3R - 254

REPORTS

DATE:

Oct. 15, 1998

TIERRA ENVIRONMENTAL COMPANY, INC.
P.O. Drawer 15250
Farmington, New Mexico 87401
Phone 505-334-8894 Fax 505-334-9024
E-Mail teci@cyberport.com

October 20, 1998

OCT 27 1998

Mr. Bill Olsen
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

RE: REQUEST FOR CLOSURE, BISTI CRUDE OIL STORAGE TANK FACILITY, Section 5, T-25 N, R-12 W, approximately six miles southwest of the El Paso Chaco Plant in San Juan County, New Mexico, owned by Bloomfield Refining Company eg. Gary Williams Energy.

Dear Mr. Olsen:

Enclosed herewith please find the complete report on voluntary cleanup activities conducted at the above described location by Tierra Environmental Company, Inc. ,on behalf of our client Gary Williams Energy.

A site assessment was preformed on September 29, 1998 by Tierra personnel. The rating sheet is enclosed. The assessment concluded that the depth to any usable groundwater was in excess of 100 feet and the distance to a surface water body was in excess of 1000 feet. As you may recall in December of 1995 Tierra successfully closed a tank battery at Bisti Station in the same general area four miles north east this location. In that report we relied on a 1992 report from El Paso Natural Gas Company wherein they had drilled three deep well ground beds to a depth of 505 feet. The drillers log indicated that groundwater was encountered at a depth of 120 feet. As the area surrounding this site is consistent with that of Bisti Station geologically, we have relied on that same report justifying the distance to groundwater. Enclosed with the report is a location map identifying this site as well as the Bisti Station site.

Therefore based on the preceding information including the site assessment we respectfully request that this site be considered for final closure pursuant to OCD regulations at 5000 ppm TPH, 10 ppm Benzene and 50 ppm BTEX.

Please call me if you have any questions or need additional information.

Thank you for your professional assistance in this matter. It is always a pleasure to work with you.

Sincerely,

Phillip C. Nobis
President

xc: Chris Hawley GWE
D. Foust, OCD Aztec
Final Report

TIERRA ENVIRONMENTAL COMPANY, INC
P.O. DRAWER 15250
FARMINGTON, N.M. 87401

"Working to save the environment, our legacy to our children"

VOLUNTARY CLEAN-UP OF CRUDE OIL STORAGE TANK FACILITY

SECTION 5, T-25 N, R 12 W, SAN JUAN COUNTY, NEW MEXICO

FOR

GARY WILLIAMS ENERGY

TABLE OF CONTENTS

VOLUNTARY TANK REMOVAL AND ENVIRONMENTAL CLEANUP

BISTI CRUDE OIL STATION

Completed October 15, 1998

1.0 SUMMARY OF ACTIVITY

The Bisti Crude Oil Station is located at Section 5, T-25N, R-12 W in San Juan County, New Mexico approximately six miles southwest of the El Paso Chaco Plant. The site is owned by Gary Williams Energy. It consists of one ten thousand barrel steel crude oil storage tank, a manifold and abandoned lact unit location and several abandoned underground piping networks.

Tierra Environmental Company, Inc.(TECI), after consulting with Gary Williams Energy (GWE) environmental representative Chris Hawley, New Mexico Oil Conservation Division (OCD) environmental representative D. Foust and U.S. Bureau of Land Management (BLM) representative Rubin Sanchez the following scope of work was presented. The tank was to be steam cleaned and purged of any explosive potential. The tank rinsate would be removed to the TECI, OCD permitted landfarm facility located on Crouch Mesa in San Juan County N.M. for remediation. The tank would then be dismantled, all piping and manifolds were to be removed and any contaminated soil would be excavated and removed also to the TECI landfarm.

On September 17, 1998 TECI personnel deployed to prepare the site. Part of the berm on the west side of the location was removed in order to allow access by sub contractors equipment. A temporary sump was prepared with the backhoe at the tank clean out and the access roadway was repaired where a large wash out had occurred. A sample of the tank sludge was obtained for TCLP analysis.

On September 21, 1998, TECI Environmental Specialist Tim Nobis accompanied by SCAT Hot Wash and Safety Alliance deployed to the site. A TECI Frac tank, which would hold the storage

tank rinsate was delivered by Sunco Trucking. Clean out operations began. The clean out was completed on September 23, 1998. Following the clean out the floor of the tank was examined. It appeared to be intact and in good condition.

On that same date the rinsate was removed from the site to the TECI landfarm where it was placed in a Frac Tank pending the results of a TCLP analysis.

On September 28, 1998, TECI Environmental Specialist Tim Nobis accompanied by Valley Scrap Metal and their large hydraulic shears deployed to the site. Tank dismantling operation commenced. Safety Alliance was also present to monitor for explosive hazards while Valley Scrap Metal using a cutting torch made the first incision into the tank. The large hydraulic shears were then used to dismantle the tank. A site assessment following tank removal was then conducted. That operation was completed on October 1, 1998.

On October 5, 1998, TECI Environmental Specialist Tim Nobis accompanied by Doug Foust Construction deployed to the site. Excavation of the under ground piping system commenced. All underground piping was removed and stockpiled by October 7, 1998. Some contamination was discovered along the east border of location. It was removed and stockpiled on site. Contamination was also discovered on the northwest side of where the tank had been located. It was also excavated and stockpiled on site. The excavation did not exceed ten vertical feet. A total of two-hundred and fifty cubic yards of contaminated soil was excavated at the site and removed to the TECI landfarm. The excavations were backfilled using mostly the existing berm material. Prior to backfilling, five closure soil samples were obtained from the excavations to be analyzed for TPH and BTEX. The site was graded and compacted using a front end wheel loader.

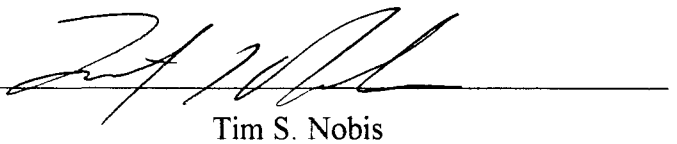
On October 15, 1998 the closure sample analysis was received. The samples identified as Gary 1 & Gary 2 were composite samples taken from the bottom and sides of the excavation on the northwest side of the tank. The samples identified as Tank Line 2 through 4 were taken from the excavated piping area where a small amount of contamination was found. (See attached site

diagram).

Laboratory Results:

	TPH	BTEX	Benzene
Gary 1	845 mg/kg	750 ug/kg	ND
Gary 2	325 mg/kg	1520 ug/kg	53.8 ug/kg
Tank Line 3	2.7 mg/kg	182 ug/kg	ND
Tank Line 4	ND	130 ug/kg	29.1 ug/kg
Tank Line 5	ND	186 ug/kg	29.0 ug/kg

As is evidenced by the laboratory analysis the site has been cleaned up to meet OCD standards of less that 5,000 ppm TPH, 50 ppm BTEX and 10 ppm Benzene.

By: 

Tim S. Nobis

Environmental Specialist

Tierra Environmental Company, Inc.

October 20, 1998

TIERRA ENVIRONMENTAL COMPANY, INC.
P.O. Drawer 15250
Farmington, New Mexico 87401
Phone 505-334-8894 Fax 505-334-9024
E-Mail teci@cyberport.com

October 19, 1998

NOTICE OF CHANGE OF ADDRESS

Dear Valued Customer:

Due to a new business arrangement our company has a new accounts receivable address.

Please send all payments due to:

Tierra Environmental Company, Inc.
75 Remittance Drive, Suite 1235
Chicago, IL 60675-1235

Our business address for all other correspondence remains:

Tierra Environmental Company, Inc.
P.O. Drawer 15250
Farmington, NM 87401

Thank you for your cooperation.

Sincerely,

Phillip C. Nobis
President

2.0

SITE ASSESSMENT

SITE ASSESSMENT

2.0

On September 29, 1998 a site assessment was completed in accordance with OCD Environmental Regulations section 7d-IV-A-2a.

1.)	Depth to Groundwater	Ranking Score
	> 100 Feet	0
2.)	Wellhead Protection Area	N/A
3.)	Distance to Surface Water Body	
	> 1000 Horizontal Feet	0
Total Ranking Score		0

Degree of remediation required:

Benzene	10ppm
BTEX	50ppm
TPH	5000ppm

Note: All contaminated soil exceeding the parameters stated above was excavated and removed from the site to the Tierra Landfarm. The depth of contamination identified was less than ten feet. A substantial layer of sandstone was encountered at that depth after all contamination had been removed.

