

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

Form C-144  
June 1, 2004

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

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a general plan? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: Pure Resources HE Telephone: 970-259-1374 e-mail address: \_\_\_\_\_  
Address: 463 Turner Drive Facility or well name: State 16-1 API #: 30045221140000 U/L or Off/On SW/NE Sec 16 T 26N R 8W  
County: San Juan Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: 1927 ☐ 1983 ☐  
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐

**Pit**

Type: Drilling ☐ Production ☒ Disposal ☐  
Workover ☐ Emergency ☐  
Lined ☐ Unlined ☒  
Liner type: Synthetic ☐ Thickness \_\_\_\_\_ mil Clay ☐  
Pit Volume \_\_\_\_\_ bbl

**Below-grade tank**

Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Construction material: \_\_\_\_\_  
Double-walled, with leak detection? Yes ☐ If not, explain why not. \_\_\_\_\_

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet	(20 points)
50 feet or more, but less than 100 feet	(10 points)
100 feet or more X	( 0 points) X

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes	(20 points)
No X	( 0 points) X

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet	(20 points) X
200 feet or more, but less than 1000 feet	(10 points)
1000 feet or more X	( 0 points)

<b>Ranking Score (Total Points)</b>	<b>20</b>
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If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☒ If offsite, name of facility: Industrial Ecosystems Inc. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Decommissioned Separator Pit. Separator was moved to production tank area, and a double walled steel pit was installed in the production tank secondary containment

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 3/3/05

Printed Name/Title John Hagstrom as Agent for Pure Resources

Signature [Signature]

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: DEPUTY OIL & GAS INSPECTOR, DIST. 02

Printed Name/Title \_\_\_\_\_

Signature [Signature]

Date: MAR - 7 2005



February 28, 2005

SMA Project: 5114698

RE: Remedial Activities for Pit Closure at the State 16-1. SW/NE, Sec. 16, T 26N, R 8W, Dakota, San Juan County NM. State Lease LG 3571. API 30045221140000.

On February 2, 2005, excavation of the unlined separator pit at the State 16-1 began. The unlined pit was approximately 25x15x3 feet. Remedial excavation was needed based on laboratory analysis of previous characterization samples, which were collected and analyzed for, Diesel Range Organics (DRO), Gasoline Range Organics (GRO), and BTEX, on November 2, 2004. The soil samples collected showed results of:

November 2, 2004	DRO ppm	GRO ppm	BTEX ppm
4 Point Sidewall Composite	360	BDL	0.143
Center Pit Bottom	212	6.82	0.460

BDL: Below Detection Limits

As those results are above the NMOCD closure level of 100 ppm for Total Petroleum Hydrocarbons (TPH) for a pit scoring 20 points on the risk assessment, excavation was considered necessary. The pit was excavated using a trackhoe. The excavated soils were heavily stained, with a strong hydrocarbon odor to a depth of approximately 20 feet bgs. The excavation sidewalls had to be stepped for safety due to soil type, which was a poorly graded sand extending from ground surface to the vertical extent of the excavation. The final extent of the excavation was approximately 30X60X 35 feet. PID readings were taken throughout the process to control the remediation by excavation. PID readings were noted in the 1200 unit range at approximately 20 feet bgs. At 35 feet bgs, the excavation had progressed as far as was safe. PID readings at that depth were in the 320 unit range. NMOCD was contacted and verbally approved termination of excavation due to increasing safety concerns. On February 3, 2005, a soil sample was collected from the center pit bottom, and a four-point composite soil sample was collected from the sidewalls for field analysis by PID. The center pit bottom sample showed a PID reading of 314 units, while the sidewall composite showed a PID reading of 0 units. Soil samples for closure were collected for laboratory analysis. The excavation was backfilled using clean native soils mixed with approximately 750 lbs. of fertilizer to promote natural remediation of any remaining contaminants. The fertilizer was a mixture of 25% nitrogen, 5% phosphorus, 10% potassium, and 5% iron. 460 cubic yards of soil was excavated from the pit and properly disposed of at Industrial Ecosystems Inc., #81 CR 3520 Aztec, NM 87410. Backfilling was completed on February 4, 2005. The backfill was wheel compacted and mounded against future settling. The laboratory analysis of the samples for closure collected on February 3, 2005 showed hydrocarbon levels of:

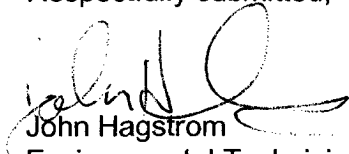
February 3, 2005	DRO ppm	GRO ppm	BTEX ppm
4 Point Sidewall Composite	21	BDL	BDL
Center Pit Bottom	140	3.5	50.5 (m.p-Xylene)

BDL: Below Detection Limits

Pure Resources, State 16-1  
Pit Closure  
SMA: 5114698  
March 3, 2005

Based on the risk associated with further excavation and the significant reduction in both laboratory analytical results and PID readings, on behalf of our client, Pure Resources, SMA requests closure for this pit. Groundwater was not encountered. Natural remediation should proceed with the mixture of the 750 lbs of fertilized backfill.

Respectfully submitted,



John Hagstrom  
Environmental Technician  
**Souder, Miller and Associates**

SUBJECT STATE 16-1

PROJECT 5114698

PAGE 1

CLIENT Pure Resources

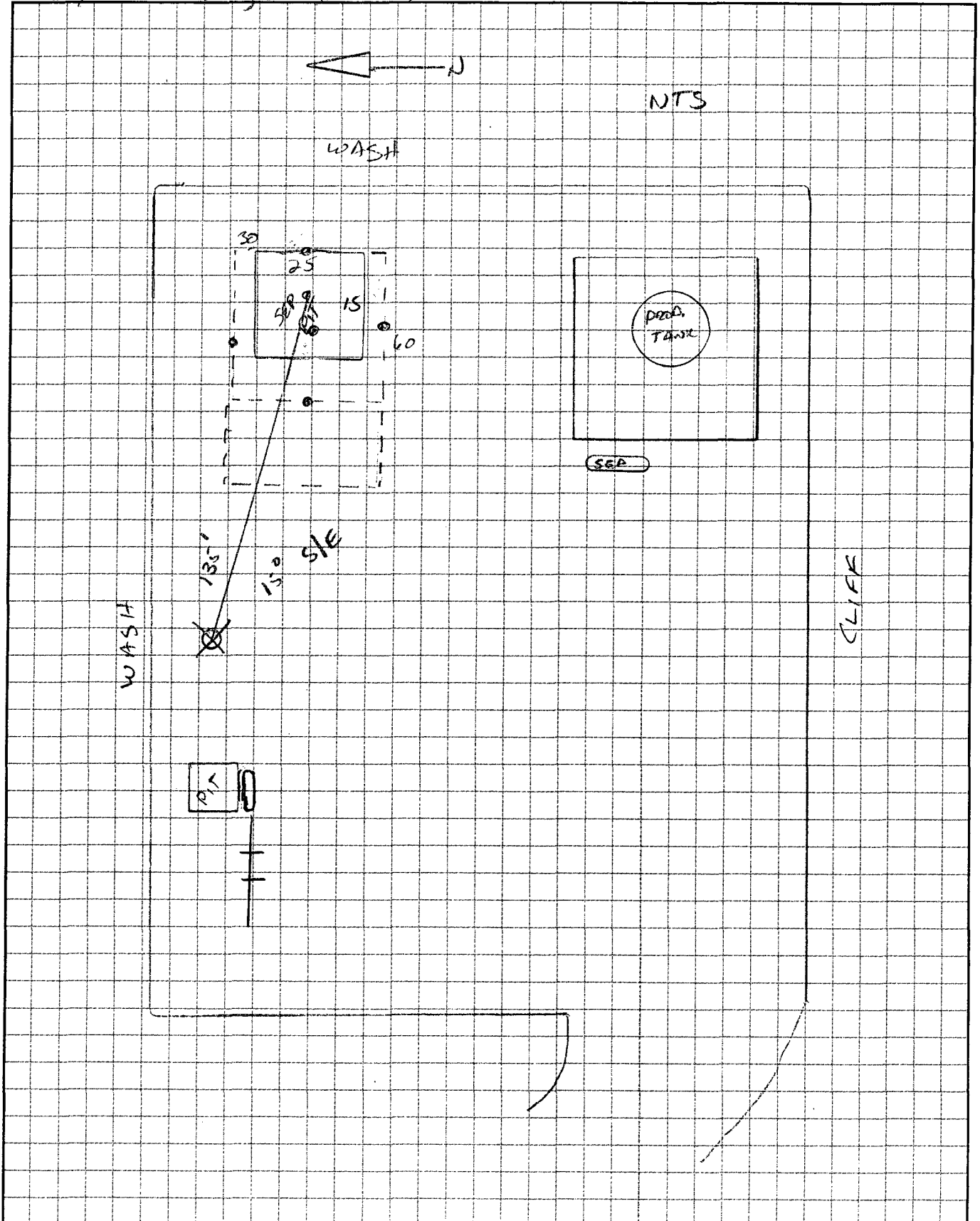
DATE 11/2/04

BY JPH

SURV NE S16, 24NGW LG 3571

CHECKED

BY



612 E. Murray Drive  
Farmington, NM 87499

Off: (505) 327-1072  
FAX: (505) 327-1496

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P.O. Box 3788  
Shiprock, NM 87420

Off: (505) 368-4065

## ANALYTICAL REPORT

Date: 17-Nov-04

**CLIENT:** Souder, Miller & Associates  
**Work Order:** 0411004  
**Project:** 5114698 - State 16-1  
**Lab ID:** 0411004-001A

**Client Sample Info:** State 16-1  
**Client Sample ID:** State 16-1 SW  
**Collection Date:** 11/2/2004 8:35:00 AM  
**Matrix:** SOIL

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015B</b>		Analyst: JEM		
T/R Hydrocarbons: C10-C28	326	25.0		mg/Kg	1	11/4/2004
Surr: o-Terphenyl	106	57-136		%REC	1	11/4/2004
<b>GASOLINE RANGE ORGANICS</b>		<b>SW8015B</b>		Analyst: JEM		
T/R Hydrocarbons: C6-C10	ND	4.50		mg/Kg	25	11/4/2004
Surr: Trifluorotoluene	92.8	84-149		%REC	25	11/4/2004
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: JEM		
Benzene	ND	25		µg/Kg	25	11/10/2004
Ethylbenzene	67	25		µg/Kg	25	11/10/2004
m,p-Xylene	56	50		µg/Kg	25	11/10/2004
o-Xylene	20	25	J	µg/Kg	25	11/10/2004
Toluene	ND	50		µg/Kg	25	11/10/2004
Surr: 1,4-Difluorobenzene	88.0	75-110		%REC	25	11/10/2004
Surr: 4-Bromochlorobenzene	89.8	40-135		%REC	25	11/10/2004
Surr: Fluorobenzene	87.0	69-110		%REC	25	11/10/2004

**Qualifiers:**  
ND - Not Detected at the Practical Quantitation Limit  
J - Analyte detected below Practical Quantitation Limit  
B - Analyte detected in the associated Method Blank  
H - Parameter exceeded Maximum Allowable Holding Time

S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted precision limits  
E - Value above Upper Quantitation Limit - UQL

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MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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P.O. Box 3788  
Shiprock, NM 87420

Off: (505) 368-4065

## ANALYTICAL REPORT

Date: 17-Nov-04

CLIENT: Souder, Miller & Associates  
Work Order: 0411004  
Project: 5114698 - State 16-1  
Lab ID: 0411004-002A

Client Sample Info: State 16-1  
Client Sample ID: State 16-1 CP  
Collection Date: 11/2/2004 8:35:00 AM  
Matrix: SOIL

