-846, 3rd Edition.

Respectfully submitted,

UK. Brown

Kendall K. Brown

President

Prepared By Shelly Weems Reviewed By S. Doster



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

November 27, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott E. Lesikar **Brown & Caldwell**

2710 Stemmons Freeway

1100 Tower North Dallas, TX 75207

PROJECT NAME:

BJ Services, FWT Closure

Artesia, NM

PROJECT NUMBER:

2988-25

SAMPLE I.D.:

T-1, FC

SAMPLE DATE:

November 15, 1995

SAMPLE TIME:

11:30AM

SAMPLE RECEIVED:

November 17, 1995

TIME RECEIVED:

9:30AM

SAMPLE COLLECTED BY:

Scott Lesikar - Customer

SAMPLE NUMBER:

54039

RESULTS:

	Detection	Observed
<u>Parameter</u>	<u>Limits (mg/kg)</u>	Concentration (mg/kg)
		•

METALS

Arsenic, Total Barium, Total Cadmium, Total Chromium, Total Lead, Total

1.0 0.25 0.20 0.25 0.50

210 0.87 7.2 4.3

1.5

Mercury, Total Selenium, Total

0.020 0.75 0.35

< 0.020 < 0.75 < 0.35

Silver, Total

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of Analyses	<u>Analyst</u>
Metals Diges	tion - ICP	3050		- 3	-	11/21/95	10:00AM	J. Marconi
•	tion - Mercury	7471				11/20/95	12:30PM	D. Bernhard
Arsenic	Cool to 4°C	6010	1.5	± 0.01	93	11/21/95	3:04PM	J. Marconi
Barium	Cool to 4°C	6010	2.6	± 0.03	94	11/21/95	3:04PM	J. Marconi
Cadmium	Cool to 4°C	6010	1.5	± 0.01	92	11/21/95	3:04PM	J. Marconi
Chromium	Cool to 4°C	6010	1.8	± 0.02	94	11/21/95	3:04PM	J. Marconi
Lead	Cool to 4°C	6010	0.2	± 0.002	97	11/21/95	3:04PM	J. Marconi

Local: (214) 727-1123

Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Scott Lesikar Page 2 November 27, 1995

SAMPLE NUMBER:

54039

Quality Control Information (Continued)

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike <u>Recovery%</u>	Date of Analyses	Time of <u>Analyses</u>	Analyst
Mercury	Cool to 4°C	7471	0.2	± 0.001	106	11/20/95	1:46PM	J. Marconi
Selenium	Cool to 4°C	6010	2.2	± 0.02	97	11/21/95	3:04PM	J. Marconi
Silver	Cool to 4°C	6010	0.1	± 0.0006	95	11/21/95	3:04PM	J. Marconi

Respectfully submitted,

Oll Libron

Kendall K. Brown

President

Prepared By Shelly Weems Prepared By S. Doster Sh



Bethany Tech Center • Suite 190 400 W. Bethany Rd. . Allen, Texas 75013

November 27, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Scott E. Lesikar **Brown & Caldwell**

2710 Stemmons Freeway

1100 Tower North Dallas, TX 75207

PROJECT NAME:

BJ Services, FWT Closure

Artesia, NM

PROJECT NUMBER:

2988-25

SAMPLE I.D.:

T-1-3, NC

SAMPLE DATE:

November 16, 1995

SAMPLE TIME:

10:00AM

SAMPLE RECEIVED:

November 17, 1995

TIME RECEIVED:

9:30AM

SAMPLE COLLECTED BY:

Scott Lesikar - Customer

SAMPLE NUMBER:

54042

RESULTS:

<u>Parameter</u>	<u>Limits (mg/kg)</u>	Concentration (mg/kg)
	METALS	
Arsenic, Total	1.0	1.7
Barium, Total	0.25	210
Cadmium, Total	0.20	0.57
Chromium, Total	0.25	7.8