EPNG
Natural Gas Company

P. O. BOX [illegible]
FARMINGTON

William J. Lemay
New Mexico Oil Conservation Division
310 Old Santa Fe Trail
Santa Fe, NM 87501

July 14, 1993

RECEIVED
JUL1 9 1993
OIL CON. DIV.
DIST. 3

RE: Discharge Plan GW-71
Chaco Canyon Gas Processing Plant
San Juan County, New Mexico

Dear Mr. Lemay:

El Paso Natural Gas Company is requesting modification of the Chaco Gas Plant Discharge Plan (EPNG would like to modify the Discharge Plan to allow the continued use of the unlined ponds for non-contact waste water, and to waive the requirement to test the non-contact drain system. The current Discharge Plan requires the closure of all unlined ponds and the testing of all drain lines in excess of 25 years old. These requirements were designed to ensure that ground water would not be adversely impacted in the vicinity of the plant. Based upon information obtained from wells drilled on Chaco Plant property, EPNG believes continued use of the unlined ponds and drain lines for non-contact water, poses no threat to ground water.

This view is based upon the following:

1. Quality of the non-contact waste water exceeds that of the ground water.
   In 1992 EPNG drilled three deep well ground beds to a depth of 505 feet in the northwest corner of Chaco Plant property. Water analysis were performed on all three deep well ground beds, A, B, and C cooling towers, and ponds 1 - 5. This analysis shows that discharge water quality exceeds that of the ground water. (See tab A)

2. At least 50 feet of unsaturated low permeability shale is present above the regional aquifer at the plant site.
   The driller's logs show the plant site resting on less than 50 feet of sandy deposits above the lower shale unit of the Nacimento Formation. A 15 to 20 foot thick sandstone of the Ojo Alamo Formation was encountered below the shale unit. (See tab B)

3. Depth to ground water of 120 feet.
   The drillers logs did not indicate a shallow unconfined aquifer. Water was first encountered at a depth of 120 feet in the Ojo Alamo Formation. No other water bearing zones were reported to the total depth of 505 feet. (See tab B)

4. Nearest water well to the plant is over a mile away.
   The closest domestic water well to the plant site as reported by the State Engineer is in section 22 over a mile away. This well was drilled in 1963 to a depth of 255 feet. No information on the current status of the well is available.

5. All contact waste water will be routed to a lined pond.
   To ensure continued protection of ground water quality, all contact waste water will be routed to a lined pond scheduled to be constructed in 1994.

6. The contact and non-contact waste water systems will be separate systems.
   A survey of all contact drain lines will be performed to ensure no contact drain lines are connected to the non-contact drain system.

EPNG believes for the above mentioned reasons that continued use of the unlined ponds for non-contact waste water will not pose a threat to ground water. EPNG also believes that if approval is granted to continue use of the unlined ponds, testing the non-contact discharge lines to the ponds would be unnecessary.

Enclosed is a check covering the filing fee. If you have any questions or comments feel free to call me at (505) 599-2175.

Sincerely,

Kris Alan Sinclair
Compliance Engineer

cc: W.D. Hall, EPNG
N.K. Prince, EPNG
William Olson, NMOCD
Denny Foust, NMOCD

DEEP WELL GROUN. D DATA DA' September 1, 19

COMPANY El Paso Natural Gas Company COUNTY San Juan STATE N.M.

CONTRACT NO. 5848 UNIT NO. CPS 296-6

LOCATION Chaco Sta. - 20 miles S. of Farmington, N.M.

GROUNDBED: Depth 500 Ft., Dia. 7 7/8 In., Anodes (25) 2 x 60

CASING: Size 8 5/8 In., Depth 100 Ft. Anotes SHA-1

DEPTH Ft.	DRILLER'S LOG	RESISTIVITY OHMS	RESISTIVITY AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE
5	Top Soil					
10	"					
15	Sand					
20	"					
25	"					
30	Blue Shale					
35	"					
40	"					
45	"					
50	"					
55	"					
60	"					
65	"					
70	"					
75	"					
80	"					
85	"					
90	"					
95	"					
100	"					
105	Sandstone		1.1			
110	"		0.9			
115	"		0.9			
120	"		0.9			
125	Water		0.8			
130	"		1.0			
135	Sandstone		1.7			
140	"		1.4			
145	Blue Clay & Shale		1.7			
150	"		1.7			
155	"		2.0			
160	"		1.8			
165	"		1.8			
170	"		1.8			
175	"		1.8			
180	"		1.8			
185	"		1.7			
190	"		1.7	25		
195	"		1.8			
200	"		1.6	24		
205	"		1.5			
210	"		1.5	23		
215	"		1.3			
220	"		1.4	22		
225	"		1.6			
230	"		1.8	21		
235	"		1.7			
240	Blue Clay & Shale		1.7	20		

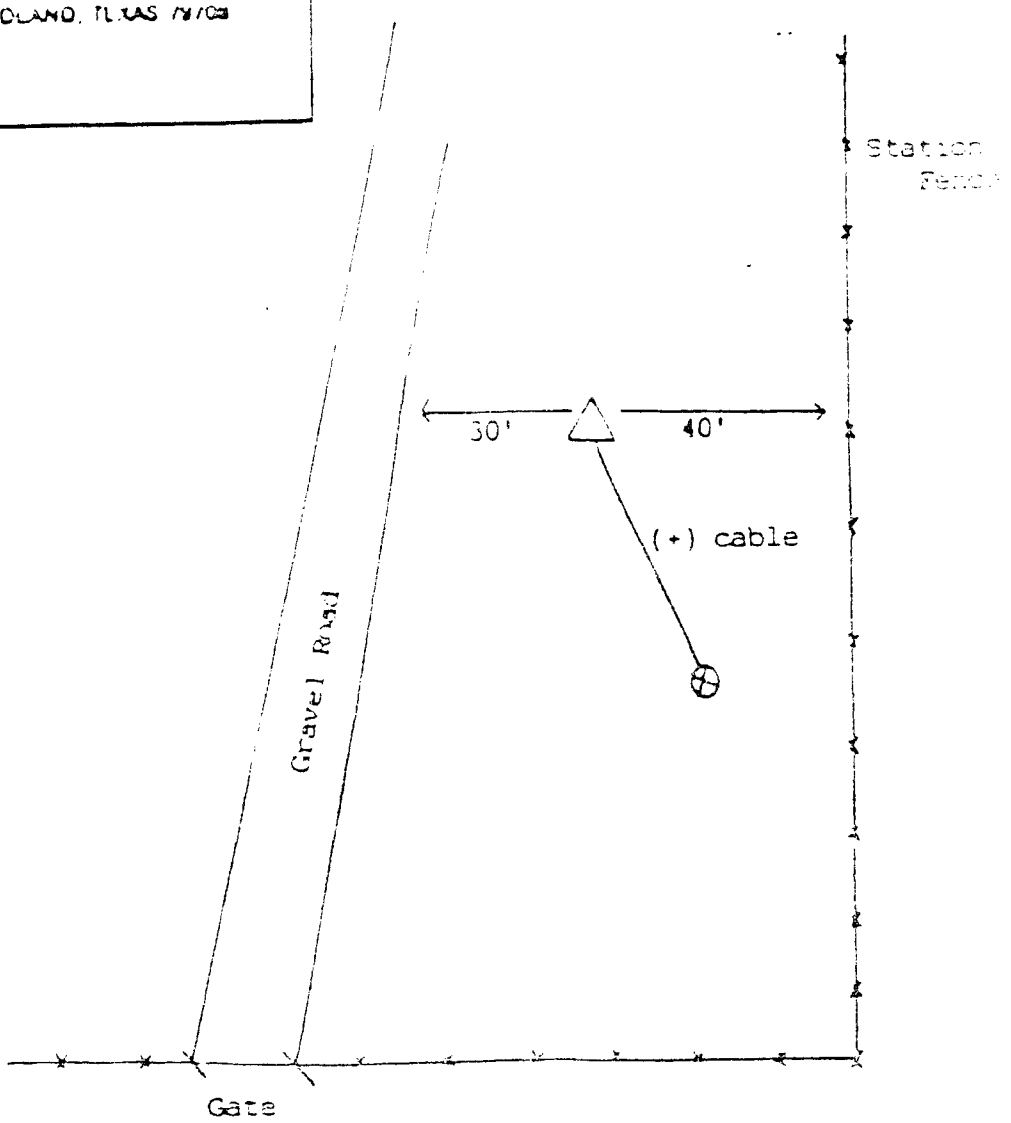
COMPANY [illegible] DATE [illegible]

