

Dated Completed: 9/15/95

Landfarmed X

Insitu Bioremediation

Other

Onsite x Offsite

by 9/15/95 (see attached lab reports).

Ground Water Encountered:	No	Yes	Depth
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Sample location	Pit bottom center
-----------------	-------------------

Sample depth 16-17 ft deep

Sample date 11/14/94

Sample time 11:45 am

Sample Results

Benzene (ppm) _____

Total BTEX (ppm)

Field headspace (ppm) 8.0

TPH (418.1) = 49 ppm

Landfarm Samples, TPH
Landfarm(85) =256 ppn
Landfarm(33) =100 ppn
Landfarm(64) =148 ppn
Cla2A-100 = 86 ppn

Ground Water 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 12/5/96

SIGNATURE

PRINTED NAME Shawn Adams, Env. Consultant
AND TITLE Contract Env. Services, Inc.

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 505*
City, State: *Kirtland, NM 87417*

Date: 11/15/94
Lab ID: 2296
Sample No. 3984
Job No. 2-1000

Project Name: *Synder Oil Corporation*
Project Location: *CLA1E-400 Excavation 1 Bottom Clearance*
Sampled by: SA Date: 11/14/94 Time: 11:45
Analyzed by: DLA Date: 11/15/94
Type of Sample: *Soil*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
3984-2296	<i>Synder Oil Corporation</i> <i>CLA1E-400 Excavation 1 Bottom Clearance</i>	49 mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by: *Shawn Adams*

Date: 11/15/94

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— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

TOTAL PETROLEUM HYDROCARBONS

EPA Method 418.1

Snyder Oil Company

Project ID: Clayton 1 E
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 09/18/95
Date Sampled: 09/13/95
Date Received: 09/15/95
Date Extracted: 09/15/95
Date Analyzed: 09/15/95

33

Excavation #2 →
old bottom sample

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Pit Bottom	1503	1,230	92.4
Landfarm (85)	1504	256	24.5
Landfarm (33)	1505	100	16.6
Landfarm (64)	1506	148	16.7

ND- Analyte not detected at the stated detection limit.

Reference: Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986;
Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Comments:

M. Williams
Analyst

Dennis [Signature]
Review

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 505*
City, State: *Kirtland, NM 87417*

Date: *11/7/94*
Lab ID: *2189*
Sample No. *3873*
Job No. *2-1000*

Project Name: *Synder Oil Corporation*
Project Location: *CLA2A-100*
Sampled by: *SA*
Analyzed by: *DC*
Type of Sample: *Soil*

Date: *11/4/94* Time: *15:43*
Date: *11/7/94*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>3873-2189</i>	<i>Synder Oil Corporation CLA2A-100 - Land farm Clearance</i>	<i>86 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:
Date:

JaG
11/15/94

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

Operator: Chateau Oil & Gas (formerly Snyder Oil Corp) Telephone: 632 - 8056

Address: P.O. Box 2038, Farmington, NM 87499-2038

Facility Or: Clayton #1E - Excavation #2
Well Name

Location: Unit or Qtr/Qtr sec Unit P sec 02 T30N R12W County SAN JUAN

Pit Type: Separator Dehydrator Other Overflow from Separator

Land Type: BLM State, Fee X, Other

Pit Location: Pit dimensions: length 12', width 12', depth 4'
(Attach diagram)

Reference: wellhead X, other

Footage from reference: 107'

Direction from reference: 100 Degrees X East North X
of
West South

Depth To Ground Water:

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

Less than 50 feet (20 points)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 Points) 0

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 (0 points) 0

Distance To Surface Water:

(Horizontal distance to perennial
lakes, ponds, rivers, streams, creeks,
irrigation canals and ditches)

Less than 200 feet (20 points)
200 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 10

