3R - 63

REPORTS

DATE:

10/1999

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

SPILL AND REMEDIATION REPORT

FOR

THE CITY OF BLOOMFIELD WATER TRANSPORT LOADING FACILITY

SOUTH CHURCH STREET, BLOOMFIELD, NEW MEXICO

OCTOBER, 1999

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

State of 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- 14
Originated 2/13/9

Submit 2 copies t
Appropriate Distric
Office in accordanc
with Rule 116 o
back side of forr

Release Notification and Corrective Action
OPERATOR

☑ Initial Report ☐ Final Repor

Name	Contact
City of Bloomfield	George Duncan
Address	**Telephone No.**
915 North First St. 87413	505-632-5498
Facility Name	**Facility Type**
Water Transport Loading Facility	Potable Water

Surface Owner	Mineral Owner	Lease No.
City of Bloomfield	N/A	N/A

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Waste oil & Sludge from Water Truck	5 BBLS or less	97%
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Water Truck overflowed	10/8/99 2 30/pm	
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	**If YES, To Whom?**	
	DCD Foust, Aztec N.M.	
By Whom?	**Date and Hour**	
Lloyd Aliff	10/8/99 3 00/pm	
Was a Watercourse Reached? ☑ Yes ☐ No	**If YES, Volume Impacting the Watercourse.**	
	Less than 1 BBL	

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

See Spill & Remediation Report

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

11 11

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

11 11

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Philip C Nobis	**OIL CONSERVATION DIVISION**
Printed Name: Philip C Nobis	Approved by District Supervisor:
Title: Consultant For City	Approval Date: / Expiration Date:
Date: 10/22/99 Phone:	Conditions of Approval: / Attached ☐

Spill and Remediation Report

for

The City of Bloomfield Water Transport Loading Facility

South Church Street, Bloomfield, New Mexico

The City of Bloomfield owns and operates a Water Transport Loading Facility on South Church Street in the City of Bloomfield. Its purpose is to provide access for oilfield water haulers and others who need to transport large volumes of potable water by truck. The facility consists of a small blue metal building with a hose connection on the southeast corner. The oilfield water haulers on a twenty-four hour basis principally use the un-manned facility. It is located adjacent to a slew on the west side which contains slow moving running ground water collected as a result of local irrigation and stormwater runoff. The slew ultimately flows south and empties into the San Juan River.

On October 8, 1999 a water hauler who had arrived at the facility to load his truck reported to the City of Bloomfield that he had observed what he believed to be a spill of liquid oilfield waste. Bloomfield City Engineer Lloyd Aliffe after looking at the spill contacted me at Tierra Environmental Company, Inc. to act as the City's Environmental Consultant, to supervise the cleanup and coordinate with regulatory authorities. According to Mr. Aliffe, the spill was discovered at about 2:30 P.M., I was called at about 3:00 P.M. and arrived at the spill site at about 3:30 P.M. The spill site consisted of about a forty square foot area that was contaminated with what appeared to be liquid oilfield waste e.g. sludge, similar in nature to tank

paraffin, water and other hydrocarbon bi-products. Oilfield waste of this nature is considered non-hazardous by definition and exempt from regulation under the Federal Resource Conservation and Recovery Act (RCRA). Evidence at the site indicated the cause of the spill was that a water truck was being filled. It subsequently overflowed through the top hatch bringing with the excess water a substantial amount of oily waste that apparently had accumulated in the trucks tank from past oilfield activity. I would estimate that the spill involved no more than five barrels of material. City personnel had bermed and diked the area with sand to prevent any further migration of the contaminants. However after further examination it was evident that prior to the spills discovery, some of the material, a barrel or less, had migrated down gradient from the immediate spill area and entered the slew adjacent to the loading facility. With the assistance of City personnel an absorbent boom was placed into the slew about two hundred feet down stream in an effort to prevent any further migration of the contaminants. Shortly thereafter Denny Foust with the New Mexico Oil Conservation Division (OCD) arrived. Mr. Aliffe had notified him of the spill. OCD is the regulatory agency that has principal jurisdiction and environmental regulatory authority over oilfield operations, spills and releases. At his request I contacted the Santa Fe Office of the OCD, a requirement because the spill had impacted surface water, e.g. the slew. Ms. Martyne Kieling, Environmental Geologist at the Santa Fe Office was informed of the situation and the fact that an absorbent boom had been placed into the slew to prevent any further down stream migration of contaminants. I also received permission from her to treat the impacted surface water in the slew with Tierra Oxy 1. Oxy 1 is a mild oxidizer which contains a 6% solution of potassium permanganate, a surfactant and other