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>DIESEL RANGE ORGANICS</b>		<b>SW8015B</b>		Analyst: JEM		
T/R Hydrocarbons: C10-C28	212	25.0		mg/Kg	1	11/4/2004
Surr: o-Terphenyl	141	57-136	S	%REC	1	11/4/2004
<b>GASOLINE RANGE ORGANICS</b>		<b>SW8015B</b>		Analyst: JEM		
T/R Hydrocarbons: C6-C10	6.82	4.50		mg/Kg	25	11/4/2004
Surr: Trifluorotoluene	95.4	84-149		%REC	25	11/4/2004
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: JEM		
Benzene	ND	25		µg/Kg	25	11/10/2004
Ethylbenzene	57	25		µg/Kg	25	11/10/2004
m,p-Xylene	310	50		µg/Kg	25	11/10/2004
o-Xylene	93	25		µg/Kg	25	11/10/2004
Toluene	ND	50		µg/Kg	25	11/10/2004
Surr: 1,4-Difluorobenzene	86.8	75-110		%REC	25	11/10/2004
Surr: 4-Bromochlorobenzene	89.3	40-135		%REC	25	11/10/2004
Surr: Fluorobenzene	86.7	69-110		%REC	25	11/10/2004

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MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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## ANALYTICAL REPORT

*iiná bá*

P.O. Box 3788  
Shiprock, NM 87420

Off: (505) 368-4065

Date: 17-Feb-05

CLIENT: Souder, Miller & Associates  
Work Order: 0502006  
Project: STATE 16-1  
Lab ID: 0502006-001A

Client Sample Info: STATE 16-1  
Client Sample ID: STATE 16-1 SIDE WALL 4PT  
Collection Date: 2/3/2005 10:30:00 AM  
Matrix: SOIL

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>GASOLINE RANGE ORGANICS</b>		<b>SW8015B</b>		Analyst: JEM		
T/R Hydrocarbons: C6-C10	ND	4.50		mg/Kg	25	2/10/2005
Surr: Trifluorotoluene	85.9	84-149		%REC	25	2/10/2005
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: JEM		
Benzene	ND	25.0		µg/Kg	25	2/11/2005
Ethylbenzene	ND	25.0		µg/Kg	25	2/11/2005
m,p-Xylene	ND	50.0		µg/Kg	25	2/11/2005
Methyl tert-Butyl Ether	ND	250		µg/Kg	25	2/11/2005
o-Xylene	ND	25.0		µg/Kg	25	2/11/2005
Toluene	ND	50.0		µg/Kg	25	2/11/2005
Surr: 1,4-Difluorobenzene	92.2	75-110		%REC	25	2/11/2005
Surr: 4-Bromochlorobenzene	100	40-135		%REC	25	2/11/2005
Surr: Fluorobenzene	90.3	69-110		%REC	25	2/11/2005

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## ANALYTICAL REPORT

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P.O. Box 3788  
Shiprock, NM 87420

Off: (505) 368-4065

Date: 17-Feb-05

**CLIENT:** Souder, Miller & Associates  
**Work Order:** 0502006  
**Project:** STATE 16-1  
**Lab ID:** 0502006-002A

**Client Sample Info:** STATE 16-1  
**Client Sample ID:** STATE 16-1 CENTER PIT@30f  
**Collection Date:** 2/3/2005 10:35:00 AM  
**Matrix:** SOIL

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>GASOLINE RANGE ORGANICS</b>		<b>SW8015B</b>			Analyst: JEM	
T/R Hydrocarbons: C6-C10	3.5	4.50	J	mg/Kg	25	2/10/2005
Surr: Trifluorotoluene	84.4	84-149		%REC	25	2/10/2005
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>			Analyst: JEM	
Benzene	ND	25.0		µg/Kg	25	2/11/2005
Ethylbenzene	ND	25.0		µg/Kg	25	2/11/2005
m,p-Xylene	50.5	50.0		µg/Kg	25	2/11/2005
Methyl tert-Butyl Ether	ND	250		µg/Kg	25	2/11/2005
o-Xylene	ND	25.0		µg/Kg	25	2/11/2005
Toluene	ND	50.0		µg/Kg	25	2/11/2005
Surr: 1,4-Difluorobenzene	92.4	75-110		%REC	25	2/11/2005
Surr: 4-Bromochlorobenzene	113	40-135		%REC	25	2/11/2005
Surr: Fluorobenzene	91.0	69-110		%REC	25	2/11/2005

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