RANKING SCORE (TOTAL POINTS): 10

Dated Completed: 9/15/95

Approx. cubic yards 500

Insitu Bioremediation

Other

Onsite^X Offsite

Ground Water Encountered: No X Yes Depth

Sample location	Pit bottom center
-----------------	-------------------

Sample depth 12 ft. deep on sandstone

Sample date 12/2/96

Sample time 10:45 am

Sample Results

Benzene (ppm) non-detect

Total BTEX (ppm) 28.19 ppm

Field headspace (ppm) 74

$$\text{TPH} (418.1) = 408 \text{ ppm}$$

8015 mod.: Gas = 5.2 ppm

Diesel₁ = 8.2 ppm

Ground Water Sample: Yes No Diesel = 8.2 ppm (If yes, attach sample results)

Landfarm Samples,	TPH
Landfarm(85)	=256 ppm
Landfarm(33)	=100 ppm
Landfarm(64)	=148 ppm
Cla2A-100	= 86 ppm

DATE 12/5/96

SIGNATURE

PRINTED NAME Shawn Adams, Env. Consultant
AND TITLE Contract Env. Services, Inc.

VOLATILE AROMATIC HYDROCARBONS

Synder Oil Co.

Project ID: Clayton 1E
Sample ID: Pit Bottom
Lab ID: 1503
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 09/20/95
Date Sampled: 09/13/95
Date Received: 09/15/95
Date Extracted: 09/20/95
Date Analyzed: 09/20/95

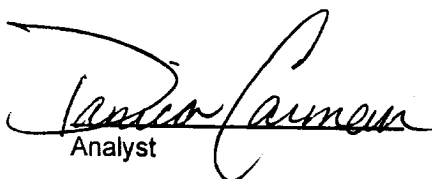
Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
Benzene	ND	0.22
Toluene	0.69	0.22
Ethylbenzene	2.80	0.22
m,p-Xylenes	18.4	0.44
o-Xylene	6.30	0.22

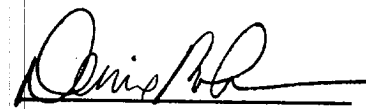
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	101	81 -117%
	Bromofluorobenzene	103	74 -121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review

OFF: (505) 325-5667



LAB: (505) 325-1556

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **2-Dec-96**
COC No.: **6219**
Sample No. **13064**
Job No. **2-1000**

Project Name: **Chateau Oil & Gas - Clayton #1E**
Project Location: **CLAY-2000; Overflow Pit Bottom, 12' deep on Sandstone**
Sampled by: **JB** Date: **2-Dec-96** Time: **10:45**
Analyzed by: **HR** Date: **2-Dec-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	408	25	mg/kg	EPA Method 418.1


Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	925	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
13064-6219	4.0	15.0

Approved by: 
Date: **12/2/96**

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **3-Dec-96**
 COC No.: **6219**
 Sample No. **13064**
 Job No. **2-1000**

Project Name: **Chateau Oil & Gas - Clayton #1E**
 Project Location: **CLAY-2000; Overflow Pit Bottom, 12' deep on Sandstone**
 Sampled by: **JB** Date: **2-Dec-96** Time: **10:45**
 Analyzed by: **DC/HR** Date: **3-Dec-96**
 Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	5.2	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	8.2	mg/kg	5.0	mg/kg
	TOTAL	13.4		mg/kg

Quality Assurance Report

GRO QC No.: **0480-STD**
 DRO QC No.: **0512-STD**

Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,351	1,236	8.5	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	103	3.3	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	98	94	(70-130)	3	20%
Diesel Range (C10-C28)	117	110	(70-130)	4	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by:

Date: **12/3/96**

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TOTAL PETROLEUM HYDROCARBONS
EPA Method 418.1Snyder Oil Company

Project ID: Clayton 1 E
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 09/18/95
Date Sampled: 09/13/95
Date Received: 09/15/95
Date Extracted: 09/15/95
Date Analyzed: 09/15/95

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Pit Bottom	1503	1,230	92.4
Landfarm (85)	1504	256	24.5
Landfarm (33)	1505	100	16.6
Landfarm (64)	1506	148	16.7

Excavation #2 →
old bottom sample

ND- Analyte not detected at the stated detection limit.

Reference: Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986;
Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Comments:

W. Wilkins

Analyst

Chris [Signature]

Review

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: *Shawn Adams*
Company: *Contract Environmental Services, Inc.*
Address: *P.O. Box 505*
City, State: *Kirtland, NM 87417*

Date: *11/7/94*
Lab ID: *2189*
Sample No. *3873*
Job No. *2-1000*

Project Name: *Synder Oil Corporation*
Project Location: *CLA2A-100*
Sampled by: *SA*
Analyzed by: *DC*
Type of Sample: *Soil*

Date: *11/4/94* Time: *15:43*
Date: *11/7/94*

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
<i>3873-2189</i>	<i>Synder Oil Corporation CLA2A-100 - Land farm Clearance</i>	<i>86 mg/kg</i>

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:
Date:

JaG
11/15/94

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: 9/6/95 Dated Completed: 10/24/96

Remediation Method: Excavation ☒ Approx. cubic yards 1000
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation ☐
Other _____

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

General Description Of Remedial Action: Contaminated soil from the pit was excavated to a depth of approx. 18'. Straw, manure, and fertilizer were added to the pit bottom to enhance the degradation of hydrocarbons in the bottom of pit. Excavated material was landfarmed on location. The landfarm and compost were tilled and sampled periodically until sufficient remediation levels were obtained. Landfarm material cleared on 10/24/96 (see attached lab data).

Ground Water Encountered: No ☒ Yes ☐ Depth _____

Final Pit: Sample location Pit bottom center, below compost and Closure Sampling: in compost.
(if multiple samples, attach sample results and diagram of sample locations and depths) Sample depth Bottom, 19ft
Sample date 7/12/96 Sample time 10:15 am

Compost Samples				Sample Results	Landfarm Samples (ppm): Gas Diesel	
I.D. #	THH	Gas	Diesel (ppm)	Benzene(ppm)	C-1	n/d n/d
Clay-500	389	n/d	n/d	non-detect	C-2	n/d n/d
Clay-501	949	5.3	n/d	Total BTEX(ppm)	C-3	n/d 11.4
Clay-502	368					
Clay-503	39			Field headspace(ppm)		
n/d = non-detect				TPH (418.1) = 378 ppm; 8015 mod.	= Gas=20.9 ppm Diesel =7.5 ppm	

Ground Water 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 12/5/96
SIGNATURE Shawn Adams PRINTED NAME Shawn Adams, Env. Consultant
AND TITLE Contract Env. Services, Inc.

OFF: (505) 325-5667



LAB: (505) 325-1556

AROMATIC VOLATILE ORGANICS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **24-Jul-96**
COC No.: **4202**
Sample No. **11502**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton #1E**
Project Location: **CLAY-100; Below Compost**
Sampled by: **SA** Date: **12-Jul-96**
Analyzed by: **HR** Date: **23-Jul-96**
Sample Matrix: **Soil**

Time: **10:15**

Laboratory Analysis

Parameter	Result	Units of Measure	Detection Limit	Units of Measure
Benzene	<0.2	ug/kg	0.2	ug/kg
Toluene	43.8	ug/kg	0.2	ug/kg
Ethylbenzene	265.6	ug/kg	0.2	ug/kg
m,p-Xylene	1855.0	ug/kg	0.2	ug/kg
o-Xylene	362.5	ug/kg	0.2	ug/kg
	TOTAL	2527.0		ug/kg

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by: 
Date: **7/24/96**

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **15-Jul-96**
COC No.: **4202**
Sample No. **11502**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton #1E**
Project Location: **CLAY-100; Below Compost**
Sampled by: **SA** Date: **12-Jul-96** Time: **10:15**
Analyzed by: **HR** Date: **15-Jul-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	378	25	mg/kg	EPA Method 418.1

Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	938	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
11494-4202	<0.1	15.0

Approved by: *Jag*
Date: **7/15/96**

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **25-Jul-96**
COC No.: **4202**
Sample No. **11502**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton #1E**
Project Location: **CLAY-100; Below Compost**
Sampled by: **SA**
Analyzed by: **HR**
Sample Matrix: **Soil**

Date: **12-Jul-96** Time: **10:15**
Date: **25-Jul-96**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	20.9	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	7.5	mg/kg	5.0	mg/kg
	TOTAL	28.4		mg/kg