Chromium, Total Lead, Total Mercury, Total Selenium, Total Silver, Total

< 0.75 0.75 0.35 < 0.35

Detection

0.50

0.020

Quality Control Information

<u>Parameter</u>	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of Analyses	<u>Analyst</u>
Metals Diges	tion - ICP	3050		-,		11/21/95	10:00AM	J. Marconi
•	tion - Mercury	7471				11/20/95	12:30PM	D. Bernhard
Arsenic	Cool to 4°C	6010	1.5	± 0.01	93	11/21/95	3:36PM	J. Marconi
Barium	Cool to 4°C	6010	2.6	± 0.03	94.	11/21/95	3:36PM	J. Marconi
Cadmium	Cool to 4°C	6010	1.5	± 0.01	92	11/21/95	3:36PM	J. Marconi
Chromium	Cool to 4°C	6010	1.8	± 0.02	94	11/21/95	3:36PM	J. Marconi
Lead	Cool to 4°C	6010	0.2	± 0.002	97	11/21/95	3:36PM	J. Marconi

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Observed

9.5

<0.020

Mr. Scott Lesikar Page 2 November 27, 1995

SAMPLE NUMBER:

54042

Quality Control Information (Continued)

Parameter	Sample <u>Preservation</u>	EPA <u>Method</u>	<u>C.V.%</u>	Standard Deviation	Spike <u>Recovery%</u>	Date of <u>Analyses</u>	Time of <u>Analyses</u>	<u>Analyst</u>
Mercury	Cool to 4°C	7471	0.2	± 0.001	106	11/20/95	1:47PM	J. Marconi
Selenium	Cool to 4°C	6010	2.2	± 0.02	97	11/21/95	3:36PM	J. Marconi
Silver	Cool to 4°C	6010	0.1	± 0.0006	95	11/21/95	3:36PM	J. Marconi

Respectfully submitted,

Oall Ki burun

Kendall K. Brown

President

Prepared By Shelly Weems Reviewed By S. Doster



Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

December 27, 1995

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana St., Suite 2500

Houston, Texas 77002

PROJECT NAME:

BJ Services, FWT Closure

Artesia, NM

PROJECT NUMBER:

2988-25

SAMPLE I.D.:

T-1-3, NC

SAMPLE DATE:

November 16, 1995

SAMPLE TIME:

10:00AM

SAMPLE RECEIVED:

November 17, 1995

Regulatory

TIME RECEIVED:

9:30AM

SAMPLE COLLECTED BY:

Scott Lesikar - Customer

SAMPLE NUMBER:

54042

RESULTS:

<u>Limits</u>	Limits	<u>Concentration</u>	
TCLP M	IETALS		
<5.0	0.20	<0.20	
<100.0	0.05	0.40	
<1.0	0.04	<0.04	
<5.0	0.05	<0.05	
<5.0	0.10	<0.10	
<0.2	0.004	< 0.004	
<1.0	0.15	<0.15	
<5.0	0.07	<0.07	
	Limits TCLP M <5.0 <100.0 <1.0 <5.0 <5.0 <5.0 <1.0	TCLP METALS <5.0 0.20 <100.0 0.05 <1.0 0.04 <5.0 0.05 <5.0 0.10 <0.2 0.004 <1.0 0.15	

Detection

Quality Control Information

	Sample	EPA ⁽¹⁾		Stand	dard	Spike	Date of	Time of	
<u>Parameter</u>	<u>Preservation</u>	<u>Method</u>	<u>C.V.%</u>	Devia	<u>ation</u>	Recovery%	<u>Analyses</u>	<u>Analyses</u>	<u>Analyst</u>
TCLP Metals Extraction		1311			78.4		12/22/95	5:30PM	D. Bernhard
Metals Diges	Metals Digestion - ICP 3010			12/22/95	10:00AM	D. Bernhard			
Metals Diges	tion - Mercury	7470					12/27/95	12:00PM	D. Bernhard
Arsenic	Cool to 4°C	6010	1.3	± (0.01	101	12/22/95	4:47PM	D. Bernhard
Barium	Cool to 4°C	6010	0.3	± (0.003	97	12/22/95	4:47PM	D. Bernhard
Cadmium	Cool to 4°C	6010	0.04	± (0.0004	93	12/22/95	4:47PM	D. Bernhard
Chromium	Cool to 4°C	6010	0.3	± (0.002	99	12/22/95	4:47PM	D. Bernhard
Lead	Cool to 4°C	6010	2.4	± (0.02	95	12/22/95	4:47PM	D. Bernhard

