Pistrict I P.O. Box 1980, Energy, Minerals and Natural Resources Department Hobbs, NM District II P.O. Drawer DD, Artesia, NM 88211 District III

Aztec, NM 87410

1000 Rio Brazos Rd,

State of New Mexico

SUBMIT 1 COPY TO APPROPRIATE

> DISTRICT OFFICE AND 1 COPY TO

OIL CONSERVATION DIVISION

SANTA FE OFFICE

1220 St Francis Drive

Santa Fe, New Mexico 87505

(Revised 3/9/94)

PIT REMEDIATION AND CLOSURE REPORT

Operator: Hallador Petroleum, LLP

Telephone: 1-800-839-5506

Address: 1660 Lincoln Street, Denver CO. 80264

Well Name: Horton 12

Location: Unit M, Sec27 T32N R12W, County: San Juan, NM

Pit Type: Separator \underline{x} Dehydrator____ Other

Land Type: BLM

Pit Location: Pit dimensions: length 25' width 25' depth 24'

(Attach diagram)

Reference: wellhead \underline{x}

Footage from reference: 22'

Direction from reference: $\underline{40}$ Degrees West of North

Depth To Ground Water:

(Vertical distance from contaminants to seasonal high water elevation of ground water)

Wellhead Protection Area:

(Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources) Yes

No

0

0

Less than 200 feet 200 feet to 1,000 feet

Less than 50 feet

50 feet to 99 feet

Greater than 100 feet

(20 points) (10 points)

(0 points) 0

(20 points)

(10 points)

(20 points)

(0 points)

(0 points)

Greater than 1,000 feet

RANKING SCORE (TOTAL POINTS): 0

Distance To Surface Water: (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)

Date Remediation Started:	10/1999	Date Completed: 10/30/2000
Pomodiation Wather		20/30/2000
Remediation Method: Excav (Check all appropriate	ation <u>x</u>	Approx. cubic yards 560
	15	
Leccions, L	andfarmed \underline{x}	Insitu Bioremediation
Remediation Location: Ons	ite landfarmed	
General Description Of Rem	edial Action: Cont	taminated soils were excavated from the pit area
inch lift on location gar	osed at approx. 24	faminated soils were excavated from the pit area feet. Recovered soils were spread in a twelve
month period. Following re	mediation and save	vere plowed/tilled ten (10) times during a sever
backfilled into the original	al pit area	were plowed/tilled ten (10) times during a seven mpling for clearance, the treated soils were
5	- pro urcu.	
Ground Water Encountered:	No <u>x</u> Yes _	Depth
Closure Sampling		
bampiing	Sample Harrier an	
	Sample Logation 12	D: t
	Sample depth Pof	Pit excavation bottom 5 point composite
	24' BGS	usal .5' below excavated bottom approximately
	Lab ID <u>Horton 12</u>	CDC
	Sample date 10/30	0/00 Sample time <u>2:20 PM</u>
	Sample Results	
	Benzene (ppm	ı) NA
	Total BTEX (, ATT
	Field Headsp	ace (ppm) 0.0
	TPH <u>360 mg/K</u>	<u>a</u>
	Sample Side wall	4 point composite
Sar	nple Depth 3-4' BG	SS
	Lab ID Horton 12	SWC
	Sample Date $10/30$	/00 Sample Time 2:35 PM
	Sample Results	
	Renzene (nom) ara
	Benzene (ppm Total BTEX () <u>NA</u>
	Field Headsp	ppm) <u>na</u>
	TPH ND	ace <u>0.0</u>
round Water Sample: Yes	No <u>x</u>	•
S AN AUTHORIZED ACTIVE		
TRUE AND COMPLETE TO THE	ALLADOR PETROLEUM, BEST OF MY KNOWLEI	, I HEREBY CERTIFY THAT THE INFORMATION ABOVE OGE AND BELIEF.
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TE 4/4/0)		
1 () 1	e de la companya de l	NAME John Hagstrom
GNATURE JELL ALL		
		TITLE Environmental Technician

<u>District I</u>

State of New Mexico

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P.O. Box 1980, Energy, Minerals and Natural Resources Department APPROPRIATE