Quality Assurance Report

GRO QC No.: **0467-STD**
DRO QC No.: **0479-STD**


Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,186	12.2	15%
Diesel Range (C10 - C28)	<5.0	ppm	2,000	1,931	3.4	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	102	109	(70-130)	5	20%
Diesel Range (C10-C28)	111	121	(70-130)	6	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
Date: **7/26/96**

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **24-May-96**
COC No.: **4025**
Sample No. **10997**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
Project Location: **CLAY-500; Compost Pile, Center West 2'**
Sampled by: **SA** Date: **23-May-96** Time: **10:30**
Analyzed by: **BV** Date: **23-May-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	389	25	mg/kg	EPA Method 418.1


Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	875	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
10990-4025	2.8	15.0

Approved by: 
Date: **5/24/96**

P. O. BOX 2606 • FARMINGTON, NM 87499

— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

OFF: (505) 325-8786



LAB: (505) 325-5667

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **3-Jun-96**
 COC No.: **4025**
 Sample No. **10997**
 Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
 Project Location: **CLAY-500, Compost Pile, Center West 2'**
 Sampled by: **SA** Date: **23-May-96** Time: **10:30**
 Analyzed by: **HR** Date: **31-May-96**
 Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	<5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	<5.0	mg/kg	5.0	mg/kg
TOTAL	<5.0	mg/kg		

Quality Assurance Report

GRO QC No.: **0461-STD**
 DRO QC No.: **0475-STD**

Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,176	12.9	15%
Diesel Range (C10 - C28)	<5.0	ppm	2,000	1,802	9.9	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	91	89	(70-130)	2	20%
Diesel Range (C10-C28)	97	99	(70-130)	2	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: *Jack*Date: *6/3/96*

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **24-May-96**
COC No.: **4025**
Sample No. **10998**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
Project Location: **CLAY-501; Compost Pile, Center West 5'**
Sampled by: **SA** Date: **23-May-96** Time: **10:30**
Analyzed by: **BV** Date: **23-May-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	949	25	mg/kg	EPA Method 418.1


Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	875	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
10990-4025	2.8	15.0

Approved by: 
Date: **5/24/96**

P. O. BOX 2606 • FARMINGTON, NM 87499

— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

OFF: (505) 325-8786



LAB: (505) 325-5667

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **3-Jun-96**
 COC No.: **4025**
 Sample No. **10998**
 Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
 Project Location: **CLAY-501, Compost Pile, Center West 5'**
 Sampled by: **SA** Date: **23-May-96** Time: **10:30**
 Analyzed by: **HR** Date: **31-May-96**
 Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	5.3	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	<5.0	mg/kg	5.0	mg/kg
	TOTAL	5.3		mg/kg

Quality Assurance Report

GRO QC No.: **0461-STD**
 DRO QC No.: **0475-STD**

Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,176	12.9	15%
Diesel Range (C10 - C28)	<5.0	ppm	2,000	1,802	9.9	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	91	89	(70-130)	2	20%
Diesel Range (C10-C28)	97	99	(70-130)	2	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by:

Date: **6/3/96**

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **24-May-96**
COC No.: **4025**
Sample No. **10999**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
Project Location: **CLAY-502; Compost Pile, Center East 2'**
Sampled by: **SA** Date: **23-May-96** Time: **10:30**
Analyzed by: **BV** Date: **23-May-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	368	25	mg/kg	EPA Method 418.1


Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	875	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
10990-4025	2.8	15.0

Approved by: 
Date: **5/24/96**

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— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

OFF: (505) 325-8786



LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn: **Shawn Adams**
Company: **Contract Environmental Services, Inc.**
Address: **P.O. Box 505**
City, State: **Kirtland, NM 87417**

Date: **24-May-96**
COC No.: **4025**
Sample No. **11000**
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
Project Location: **CLAY-503; Compost Pile, Center East 5'**
Sampled by: **SA** Date: **23-May-96** Time: **10:30**
Analyzed by: **BV** Date: **23-May-96**
Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Detection Limit	Unit of Measure	Method
Total Petroleum Hydrocarbons, TPH	39	25	mg/kg	EPA Method 418.1


Quality Assurance Report

Laboratory Fortified Blank/Spike Soil

Laboratory Identification	Analyzed Value	Acceptable Range	Unit of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	875	828 - 1024	mg/kg

Duplication

Laboratory Identification	(% RSD)	Limit (% RSD)
10990-4025	2.8	15.0

Approved by: 
Date: **5/24/96**

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— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **30-Oct-96**
 COC No.: **6162**
 Sample No. **12710**
 Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
 Project Location: **C-1; Soil Farm Center**
 Sampled by: **SA/CM**
 Analyzed by: **DC/HR**
 Sample Matrix: **Soil**

Date: **24-Oct-96** Time: **12:00**
 Date: **30-Oct-96**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	<5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	<5.0	mg/kg	5.0	mg/kg
	TOTAL	<5.0		mg/kg

Quality Assurance Report

GRO QC No.: **0493-STD**
 DRO QC No.: **0489-STD**


Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,326	1.8	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	101	1.4	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	107	103	(70-130)	3	20%
Diesel Range (C10-C28)	110	97	(70-130)	9	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
 Date: **10/30/96**

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **30-Oct-96**
 COC No.: **6162**
 Sample No. **12711**
 Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
 Project Location: **C-2; Soil Farm East**
 Sampled by: **SA/CM** Date: **24-Oct-96** Time: **12:00**
 Analyzed by: **DC/HR** Date: **30-Oct-96**
 Sample Matrix: **Soil**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	<5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	<5.0	mg/kg	5.0	mg/kg
	TOTAL	<5.0		mg/kg

Quality Assurance Report

GRO QC No.: **0493-STD**
 DRO QC No.: **0489-STD**

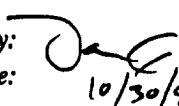
Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,326	1.8	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	101	1.4	15%

Matrix Spike

Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	107	103	(70-130)	3	20%
Diesel Range (C10-C28)	110	97	(70-130)	9	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
 Date: **10/30/96**

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

TPH - Gasoline / Diesel Range Organics

Attn: **Shawn Adams**
 Company: **Contract Environmental Services, Inc.**
 Address: **P.O. Box 505**
 City, State: **Kirtland, NM 87417**

Date: **30-Oct-96**
 COC No.: **6162**
 Sample No. **12712**
 Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Clayton 1E**
 Project Location: **C-3; Soil Farm West**
 Sampled by: **SA/CM**
 Analyzed by: **DC/HR**
 Sample Matrix: **Soil**

Date: **24-Oct-96** Time: **12:00**
 Date: **30-Oct-96**

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)	<5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)	11.4	mg/kg	5.0	mg/kg
	TOTAL	11.4		mg/kg

Quality Assurance Report

GRO QC No.: **0493-STD**
 DRO QC No.: **0489-STD**

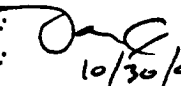
Calibration Check

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	<50	ppb	1,350	1,326	1.8	15%
Diesel Range (C10 - C28)	<5.0	ppm	100	101	1.4	15%

Matrix Spike

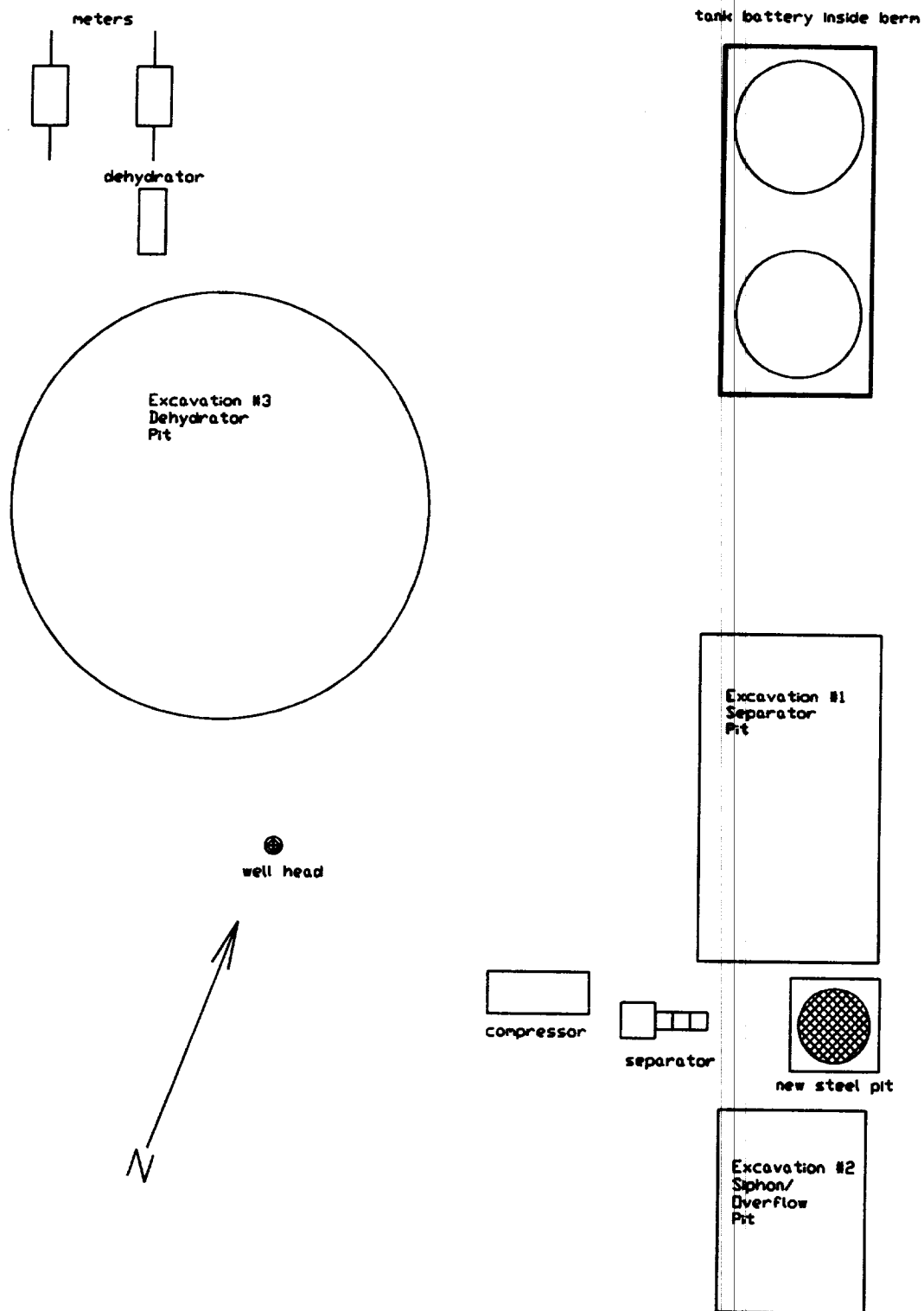
Parameter	1 - Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	107	103	(70-130)	3	20%
Diesel Range (C10-C28)	110	97	(70-130)	9	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: 
 Date: **10/30/96**

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



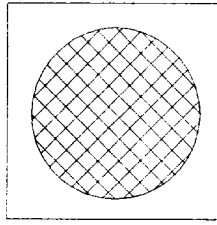
Plot of Clayton 1E Well Site
showing earthen pit excavations



compressor

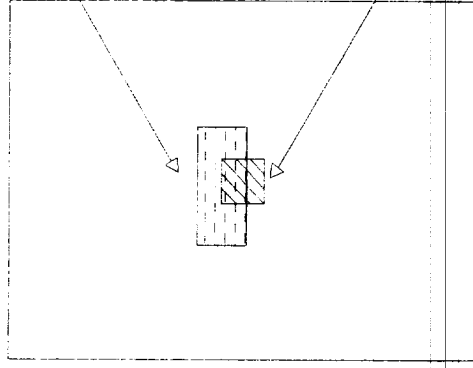


separator



new steel pit

Excavation #2
Siphon/
Overflow
Pit



New sample at 12' from 12/2/96 on sandstone

Old sample at 12' from 9/13/95 on sandstone

Plot of Clayton 1E Excav. #2
showing sampling sites.