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Obcorred

Mr. Tim Jenkins Page 2 December 27, 1995

SAMPLE NUMBER:

54042

Quality Control Information (Continued)

	<u>Parameter</u>	Sample <u>Preservation</u>	EPA (1) Method	<u>C.V.%</u>	Standard <u>Deviation</u>	Spike <u>Recovery%</u>	Date of Analyses	Time of <u>Analyses</u>	Analyst
N	Mercury	Cool to 4°C	7470	0.8	± 0.0008	97	12/27/95	3:15PM	D. Bernhard
	Selenium	Cool to 4°C	6010	0.3	± 0.003	96	12/22/95	4:47PM	D. Bernhard
	Silver	Cool to 4°C	6010	0.7	± 0.003	102	12/22/ 95	4:47PM	D. Bernhard

Using the criteria of Metals Toxicity characteristics, this sample of waste is not hazardous.

(1) EPA. 1986. Test Methods for Evaluating Solid Waste. SW-846, 3rd Edition.

Respectfully submitted,

and K. Buna

Kendall K. Brown

President

Prepared By Shelly Weems Reviewed By L'Cena Glover



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. • Allen, Texas 75013

January 3, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown & Caldwell 1415 Louisiana Houston, TX 77002

PROJECT NAME:

BJ Services Artesia, NM

PROJECT NUMBER:

2988-26

SAMPLE I.D.:

See Below

SAMPLE DATE:

See Below

SAMPLE TIME:

See Below

SAMPLE RECEIVED:

December 29, 1995

TIME RECEIVED:

9:00AM

SAMPLE COLLECTED BY:

TLJ - Customer

SAMPLE NUMBER:

See Below

RESULTS:

	Sample Number	Sample I.D.#	Sample <u>Date</u>	Sample <u>Time</u>	TPH -Diesel (mg/kg)
ER .	55520	10' X 10' North	12/27/95	2:00PM	16
	55521	15' @ N. Face	12/27/95	12:00PM	54
4	Detection	Limits			5.0

Quality Control Information

•		Sample	EPA		Standard	Spike	Date of	Time of	
)	<u>Parameter</u>	<u>Preservation</u>	<u>Method</u>	<u>C.V.%</u>	<u>Deviation</u>	Recovery%	<u>Analyses</u>	Analyses	<u>Analyst</u>
	TPH - Diesel Sample Number	Cool to 4°C r: 55 520	8015	14.4	± 0.613	85	01/02/96	6:17PM	K. Richmond
	Surrogates: Trifluorotoluen	e .		N/A	N/A	80			

Local: (214) 727-1123 Long Distance: (800) 228-ERMI

FAX: (214) 727-1175

Mr. Tim Jenkins Page 2 January 3, 1996

SAMPLE NUMBERS:

55520-55521

Quality Control Information (Continued)

Sample Parameter Preservation

EPA Standard Method Deviation

N/A

Spike Recovery%

Date of **Analyses** Time of **Analyses**

<u>Analyst</u>

Sample Number:

Trifluorotoluene

55521 Surrogates:

N/A

85

Respectfully submitted, Call Ko Birun

Kendall K. Brown

President

Prepared By Shelly Pope Reviewed By Shelly Weems



Environmental Laboratories

Bethany Tech Center • Suite 190 400 W. Bethany Rd. . Allen, Texas 75013

January 3, 1996

REPORT OF:

Soil Analysis

REPORT TO:

Mr. Tim Jenkins Brown and Caldwell

1415 Louisiana Street, Suite 2500

Houston, Texas 77002

SAMPLE I.D.:

15' @ N. Face*

SAMPLE DATE:

December 27, 1995

SAMPLE TIME:

12:00PM

SAMPLE RECEIVED:

December 29, 1995

TIME RECEIVED:

9:00AM

SAMPLE METHOD:

Grab

SAMPLE COLLECTED BY:

TLJ - Customer .

