

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey	
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201	
Facility Name: Bisti Coal 16-2	Facility Type: Gas Well	
Surface Owner: Federal	Mineral Owner:	Lease No.: E-6597-2

LOCATION OF RELEASE

Unit Letter K	Section 16	Township 25N	Range 12W	Feet from the 1980	North/South Line FSL	Feet from the 1850	East/West Line FWL	County San Juan
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Latitude: 36.399371 Longitude: -108.119498

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Produced Water from gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).		
Describe Area Affected and Cleanup Action Taken.* Blow sand was removed from the earthen pit, and approximately two (2) cubic yards of 'production sludge' was removed from the earthen pit. A 5-point composite sample was collected from approximately one (1) foot below the earthen pit once it was removed. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. The sample returned results below the 'Pit Rule' standards of 100 mg/kg TPH, 0.2 mg/kg benzene and 50 mg/kg BTEX, but above the 250 mg/kg total chloride standard, confirming that a release had occurred. Elm Ridge Exploration will comply with Rule 29 from this point forward with the local division of the OCD.		
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: 		OIL CONSERVATION DIVISION
Printed Name: Ms. Amy Mackey		Approved by District Supervisor:
Title: Administrative Manager	Approval Date:	Expiration Date:
E-mail Address: amackey1@elmridge.net	Conditions of Approval:	
Date: <u>6-15-10</u> Phone: 505-632-3476 Ext 201	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

Earthen Pit Closure Checklist

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all former earthen pits prior to the closure date agreed upon by the New Mexico Oil Conservation Division of December 31, 2009.
Closure date for the earth pit located at Bisti Coal 16-2 well site is August 18, 2009.
- 2) In accordance with Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health or the environment.
None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.
- 3) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close earthen pits first which seem to pose a greater risk to fresh water, public health, or the environment. This will be determined by the locations proximity to surface water sources and distance to groundwater.
None of the earthen pits to be closed by Elm Ridge Exploration are deemed an imminent risk to the environment, public health, or to fresh or public water.
- 4) No less than 60 days prior to any earthen pit closure activities, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the Santa Fe NMOCD office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (3) NMAC.
Notification was provided to Mr. Brad Jones of the NMOCD Santa Fe Office on August 4, 2009 along with a schedule of on-site activities; see attached Notification Letter.
- 5) No less than 24 hours and no greater than one (1) week prior to earthen pit removal, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close an earthen pit. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of the earthen pit closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner will receive notice at least 24 hours prior to the beginning of closure activities.
Notification was provided to the Bureau of Land Management on August 13, 2009; see attached Sundry Notice and Return Receipt.

- 6) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids and/or sludge, to visual extents, prior to closure sampling. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection C Paragraph (1) NMAC.

On August 18, 2009, approximately two (2) cubic yards of production sludge was removed from the earthen pit and disposed of at Envirotech's NMOCD permitted soil remediation facility, Landfarm #2, Permit # NM-01-0011; see attached *Bill of Lading*.

- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this earthen pit unless it is required for some other purpose, as in accordance with 19.15.17.13 Subsection C Paragraph (2) NMAC. The equipment that meets the requirements of 19.15.9.712 Subsection A NMAC and 19.15.9.712 Subsection D Paragraph (1) will be disposed of at San Juan County Regional Landfill. Waste that is classified by 19.15.9.712 Subsection D Paragraph (2) will be sampled accordingly to determine acceptance of this material at the San Juan County Regional Landfill. Waste that is unable to be accepted at the San Juan County Regional Landfill will be submitted to the OCD on a case-by-case basis in accordance with Paragraph (3) of Subsection D of 19.15.9.712.

All on-site equipment will be used for the continued operation of the Bisti Coal 16-2 well site; see *Field Sheet* and *Site Photos*.

- 8) Once the earthen pit is removed to visual extents of contamination, a five (5)-point composite sample will be collected from directly below the liner(s) or at native soil. Additional discrete samples will be collected from any area that is wet, discolored or show other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

A five (5)-point composite sample was collected of native soil beneath the earthen pit and analyzed in the field for total petroleum hydrocarbons (TPH) via USEPA Method 418.1, and analyzed in the laboratory for benzene and BTEX via USEPA Method 8021B, and for total chlorides via USEPA Method 4500B. The sample returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard and the 50 mg/kg BTEX standard, but above the 250 mg/kg total chloride standard, confirming that a release did occur. Elm Ridge Exploration will comply with Rule 29 from this point forward with the local division of the OCD.