non-hazardous amenities, which would mitigate and neutralize the hydrocarbon contaminates. Prior to the application of Oxy 1, at the request of Denny Foust OCD two water samples were taken of the contamination in the slew. The samples were delivered to Envirotech Labs on October 12, 1999. About two-hundred-fifty gallons of Oxy 1 was applied to the area of the slew that was impacted. At my direction the City personnel covered the surface spill area at the facility with additional sand as an absorbent material. The facility was closed to the public from October 8 through the morning of Monday, October 11, 1999. On October 9 and again on October 10, 1999, I visited the site to examine the effects of OXY 1 on the slew contamination and to ensure the absorbent boom was holding. Some contamination was still visible but appeared to be dissipating. On October 9, 1999 I again visited the site. At that time under my direction, City personnel excavated the sand and gravel from the spill area to a depth of about one foot. The material (about forty-five cubic yards) was transported by City of Bloomfield trucks to the OCD permitted Tierra Environmental Crouch Mesa Landfarm Facility located at 420 County Road 3100 in San Juan County, New Mexico for remediation. The field tests I conducted at the site using a Thermo-Environmental Organic Vapor Meter Model 580 B indicated that all of the contamination had been removed from the excavated site. A laboratory soil sample was obtained for verification.

I then instructed the City personnel to backfill the excavation. While at the site on October 11, I again examined the effects of Oxy 1 in the slew. It appeared that about 65% of the contaminants had been mitigated and neutralized. The remaining contaminates appeared to have pooled in two locations down stream from the spill site but about one hundred feet up

stream of the absorbent boom. On Tuesday morning October 12, 1999, I again visited the site. The contaminants that remained in the slew had not dissipated any further. A second application of Oxy 1 (about 150 gallons) was conducted that same date.

On October 13, 1999, Denny Foust OCD again inspected the site. He noticed a strong hydrocarbon odor and asked that I again look the site over. At about 4:00 P.M. that same date I arrived at the site. The odor was noticeable. It appeared that as yet another small spill of what smelled like condensate had occurred again, as a result of an overflow of water from a water truck. There was what appeared to be a slight thin sheen of hydrocarbon product on the water in the slew. It covered about a four-foot square area. The boom containment was still in place.

On Thursday October 14, 1999, Frank Chavez Area 3 Supervisor OCD and Denny Foust OCD met with City Officials and me at the site. The purpose of the meeting was to develop a contingency plan to prevent or minimize any future occurrence. Fire Chief Duncan and MOC Manager Curtis Lynch suggested that the City berm the facility with sand as a temporary measure, until a more permanent solution could be developed. OCD personnel voiced no objection. The facility was bermed the following morning, Friday, October 15, 1999. I inspected the berm later that same date. It appeared to be sufficient for the time being. I also inspected the water in the slew. There still appeared to be small ribbons of hydrocarbon product visible in a small area. On Monday October 18, 1999 at about 7:45 A.M., I again visited the site. Because the hydrocarbon sheen was still slightly visible on the