LOCATION Chaco St. UNIT NUM ? CPS 296-6

DEPTH FT.	DRILLER'S LOG	RESISTIVITY OHMS	AMPS	ANODE NUMBER	DEPTH TO ANODE TOP	BEFORE COKE	AFTER COKE
245	Blue Clay & Shale		1.6				
250	"		1.6	19		[illegible]	[illegible]
255	"		1.5				
260	"		1.5	18		1.9	[illegible]
265	"		1.6				
270	"		1.6	17		2.0	[illegible]
275	"		1.5				
280	"		1.5	16		1.9	[illegible]
285	"		1.6				
290	"		1.5	15		1.7	[illegible]
295	"		1.0				
300	"		1.6				
305	Sandstone & Blue Shale		1.5	14		[illegible]	[illegible]
310	"		1.0				
315	"		0.9				
320	"		1.0				
325	"		1.0				
330	"		0.9				
335	"		0.9				
340	"		1.6				
345	"		1.5	13		1.7	[illegible]
350	"		0.9				
355	Sandstone		1.6	12		1.3	[illegible]
360	"		1.3				
365	Blue Clay & Shale		1.6	11		2.[illegible]	[illegible]
370	"		1.9				
375	"		1.5	10		1.3	[illegible]
380	"		1.6				
385	"		1.6	9		1.9	[illegible]
390	"		1.8				
395	"		1.7	8		2.0	[illegible]
400	"		1.5				
405	"		1.4	7		1.7	6.[illegible]
410	"		1.5				
415	"		1.5	6		[illegible]	[illegible]
420	"		1.4				
425	"		1.3	5		1.6	5.[illegible]
430	"		1.1				
435	"		0.9				
440	"		1.2				
445	"		1.7				
450	"		1.4	4		1.7	5.4
455	"		1.0				
460	"		0.8				
465	"		1.4				
470	"		1.5	3		1.8	5.[illegible]
475	"		1.7				
480	"		1.6	2		1.8	5.9
485	"		1.6				
490	"		1.6	1		2.0	[illegible]
495	"		1.7				
500	Blue Clay & Shale		1.7				
505							
510							

THE LOFTIS COMPANY
P O BOX 7847
MIDLAND, TEXAS 79708

AS-BUILT



LEGEND	
△	Groundbed
▽	Rectifier
⊖	Negative
▭	Junction Box
⍋	Marker/Vent
⊗	Old Groundbed

LOCATION: CPS 296-6, Chaco Station San Juan County, N.M. 20 mi. S. of Farmington, N.M.		CLIENT: El Paso Natural Gas Company	
		PROJECT: Cathodic Protection System Contract #5848	
DATE COMPLETED: 09/10/92	NOT TO SCALE		
DATE DRILLED: 09/01/92	DRAWN BY: JM/MI	APPROVED BY: MFL	DRAWING #

3.0

CLOSURE REQUEST TO OCD

TIERRA ENVIRONMENTAL COMPANY, INC.
P.O. Drawer 15250
Farmington, New Mexico 87401
Phone 505-334-8894 Fax 505-334-9024
E-Mail teci@cyberport.com

October 20, 1998

Mr. Bill Olsen
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

RE: REQUEST FOR CLOSURE, BISTI CRUDE OIL STORAGE TANK FACILITY, Section 5, T-25 N, R-12 W, approximately six miles southwest of the El Paso Chaco Plant in San Juan County, New Mexico, owned by Bloomfield Refining Company eg. Gary Williams Energy.

Dear Mr. Olsen:

Enclosed herewith please find the complete report on voluntary cleanup activities conducted at the above described location by Tierra Environmental Company, Inc. ,on behalf of our client Gary Williams Energy.

A site assessment was preformed on September 29, 1998 by Tierra personnel. The rating sheet is enclosed. The assessment concluded that the depth to any usable groundwater was in excess of 100 feet and the distance to a surface water body was in excess of 1000 feet. As you may recall in December of 1995 Tierra successfully closed a tank battery at Bisti Station in the same general area four miles north east this location. In that report we relied on a 1992 report from El Paso Natural Gas Company wherein they had drilled three deep well ground beds to a depth of 505 feet. The drillers log indicated that groundwater was encountered at a depth of 120 feet. As the area surrounding this site is consistent with that of Bisti Station geologically, we have relied on that same report justifying the distance to groundwater. Enclosed with the report is a location map identifying this site as well as the Bisti Station site.

Therefore based on the preceding information including the site assessment we respectfully request that this site be considered for final closure pursuant to OCD regulations at 5000 ppm TPH, 10 ppm Benzene and 50 ppm BTEX.

Please call me if you have any questions or need additional information.

Thank you for your professional assistance in this matter. It is always a pleasure to work with you.

Sincerely,

Phillip C. Nobis
President

xc: Chris Hawley GWE
D. Foust, OCD Aztec
Final Report

4.0

PERMITS

District I - (505) 393-6161
P.O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-138

Submit Original Plus 1 Copy to appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE 98085

1. RCRA Exempt: ☐ Non-Exempt: ☒	4. Generator Gary Williams Energy
Verbal Approval Received: Yes ☒ 9-30-98 No ☐ D. Foust	5. Originating Site Chaco Storage Tank
2. Management Facility Destination Tierra Environmental Landfarm	6. Transporter Junco Trucking
3. Address of Facility Operator 420 C.R. 3100 Aztec, San Juan County	8. State New Mexico
7. Location of Material (Street Address or ULSTR) S-5, T-25N, R12W	San Juan County, New Mexico

9. Circle One:

A. All requests for approval to accept oilfield 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:
Tank Bottoms From Crude Oil Storage Tank

Estimated Volume 300 BBls or Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: _____ TITLE: Environmental Specialist DATE: 9-22-98
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: Tim Nobis TELEPHONE NO. 334-8894

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY: _____ TITLE: _____ DATE: _____

+ Submit 5 cop'es to Appropriate District Office
DISTRICT I
P.O.Box 1980, Hobbs, NM 88241-1980
DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719
DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
2040 S Pacheco
Santa Fe, New Mexico 87504-2088

Form C-117 A
Revised 4-1-91

PERMIT NO. 3-592

TANK CLEANING, SEDIMENT OIL REMOVAL, TRANSPORTATION OF MISCELLANEOUS HYDROCARBONS AND DISPOSAL PERMIT

Operator or Owner Gary Williams Energy Address P O Box 305 Wynnewood Okla

Lease or Facility Name Chaco Storage Tank Location S-5, T-25N, R-12W
U.L. - Sec. - Twp. - Rge.

OPERATION TO BE PERFORMED:

☐ Tank Cleaning ☐ Sediment Oil Removal ☒ Transportation of Miscellaneous Hydrocarbons

Operator or Owner Representative authorizing work Tierra Environmental

Date Work to be Performed 9-24-98

TANK CLEANING DATA Tank Number TL2993 Volume 42,000 GALLON

Tank Type WELDED PLATE Volume Below Load Line 1000 GALLON

SEDIMENT OIL OR MISCELLANEOUS HYDROCARBON DATA

Sediment Oil from: ☐ Pit ☐ Cellar ☐ Other

MISCELLANEOUS OIL
Tank Bottoms From: ☐ Pipeline Station ☒ Crude Terminal ☐ Refinery ☐ Other*

Catchings From: ☐ Gasoline Plant ☒ Gathering Lines ☐ Salt Water Disposal System ☐ Other*

Pipeline Break Oil or Spill ☐

*Other (Explain)

RECEIVED
SEP 24 1998
OIL CON. DIV.
DIST. 3

VOLUME AND DESTINATION: Estimated Volume 120 Bbls. Field test volume of good oil ______ Bbls.
(Not required prior to Division approval)

Destination (Name and Location of treating plant or other facility) Tierra Land Farm
420 RD 3100 AZTEC 87410

DESTRUCTION OF SEDIMENT OIL BY: ☐ Burning ☐ Pit Disposal ☐ Use on Roads or firewalls ☐ Other
(Explain) LANDFARM

Location of Destruction Tierra Land Farm

Justification of Destruction ~~NON~~ NONE RECOVERABLE

CERTIFICATION: (APPLICATION MAY BE MADE BY EITHER OF THE FOLLOWING)
I hereby certify that the infomation above is true and complete to the best of my knowledge and belief.

