

OIL CON. DIV.
FILE 8

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PIT REMEDIATION AND CLOSURE REPORT

1 and Type: Sierra Apache

Direction from reference: 80° Degrees _____ East North X
or
_____ West South _____

Less than 100 feet (20 points)
100 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 10

Date Remediation Started: 8-26-96 Date Completed: _____

Remediation Method: Excavation ☒ Approx. cubic yards 33
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____

Other _____

Remediation Location: Onsite ☒ Offsite _____
(i.e. landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action: Excavate contaminated material down to solid sandstone

Groundwater Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location See pit closure verification sheet
Closure Sampling: sheet
(if multiple samples, attach sample results and diagram of sample locations and depths) Sample depth _____
Sample date 8-26-96 Sample time 1330

Sample Results

Soil: Benzene (ppm)	<u>0.45</u>	Water: Benzene (ppb)	_____
Total BTEX (ppm)	<u>85.35</u>	Toluene (ppb)	_____
Field Headspace (ppm)	<u>249</u>	Ethylbenzene (ppb)	_____
TPH (ppm)	<u>6900</u>	Total Xylenes (ppb)	_____

Groundwater Sample: Yes _____ No ☒ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 8-26-96 PRINTED NAME CRAIG A. Back
SIGNATURE Craig A. Back AND TITLE Environmental Representative

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES ☒ NO _____ (REASON) Spray w/ Nutrients (Conditional)

SIGNED: Heidi J. [Signature] DATE: 9/9/96

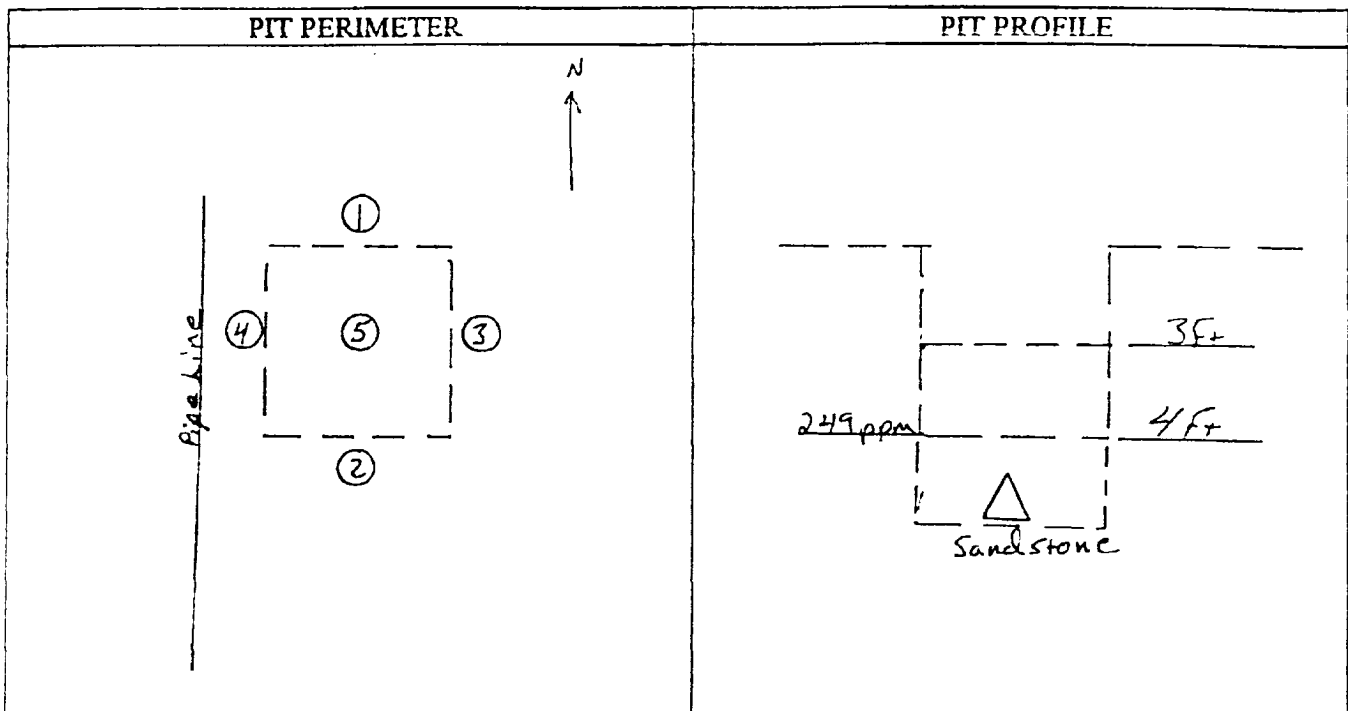
BURLINGTON RESOURCES

PIT CLOSURE VERIFICATION SHEET

Location: Licorilla 94 #5 AP# 29200A Lease No. NM Cont 09-000094
 Contractor: Philp Env Consultant Initials: gff
 Date Started: 8-26-96 Date Finished:

Excavation & Soil Information

Dimensions (approx.): 15' FT. x 15' FT. x 4' FT. Deep Cubic Yards: (bcy) 33
 Soil Remediated ☒ On Site ☐ Off Site If off site name location (s)



OVM Results:								
Sample ID	1	2	3	4	5	6	7	8
Headspace PID (ppm)	247	247	250	249	249			
Sample ID	9	10	11	12	13	Comp 1	Comp 2	Comp 3
Headspace PID (ppm)						249		

Laboratory Results:		
Sample ID	M6-29200A-2-V	
BTEX RM8020 (ppm)	85.35	
TPH RM8015 (ppm)	6900	

Zenon Environmental Laboratory Certificate of Analysis

Page 1 of 1

P 04 '96 15:30 FR ZENON LABORATORIES

905 332 9169 TO 15053262388

P.02/05

Client ID: 44219A-3-V 44219A-3-V 44219A-3-V 44219A-3-V 44219A-3-V 25200A-2-V

Zenon ID: 033787 96 033788 96 033788 96 033788 96 033788 96 033789 96

Date Sampled: 96/08/26 96/08/26 96/08/26 96/08/26 96/08/26 96/08/26

MDL Units Matrix Spike % Recovery MS Dup MS D % Rec.

0.005 mg/kg < < - - - 0.45

0.005 " < < - - - 14

0.005 " < 0.005 - - - 4.9

0.005 " < 0.010 - - - 50

0.005 " < < - - - 16

surrogate Recoveries

4-1,2-Dichloroethane

8-Toluene

monofluorobenzene

90 89 - - - 103

91 79 - - - 104

104 105 - - - 77

(1)

6900

19 mg/kg < < 37 70 35 67

surrogate Recoveries

-a-Androstane

99 72 95 95 106 93

Client: Philip Environmental Inc. Project: 16256

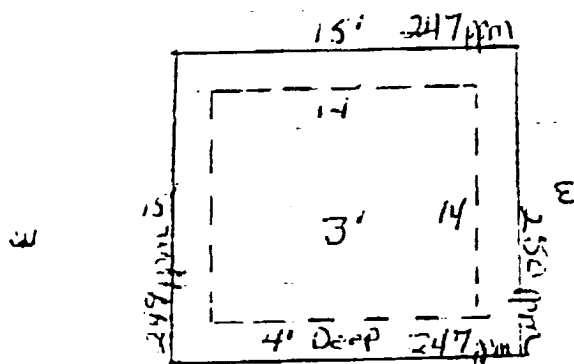
Jicarilla 9405 8-26-76
 Truck 1/2 into Location - Pure Mud -
 work permit - one call - 9608 2210490332
 Walk Truck hoe to Location
 Start Digging @ 12:45 pm
 Sandstone @ 8"

33 yards

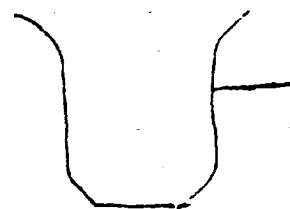
Guy
 Jamin
 James
 Tim

HTC
 SOURCE
 INSTA

(19)
 #13 C 12:30 pm



Compos. for 249
 Bottom 249 ppm
 Chuck Tank

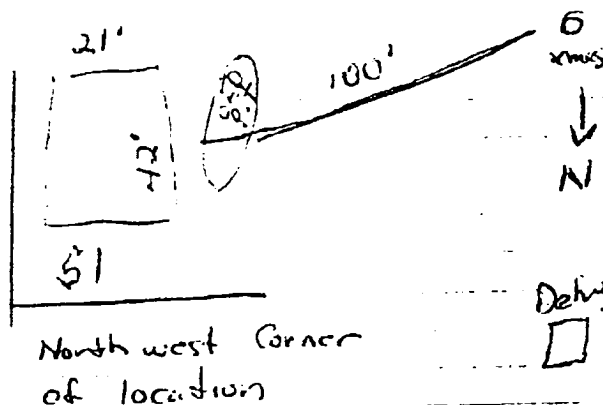


(20) (21)
 Picture 124 11 12:55 pm

Samples @ 1:20 pm

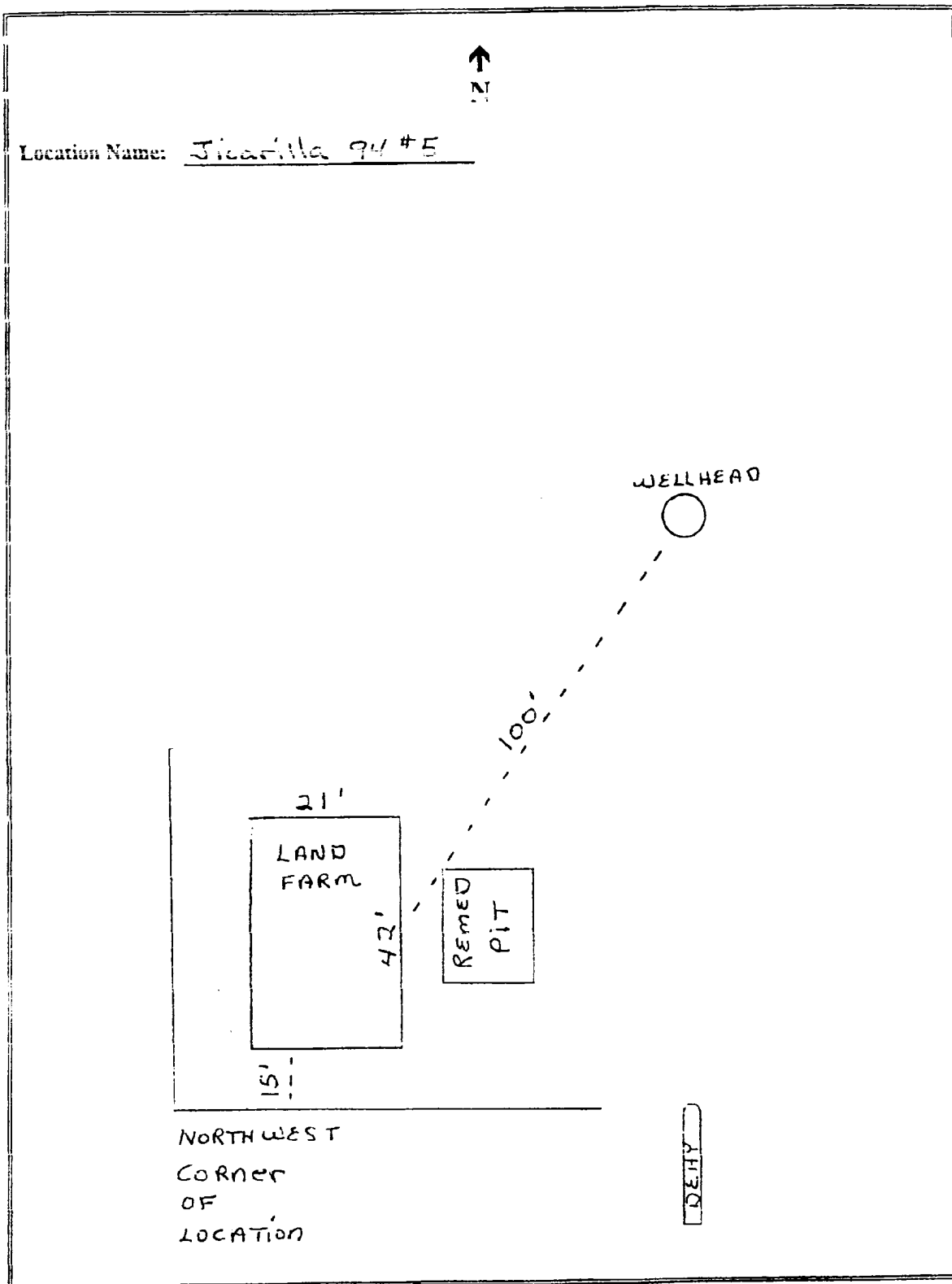
Sandstone on Bottom & Sides

Headed for 67011 w/ Hoe @ 1:25 pm



North west Corner
 of location

ON-SITE SOIL REMEDIATION DIAGRAM



JICARILLA APACHE TRIBE
ENVIRONMENTAL
PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

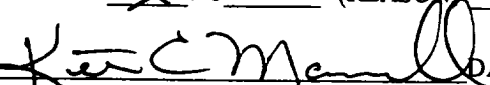
SUBMIT 1 COPY TO
NATURAL
RESOURCE DEPT
AND OIL GAS
ADMINISTRATION

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>BURLINGTON RESOURCES</u>		Telephone: <u>(505) 326-9700</u>	
Address: <u>P.O. BOX 4289, Farmington, NM 87499-4289</u>			
Facility or Well Name: <u>Jicarilla 94 #5</u>			
Location: Unit: <u>m</u> Sec. <u>23</u> T. <u>27 N</u> R. <u>03</u> W County <u>Rio Arriba</u>			
Land Type: <u>Jicarilla Apache</u>			
Date Remediation Started: <u>8-26-96</u>		Date Completed: _____	
Remediation Method: Landfilled ☒		Approx. cubic yards <u>33</u>	
Composted ☐			
Other ☐			
Depth to Ground Water: (pts.) <u>0</u>		Final Closure Sampling: Sampling Date: _____ Time _____ Sampling Results: Field Headspace (ppm) _____ TPH (ppm) _____ Method _____ Other _____ Sample No. _____	
Distance to an Ephemeral Stream: (pts.) <u>0</u>			
Distance to Nearest Lake, Playa, or Watering Pond: (pts.) <u>0</u>			
Wellhead Protection Area: (pts.) <u>0</u>			
Distance to Surface Water: (pts.) <u>10</u>			
Ranking Score (Total Points): <u>10</u>			
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF			
DATE _____		PRINTED NAME _____	
SIGNATURE _____		AND TITLE _____	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE			
APPROVED: YES _____ NO _____ (REASON) _____			
SIGNED: _____ DATE: _____			

JICARILLA APACHE TRIBE
ENVIRONMENTAL PROTECTION OFFICE
P.O. BOX 507
DULCE, NEW MEXICO 87528

ON-SITE SOIL REMEDIATION REPORT

Operator: <u>Taurus Exploration USA Inc.</u> Telephone: <u>(505) 325 - 6800</u>	
Address: <u>2198 Bloomfield Hwy, Farmington N.M. 87401</u>	
Facility or Well Name: <u>Jicarilla 94-5</u>	
Location: Unit or Qtr/Qtr Sec <u>M</u> Sec <u>23</u> T <u>27 N</u> R <u>3 W</u> County <u>Rio Arriba</u>	
Land Type: <u>Range</u>	
Date Remediation Started: <u>8/26/96</u> Date Completed: <u>2/3/99</u>	
Remediation Method: Landfarmed <u>X</u> Approx. cubic yards <u>33</u>	
Composted <u> </u>	
Other <u> </u>	
Depth to Groundwater: (pts) <u>0</u> Distance to an Ephemeral Stream (pts) <u>0</u> Distance to Nearest Lake, Playa, or Watering Pond (pts) <u>0</u> Wellhead Protection Area (pts) <u>0</u> Distance to Surface Water (pts) <u>10</u> RANKING SCORE (TOTAL POINTS): <u>10</u>	Final Closure Sampling: Sampling Date: <u>2/3/99</u> Time: <u>11:00</u> Sample Results: Field Headspace (ppm) <u>0.5</u> TPH (ppm) <u><10</u> Method <u>8015</u> Other: <u> </u>
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF	
DATE: <u>2/11/99</u> PRINTED NAME <u>VIRGIL CHAVEZ</u>	
SIGNATURE <u></u> AND TITLE <u>ENV. SPECIALIST</u>	
AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION. ON-SITE SOIL REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.	
APPROVED: YES <u>X</u> NO <u> </u> (REASON) <u> </u>	
SIGNED: <u></u> DATE: <u>4-5-99</u>	

Client : Taurus Exploration USA Inc.