SAMPLE NUMBER:

55521

RESULTS:

	Hegulatory	Detection	Observed
<u>Parameter</u>	Limits	<u>Limits</u>	Concentration

Flashpoint

IGNITABILITY >60°C (140°F) 0.5°C

CORROSIVITY

pH ≥ 2.0 pH units 0.1 units

8.1 units

pH ≤12.5 pH units

REACTIVITY

Cyanides, mg/kg	≤250	1.0	<1.0 (1)
Sulfides, mg/kg	≤500	4.0	7.8

	TCLP N	METALS	
Arsenic, mg/l	<5.0	0.20	<0.20
Barium, mg/l	<100.0	0.05	1.0
Cadmium, mg/l	<1.0	0.04	< 0.04
Chromium, mg/i	<5.0	0.05	<0.05
Lead, mg/l	<5.0	0.10	< 0.10
Mercury, mg/l	<0.2	0.004	< 0.004
Selenium, mg/l	<1.0	0.15	<0.15
Silver, mg/l	<5.0	0.07	<0.07

TCLP VOLATILE ORGANICS

<0.5	0.003	< 0.003
<0.5	0.003	< 0.003
<100.0	0.003	< 0.003
<6.0	0.003	< 0.003
<7.5	0.003	< 0.003
	<0.5 <100.0 <6.0	<0.5 0.003 <100.0 0.003 <6.0 0.003

FAX: (214) 727-1175 Local: (214) 727-1123 Long Distance: (800) 228-ERMI

Mr. Tim Jenkins Page 2 January 3, 1996

SAMPLE NUMBER:

55521

<u>Parameter</u>	Regulatory Limits	Detection <u>Limits</u>	Observed <u>Concentration</u>
	TCLP VOLATIL	ES (Continued)	
1,2-Dichloroethane, mg/l	<0.5	0.003	< 0.003
1,1-Dichloroethylene, mg/l	<0.7	0.003	< 0.003
Methyl ethyl ketone, mg/l	<200.0	0.010	<0.010
Tetrachloroethylene, mg/l	<0.7	0.003	< 0.003
Trichloroethylene, mg/l	<0.5	0.003	< 0.003
Vinyl chloride, mg/l	<0.2	0.005	<0.005
i	TCLP SEMIN	OLATILES	
2,4-Dinitrotoluene, mg/l	<0.13	0.003	< 0.003
o-Cresoi, mg/l	<200.0	0.003	< 0.003
m-Cresol, mg/l	<200.0	0.003	< 0.003
p-Cresol, mg/l	<200.0	0.003	< 0.003
Cresol, mg/l	<200.0	0.003	< 0.003
Hexachlorobenzene, mg/i	<0.13	0.003	< 0.003
Hexachlorobutadiene, mg/l	<0.5	0.003	<0.003
Hexachloroethane, mg/l	<3.0	0.003	< 0.003
Nitrobenzene, mg/l	<2.0	0.003	< 0.003
Pentachlorophenol, mg/l	<100.0	0.003	< 0.003
Pyridine, mg/l	<5.0	0.003	< 0.003
2,4,5-Trichlorophenol, mg/l	<400.0	0.003	<0.003
2,4,6-Trichlorophenol, mg/l	<2.0	0.003	< 0.003

Quality Control Information

	<u>Parameter</u>	Sample <u>Preservation</u>	EPA ⁽²⁾ Method	<u>C.V.%</u>		andard eviation	Spike <u>Recovery%</u>	Date of Analyses	Time of Analyses	<u>Analyst</u>
	Ignitability	None Required	7.1.2.2	N/A		Ň/A	N/A	01/03/96	10: 0 0AM	M. McGaugh
	Corrosivity	None Required	9045	0.0	\pm	0.00	N/A	01/03/96	12:30PM	M. McGaugh
Î	Reactivity									
	Cyanides	None Required	7.3.3.2	0.0	±	0.00	22	01/03/96	10:00AM	S. Freeman
	Sulfides	None Required	7.3.4.2	7.3	±	0.57	99	01/03/96	10:00AM	S. Freeman
	TCLP Metals									
•	Extraction		1311					12/29/95	5: 00PM	D. Bernhard
_	Metals Digestion	- ICP	3010					01/02/96	10:00AM	D. Bernhard
	Metals Digestion	- Mercury	7470					01/02/96	11:00AM	J. Marconi
II.										

Mr. Tim Jenkins Page 3 January 3, 1996

SAMPLE NUMBER:

55521

Quality Control Information (Continued)

Parameter	Sample Preservation	EPA (2) Method	<u>C.V.%</u>	_	tandard eviation	Spike Recovery%	Date of Analyses	Time of Analyses	Analyst
									
TCLP Metals							0.4.10.0.10.0		
Arsenic	Cool to 4°C	6010	0.2	±	0.002	101	01/02/96	2:40PM	D. Bernhard
Barium	Cool to 4°C	6010	0.4	±	0.004	93	01/02/96	2:40PM	D. Bernhard
Cadmium	Cool to 4°C	6010	8.0	±	0.007	97	01/02/96	2:40PM	D. Bernhard
Chromium	Cool to 4°C	6010	0.3	±.	0.003	99	01/02/96	2:40PM	D. Bernhard
Lead	Cool to 4°C	6010	1.1	±	. 0.01	101	01/02/96	2:40PM	D. Bernhard
Mercury	Cool to 4°C	7470	1.9	±	0.002	99	01/02/96	3:11PM	J. Marconi
Selenium	Cool to 4°C	6010	0.5	±	0.005	97	01/02/96	2:40PM	D. Bernhard
Silver	Cool to 4°C	6010	0.3 .	±	0.001	98	01/02/96	2:40PM	D. Bernhard
TCLP Volatiles	Cool to 4°C	8260					01/03/96	11:43AM	K. Richmond
ZHE Extraction		1311					01/02/96	5:15PM	K. Richmond
Matrix Spikes:			•						
Benzene			1.44	\pm	0.290	101			
Carbon Tetrac	chloride		1.16	\pm	0.262	113			
Chlorobenzer	ne		5.74	±	1.061	92			
Chloroform			4.31	士.	0.856	99			
1,4-Dichlorob	enzene.		2.37	\pm	0.516	109			
1,2-Dichloroe	thane		7.71	\pm	1.541	100			
1,1-Dichloroe	thylene		2.56	±	0.495	97			
Methyl ethyl k	etone		4.84	\pm	0.969	100			
Tetrachloroet	hylene		3.41	\pm	0.750	110			
Trichloroethyl	ene		2.21	±	0.495	112			
Vinyl chloride			11.71	±	2.256	96	•		
Surrogates:									
Fluorobenzer	ie		N/A		N/A	103			
Toluene-d ₈			N/A		N/A	102			
Bromofluorob	enzene		N/A		N/A	99			
TCLP									
SemiVolatiles	Cool to 4°C	8270					01/02/96	8:26PM	F. Coskey
Extraction		1311					12/29/95	5:00PM	D. Bernhard
Liquid-Liquid Ex	draction	3520			-> .		12/31/95	10: 1 5AM	E. Boateng
Matrix Spikes:									_
o-Cresol			7.0	\pm	8.80	60			
m-Cresol & p	-Cresol		4.0	\pm	7.76	93			
2,4,5-Trichlor	ophenol		12.0	\pm	18.04	73			
2,4,6-Trichlor	•		12.0		17.56	71			
Pentachlorop	henol		2.0	±	9.23	103			
1,4-Dichlorob	enzene		5.0	±	5.45	53			

Mr. Tim Jenkins Page 4 January 3, 1996

SAMPLE NUMBER:

55521

Quality Control Information (Continued)

2.5	<u>Parameter</u>	Sample <u>Preservation</u>		EPA (2) Method	<u>C.V.%</u>	Standar Deviatio	•	Date of Analyses	Time of Analyses	Analyst
į	TCLP	014- 490		2070			¥	04/00/00	0.00014	5.0 .1
Į,	SemiVolatiles Matrix Spikes:	Cool to 4°C		8270			•	01/02/96	8:26PM	F. Coskey
-	2,4,-Dinitrotolu	iene			7.0	± 12.25	91		•	
Ť.	Hexachlorobe	nzene			3.0	± 4.62	83	•		
<u> </u>	Hexachlorobut	tadiene			4.0	± 3.88	53		•	
	Hexachloroeth	ane			6.0	± 6.71	54			
	Nitrobenzene				3.0	± 3.95	62			
	Pyridine		•		2.0	± 2.08	46	*		
	Surrogates:	-								
1	2-Fluoropheno	ol			N/A	N/A	40			•
.7	Phenol-d ₅			,	N/A	N/A	90.			
	Nitrobenzene-	d ₅			N/A	N/A	59			•
	2-Fluorobiphe	nyl			N/A	· N/A	67 °			
	2,4,6-Tribromo	ophenol			N/A	N/A	110			
	Terphenyl-d ₁₄	ı			N/A	N/A	93			

- * Using the criteria of Ignitability, Reactivity, Corrosivity and Toxicity characteristics, this sample of waste is not hazardous.
- ** Not ignitable using the criteria applied for not a liquid sample. (Section 7.1.2.2)
- (1) < = Less than Detection Limit.
- (2) EPA. 1986. Test Methods for Evaluating Solid Waste. SW-846, 3rd Edition.

Respectfully submitted,

W. L. Burun

Kendall K. Brown

President

Prepared By S. Doster S. Reviewed By Shelly Weems N

Chain-of-Custody 002426

Page

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CLOSURE PLAN FIELD WASTE TANKS AND OLD STEEL BRINE TANKS

BJ SERVICES COMPANY, U.S.A.

ARTESIA, NEW MEXICO FACILITY

Prepared by

BROWN AND CALDWELL

October 26, 1995

TABLE OF CONTENTS

SECTION 1	INTRODUCTION	1-1
SECTION 2	SITE ASSESSMENT General Site Characteristics Preliminary Site Scoring Soil/Waste Characteristics	2-1
SECTION 3	SITE ASSESSMENT REPORTCleanup GoalsCleanup Alternatives	3-1
TABLES		
FIGURES		

LIST OF TABLES

Soil Cleanup Goals

LIST OF FIGURES

Site Location Map Site Plan

SECTION 1

INTRODUCTION

BJ Services has developed this closure plan for three (3) fiberglass field waste tanks and two (2) steel brine tanks for the facility in Artesia, New Mexico, for OCD approval. The Artesia facility is located in Eddy County, in the SE/4, Section 32, Township 16 South, Range 26 East. The facility address is 2401 Sivley, Artesia, New Mexico, 88210. A site location map and site plan map are attached as Figures 1 and 2, respectively.

The field waste collection system received wastewater from activities associated with oil and gas well servicing. The closure of the field waste collection system will include the removal of three field waste tanks. The field waste collection system is no longer in service.

The brine tanks are no longer is service. Closure of the brine tanks will include cleaning to remove crystalline salt, and disposal of metal tank parts.

This closure plan is prepared in general accordance with a guidance document prepared by the OCD entitled Unlined Surface Impoundment Closure Guidelines (February 1993), and the Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993). In accordance with these guidance documents, this closure plan contains the following elements:

- The procedures that will be used to collect soil verification samples for closure of the field waste tanks.
- The procedures that will be used to manage, remediate, or dispose of contaminated soil and groundwater.
- Reporting procedures that will be used to document the closure activities and obtain approval for final closure from the OCD.

SECTION 2

SITE ASSESSMENT

BJ Services will perform a site assessment to determine general site characteristics, soil/waste characteristics, and groundwater quality, if groundwater is encountered.

General Site Characteristics

Based on OCD guidance documents, BJ Services will determine the depth to groundwater, defined as the vertical distance from the lowermost contaminants to the seasonal high water elevation of the groundwater. Depth to groundwater will be determined by reviewing reports of previous groundwater investigations at the site and regional and local groundwater reports published by state and federal agencies such as the USGS and the New Mexico Bureau of Mines and Mineral Resources. Information on groundwater quality may also be researched through local and state agencies.

Depth to Groundwater:	Ranking Score:	
< 50 feet	20	
50 - 99 feet	10	
> 100 feet	0	

If necessary, BJ Services will determine the proximity of drinking water sources by performing a search of water wells within a one mile radius of the facility. The search would provide information (as available) such as the distance from the site to each well, well depth, water quality data and the purpose of the well.

Wellhead Protection Area:	Ranking Score:	
< 1000 feet from a water source, or;		
< 200 feet from a private domestic water source:		
Yes	20	
No	0	

The distance to nearby downgradient surface water bodies will be determined by review of a USGS topographic map for the area. Surface water bodies include rivers, creeks, ponds, lakes, irrigation canals and ditches. Site drainage patterns and off-site receptors of surface drainage will be determined from field observations and discussions with site personnel.

Distance to Surface Water Body:	Ranking Score:	
< 200 horizontal feet	20	
200 - 1000 feet	10	
> 1000 feet	0	

Preliminary Site Scoring

Groundwater is present at a depth of less than 50 feet below grade, and flow direction is east-southeast, determined from wells previously installed at the facility. Therefore, the site scoring procedure outlined above calls for a groundwater Ranking Score of 20, since the groundwater is less than 50 feet below the ground surface, and hence less than 50 ft. below the bottom of the tanks. BJ Services may confirm groundwater elevation and flow direction prior to tank removal and verification sampling by measuring water levels in the existing wells, if available.

The site ranking is greater than 19. This determination was made based on physical site characteristics as described above. According to the OCD guidance documents, a total ranking score of >19 yields action levels as outlined in the Site Assessment Report section, Table 1.

Soil/Waste Characteristics

Following tank removal, BJ Services will sample the soils beneath the field waste collection system. Soil samples will be collected from each of the excavation sidewalls, and from the base of the excavation at each tank footprint. The sidewall samples should be collected from the lower 1/3 of the excavation.

Based on visual observation, highly contaminated/saturated soils will be excavated for treatment or disposal, in accordance with the OCD guidance documents. Highly contaminated/saturated soils are those soils which contain observable free petroleum hydrocarbons or immiscible phases and gross staining. The immiscible phase may range from a free hydrocarbon to a sheen on any associated aqueous phase.

Unsaturated contaminated soils encountered during field waste tank removal will be evaluated and remediated in accordance with OCD guidance documents. Unsaturated contaminated soils are those that are not highly contaminated as described above, but contain measurable concentrations of contaminants.

Verification samples will be collected following the removal of the tanks. One sample from each tank footprint will be composited from five grabs taken from the 0 - 6 inch interval of soil from the excavation floor. Samples will be field composited and placed in jars. One sample from each sidewall of the field waste collection system excavation will also be composited from five grab samples collected from the lower 1/3 of the sidewall.