Owner Tierra Environmental Co. Inc.
By Tim Nobis [signature]
Title Environmental Specialist.
Date 9-24-98

Transporter Sonco Trucking
Address 708 S. Tucker Ave Farm
Signature [signature]
Title Environmental Specialist Date 9-24-98

OIL CONSERVATION DIVISION

Approved By [signature] Title Dist Geol Date 9-24-98

A COPY OF THIS FORM MUST BE ON LOCATION DURING TANK CLEANING, REMOVAL OF SEDIMENT OIL OR MISCELLANEOUS HYDROCARBONS, AND MUST BE PRESENTED WITH TANK BOTTOMS, SEDIMENT OIL OR MISCELLANEOUS HYDROCARBONS AT THE TREATING PLANT TO WHICH IT IS DELIVERED.

DISTRIBUTION BY OCD	
	Santa Fe
	File
	Operator
	Transporter (2)

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address:	2. Destination Name:
Gary Williams Energy	Tierra Environmental/ Land farm 420 C.R 3100 Aztec, New Mexico 87410
3. Originating Site (name): Chaco Storage Tank Attach list of originating sites as appropriate	**Location of the Waste (Street address &/or ULSTR):** Sec. 5, T-25N, R 12W San Juan County
4. Source and Description of Waste Tank Bottoms from Crude Oil Storage Tanks	

I, Tim Nobis representative for:
(Print Name)

Gary Williams Energy do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July, 1988, regulatory determination, the above described waste is: (Check appropriate classification)

___ **EXEMPT** oilfield waste

X **NON-EXEMPT** oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non-hazardous waste defined above.

For **NON-EXEMPT** waste only the following documentation is attached (check appropriate items):

___ MSDS Information
X RCRA Hazardous Waste Analysis
___ Chain of Custody
___ Other (description):

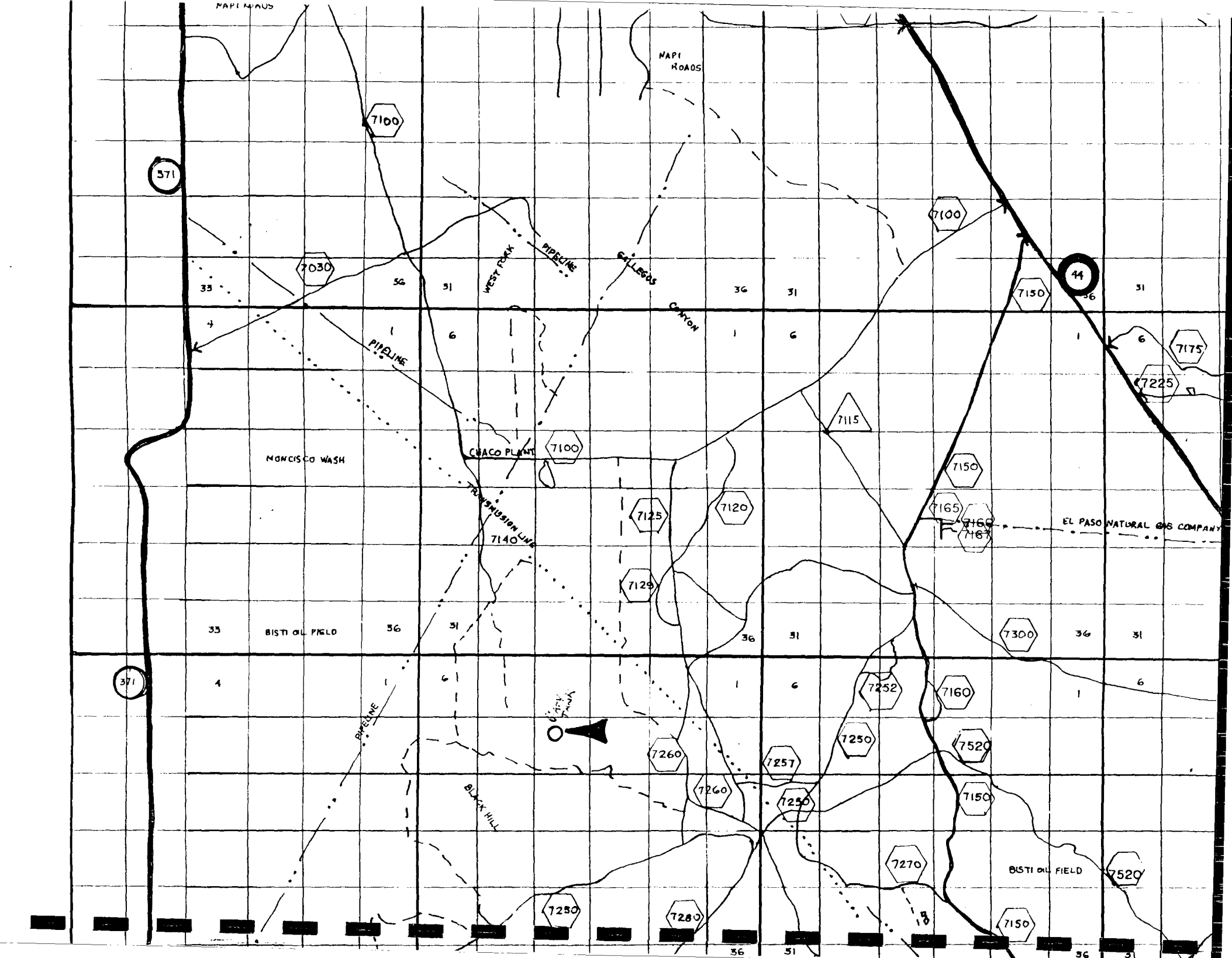
Name (Original Signature): [signature]