Date Started : August 26, 1996 Date Completed : February 3, 1999

Location : Jicarilla 94 - 5			Overview of Landfarm and Sampling :																																									
Quad : M Section : 23																																												
Township: 27 N Range: 3 W																																												
Pit :	Blow Pit	<table border="1"><thead><tr><th>Sample #</th><th>Location</th><th>OVM</th></tr></thead><tbody><tr><td>1</td><td>Comp 1</td><td>0.5</td></tr><tr><td>2</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td></tr><tr><td>4</td><td></td><td></td></tr><tr><td>5</td><td></td><td></td></tr><tr><td>6</td><td></td><td></td></tr><tr><td>7</td><td></td><td></td></tr><tr><td>8</td><td></td><td></td></tr><tr><td>9</td><td></td><td></td></tr><tr><td>10</td><td></td><td></td></tr><tr><td>11</td><td></td><td></td></tr><tr><td>12</td><td></td><td></td></tr></tbody></table>	Sample #	Location	OVM	1	Comp 1	0.5	2			3			4			5			6			7			8			9			10			11			12					
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11																																												
12																																												
Reference 60' N 60 E from wellhead																																												
Size: 15' x 15' x 1'																																												
Yds : 33																																												
1 5 - Point Composites																																												
Comments : Soil is moist, medium brown, clay/loam, with no visible staining or hydrocarbon odor. A sample from composite # 1 was sent to IML for GRO/DRO analysis.																																												
Environmental Specialist : JE																																												

Ranking Score : 0 Closure Standard : 5000 ppm

Cimarron Oilfield Services



Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Energen Resources

Project: Jicarilla 94-5

Sample ID: Landfarm Comp #1

Lab ID: 0399W00709

Matrix: Soil

Condition: Cool/Intact

Date Reported: 02/10/99

Date Sampled: 02/03/99

Date Received: 02/04/99

Date Analyzed: 02/08/99

Parameter	Analytical Result	PQL	Units
MEHTOD 8015 - DRO			
Diesel Range Organics	<5	5	mg/Kg
Diesel Range Organics as Diesel	<5	5	mg/Kg
Quality Control - Surrogate Recovery			
	%	QC Limits	
o-Terphenyl(SUR-8015)	86	70 - 130	

Reference: DRO - USEPA Method for Determination of Diesel Range Organics. Revision 2, February 1992.

WTPH-D Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By:

Sharon Williams, Organic Lab Supervisor



Inter-Mountain Laboratories, Inc.

Phone (505) 326-4737 Fax (505) 325-4182

2506 West Main Street, Farmington, NM 87401

Client: Energen Resources

Project: Jicarilla 94-5

Sample ID: Landfarm Comp #1

Lab ID: 0399W00709

Matrix: Soil

Condition: Cool/Intact

Date Reported: 02/05/99

Date Sampled: 02/03/99

Date Received: 02/04/99

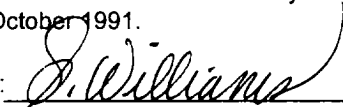
Date Analyzed: 02/05/99

Parameter	Analytical Result	PQL	Units
METHOD 8015 - GRO			
Gasoline Range Organics	<5	5	mg/Kg
Gasoline Range Organics as Gasoline	<5	5	mg/Kg

Reference: GRO - USEPA Method for Determination of Gasoline Range Organics, Revision 5, February 1992.

WTPH-G Total Petroleum Hydrocarbons Analytical Methods for Soil, Washington State Department of Ecology, Revision 3, October 1991.

Reviewed By:


Sharon Williams, Organic Lab Supervisor



CHAIN OF CUSTODY RECORD

Client/Project Name						Project Location				ANALYSES / PARAMETERS																			
Sampler: (Signature)						Chain of Custody Tape No.																							
Emergen William P. Roth						Sic 94-5																							
Sample No./ Identification		Date	Time	Lab Number	Matrix	No. of Containers	Remarks																						
Landfill Comp		2-3-99	1100		Soil	8015 480/ 1000 X	Push																						
Relinquished by: (Signature)						Date	Time	Received by: (Signature)		Date Time																			
William P. Roth						2-4-99	1330																						
Relinquished by: (Signature)						Date	Time	Received by: (Signature)		Date Time																			
Relinquished by: (Signature)						Date	Time	Received by laboratory: (Signature)		Date Time																			
Inter-Mountain Laboratories, Inc.						Handwritten note: Will supply for IMC transmission																							
1633 Terra Avenue Sheridan, Wyoming 82801 Telephone (307) 672-8945						1701 Phillips Circle Gillette, Wyoming 82718 Telephone (307) 682-8945						2506 West Main Street Farmingington, NM 87401 Telephone (505) 326-4737						1160 Research Drive Bozeman, Montana 59718 Telephone (406) 586-8450						11183 State Hwy. 30 College Station, TX 77845 Telephone (409) 776-8945					
50038																													