NAME	Benzene	BTEX	Chlorides	TPH
Pit Rule Standard	0.2 mg/kg	50 mg/kg	250 mg/kg	100 mg/kg
Earth Pit Comp @ 2'	< 0.0009 mg/kg	0.0193 mg/kg	595 mg/kg	32 mg/kg
Background	NS	NS	405 mg/kg	NS

- 9) Depending on soil sample results the area will be either backfilled or the area will be excavated.

1) If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg above background

concentration of chlorides, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.

- i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

Completed Form C-141 is attached for your review.

- ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one (1) foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

Elm Ridge Exploration has backfilled the excavated area with non-waste containing earthen material, and installed a soil cover of at least one (1) foot thick of suitable material to establish vegetation at this site. The soil cover has been graded in such a way that it conforms to the grade of the natural surroundings, and will prevent ponding of water and erosion of the cover material; see attached *Site Photos*.

- iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will substantially restore, recontour and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation.

Elm Ridge Exploration has restored, recontoured and re-seeded the excavated area in accordance with BLM standards as outlined in the Memorandum of Understanding (MOU).

- 2) If soil samples exceed the regulatory standards stated above:

- i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.

The five (5)-point composite sample of native soil beneath the earthen pit returned results below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard and the 50 mg/kg BTEX standard, but above the 250 mg/kg total chloride standard, confirming that a release did occur. Elm Ridge Exploration will comply with Rule 29 from this point forward with the local division of the OCD.

Elm Ridge Exploration
Bisti Coal 16-2
Earth Pit Closure
03056-0160
Closure Date: 8/18/09

- 10) Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques, and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.
Elm Ridge Exploration will submit all above mentioned closure documents to the local division of the OCD..



March 8, 2010

Project No. 03056-0160

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Phone (505) 476-3487

RE: C-141 RELEASE NOTIFICATION FORM FOR THE BISTI COAL 16-2 WELL SITE

Dear Mr. Jones,

Please find enclosed the modified C-141 Release Notification Form and additional supporting closure documentation for the Bisti Coal 16-2 well site owned and operated by Elm Ridge Exploration. All closure activities from this point forward will comply with Rule 29 with the district office of the OCD.

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

Respectfully Submitted,
ENVIROTECH, INC.

A handwritten signature in black ink, appearing to read 'J. McDaniel', written over a horizontal line.

James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

Enclosure: Modified C-141 Release Notification Form
Modified Closure Checklist

Cc: Client File No. 03056

RECEIVED OCD
2010 JUN 18 A 11:16

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

2008 MAY 10 PM 2:39

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

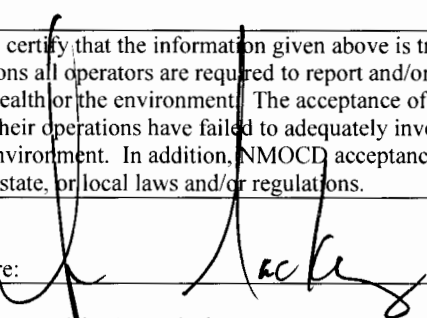
Name of Company: Elm Ridge Exploration	Contact: Amy Mackey	
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201	
Facility Name: Bisti Coal 16-2	Facility Type: Gas Well	
Surface Owner: Federal	Mineral Owner:	Lease No.: E-6597-2

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	16	25N	12W	1980	FSL	1850	FWL	San Juan

Latitude 36.399372 Longitude -108.119498

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Produced Water from gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).		
Describe Area Affected and Cleanup Action Taken.* Earthen pit was dry, and has not been discharged into since prior to June 16, 2008. A sample was collected from the earthen pit and the sample results are attached to this document for reference. The sample was analyzed for in the field for Total Petroleum Hydrocarbons (TPH) via USEPA Method 418.1 and in Envirotech's laboratory for benzene and total BTEX via USEPA Method 8021, TPH via USEPA Method 8015 and for total chlorides via USEPA Method 4500B. The sample returned results that were below the 0.2 ppm benzene standard, the 50 ppm BTEX standard and the 250 ppm total chloride standard, but above the 100 ppm TPH standard via USEPA Method 418.1, confirming that a release had occurred at this site. The site was then ranked pursuant to the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. The site was ranked a 10 due to groundwater being greater than 50 feet below ground surface, but less than 100 feet. This set the closure standards to 1000 ppm TPH, 10 ppm benzene and 50 ppm total BTEX. There is no closure standard for total chlorides per the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. All analytical results were below the closure standards determined for this site.		
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: 	OIL CONSERVATION DIVISION	
Printed Name: Ms. Amy Mackey	Approved by District Supervisor:	
Title: Administrative Manager	Approval Date:	Expiration Date:
E-mail Address: amackeyI@elmridge.net	Conditions of Approval:	Attached <input type="checkbox"/>
Date:	Phone: 505-632-3476 Ext 201	

* Attach Additional Sheets If Necessary

PAGE NO: <u>1</u> OF <u>1</u> DATE STARTED: <u>10-1-08</u> DATE FINISHED: <u>10-1-08</u>	ENVIROTECH INC ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 - 3014 FARMINGTON, NEW MEXICO 87401 PHONE: (505) 632-0615	ENVIRONMENTAL SPECIALIST: <u>Sharon</u> LAT: <u>36.399372</u> LONG: <u>-108.119498</u>
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FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION:	NAME: <u>Bisti Coal</u>	WELL #: <u>2</u>	TEMP PIT:	PERMANENT PIT: <input checked="" type="checkbox"/> BGT:
LEGAL ADD:	UNIT: <u>K</u>	SEC: <u>16</u>	TWP: <u>25N</u>	RNG: <u>12W</u> PM: <u>NMTPM</u>
QTR/FOOTAGE:	<u>1980 FSL X 1850' FAL CNTY San Juan</u>			ST: <u>NM</u>

EXCAVATION APPROX:	— FT.	X	— FT.	X	— FT. DEEP	CUBIC YARDAGE: —
DISPOSAL FACILITY:	REMEDICATION METHOD: —					
LAND OWNER:	API: <u>3004527764</u>			BGT / PIT VOLUME: <u>18' X 20' X 2 1/2'</u>		
CONSTRUCTION MATERIAL: <u>Earth</u>	DOUBLE-WALLED, WITH LEAK DETECTION: —					

LOCATION APPROXIMATELY:	25	FT.	30°	FROM WELLHEAD
DEPTH TO GROUNDWATER:	<u>2900 750 < 100 ft</u>			

TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 500 mg/kg	
TEMPORARY PIT - GROUNDWATER ≥ 100 FEET DEEP BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 1000 mg/kg	
<input checked="" type="checkbox"/> PERMANENT PIT OR BGT BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg	

FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
	200 STD					209	
3:15	5pt Comp	1	5	20	4	11600	6400
		2					
		3					
		4					
		5					
		6					

PERIMETER

FIELD CHLORIDES RESULTS

PROFILE

SAMPLE ID	READING	CALC. (mg/kg)

18' X 20' X 2 1/2' deep

PID RESULTS	
SAMPLE ID	RESULTS (mg/kg)
5pt Composite	5.8

LAB SAMPLES			NOTES: <div style="font-size: 1.2em; text-align: center;">Ranking 1C</div> <div style="text-align: right;">closure = 1000 ppm</div>
SAMPLE ID	ANALYSIS	RESULTS	
	BENZENE		
	BTEX		
	GRO & DRO		
	CHLORIDES		
WORKORDER #			WHO ORDERED



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0160
Sample No.:	1	Date Reported:	1/21/2009
Sample ID:	5 Point Composite	Date Sampled:	10/1/2008
Sample Matrix:	Soil	Date Analyzed:	10/1/2008
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	6,400	5.0

ND = Parameter not detected at the stated detection limit.

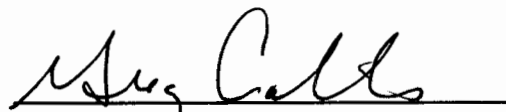
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Bisti Coal 16-2 Earthen Pit**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

 For
Analyst

Sharon Putt
Printed



Greg Crabtree
Printed

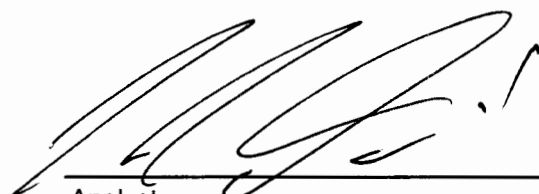


CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 1-Oct-08

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	209
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

 For

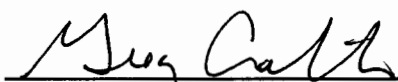
Analyst

1/21/09

Date

Sharon Putt

Print Name



Review

1/21/09

Date

Greg Crabtree

Print Name



**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Elmridge	Project #:	03056-0136
Sample ID:	Bisti Coal 16-002	Date Reported:	11-04-08
Laboratory Number:	47928	Date Sampled:	10-29-08
Chain of Custody No:	5654	Date Received:	10-29-08
Sample Matrix:	Soil	Date Extracted:	10-31-08
Preservative:	Cool	Date Analyzed:	11-03-08
Condition:	Intact	Analysis Requested:	8015 TPH

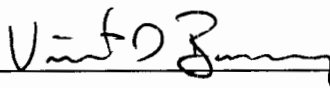
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	7.6	0.2
Diesel Range (C10 - C28)	501	0.1
Total Petroleum Hydrocarbons	509	0.2

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: **Earth Pit Samples, 5pt Comp.**


Analyst


Review



EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	11-03-08 QA/QC	Date Reported:	11-04-08
Laboratory Number:	47923	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-03-08
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.9278E+002	9.9318E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0226E+003	1.0230E+003	0.04%	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	15.5	15.4	0.7%	0 - 30%
Diesel Range C10 - C28	9,140	9,090	0.6%	0 - 30%

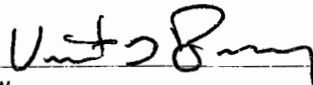
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	15.5	250	262	98.5%	75 - 125%
Diesel Range C10 - C28	9,140	250	9,370	99.8%	75 - 125%

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 47923 - 47926, 47928, 47929, 47931, 47932, 47942 and 47943.

Analyst 

Review 



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Elmridge	Project #:	03056-0136
Sample ID:	Bisti Coal 16-002	Date Reported:	11-04-08
Laboratory Number:	47928	Date Sampled:	10-29-08
Chain of Custody:	5654	Date Received:	10-29-08
Sample Matrix:	Soil	Date Analyzed:	11-03-08
Preservative:	Cool	Date Extracted:	10-31-08
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	5.3	1.0
Ethylbenzene	6.4	1.0
p,m-Xylene	11.9	1.2
o-Xylene	3.0	0.9
Total BTEX	26.6	

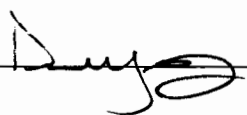
ND - Parameter not detected at the stated detection limit.

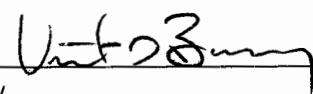
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

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: Earth Pit Samples, 5pt Comp.

Analyst 

Review 

Client:	N/A	Project #:	N/A
Sample ID:	11-03-BT QA/QC	Date Reported:	11-04-08
Laboratory Number:	47923	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	11-03-08
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff.	Blank Conc	Detect. Limit
		Accept. Range 0 - 15%			
Benzene	4.3065E+007	4.3151E+007	0.2%	ND	0.1
Toluene	3.3071E+007	3.3137E+007	0.2%	ND	0.1
Ethylbenzene	2.5284E+007	2.5335E+007	0.2%	ND	0.1
p,m-Xylene	2.5284E+007	2.5335E+007	0.2%	ND	0.1
o-Xylene	2.4071E+007	2.4119E+007	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect. Limit
Benzene	1.4	1.3	7.1%	0 - 30%	0.9
Toluene	16.9	17.0	0.6%	0 - 30%	1.0
Ethylbenzene	56.3	56.1	0.4%	0 - 30%	1.0
p,m-Xylene	179	181	0.9%	0 - 30%	1.2
o-Xylene	86.6	86.2	0.5%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	1.4	50.0	50.4	98.1%	39 - 150
Toluene	16.9	50.0	64.6	96.6%	46 - 148
Ethylbenzene	56.3	50.0	104	98.0%	32 - 160
p,m-Xylene	179	100	276	98.7%	46 - 148
o-Xylene	86.6	50.0	133	97.7%	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 47923 - 47926, 47928, 47930, 47932, 47933, 47942, and 47943.

Analyst

Review



Chloride

Client:	Elmridge	Project #:	03056-0136
Sample ID:	Bisti Coal 16-002	Date Reported:	11-04-08
Lab ID#:	47928	Date Sampled:	10-24-08
Sample Matrix:	Soil Extract	Date Received:	10-29-08
Preservative:	Cool	Date Analyzed:	11-04-08
Condition:	Intact	Chain of Custody:	5654

Parameter

Concentration (mg/L)

Total Chloride

125

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Samples, 5pt Comp.**

Analyst

A handwritten signature in black ink, appearing to be 'D. S. ...', written over a horizontal line.

Review

A handwritten signature in black ink, appearing to be 'V. B. ...', written over a horizontal line.

100

ENVIROTECH INC.