Title: Environmental Specialist

Date: 9-22-98

5.0

SITE DIAGRAMS


NAPI ROADS
NAPI ROADS
7100
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7100
7030
33
36
31
WEST FORK
PIPELINE
GALLEGOS
CANYON
36
31
7150
44
36
31
4
1
6
PIPELINE
1
6
1
6
7175
7225
7115
CHACO PLANT
7100
NOMCISCO WASH
7150
7165
7160
7167
EL PASO NATURAL GAS COMPANY
TRANSMISSION LINE
7140
7125
7120
7129
33
BISTI OIL FIELD
36
31
36
31
7300
36
31
371
4
1
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1
6
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7160
PIPELINE
7260
7250
7520
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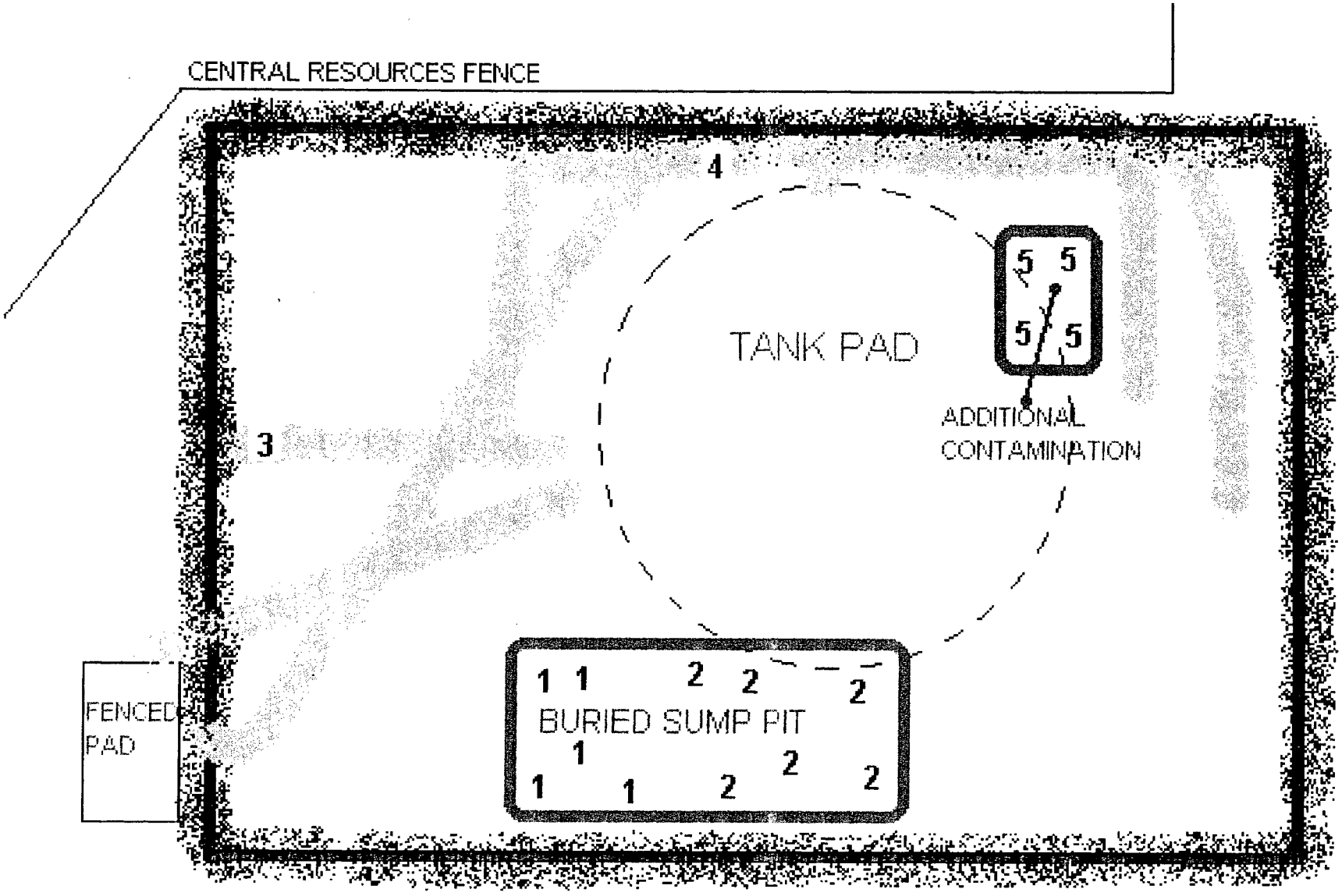

GARY WILLIAMS TANK

EXCAVATION DIAGRAM

(NOT TO SCALE)

GARY WILLIAMS TANK

(NOT TO SCALE)

CENTRAL RESOURCES FENCE

BERM

FENCED PAD

BURIED LINES

LOAD LINE (ABOVE GROUND)

CLEANING SUMP

TANK

MAN WAY

MANIFOLD

6.0

LABORATORY REPORTS

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER ENVIRONMENT

September 23, 1998

Mr. Phil Nobis
Tierra Environmental Services, Inc.
P.O. Drawer 15250
Farmington, New Mexico 87499

Project No.: 04074-03

Dear Mr. Nobis,

Enclosed are the analytical results for the sample collected from the location identified as "Chaco - GWE-1". One soil sample was collected by Tierra Environmental designated personnel on 09/17/98, and received by the Envirotech laboratory on 09/17/98 for Hazardous Waste Characterization analysis (Volatile and Semi-volatile Organics, Trace Metals, Reactivity, Corrosivity, and Ignitability).

The sample was documented on Envirotech Chain of Custody No. 6269 and assigned Laboratory No. D937 for tracking purposes.

The sample was extracted on 09/17/98, and analyzed 09/17/98 through 09/23/98 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615. It is always a pleasure doing business with you.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

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03.l21/wpd

04074/04074-

ENVIROTECH LABS

SUSPECTED HAZARDOUS WASTE ANALYSIS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	GWE - 1	Date Reported:	09-17-98
Lab ID#:	D937	Date Sampled:	09-15-98
Sample Matrix:	Soil / Sludge	Date Received:	09-17-98
Preservative:	Cool	Date Analyzed:	09-17-98
Condition:	Cool & Intact	Chain of Custody:	6269

Parameter	Result	
IGNITABILITY:	**Negative**	
CORROSIVITY:	**Negative**	**pH = 6.57**
REACTIVITY:	**Negative**	

RCRA Hazardous Waste Criteria

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

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

Comments: **Chaco.**

Analyst

Review

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ENVIROTECH LABS

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	GWE - 1	Date Reported:	09-21-98
Laboratory Number:	D937	Date Sampled:	09-15-98
Chain of Custody:	6269	Date Received:	09-17-98
Sample Matrix:	Soil	Date Extracted:	09-17-98
Preservative:	Cool	Date Analyzed:	09-21-98
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	ND	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	0.0012	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	98%
	Bromofluorobenzene	99%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **Chaco.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	GWE - 1	Date Reported:	09-21-98
Laboratory Number:	D937	Date Sampled:	09-15-98
Chain of Custody:	6269	Date Received:	09-17-98
Sample Matrix:	Soil	Date Extracted:	09-17-98
Preservative:	Cool	Date Analyzed:	09-21-98
Condition:	Cool & Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	97%
	2,4,6-Tribromophenol	100%

References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: **Chaco.**

Analyst

Review

ENVIROTECH LABS

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	GWE - 1	Date Reported:	09-21-98
Laboratory Number:	D937	Date Sampled:	09-15-98
Chain of Custody:	6269	Date Received:	09-17-98
Sample Matrix:	Soil	Date Extracted:	09-17-98
Preservative:	Cool	Date Analyzed:	09-21-98
Condition:	Cool and Intact	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**ND**	**0.020**	**5.0**
Hexachloroethane	**ND**	**0.020**	**3.0**
Nitrobenzene	**ND**	**0.020**	**2.0**
Hexachlorobutadiene	**ND**	**0.020**	**0.5**
2,4-Dinitrotoluene	**ND**	**0.020**	**0.13**
HexachloroBenzene	**0.040**	**0.020**	**0.13**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	**100%**

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **Chaco.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	GWE - 1	Date Reported:	09-22-98
Laboratory Number:	D937	Date Sampled:	09-15-98
Chain of Custody:	6269	Date Received:	09-17-98
Sample Matrix:	Soil	Date Analyzed:	09-22-98
Preservative:	Cool	Date Extracted:	09-17-98
Condition:	Cool & Intact	Analysis Needed:	TCLP metals

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Level (mg/L)
Arsenic	**0.0046**	**0.0001**	**5.0**
Barium	**2.97**	**0.001**	**21**
Cadmium	**ND**	**0.0001**	**0.11**
Chromium	**0.0074**	**0.0001**	**0.60**
Lead	**0.0498**	**0.0001**	**0.75**
Mercury	**ND**	**0.0001**	**0.025**
Selenium	**0.0083**	**0.0001**	**5.7**
Silver	**ND**	**0.0001**	**0.14**

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, December 1996.

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060, 7080, 7131, 7191, 7470, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA. December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Chaco.**

Analyst

Review

ENVIROTECH LABS

QUALITY ASSURANCE / QUALITY CONTROL

DOCUMENTATION

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-21-98
Laboratory Number:	09-21-TCV-Blank	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-21-98
Condition:	N/A	Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	**ND**	**0.0001**	**0.2**
1,1-Dichloroethene	**ND**	**0.0001**	**0.7**
2-Butanone (MEK)	**ND**	**0.0001**	**200**
Chloroform	**ND**	**0.0001**	**6.0**
Carbon Tetrachloride	**ND**	**0.0001**	**0.5**
Benzene	**ND**	**0.0001**	**0.5**
1,2-Dichloroethane	**ND**	**0.0001**	**0.5**
Trichloroethene	**ND**	**0.0003**	**0.5**
Tetrachloroethene	**ND**	**0.0005**	**0.7**
Chlorobenzene	**ND**	**0.0003**	**100**
1,4-Dichlorobenzene	**ND**	**0.0002**	**7.5**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	**100%**
	Bromofluorobenzene	**100%**

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-21-98
Laboratory Number:	09-17-TV-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-21-98
Condition:	N/A	Date Extracted:	09-17-98
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limits (mg/L)
Vinyl Chloride	ND	0.0001	0.2
1,1-Dichloroethene	ND	0.0001	0.7
2-Butanone (MEK)	ND	0.0001	200
Chloroform	ND	0.0001	6.0
Carbon Tetrachloride	ND	0.0001	0.5
Benzene	ND	0.0001	0.5
1,2-Dichloroethane	ND	0.0001	0.5
Trichloroethene	ND	0.0003	0.5
Tetrachloroethene	ND	0.0005	0.7
Chlorobenzene	ND	0.0003	100
1,4-Dichlorobenzene	ND	0.0002	7.5

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	Trifluorotoluene	99%
	Bromofluorobenzene	98%

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHODS 8010/8020 AROMATIC / HALOGENATED VOLATILE ORGANICS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-21-98
Laboratory Number:	D932	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-21-98
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Duplicate Sample Result (mg/L)	Detection Limits (mg/L)	Percent Difference
Vinyl Chloride	ND	ND	0.0001	0.0%
1,1-Dichloroethene	ND	ND	0.0001	0.0%
2-Butanone (MEK)	ND	ND	0.0001	0.0%
Chloroform	ND	ND	0.0001	0.0%
Carbon Tetrachloride	ND	ND	0.0001	0.0%
Benzene	ND	ND	0.0001	0.0%
1,2-Dichloroethane	ND	ND	0.0001	0.0%
Trichloroethene	ND	ND	0.0003	0.0%
Tetrachloroethene	ND	ND	0.0005	0.0%
Chlorobenzene	ND	ND	0.0003	0.0%
1,4-Dichlorobenzene	ND	ND	0.0002	0.0%

ND - Parameter not detected at the stated detection limit.

References:
Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

EPA METHODS 8010/8020
AROMATIC / HALOGENATED
VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	09-21-98
Laboratory Number:	D932	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP	Date Analyzed:	09-21-98
Condition:	N/A	Date Extracted:	N/A

Parameter	Sample Result (mg/L)	Spike Added (mg/L)	Spiked Sample Result (mg/L)	Det. Limit (mg/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Vinyl Chloride	ND	0.050	0.0495	0.0001	99%	28-163
1,1-Dichloroethene	ND	0.050	0.0494	0.0001	99%	43-143
2-Butanone (MEK)	ND	0.050	0.0495	0.0001	99%	47-132
Chloroform	ND	0.050	0.0498	0.0001	100%	49-133
Carbon Tetrachloride	ND	0.050	0.0491	0.0001	98%	43-143
Benzene	ND	0.050	0.0498	0.0001	100%	39-150
1,2-Dichloroethane	ND	0.050	0.0494	0.0001	99%	51-147
Trichloroethene	ND	0.050	0.0494	0.0003	99%	35-146
Tetrachloroethene	ND	0.050	0.0494	0.0005	99%	26-162
Chlorobenzene	ND	0.050	0.0494	0.0003	99%	38-150
1,4-Dichlorobenzene	ND	0.050	0.0494	0.0002	99%	42-143

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 5030, Purge-and-Trap, SW-846, USEPA, July 1992.
Method 8010, Halogenated Volatile Organic, SW-846, USEPA, Sept. 1994.
Method 8020, Aromatic Volatile Organics, SW-846, USEPA, Sept. 1994.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report
Laboratory Blank

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-21-98
Laboratory Number:	09-21-TCA-Blank	Date Sampled:	N/A
Sample Matrix:	2-Propanol	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-21-98
Condition:	N/A	Analysis Requested:	TCLP

Analytical Results

Parameter	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-fluorophenol	99 %
	2,4,6-tribromophenol	99 %

References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-21-98
Laboratory Number:	09-17-TCA-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-17-98
Condition:	Cool & Intact	Date Analyzed:	09-21-98
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
o-Cresol	ND	0.020	200
p,m-Cresol	ND	0.040	200
2,4,6-Trichlorophenol	ND	0.020	2.0
2,4,5-Trichlorophenol	ND	0.020	400
Pentachlorophenol	ND	0.020	100

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	2-Fluorophenol	96%
	2,4,6-Tribromophenol	99%

References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8040
PHENOLS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-21-98
Laboratory Number:	D932	Date Sampled:	N/A
Sample Matrix:	TCLP Extraction	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-17-98
Condition:	Cool & Intact	Date Analyzed:	09-21-98
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Detection Limit (mg/L)	Percent Difference
o-Cresol	ND	ND	0.020	0.0%
p,m-Cresol	0.089	0.089	0.040	0.0%
2,4,6-Trichlorophenol	0.036	0.036	0.020	0.0%
2,4,5-Trichlorophenol	0.022	0.022	0.020	0.0%
Pentachlorophenol	0.079	0.079	0.020	0.0%

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8040 Compounds	30.0%

References: Method 1311, Toxicity Characteristic Leaching Procedure Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 3510, Separatory Funnel Liquid-Liquid Extraction, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8040, Phenols, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER ENVIRONMENT

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-21-98
Laboratory Number:	09-21-TBN-Blank	Date Sampled:	N/A
Sample Matrix:	Hexane	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	09-21-98
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**ND**	**0.020**	**5.0**
Hexachloroethane	**ND**	**0.020**	**3.0**
Nitrobenzene	**ND**	**0.020**	**2.0**
Hexachlorobutadiene	**ND**	**0.020**	**0.5**
2,4-Dinitrotoluene	**ND**	**0.020**	**0.13**
HexachloroBenzene	**ND**	**0.020**	**0.13**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	**100%**

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	09-21-98
Laboratory Number:	09-17-TBN-MB	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	Cool	Date Extracted:	09-17-98
Condition:	Cool and Intact	Date Analyzed:	09-21-98
		Analysis Requested:	TCLP

Parameter	Concentration (mg/L)	Det. Limit (mg/L)	Regulatory Limit (mg/L)
Pyridine	**ND**	**0.020**	**5.0**
Hexachloroethane	**ND**	**0.020**	**3.0**
Nitrobenzene	**ND**	**0.020**	**2.0**
Hexachlorobutadiene	**ND**	**0.020**	**0.5**
2,4-Dinitrotoluene	**ND**	**0.020**	**0.13**
HexachloroBenzene	**ND**	**0.020**	**0.13**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Percent Recovery
	2-fluorobiphenyl	**99%**

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8090
Nitroaromatics and Cyclic Ketones
TCLP Base/Neutral Organics
QA/QC Matrix Duplicate Report

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-21-98
Laboratory Number:	D932	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Preservative:	N/A	Date Extracted:	N/A
Condition:	N/A	Date Analyzed:	09-21-98
		Analysis Requested:	TCLP

Parameter	Sample Result (mg/L)	Duplicate Result (mg/L)	Percent Difference	Det. Limit (mg/L)
Pyridine	**ND**	**ND**	**0.0%**	**0.020**
Hexachloroethane	**ND**	**ND**	**0.0%**	**0.020**
Nitrobenzene	**ND**	**ND**	**0.0%**	**0.020**
Hexachlorobutadiene	**ND**	**ND**	**0.0%**	**0.020**
2,4-Dinitrotoluene	**ND**	**ND**	**0.0%**	**0.020**
HexachloroBenzene	**ND**	**ND**	**0.0%**	**0.020**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria	Parameter	Maximum Difference
	8090 Compounds	**30%**

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, July 1992.
Method 3510, Separatory Funnel Liquid-Liquid Extraction, SW-846, USEPA, July 1992.
Method 8090, Nitroaromatics and Cyclic Ketones, SW-846, USEPA, Sept. 1986.

Note: Regulatory Limits based on 40 CFR part 261 Subpart C section 261.24, July 1, 1992.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 1311
TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL ANALYSIS
Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	09-22-TCM QA/QC	Date Reported:	09-22-98
Laboratory Number:	D932	Date Sampled:	N/A
Sample Matrix:	TCLP Extract	Date Received:	N/A
Analysis Requested:	TCLP Metals	Date Analyzed:	09-22-98
Condition:	N/A	Date Extracted:	09-17-98

Blank & Duplicate Conc. (mg/L)	Instrument Blank	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Barium	ND	ND	0.001	0.762	0.760	0.3%	0% - 30%
Cadmium	ND	ND	0.0001	0.0224	0.0222	0.9%	0% - 30%
Chromium	ND	ND	0.0001	0.0028	0.0028	0.0%	0% - 30%
Lead	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Mercury	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.0001	ND	ND	0.0%	0% - 30%
Silver	ND	ND	0.0001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/L)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.1000	ND	0.0998	99.8%	80% - 120%
Barium	1.000	0.762	1.759	99.8%	80% - 120%
Cadmium	0.0500	0.022	0.0725	100.1%	80% - 120%
Chromium	0.0500	0.0028	0.0527	99.8%	80% - 120%
Lead	0.1000	ND	0.0999	99.9%	80% - 120%
Mercury	0.0250	ND	0.0249	99.6%	80% - 120%
Selenium	0.1000	ND	0.0997	99.7%	80% - 120%
Silver	0.0500	ND	0.0499	99.8%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 1311, Toxicity Characteristic Leaching Procedure, SW-846, USEPA, Dec. 1996

Methods 3010, 3020, Acid Digestion of Aqueous Samples and Extracts for Total Metals, SW-846, USEPA, December 1996.

Methods 7060B, 7081, 7131A, 7191, 7470A, 7421, 7740, 7761 Analysis of Metals by GFAA and Cold Vapor Techniques, SW-846, USEPA, December 1996.

Comments: **QA/QC for samples D932 and D937.**

Analyst

Review

CHAIN OF CUSTODY RECORD

6269

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Tierra Environmental	Chaco	
Sampler: Tim Nobis	Client No. 04074-03	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TCLP 4% HCl						Remarks
GWE-1	9.15.98	1500	D937	Soil/Sludge	2	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	9.17.98	0940	[signature]	9.17.98	0940
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

ENVIRONMENTAL COMPANY Inc.

P.O. DRAWER 15250 FARMINGTON, NM 87401

Date: 9/17/98

Page 1 of 1

Purchase Order No.: | Job No.

SEND INVOICE TO
Name
Company | Dept.
Address
City, State, Zip

REPORT RESULTS TO
Name | Title
Company
Mailing Address
City, State, Zip
Telephone No. | Telefax No.

Sampling Location: Chaco.

Sampler: Tim Nobis

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	TCLP	LAB ID
GWE-1 Soil/sludge	9/16/98	3:00 pm				✓	

ANALYSIS REQUESTED

Relinquished by: Tim Nobis — Date/Time 9/17/98
Relinquished by: — Date/Time 8:00 AM
Relinquished by: — Date/Time

Received by: DC Nobis — Date/Time 9/17/98 8:
Received by: — Date/Time
Received by: — Date/Time

Method of Shipment:

Authorized by: _____ Date 9/17/98
(Client Signature Must Accompany Request)

Rush ✓ | 24-48 Hours | 10 Working Days | Special Instructions:

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

SAFETY ALLIANCE, INC.

"Partnerships for Safe Working Environments"

September 23, 1998

Tierra Environmental Corp.
ATTN: Tim Nobis
PO Drawer 15250
Farmington, NM 87401

RE: NORM READINGS ON SLUDGE SAMPLE

Mr. Nobis,

At your request, a sample was checked for NORM. No levels above background were detected.

Please call Safety Alliance, Inc. at 505-325-SAFE (7233) if you have questions regarding procedures or instrumentation.

Sincerely,

Kirk J. Bennett

KJB/dm

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Gary 1	Date Reported:	10-14-98
Laboratory Number:	E055	Date Sampled:	10-13-98
Chain of Custody No:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Extracted:	10-13-98
Preservative:	Cool	Date Analyzed:	10-13-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**258**	**0.2**
Diesel Range (C10 - C28)	**587**	**0.1**
Total Petroleum Hydrocarbons	**845**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Bisti Tank.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Gary 2	Date Reported:	10-14-98
Laboratory Number:	E056	Date Sampled:	10-13-98
Chain of Custody No:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Extracted:	10-13-98
Preservative:	Cool	Date Analyzed:	10-13-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**121**	**0.2**
Diesel Range (C10 - C28)	**204**	**0.1**
Total Petroleum Hydrocarbons	**325**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Bisti Tank.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line # 3	Date Reported:	10-14-98
Laboratory Number:	E057	Date Sampled:	10-13-98
Chain of Custody No:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Extracted:	10-13-98
Preservative:	Cool	Date Analyzed:	10-13-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**2.7**	**0.1**
Total Petroleum Hydrocarbons	**2.7**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Bisti Tank.**

Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line # 4	Date Reported:	10-14-98
Laboratory Number:	E058	Date Sampled:	10-13-98
Chain of Custody No:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Extracted:	10-13-98
Preservative:	Cool	Date Analyzed:	10-13-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Bisti Tank.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line # 5	Date Reported:	10-14-98
Laboratory Number:	E059	Date Sampled:	10-13-98
Chain of Custody No:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Extracted:	10-13-98
Preservative:	Cool	Date Analyzed:	10-13-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

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

Comments: **Bisti Tank.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-13-TPH .QA/QC	Date Reported:	10-14-98
Laboratory Number:	E055	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-12-98
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	04-28-98	4.9098E-002	4.9054E-002	**0.09%**	**0 - 15%**
Diesel Range C10 - C28	04-28-98	3.9029E-002	3.9005E-002	**0.06%**	**0 - 15%**

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

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**258**	**256**	**0.8%**	**0 - 30%**
Diesel Range C10 - C28	**587**	**582**	**0.8%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**258**	**250**	**507**	**100%**	**75 - 125%**
Diesel Range C10 - C28	**587**	**250**	**835**	**100%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

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

Comments: **QA/QC for samples E055 - E059.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

October 15, 1998

Mr. Phil Nobis
Tierra Environmental Services, Inc.
P.O. Drawer 15250
Farmington, New Mexico 87499

Project No.: 04074-03

Dear Mr. Nobis,

Enclosed are the analytical results for the samples collected from the location designated as "Bisti Tank". Five soil samples were collected by Tierra Environmental designated personnel on 10/13/98, and received by the Envirotech laboratory on 10/13/98 for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) analysis per USEPA Method 8021, and for Total Petroleum Hydrocarbons (TPH) analysis per USEPA Method 8015 Modified.

The samples were documented on Envirotech Chain of Custody No. 6350 and assigned Laboratory Nos. E055 (Gary 1), E056 (Gary 2), E057 (Tank Line #3), E058 (Tank Line #4), and E059 (Tank Line #5) for tracking purposes.

The sample were extracted and analyzed on 10/13/98 using USEPA or equivalent methods.

Should you have any questions or require additional information, please do not hesitate to contact us at (505) 632-0615. It is always a pleasure doing business with you.

Respectfully submitted,
Envirotech, Inc.

Stacy W Sendler

Stacy W. Sendler
Environmental Scientist/Laboratory Manager

enc.

SWS\sws
03.I23/wpd

04074/04074-

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Gary 1	Date Reported:	10-14-98
Laboratory Number:	E055	Date Sampled:	10-13-98
Chain of Custody:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Analyzed:	10-13-98
Preservative:	Cool	Date Extracted:	10-13-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**17.5**
Toluene	**78.1**	**16.7**
Ethylbenzene	**53.9**	**15.2**
p,m-Xylene	**399**	**21.6**
o-Xylene	**219**	**10.4**
Total BTEX	**750**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**98 %**
	Bromofluorobenzene	**98 %**

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

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

Comments: **Bisti Tank.**

Analyst

Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Gary 2	Date Reported:	10-14-98
Laboratory Number:	E056	Date Sampled:	10-13-98
Chain of Custody:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Analyzed:	10-13-98
Preservative:	Cool	Date Extracted:	10-13-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**53.8**	**17.5**
Toluene	**172**	**16.7**
Ethylbenzene	**81.7**	**15.2**
p,m-Xylene	**725**	**21.6**
o-Xylene	**485**	**10.4**
Total BTEX	**1,520**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**101 %**

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

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

Comments: **Bisti Tank.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line #3	Date Reported:	10-14-98
Laboratory Number:	E057	Date Sampled:	10-13-98
Chain of Custody:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Analyzed:	10-13-98
Preservative:	Cool	Date Extracted:	10-13-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**17.5**
Toluene	**19.6**	**16.7**
Ethylbenzene	**ND**	**15.2**
p,m-Xylene	**93.4**	**21.6**
o-Xylene	**68.8**	**10.4**
Total BTEX	**182**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**98 %**
	Bromofluorobenzene	**98 %**

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

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

Comments: **Bisti Tank.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line #4	Date Reported:	10-14-98
Laboratory Number:	E058	Date Sampled:	10-13-98
Chain of Custody:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Analyzed:	10-13-98
Preservative:	Cool	Date Extracted:	10-13-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**29.1**	**17.5**
Toluene	**ND**	**16.7**
Ethylbenzene	**ND**	**15.2**
p,m-Xylene	**63.9**	**21.6**
o-Xylene	**36.8**	**10.4**
Total BTEX	**130**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**101 %**

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

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

Comments: **Bisti Tank.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	04074-03
Sample ID:	Tank Line #5	Date Reported:	10-14-98
Laboratory Number:	E059	Date Sampled:	10-13-98
Chain of Custody:	6350	Date Received:	10-13-98
Sample Matrix:	Soil	Date Analyzed:	10-13-98
Preservative:	Cool	Date Extracted:	10-13-98
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**29.0**	**17.5**
Toluene	**19.6**	**16.7**
Ethylbenzene	**ND**	**15.2**
p,m-Xylene	**93.5**	**21.6**
o-Xylene	**43.9**	**10.4**
Total BTEX	**186**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**97 %**
	Bromofluorobenzene	**97 %**

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

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

Comments: **Bisti Tank.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	10-13-BTEX QA/QC	Date Reported:	10-14-98
Laboratory Number:	E055	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-13-98
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	3.7569E-002	3.7690E-002	0.3%	ND	0.2
Toluene	1.2324E-002	1.2366E-002	0.3%	ND	0.2
Ethylbenzene	1.5149E-002	1.5207E-002	0.4%	ND	0.2
p,m-Xylene	1.2209E-002	1.2270E-002	0.5%	ND	0.2
o-Xylene	1.2474E-002	1.2587E-002	0.9%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	17.5
Toluene	78.1	79.2	1.4%	0 - 30%	16.7
Ethylbenzene	53.9	54.7	1.5%	0 - 30%	15.2
p,m-Xylene	399	405	1.6%	0 - 30%	21.6
o-Xylene	219	223	2.2%	0 - 30%	10.4

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	50.0	100%	39 - 150
Toluene	78.1	50.0	127	99%	46 - 148
Ethylbenzene	53.9	50.0	103	99%	32 - 160
p,m-Xylene	399	100.0	494	99%	46 - 148
o-Xylene	219	50.0	266	99%	46 - 148

ND - Parameter not detected at the stated detection limit.

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

Comments: **QA/QC for samples E055 - E059.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505 • 632 • 0615 • Fax 505 • 632 • 1865

CHAIN OF CUSTODY RECORD

6350

Client / Project Name	Project Location
Tierra	Bisti TANK

Sampler:	Client No.
PC Nobis	04074-03

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	8015 TPH	BTEX					Remarks
Gary 1	10/13	11:15AM	E055	Soil	1	✓	✓					
Gary 2	10/13	11:20AM	E056		1	✓	✓					
TANK Line #3	10/13	11:30A	E057		1	✓	✓					
TANKLINE #4	10/13	11:35A	E058		1	✓	✓					
TANKLINE #5	10/13	11:40A	E059		1	✓	✓					

ANALYSIS / PARAMETERS

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
PC Nobis	10/13	1257	Dawn L. Aguirre	10.13.98	13:25
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

ENVIROTECH INC.

5796 U.S. Highway 64
Farmington, New Mexico 87401
(505) 632-0615

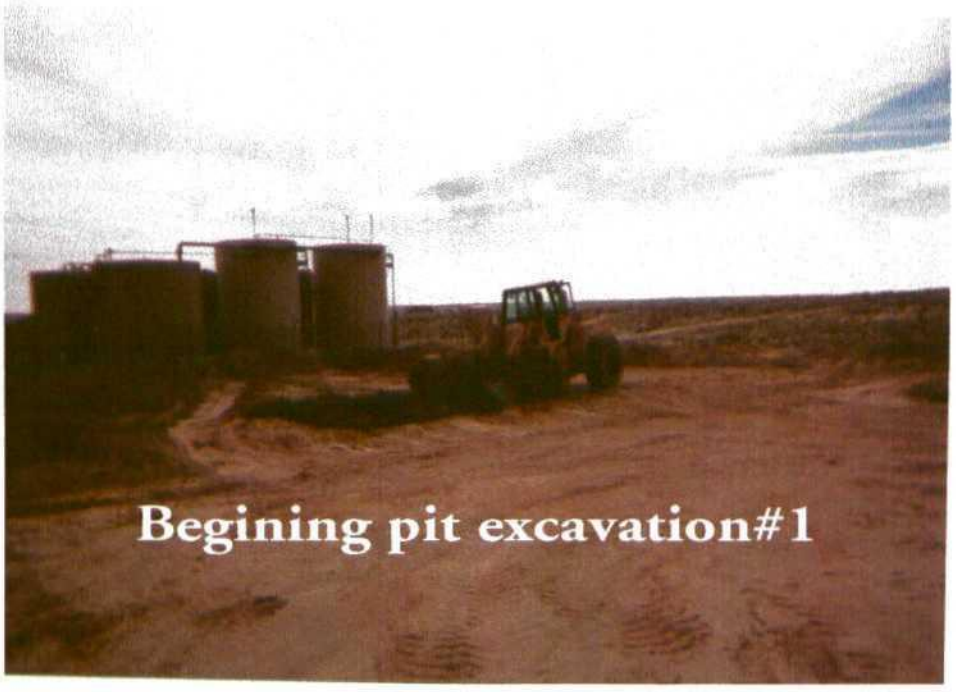
Sample Receipt	Y	N	N/A
Received Intact	✓		
Cool - Ice/Blue Ice	✓		

7.0

SITE PHOTOGRAPHS


Area before tank
and pipeline removal
28 '98

Area after tank removal



Begining pit excavation#1

Begining pit excavation #2

Pit excavation photo# 3

Pit excavation photo #4

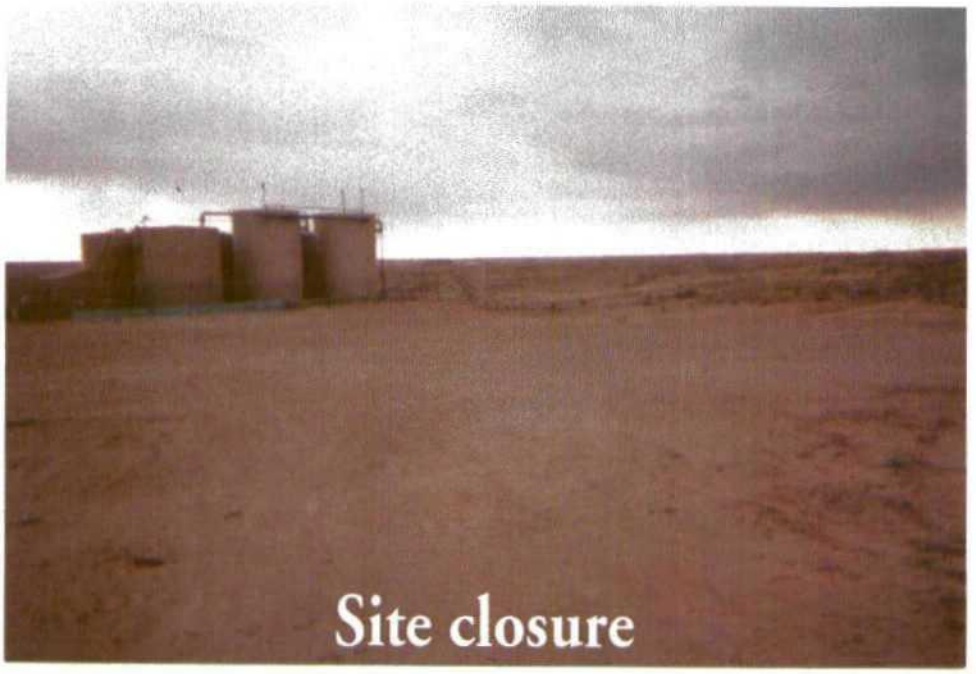
Pit excavation photo #5

Line excavation

Line removal

Line removal

Line removal


Site closure