Observations and Recommendations for

Prevention and Containment

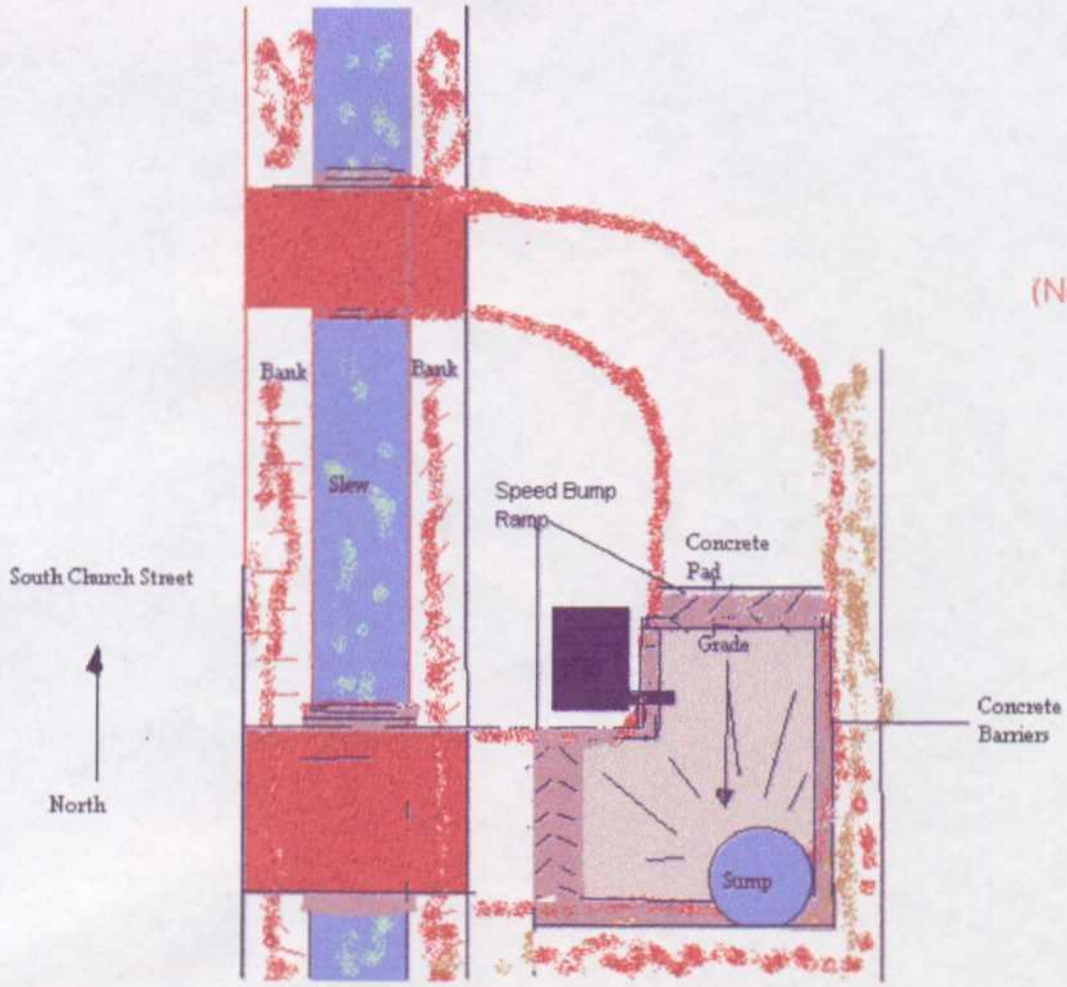
1. The City should consider adopting a policy directed to the water haulers assn., wherein procedures are set forth governing how water trucks are to be loaded. The policy would include that "no hatches or valves are to be left open during loading operations" e.g. " no overflow is allowed at the loading facility whatsoever". Penalties should be attached for violations whether or not contamination occurs.

2. The installation of a video surveillance camera in the proximity of the loading facility would also be a good preventive measure. There are some fairly inexpensive wireless models now available with tape backup.

3. A concrete pad with containment and a sump would also reduce the possibility of another release into the adjacent slew. I have included a diagram (not to scale) of what containment might be necessary.

Suggested Containment for the Water Transport Loading Facility

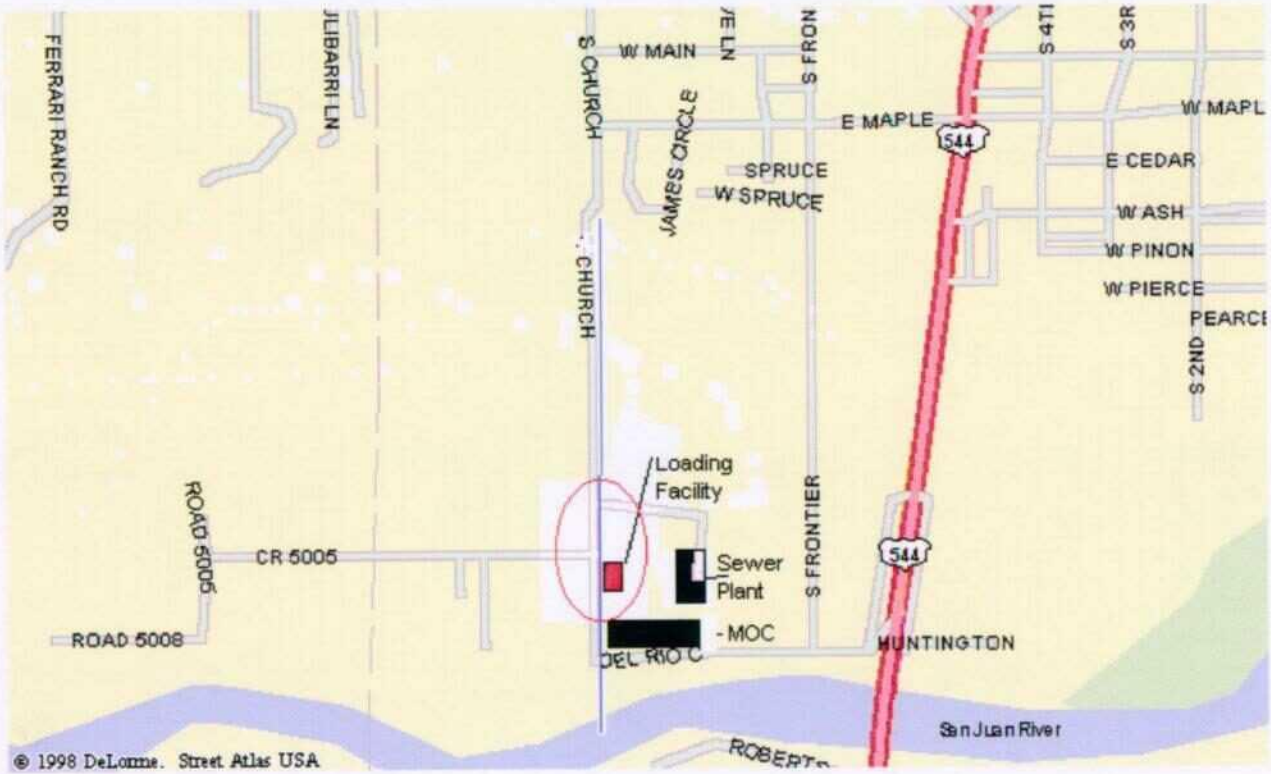
City of Bloomfield, New Mexico

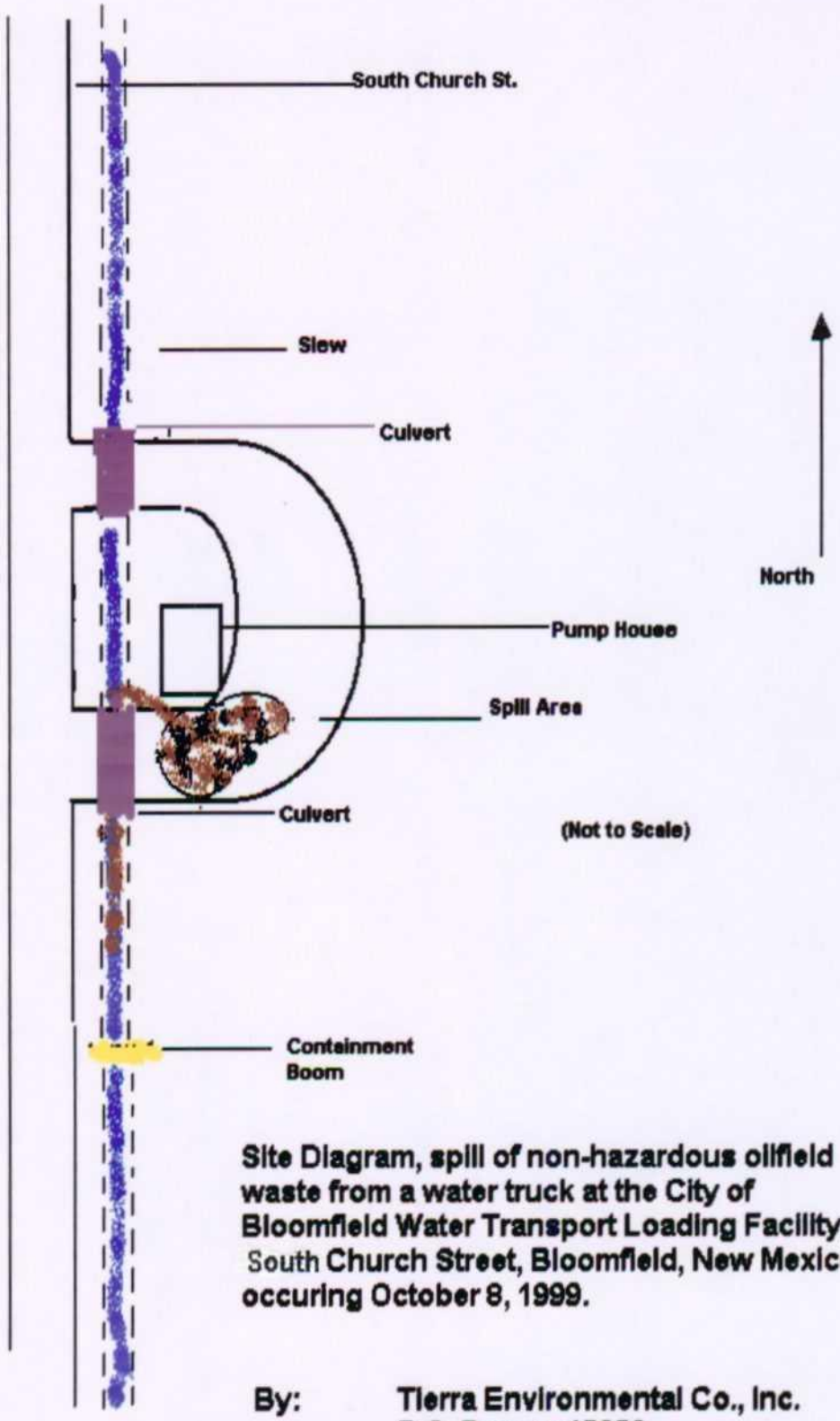


By Tierra Environmental Company, Inc
P.O. Drawer 15250
Farmington, New Mexico 87401

Location Map - City of Bloomfield Water Transport Loading Facility - South Church Street, Bloomfield, New Mexico

North





Site Diagram, spill of non-hazardous oilfield waste from a water truck at the City of Bloomfield Water Transport Loading Facility, South Church Street, Bloomfield, New Mexico occuring October 8, 1999.

By: Tierra Environmental Co., Inc.
P.O. Drawer 15250
Farmington, New Mexico 87401

View of the approximately

40' x 40' Spill Area

Bloomfield Water Transport

Loading Facility

View of contaminants on the surface water of the slew looking south from the culvert

Excavation and Removal of Contaminants

Backfill
and
Closure

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	407403
Sample ID:	# 4	Date Reported:	10-20-99
Laboratory Number:	G218	Date Sampled:	10-19-99
Chain of Custody No:	7504	Date Received:	10-19-99
Sample Matrix:	Water	Date Extracted:	10-20-99
Preservative:	Cool	Date Analyzed:	10-20-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	407403
Sample ID:	# 4	Date Reported:	10-20-99
Chain of Custody:	7504	Date Sampled:	10-19-99
Laboratory Number:	G218	Date Received:	10-19-99
Sample Matrix:	Water	Date Analyzed:	10-20-99
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**ND**	**1**	**0.1**
Total BTEX	**ND**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 1	Date Reported:	10-14-99
Laboratory Number:	G184	Date Sampled:	10-08-99
Chain of Custody No:	7431	Date Received:	10-12-99
Sample Matrix:	Water	Date Extracted:	10-13-99
Preservative:	Cool	Date Analyzed:	10-13-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	**26.7**	**0.2**
Diesel Range (C10 - C28)	**54.4**	**0.1**
Total Petroleum Hydrocarbons	**81.1**	**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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 1	Date Reported:	10-13-99
Chain of Custody:	7431	Date Sampled:	10-08-99
Laboratory Number:	G184	Date Received:	10-12-99
Sample Matrix:	Water	Date Analyzed:	10-13-99
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**140**	**1**	**0.2**
Toluene	**93.3**	**1**	**0.2**
Ethylbenzene	**63.1**	**1**	**0.2**
p,m-Xylene	**245**	**1**	**0.2**
o-Xylene	**114**	**1**	**0.1**
Total BTEX	**656**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**99 %**
	Bromofluorobenzene	**99 %**

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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 2	Date Reported:	10-14-99
Laboratory Number:	G185	Date Sampled:	10-08-99
Chain of Custody No:	7431	Date Received:	10-12-99
Sample Matrix:	Water	Date Extracted:	10-13-99
Preservative:	Cool	Date Analyzed:	10-13-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Gasoline Range (C5 - C10)	**686**	**0.2**
Diesel Range (C10 - C28)	**1,700**	**0.1**
Total Petroleum Hydrocarbons	**2,390**	**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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 2	Date Reported:	10-13-99
Chain of Custody:	7431	Date Sampled:	10-08-99
Laboratory Number:	G185	Date Received:	10-12-99
Sample Matrix:	Water	Date Analyzed:	10-13-99
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**236**	**1**	**0.2**
Toluene	**172**	**1**	**0.2**
Ethylbenzene	**113**	**1**	**0.2**
p,m-Xylene	**206**	**1**	**0.2**
o-Xylene	**131**	**1**	**0.1**
Total BTEX	**858**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**95 %**
	Bromofluorobenzene	**95 %**

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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 3	Date Reported:	10-13-99
Laboratory Number:	G186	Date Sampled:	10-11-99
Chain of Custody:	7431	Date Received:	10-12-99
Sample Matrix:	Soil	Date Analyzed:	10-13-99
Preservative:	Cool	Date Extracted:	10-13-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**26.6**	**0.9**
Toluene	**2.2**	**0.8**
Ethylbenzene	**1.8**	**0.8**
p,m-Xylene	**129**	**1.1**
o-Xylene	**18.9**	**0.5**
Total BTEX	**178**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

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: **City of Bloomfield.**

Analyst

Review

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

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Tierra Environmental	Project #:	407403
Sample ID:	B - 3	Date Reported:	10-14-99
Laboratory Number:	G186	Date Sampled:	10-11-99
Chain of Custody No:	7431	Date Received:	10-12-99
Sample Matrix:	Soil	Date Extracted:	10-13-99
Preservative:	Cool	Date Analyzed:	10-13-99
Condition:	Cool and Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**154**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **City of Bloomfield.**

Analyst

Review

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

CHAIN OF CUSTODY RECORD

7504

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Tierra Environmental	City of Bloomfield	
Sampler: Phil Nobis	Client No. 402403	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX	8015 TPH					Remarks
#4	10/19/99	8:00AM	G218	Water	1							

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
David Burtt	10-19-99	16:35	Zora L. Boogmd	10/19/99	16:35
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	✓		

CHAIN OF CUSTODY RECORD

7431

Client / Project Name	Project Location	ANALYSIS / PARAMETERS
Tierra Environmental/	City of Bloomfield	
Sampler: Dave	Client No. 407403	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX 8021	8015 TPH	418.1 TPH				Remarks
B-1	10-8	5:00pm	G184	Water	1	✓	✓					
B-2	10-8	5:05pm	G185	⊥	1	✓	✓					
B-3	10-11	11:15Am	G186	Soil	1	✓		✓				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	10-12-99	14:11	[signature]	10.12.99	1411
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	✓		