Samples will be collected with decontaminated sampling equipment, field composited, placed in labeled jars, and shipped on ice overnight using chain of custody procedures to the off-site laboratory. Decontamination fluids (non-toxic degreasers and water) will be collected for subsequent disposal by BJ Services. Decontamination solids will be placed on plastic and covered near the field waste collection system, pending the results of

sample analysis. Final disposition of the solids will be determined as part of the remedial evaluation included in the site assessment report.

The samples will be analyzed for TPH by EPA Method 8015 modified for diesel range organics, BTEX by EPA Method 8020, and pH. Two excavation samples, one bottom and one sidewall, will be selected for RCRA metals analysis. These RCRA samples will be chosen based on visual staining and the field-determined highest organic vapor measurements and/or corrosivity (pH) measurements.

In accordance with the OCD guidance documents, all highly contaminated/saturated soils encountered during tank removal will be remediated in-situ or excavated to the maximum extent practicable. Unsaturated contaminated soils may require remediation based on the general site characteristics obtained during the site assessment. These site characteristics will be used to determine the appropriate soil remediation levels using a risk based approach. Soils which are contaminated by petroleum constituents will be scored according to the ranking criteria presented in the OCD guidance document (depth to groundwater, distance to water sources, and distance to nearest surface water body). Soils contaminated with substances other than petroleum hydrocarbons may be required to be remediated based upon the nature of the contamination and its potential to impact fresh waters, public health and the environment (see Table 1).

Closure activities are planned to commence within 10 days of approval of this Closure Plan by the New Mexico Oil Conservation Division (NMOCD). The closure of tanks are planned to be completed within 14 days of start-up.

SECTION 3

SITE ASSESSMENT REPORT

The field procedures and analytical results documenting closure of the field waste and brine tanks will be presented in a site assessment report to the OCD within 20 days after field activities are completed. The sample results will be used in conjunction with the ranking score, to verify final closure determined according to the OCD closure guidance documents. BJ Services will present the ranking score in the site assessment report and propose further activities, such as additional investigation of groundwater or soil remediation, if needed.

The ranking score will establish the OCD recommended cleanup level for benzene, total BTEX, and TPH for those soils contaminated with petroleum constituents. If the site assessment indicates additional investigation or remediation is not necessary, the report will propose no further action and BJ Services will request approval for final closure of the site.

Cleanup Goals

Soil cleanup goals for the field waste collection system removal and excavation are listed below in Table 1.

Upon removal of the tanks as described above, BJ Services will determine the extent of the contaminated soils, if any, using results from the samples collected from the excavation. Once the sample analytical results are obtained, they will be compared to the cleanup goals for particular constituents. These cleanup goals are listed below in Table 1.

If soil analytical results exceed clean-up goals, BJ Services may propose alternate cleanup levels for OCD approval or propose no further action by conducting a risk-based evaluation of the site assessment data.

Cleanup Alternatives

If remediation is necessary, feasible cleanup alternatives will be presented in the site assessment report. Alternatives include further excavation and off-site disposal, landfarming or other in-situ treatment such as vapor sparging, bioremediation, and bioattenuation. BJ Services will not commence further remediation until the OCD has reviewed and approved the recommended cleanup alternatives.

TABLES

Table 1
Soil Cleanup Goals

Contaminant (mg/kg)	Regulatory Remediation Action Levels
Benzene	*10 ppm
BTEX, Total	*50 ppm
ТРН	*100 ppm
pH (Std. Units) for Corrosivity	2.0 <ph measured<12.5<="" td=""></ph>
RCRA Metals (if necessary):	
Arsenic	<5.0 (mg/L TCLP)
Barium	<100.0 (mg/L TCLP)
Cadmium	<1.0 (mg/L TCLP)
Chromium	<5.0 (mg/L TCLP)
Lead	<5.0 (mg/L TCLP)
Mercury	<0.2 (mg/L TCLP)
Selenium	<1.0 (mg/L TCLP)
Silver	<5.0 (mg/L TCLP)

^{*} These limits based on a ranking score >19, and are outlined in the NMOCD guidance documents.

FIGURES