Hobbs, NM District II DISTRICT

P.O. Drawer DD, Artesia, NM 88211 District III

OFFICE AND 1 COPY TO

OIL CONSERVATION DIVISION

SANTA FE OFFICE

1000 Rio Brazos Rd, Aztec, NM 87410

Title: Environmental Technician

1220 St. Francis Drive Santa Fe, NM 87505

Landfarm Remediation and Closure Report

Owner/Operator: Hallador Petroleum, LLP Telephone: 1-800-839-5506
Address: 1660 Lincoln Street Denver, CO 80264
Facility or Well Name: Horton 12
Location: Unit M, Section: 27 T32N R12W County: San Juan, NM Land Type BLM X_, State, Fee, Other
Indian location Length: 90' width: 60
Reference: Wellhead: X Other:
Footage from reference: 55' Direction from reference: 5°East of North
Refer to attached map for land farm location
GENERAL DISCRIPTION of LANDFARM ACTIVITIES: Excavated contaminated soils were removed from the pit area and distributed on location. The soils were turned ten times in seven months. Bedrock of shale was uncovered at approximately 24 feet. Following sampling for clearance and land farm remediation, treated soils were backfilled in the original pit area.
SAMPLING INFORMATION
Type of sample: Grab: Composite: 10 points
Sample Depth : 0-12"
Sample Date: $10/30/00$ Sample Time: 1445 Laboratory Analysis: BTEX NA (ppm) TPH ND (ppm)
OVM/PID 0.0 units Refer to attached map for sample location. Laboratory results attached
AS AN AUTHORIZED AGENT FOR HALLADOR PETROLEUM, I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF
ABOVE IS TRUE AND COMPLETE TO THE BEST OF THE SECTION OF THE SECTI
Date: 44401
Signature:
Print Name: John Hagstrom



DATE 1 6 / 30 / 50 BY # 1014

SUBJECT Notice						- 1 Proj	 المنافعة المنافعة	S. O. John	
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November 20, 2000

LAB: (505) 325-1556 FAX: (505) 327-1496

Order No.: 0010051

John Hagstrom
On Site Technologies Limited
612 E. Murray Drive
P.O. Box 2606
Farmington, NM 87499
TEL: (505) 325-5667
FAX (505) 327-1496

RE: 4-1771; Hallador Pits

Dear John Hagstrom,

On Site Technologies, LTD. received 3 samples on 10/30/2000 for the analyses presented in the following report.

The Samples were analyzed for the following tests: SOPREP SONICATION: TPH 418.1 (SW3550A) TPH, T/R Soil (E418.1)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

David Cox



LAB: (505) 325-1556 FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 20-Nov-00

CLIENT:

On Site Technologies Limited

Project:

4-1771; Hallador Pits

Lab Order:

0010051

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).



LAB: (505) 325-1556 FAX: (505) 327-1496

ANALYTICAL REPORT

Date:

Date: 20-Nov-00

Client:

On Site Technologies Limited

Work Order:

0010051

Lab ID:

0010051-01A

Matrix: SOIL

Project:

4-1771; Hallador Pits

Client Sample Info: Hallador Pits

Client Sample ID: Horton 12 CPC

Collection Date: 10/30/2000 2:20:00 PM

COC Record: 10992

1.0,000					
Parameter	Result	PQL Qu	al Units	DF	Date Analyzed
TPH, T/R SOIL Petroleum Hydrocarbons, T/R	E 4	1 18.1 25	mg/Kg	1	Analyst: DM 11/16/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

1 of 3



LAB: (505) 325-1556 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Nov-00

Client:

On Site Technologies Limited

Work Order:

0010051

Lab ID:

0010051-02A

Matrix: SOIL

Project:

4-1771; Hallador Pits

Client Sample Info: Hallador Pits

Client Sample ID: Horton 12 SWC

Collection Date: 10/30/2000 2:35:00 PM

COC Record: 10992

Parameter	Result	PQL Qua	ıl Units	DF	Date Analyzed
TPH, T/R SOIL Petroleum Hydrocarbons, T/R	E ND	25	mg/Kg	1	Analyst: DM 11/16/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

2 of 3



LAB: (505) 325-1556 FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 20-Nov-00

Client:

On Site Technologies Limited

Work Order:

0010051

Lab ID:

0010051-03A

Matrix: SOIL

Project:

4-1771; Hallador Pits

Client Sample Info: Hallador Pits

Client Sample ID: Horton 12 Landfarm Collection Date: 10/30/2000 2:45:00 PM

COC Record: 10992

Parameter	Result	PQL Qu	al Units	DF	Date Analyzed
TPH, T/R SOIL Petroleum Hydrocarbons, T/R	E -	418.1 25	mg/Kg	1	Analyst: DM 11/16/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

3 of 3

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Date:

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612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499 LAB: (505) 325-5667 • FAX: (505) 327-1496

ON SITE

LAB ID Date/Time Date/Time Date/Time By Date ANALYSIS REQUESTED Telefax No. Title 10 Working Days Name Into Microst Control 24-48 Hours Mailing Address City, State, Zip Telephone No. Received by: ➤--Company Received by: Received by Rush RESULTS TO Containers Number of ТЯОЧЭЯ Date/Time to to a 3 PRES. TIME | MATRIX 3 Date/Time Date/Time Project No. 💝 📝 SAMPLE 9 から 1 Dept. DATE 言い意見 SAMPLE IDENTIFICATION Bernary Cont. SAMPLER'S SIGNATURE City, State, Zip PROJECT LOCATION: Name Purchase Order No.: Relinquished by: Company Address Relinquished by: Relinquished by: LO INAOICE SEND

To Balander Coll 305.0400 or Eav 305.0744 sinhStranhine" money of

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

Special Instructions / Remarks:

Date

(Client Signature Must Accompany Request)

Authorized by:

Method of Shipment: