1R - 337

# REPORTS

# DATE:

2002

# ALLSTATE ENVIRONMENTAL SERVICES, LLC

P.O BOX 11322
MIDLAND, TEXAS 79702
OFFICE: (915) 682-3547
FAX: (915) 682-4182



RECEIVED
SEP 24 2002
Environmental Bureau
Oil Conservation Division


September 16, 2002

Mr. Wayne Price
New Mexico OCD
1220 S. Saint Francis Dr.
Santa Fe, NM 87505
SUBJECT: Closure Report – Saga U.D. Sawyer SWD Pit

Dear Mr. Price,

On September 3, 2002, Allstate Environmental Services, contracted by Saga Petroleum, began completion of the closure plan at the Saga U.D. Sawyer salt water disposal pit located 5 miles east of Crossroads in Lea County, New Mexico.

Having decreased the TPH and Chloride levels to the requirements of the State, the bottom of the pit was covered with a 20 mil sheet of plastic lining, then backfilled with the remainder of soil around the pit, followed by native area soil to complete the backfill plus an 18" cap to allow for settlement and drainage. The area will be reseeded with native grasses in the spring of 2003.

Included in this report are photos of the area and a diagram of the subsurface arrangement of the liner and soil.

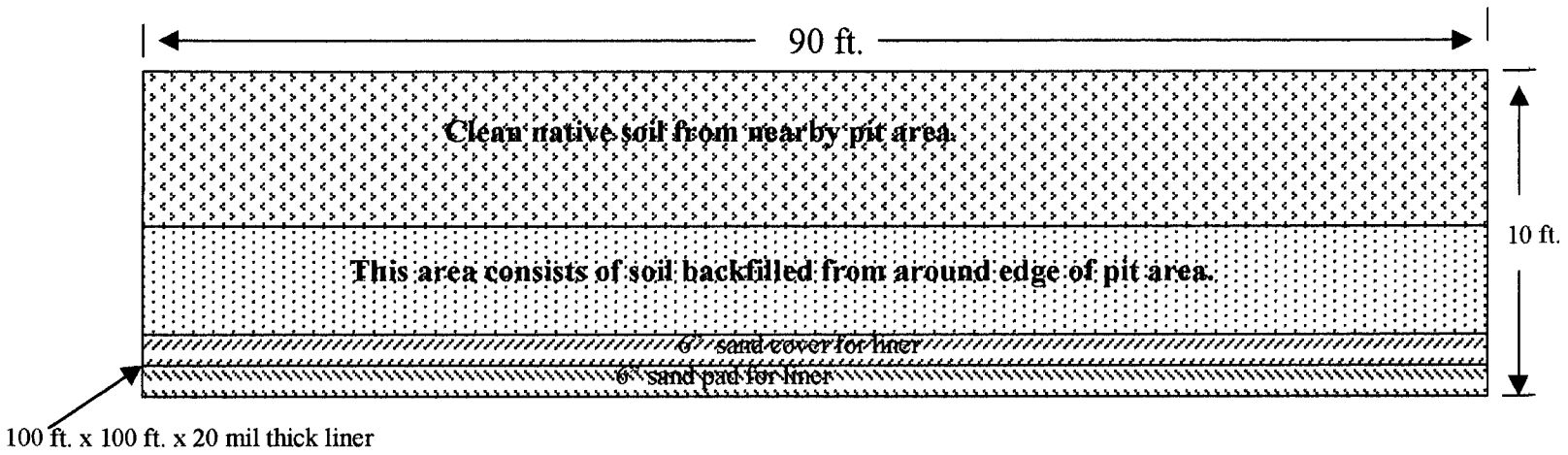
Please feel free to call Hamp Kerby, 915-528-5716, or Bobby Blackwood, 505-631-3744, with any questions or concerns regarding this closure report.

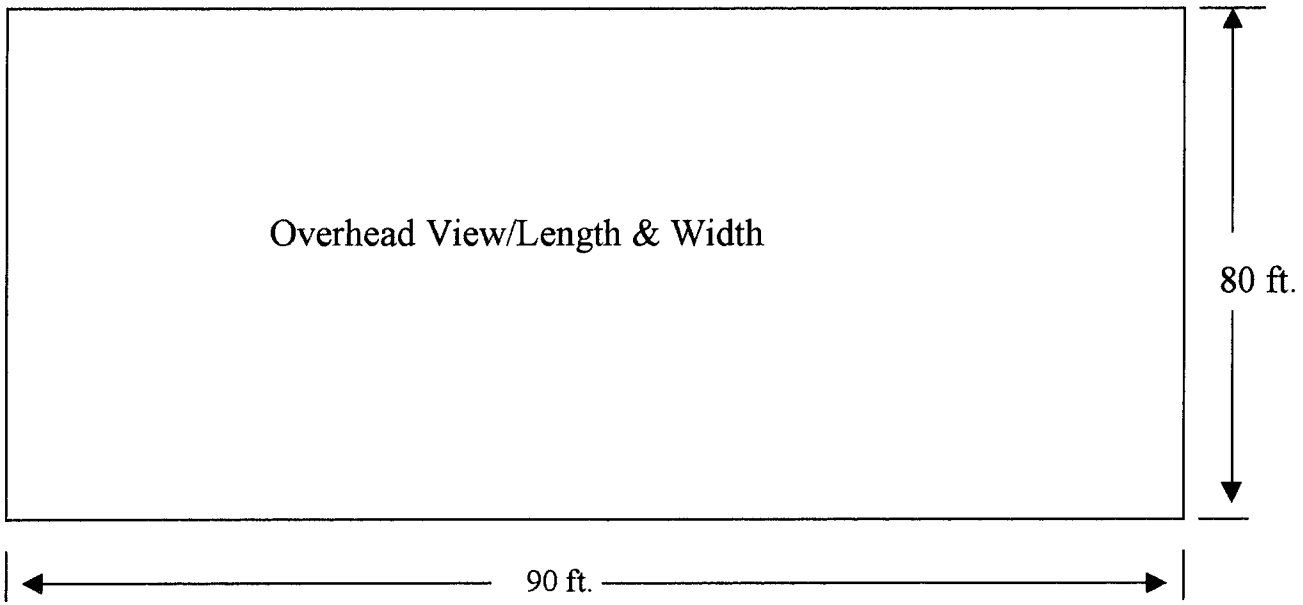
Sincerely,

C. H. Kerby

# Detailed Horizontal Sketch of U.D. Sawyer Pit Site as of Sept. 6, 2002

4074 cu. yds. Clean fill soil



Saga Petroleum
U.D. Sawyer SWD Pit
Sept. 7, 2002

Saga Petroleum
U. D. Sawyer SWD Pit
Sept. 5, 2002

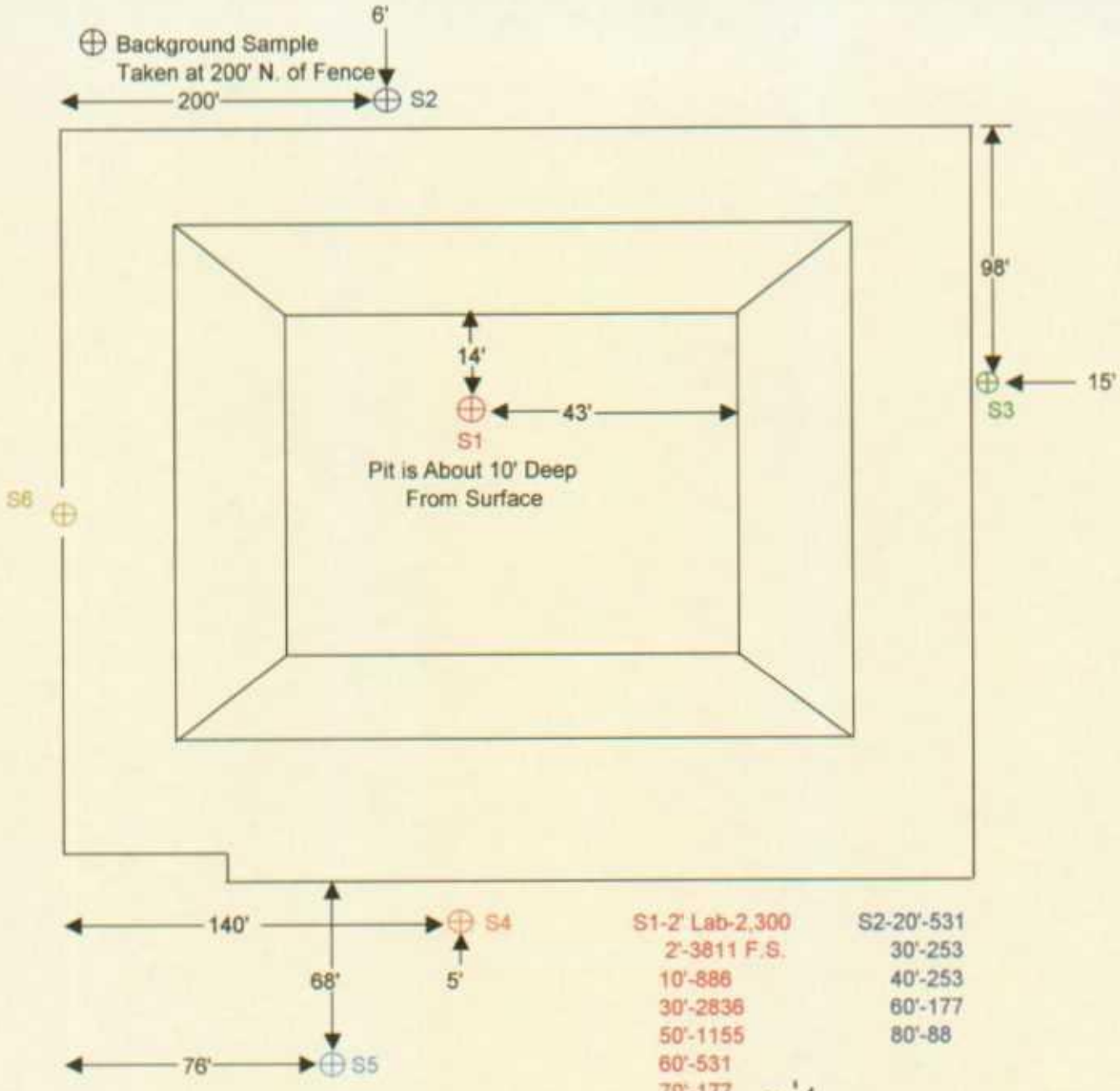
Aug. 29, 2002
Saga Pet.
U. D. Sawyer SWD Pit

## Price, Wayne

**From:** Price, Wayne
**Sent:** Thursday, March 28, 2002 2:41 PM
**To:** 'ALLSTATEENV@aol.com'
**Subject:** Saga Projects- 1R0316 Todd Lower San Andres Unit Pit; and 1R0337 UD Sawer water pit

What is the status of the two projects?

Saga Petroleum
U.D. Sawyer Salt Water Disposal
Crossroads, NM
Sec. 34-T-95-R-36E
Lea, Co. Unit A
7/27/01-7/31/01




S1-2' Lab-2,300
2'-3811 F.S.
10'-886
30'-2836
50'-1155
60'-531
70'-177
80'-177
90'-177

S2-20'-531
30'-253
40'-253
60'-177
80'-88

S3-20'-613
40'-1181
50'-443
60'-354
70'-177
80'-177

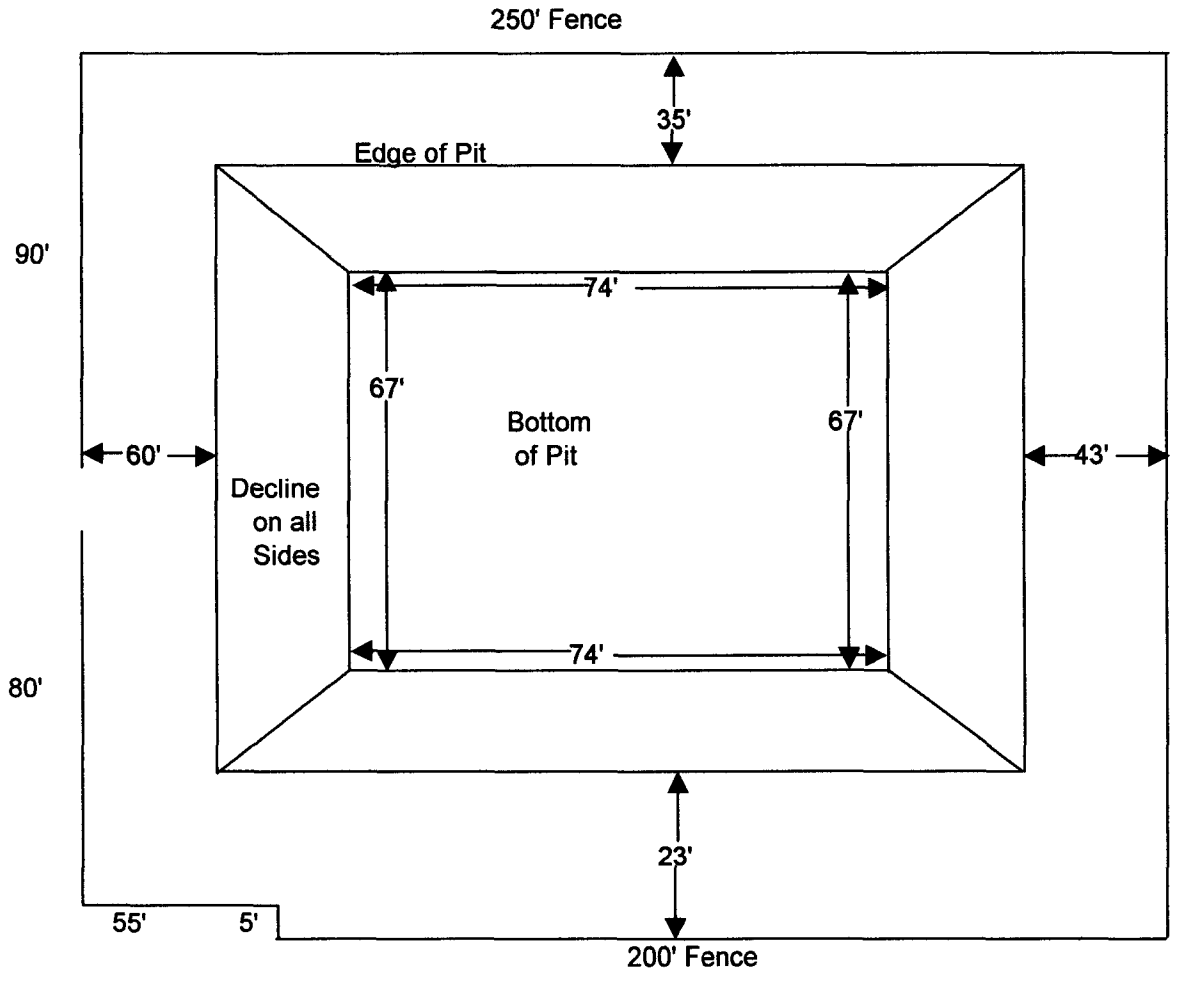
S4-30'-340
40'-340
50'-531
60'-531
70'-177
80'-177
90'-88

S5-2'-Lab-2,220
30'-354
40'-537
60'-177
80'-88

S6-10'-1862
30'-483
40'-574
50'-709
60'-886
70'-531
80'-265
90'-177

Map Not to Scale

Saga Petroleum
U.D. Sawyer Salt Water Disposal
Crossroads, NM
Sec. 34-T-95-R-36E
Lea, Co. Unit A
7/27/01-7/31/01




Map Not to Scale

## Price, Wayne

**From:** Price, Wayne
**Sent:** Monday, July 01, 2002 2:55 PM
**To:** 'ALLSTATEENV@aol.com'
**Subject:** RE: (no subject)

APPROVED!

Please be advised that NMOCD approval of this plan does not relieve Saga of liability should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Saga of responsibility for compliance with any other federal, state, or local laws and/or regulations.

-----Original Message-----
From: ALLSTATEENV@aol.com [mailto:ALLSTATEENV@aol.com]
Sent: Monday, July 01, 2002 2:51 PM
To: wprice@state.nm.us
Subject: (no subject)

Wayne, the attachment is the letter (dated 4-10-02) I last sent ammending other plans we have sent in. Analytical and maps/sketches are attached to previous plans.

## Price, Wayne

**From:** ALLSTATEENV@aol.com
**Sent:** Monday, July 01, 2002 2:51 PM
**To:** wprice@state.nm.us
**Subject:** (no subject)

Saga Sawyer Plan, amends Jan. ...

Wayne, the attachment is the letter (dated 4-10-02) I last sent ammending other plans we have sent in. Analytical and maps/sketches are attached to previous plans.

April 10, 2002

New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505
Attn: Mr. Wayne Price

SUBJECT: Saga Petroleum L.L.C. U.D.Sawyer Salt Water Pit – Near Crossroads, N. M.

Dear Mr. Price,

On behalf of Saga Petroleum, Allstate Environmental Services would like to submit the following closure plan for the subject site in northern Lea County, New Mexico.

Based on information (enclosed) accumulated and provided in the closure plan from August 11, 2001, Allstate in concurrence with Saga, proposes that the bottom of the pit area be lined with a layer of 20 mil thick plastic sheeting, then the excavated material forming the berm around the pit be pushed in over the top of the barrier material. Clean soil will then be used to finish filling in the depression, brought back to grade and seeded with native grasses.

This plan serves as an amendment to the plan dated January 11 of this year. Your time in reviewing and replying to this plan is greatly appreciated.

Sincerely,

Hamp Kerby, Allstate Environmental Services

APPROVAL

Joe Clement, Engineer – Saga Petroleum, LLC

## Price, Wayne

**From:** Price, Wayne
**Sent:** Thursday, January 10, 2002 3:07 PM
**To:** 'ALLSTATEENV@aol.com'
**Subject:** RE: Saga U.D. Sawyer Salt Water Pit

Dear Hamp:

Please modify the orginal proposal to reflect the changes. OCD will then review for approval. Please send me the contact name and address of the operator.

-----Original Message-----
From: ALLSTATEENV@aol.com [mailto:ALLSTATEENV@aol.com]
Sent: Thursday, December 13, 2001 10:25 AM
To: wprice@state.nm.us
Subject: Saga U.D. Sawyer Salt Water Pit

Wayne,
I visited with Randy this morning about the two questions: 1) encounter any ground water in drilling? He said no water...2) Clay or Kiln dust pit bottom? He said the pit is still open. A couple of weeks ago you and Randy talked in Hobbs and he said you mentioned going another 20 ft. down with the pit, then sealing it and back filling it with the berm. We intend to use kiln dust to seal the bottom of the pit. We will proceed when we know you approve.

Randy is working in the Jal area and asked me to reply to you.

Regards,

Hamp Kerby for Randy

# ALLSTATE ENVIRONMENTAL SERVICES, LLC

P.O BOX 11322
MIDLAND, TEXAS 79702
OFFICE: (915) 682-3547
FAX: (915) 682-4182


1R0337

OIL CONSERVATION DIV.
01 SEP -3 PM 1:51

August 31, 2001

New Mexico Oil Conservation Division
1220 S. Saint Francis Dr.
Santa Fe, New Mexico 87505
Attn: Wayne Price

Dear Mr. Price:

Enclosed please find the closure plan for the U.D. Sawyer Salt Water Pit.

I will e-mail a copy to you, if you will let me know your e-mail address. You can reach me at (915)682-3547.

Thank you,

Peggy Swails

SAGA PETROLEUM

August13, 2001

CHUCK FARMER

New Mexico Oil Conservation Division
1220 S. Saint Francis Drive
Santa Fe, New Mexico 87505
ATTN: Mr. Wayne Price

Dear Mr. Price,

Saga Petroleum L.L.C. of Midland, Texas would like to submit for your review and approval the following closure plan for the U.D. Sawyer Salt Water Pit located in the Lea County New Mexico, whose legals are, Section 34- Township 95- Range 36E- Unit A.

## History

The pit was used by the previous operator of the lease as a produced saltwater containment in the production of oil. The impoundment was lined at the onset of it's use, but due to the lack of use, the fiberglass liner deteriorated and the containment became unlined in some areas.

On July 31,2001 Allstate Environmental Services L.L.C. (AES) delineated the pit area using an air rotary drilling rig with a split spoon sampling tool. Five (5) soil bores were drilled to a depth of eighty (80) feet to ninety (90) feet. (See map APPENDIX B) Split spoon samples were taken at ten (10) foot intervals except for S-1, and there was a two (2) foot sample taken being that this soil bore was in the bottom of the containment.

415 W. Wall, Ste 835
Midland, TX 79701

Office: (915) 684-4293
Fax (915) 684-0829

The samples taken during the delineation process were titrated on site by AES employees (see map APPENDIX B). Some surface samples and bottom hole samples were transported to Environmental Labs of Texas for confirmatory analysis(see analytical).

Soil bores S-1 and S-5 were analyzed for total metals using EPA methods SW 846-7470, 6010B, BTEX using methods EPA SW 846-8021bB, 5030, TPH using methods EPA SW 846-8015M, GRO-DRO chlorides –methods EPA SW 846-9253(see ANALYTICAL). A background sample was taken from a neutral location and analyzed for total metals, BTEX, TPH, and chlorides using the same methods as above (see ANALYTICAL).

*NOTE- Soil bore S-5 is located across the lease road south of the contaminated area on a pipeline right of way (see map APPENDIX B).

Plan of Action

Saga Petroleum L.L.C. after examining the information obtained from the State Engineers Office Roswell, New Mexico (see APPENDIX C) concerning the depth to groundwater in the area of the U.D. Sawyer Saltwater containment, two (2) wells were drilled. One, northwest of the ranch house and the other southeast of the containment proving, that very little if any water exists under the pit. These two (2) wells were drilled in proximity of the pit, one to a depth of 180 feet (see APPENDIX C) with only "seep water", the other to a depth of 200 feet with no water. Thru the analytical obtained during delineation (see ANALYTICAL) and the depth to groundwater report, (see APPENDIX C) the threat of contamination affecting the water in the area is nil.

Saga Petroleum L.L.C. would like to propose that a barrier of either clay or cement kiln dust (CKD) be placed over the bottom of the containment area to prevent any upward wicking. Once the barrier is in place the berms of the containment will be pushed in over the top of the barrier material. Clean soil will then be used to finish filling in the depression and the area will be brought back to grade. Revegetation will be with native grasses of the area next spring.

The landowner, Mr. Joe Ed Williams has been apprised of this plan and is in agreement with it.

Your time in reviewing this plan is greatly appreciated.

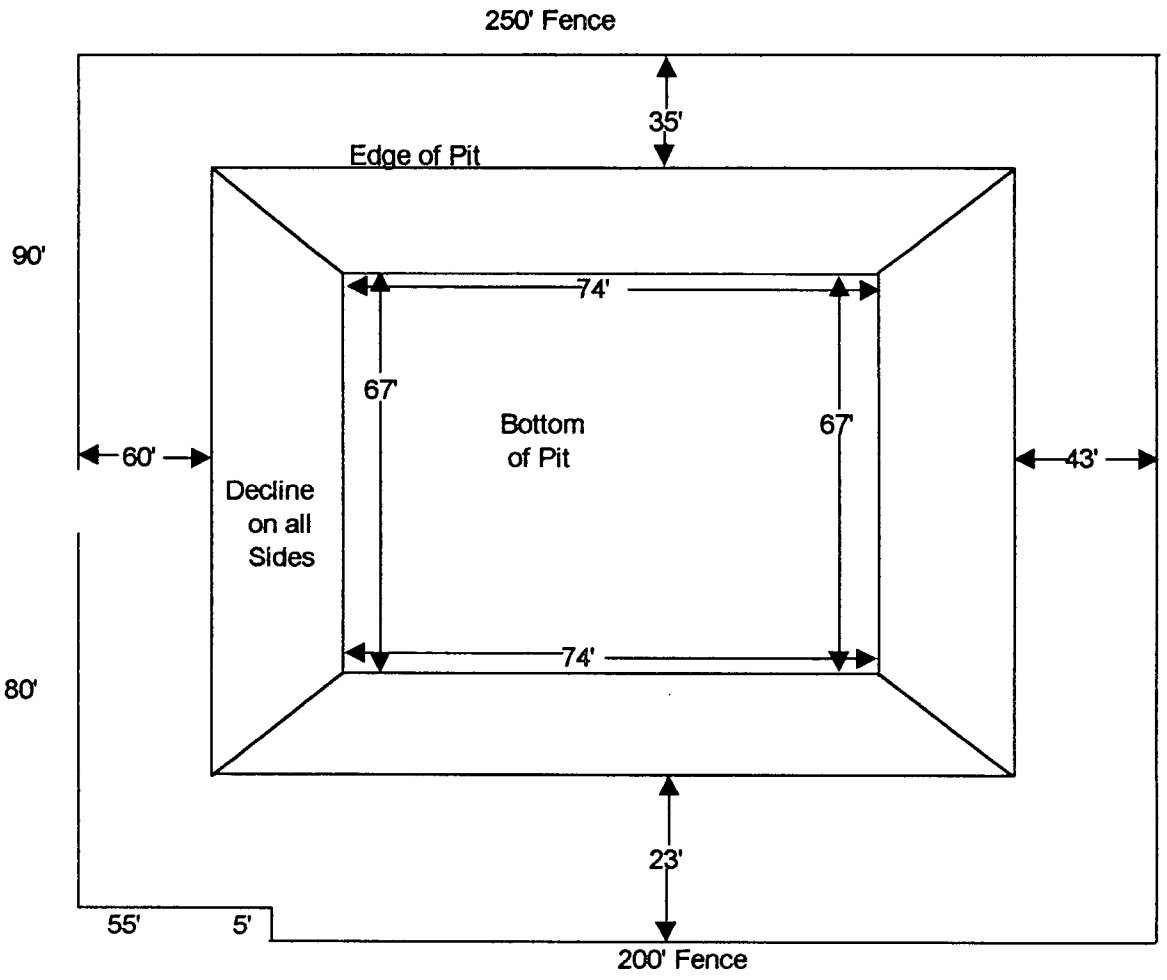
**Approvals**

Mr. J. Charles Farmer, Manager – Saga Petroleum, LLC. — 8/24/01 Date

Mr. Joe Ed Williams, Landowner – Sawyer Ranch — 8-27-01 Date

# APPENDIXES

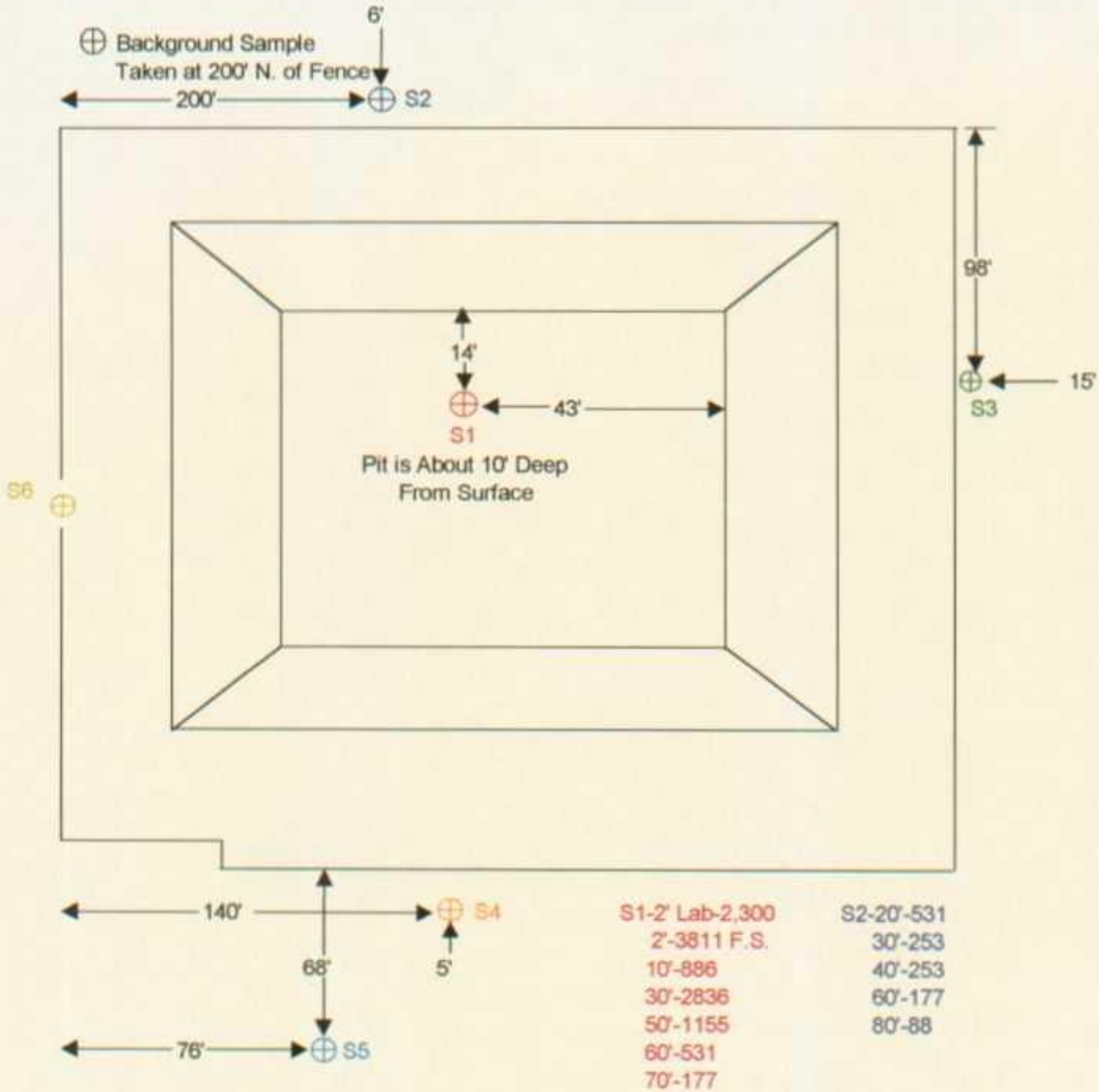
Saga Petroleum
U.D. Sawyer Salt Water Disposal
Crossroads, NM
Sec. 34-T-95-R-36E
Lea, Co. Unit A
7/27/01-7/31/01




Map Not to Scale

APPENDIX A

Saga Petroleum
U.D. Sawyer Salt Water Disposal
Crossroads, NM
Sec. 34-T-95-R-36E
Lea, Co. Unit A
7/27/01-7/31/01




S1-2' Lab-2,300
2'-3811 F.S.
10'-886
30'-2836
50'-1155
60'-531
70'-177
80'-177
90'-177

S2-20'-531
30'-253
40'-253
60'-177
80'-88

S3-20'-613
40'-1181
50'-443
60'-354
70'-177
80'-177

S4-30'-340
40'-340
50'-531
60'-531
70'-177
80'-177
90'-88

S5-2'-Lab-2,220
30'-354
40'-537
60'-177
80'-88

S6-10'-1862
30'-483
40'-574
50'-709
60'-886
70'-631
80'-265
90'-177

Map Not to Scale

# OFFICE OF THE STATE ENGINEER

**DISTRICT II**

**1900 W. 2nd STREET**

**ROSWELL, N.M. 88201**
**FAX # (505) 623-8559**

---

**Fax Transmittal Lead Sheet**

**DATE:** 8/14/01 **NUMBER OF PAGES ATTACHED:** 4

**ATTENTION:** Fran

**ORGANIZATION:**

**SECTION:**

**FROM:** Juan Hernandez

**SECTION:**

**PHONE #:**

**COMMENTS:** well logs

**TIME SENT:** 8:50 **FAX # TO:** 915 682-4182

**TELECOPIER OPERATOR:** JH

APPENDIX C

Revised June 1972

STATE ENGINEER OFFICE

# WELL RECORD

## Section 1. GENERAL INFORMATION

(A) Owner of well Bobby Lewis Owner's Well No. _____

Street or Post Office Address Box 987

City and State Crossroads, N.M. 88114

Well was drilled under Permit No. _____ and is located in the:

a. _____ ¼ _____ ¼ _____ ¼ _____ ¼ of Section _____ Township _____ Range _____ N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in _____ County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor _____ License No. _____

Address _____

Drilling Began _____ Completed _____ Type tools _____ Size of hole _____ in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well _____ ft.

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well _____ ft.

## Section 2. PRINCIPAL WATER-BEARING STRATA

| Depth in Feet From | Depth in Feet To | Thickness in Feet | Description of Water-Bearing Formation | Estimated Yield (gallons per minute) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## Section 3. RECORD OF CASING

| Diameter (inches) | Pounds per foot | Threads per in. | Depth in Feet Top | Depth in Feet Bottom | Length (feet) | Type of Shoe | Perforations From | Perforations To |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

## Section 4. RECORD OF MUDDING AND CEMENTING

| Depth in Feet From | Depth in Feet To | Hole Diameter | Sacks of Mud | Cubic Feet of Cement | Method of Placement |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

## Section 5. PLUGGING RECORD

Plugging Contractor _____

Address _____

Plugging Method _____

Date Well Plugged _____

Plugging approved by: _____
State Engineer Representative

| No. | Depth in Feet Top | Depth in Feet Bottom | Cubic Feet of Cement |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

## FOR USE OF STATE ENGINEER ONLY

Date Received Typed 10/24/75 Quad 96.2.1 FWL _____ FSL _____

File No. _____ Use Test #1 Location No. 9.36.34.224343

Revised June 1972

# STATE ENGINEER OFFICE

## WELL RECORD

### Section 1. GENERAL INFORMATION

(A) Owner of well _____ Owner's Well No. _____

Street or Post Office Address _____

City and State _____

Well was drilled under Permit No. _____ and is located in the:

a. _____ ¼ _____ ¼ _____ ¼ _____ ¼ of Section _____ Township _____ Range _____ N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____

Subdivision, recorded in _____ County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor _____ License No. _____

Address _____

Drilling Began _____ Completed _____ Type tools _____ Size of hole _____ in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well _____ ft.

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well _____ ft.

### Section 2. PRINCIPAL WATER-BEARING STRATA

| Depth in Feet | | Thickness in Feet | Description of Water-Bearing Formation | Estimated Yield (gallons per minute) |
|---|---|---|---|---|
| From | To | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

### Section 3. RECORD OF CASING

| Diameter (inches) | Pounds per foot | Threads per in. | Depth in Feet | | Length (feet) | Type of Shoe | Perforations | |
|---|---|---|---|---|---|---|---|---|
| | | | Top | Bottom | | | From | To |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

### Section 4. RECORD OF MUDDING AND CEMENTING

| Depth in Feet | | Hole Diameter | Sacks of Mud | Cubic Feet of Cement | Method of Placement |
|---|---|---|---|---|---|
| From | To | | | | |
| | | | | | |
| | | | | | |

### Section 5. PLUGGING RECORD

Plugging Contractor _____

Address _____

Plugging Method _____

Date Well Plugged _____

Plugging approved by:

_____

State Engineer Representative

| No. | Depth in Feet | | Cubic Feet of Cement |
|---|---|---|---|
| | Top | Bottom | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

### FOR USE OF STATE ENGINEER ONLY

Date Received Typed 10/24/75 Quad 96.2.1 FWL _____ FSL _____

File No. _____ Use Test #2 Location No. 9.36.34.222134

Section 6. LOG OF HOLE

| Depth in Feet From | Depth in Feet To | Thickness in Feet | Color and Type of Material Encountered |
|---|---|---|---|
| 0 | 32 | | Surface and caliche |
| 32 | 55 | | Sandrock with stringers of sand |
| 55 | 76 | | Sandy clay |
| 76 | 114 | | Sand and gravel with layers of sandy clay |
| 114 | 118 | | Cemented gravel |
| 118 | 136 | | Yellow clay |
| 136 | 160 | | Blue shale |
| 160 | 165 | | Sandy clay |
| 165 | 172 | | Sand and gravel with layers of sandy clay |
| 172 | 178 | | White clay |
| 178 | 180 | | Red bed |
| | | | |
| | | | |
| | | | |
| "Seep" | water. | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Section 7. REMARKS AND ADDITIONAL INFORMATION

Location: 9.36.34.222134
Owner: Bobby Lewis
Year Completed: August 1973
Depth of Well: 180'

Elevation: 4021'
(500' from east line, 640' from north line,
230' north of oil field road)

Hole by Texaco tanks W-NW of ranch house.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

E. H. Sumruld
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to appropriate district office of the State Engineer. All items, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

Section 6. LOG OF HOLE

| Depth in Feet From | Depth in Feet To | Thickness in Feet | Color and Type of Material Encountered |
|---|---|---|---|
| 0 | 26 | | Caliche |
| 26 | 55 | | Sandrock |
| 55 | 74 | | Sandy clay |
| 74 | 112 | | Sand and gravel with layers of clay |
| 112 | 117 | | Cemented gravel |
| 117 | 134 | | Yellow clay |
| 134 | 167 | | Blue clay and limestone |
| 167 | 178 | | Sand and shale |
| 178 | 182 | | White clay |
| 182 | 200 | | Red bed |
| | | | |
| | | | |
| | | | |
| No water. | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Section 7. REMARKS AND ADDITIONAL INFORMATION

Location: 9,36,34,224343 (535' from east line, 900' from north line)
Owner: Bobby Lewis Elevation: 4020' (21' south of oil field road.
Year Completed: 8/23/73
Depth of Well: 200'

This hole by Texaco Tank Battery W/NW of ranch house.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

E. H. Sumruld
Driller

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to appropriate district office of the State Engineer. All items, except Section 5, shall be answered as completely and accurately possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

# ANALYTICAL

# Environmental Lab of Texas, Inc.

12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: BILLY SULLIVAN

Phone #: 915/682-3547
FAX #: 915/682-4182

Company Name & Address: ALLLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #: SAGA S.W. PIT

Project Name:

Project Location: SEC. 34 -T-95 R36E

Sampler Signature:

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX: WATER | SOIL | AIR | SLUDGE | OTHER | PRESERVATIVE METHOD: HCL | HNO3 | ICE | NONE | OTHER | SAMPLING: DATE | TIME | BTEX 8(1)2(1)/5(1)3(1) | TPH 418.1 | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | TDS | RCI | CHLORIDES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S-1 - 10' | 1 | | | X | | | | | | | | | 7/27 | 10:00 | | | | | | | | | X |
| | S-1 - 20' | 1 | | | X | | | | | | | | | 7/27 | 10:30 | | | | | | | | | X |

| Relinquished by: | Date: | Time: | Received by: |
|---|---|---|---|
| CARLOS LUJAN | 8-6-01 | 8:41 | Jane Manning |
| Relinquished by: | Date: | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by Laboratory: |

REMARKS: Rec. 21.5°C RUSH today

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ 21.5 deg C
Project #: Saga SW Pit
Project Name: None Given
Project Location: Sec 34 T95 R36E

Sampling Date: 07/27/01
Receiving Date: 08/06/01
Analysis Date: 08/06/01

| ELT# | FIELD CODE | Chloride mg/kg |
|---|---|---|
| 0101280-01 | S-1-10' | 1200 |
| 0101280-02 | S-1-20' | 2480 |

| QUALITY CONTROL | |
|---|---|
| TRUE VALUE | 5050 |
| % INSTRUMENT ACCURACY | 5000 |
| SPIKED AMOUNT | 101 |
| ORIGINAL SAMPLE | 2500 |
| SPIKE | 1200 |
| SPIKE DUP | 3630 |
| % EXTRACTION ACCURACY | 3630 |
| BLANK | 97 |
| RPD | <5.0 |
| | 0.0 |

Methods: EPA SW 846-9253

Raland K. Tuttle

8-6-01
Date

# Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915 563 1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Billy Sullivan
Company Name: ALLSTATE SERVICES ENVIRONMENTAL
Company Address: MIDLAND, TEXAS
City/State/Zip:
Telephone No: 682-3547
Fax No: 915-682-4182
Sampler Signature: B L Sullivan

Project Name: Sage
Project #: Sage SWAT
Project Loc:
PO #:

| LAB # (lab use only) | FIELD CODE | Date Sampled | Time Sampled | No. of Containers | Preservative: Ice | Preservative: HNO3 | Preservative: HCl | Preservative: NaOH | Preservative: H2SO4 | Preservative: None | Preservative: Other (Specify) | Matrix: Water | Matrix: Sludge | Matrix: Soil | Matrix: Other (Specify) | Analyze For: TCLP Volatiles | Analyze For: TCLP Semivolatiles | Analyze For: TCLP Pesticides | Analyze For: TCLP Herbicides | Analyze For: TCLP Metals Ag As Ba Cd Cr Pb Hg Se | Analyze For: TPH TX 1005/006 | Analyze For: TPH 8015M GRO/DRO | Analyze For: Metals As Ag Ba Cd Cr Pb Hg Se | Analyze For: Volatiles | Analyze For: Semivolatiles | Analyze For: BTEX 8021B/5030 | RUSH TAT (Pre-Schedule) | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 010254-01 | Sage Background | 7-31-01 | 1000 | 1 | ✓ | | | | | | | | | ✓ | | ✓ | | | | | | ✓ | ✓ | | | ✓ | | |

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 7.5°C

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| B L Sullivan | 8-1-01 | 1130 | | | |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |
| | | | Jana McMurray | 8-1-01 | 1130 |

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R. SULLIVAN
P.O. BO 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 7.5 deg. C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/31/01
Receiving Date: 08/01/01
Analysis Date: 08/03/01

TOTAL METALS (mg/kg)

| ELT# | Field Code | Ag | As | Ba | Cd | Cr | Hg | Pb | Se |
|---|---|---|---|---|---|---|---|---|---|
| 010!254-01 | Saga Background | 0 677 | 1.78 | 52.8 | 1.36 | 6.37 | ND | 3.39 | ND |
| | REPORT LIMIT | 0.100 | 0.400 | 0.050 | 0.050 | 0.100 | 0.100 | 0.550 | 0.200 |
| | QUALITY CONTROL | 1.04 | 1.01 | 0.998 | 0.993 | 0.993 | 0.017 | 0.990 | 1.01 |
| | TRUE VALUE | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.015 | 1.00 | 1.00 |
| | % INSTRUMENT ACCURACY | 104 | 100 | 100 | 99 | 99 | 111 | 99 | 101 |
| | ORIGINAL SAMPLE | <0.100 | <0.400 | <0.050 | <0.050 | <0.100 | <0.100 | <0.550 | <0.200 |
| | SPIKED AMOUNT | 50.0 | 10.0 | 50.0 | 10.0 | 50.0 | 0.015 | 50.0 | 10.0 |
| | SPIKE | 48.1 | 8.89 | 46.8 | 9.12 | 45.5 | 0.017 | 46.7 | 8.22 |
| | SPIKE DUP | 49.1 | 9 20 | 46.6 | 9.19 | 46.8 | 0.018 | 46.5 | 8.09 |
| | % EXTRACTION ACCURACY | 98 | 92 | 93 | 92 | 94 | 111 | 93 | 81 |
| | BLANK | <0.100 | <0.400 | <0.050 | <0.050 | <0.100 | <0.100 | <0.550 | <0.200 |
| | RPD | 2.06 | 3.31 | 1.07 | 1.09 | 3.24 | 8.04 | 0.00 | 1.23 |

ND= Not detected at report limit.

METHODS: EPA SW 846- 3050, 7470, 6010B

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

*"Don't Treat Your Soil Like Dirt!"*

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 7.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/31/01
Receiving Date: 08/01/01
Analysis Date: 08/02/01

| ELT# | FIELD CODE | Chloride mg/kg |
|---|---|---|
| 0101254-01 | Saga Background | 71 |

| | |
|---|---|
| QUALITY CONTROL | 5140 |
| TRUE VALUE | 5000 |
| % INSTRUMENT ACCURACY | 103 |
| SPIKED AMOUNT | 5000 |
| ORIGINAL SAMPLE | 87 |
| SPIKE | 5670 |
| SPIKE DUP | 5760 |
| % EXTRACTION ACCURACY | 112 |
| BLANK | <5.0 |
| RPD | 1.57 |

Methods: EPA SW 846-9253

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R. SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 7.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/31/01
Receiving Date: 08/01/01
Analysis Date: 08/01/01

| ELT# | FIELD CODE | BENZENE mg/kg | TOLUENE mg/kg | ETHYLBENZENE mg/kg | m,p-XYLENE mg/kg | o-XYLENE mg/kg |
|---|---|---|---|---|---|---|
| 0101254-01 | Saga Background | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| QUALITY CONTROL | | 0.094 | 0.094 | 0.089 | 0.178 | 0.093 |
| TRUE VALUE | | 0.100 | 0.100 | 0.100 | 0.200 | 0.100 |
| % INSTRUMENT ACCURACY | | 94 | 94 | 89 | 89 | 93 |
| SPIKED AMOUNT | | 0.100 | 0.100 | 0.100 | 0.200 | 0.100 |
| ORIGINAL SAMPLE | | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| SPIKE | | 0.111 | 0.109 | 0.108 | 0.206 | 0.115 |
| SPIKE DUP | | 0.106 | 0.111 | 0.103 | 0.197 | 0.110 |
| % EXTRACTION ACCURACY | | 106 | 111 | 103 | 99 | 110 |
| BLANK | | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| RPD | | 5 | 2 | 5 | 5 | 5 |

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

*"Don't Treat Your Soil Like Dirt!"*

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 7.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/31/01
Receiving Date: 08/01/01
Analysis Date: 08/01/01

| ELT # | FIELD CODE | GRO C6-C10 mg/kg | DRO >C10-C28 mg/kg |
|---|---|---|---|
| 0101254-01 | Saga Background | <10 | 98 |

| | | |
|---|---|---|
| QUALITY CONTROL | 569 | 556 |
| TRUE VALUE | 500 | 500 |
| % INSTRUMENT ACCURACY | 114 | 111 |
| SPIKED AMOUNT | 476 | 476 |
| ORIGINAL SAMPLE | <10 | <10 |
| SPIKE | 506 | 535 |
| SPIKE DUP | 501 | 558 |
| % EXTRACTION ACCURACY | 106 | 112 |
| BLANK | <10 | <10 |
| RPD | 1 | 4 |

Methods: EPA SW 846-8015M GRO/DRO

Roland K. Tuttle

8-3-01
Date

# Environmental Lab of Texas, Inc.

12600 West I-20 East
Odessa, Texas 79763
Phone 915-563-1800
Fax 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: B.L. Sullivan
Company Name: ALLSTATE SERVICES ENVIRONMENTAL
Company Address: MIDLAND, TEXAS
City/State/Zip:
Telephone No: 682-3547
Fax No: 915-682-4182
Sampler Signature: B. L. Sullivan

Project Name: Sago
Project #: SAGO SWP.T
Project Loc:
PO #:

| LAB # (lab use only) | FIELD CODE | Date Sampled | Time Sampled | No. of Containers | Preservative: Ice | Preservative: HNO3 | Preservative: HCl | Preservative: NaOH | Preservative: H2SO4 | Preservative: None | Preservative: Other (Specify) | Matrix: Water | Matrix: Sludge | Matrix: Soil | Matrix: Other (Specify) | Analyze For: TCLP / SARA / TCC | Analyze For: TPH TX 1005/1006 | Analyze For: TPH 8015M GRO/DRO | Analyze For: Metals As Ag Ba Cd Cr Pb Hg Se | Analyze For: Volatiles | Analyze For: Semivolatiles | Analyze For: BTEX 8021B/5030 | Analyze For: Chlorides | RUSH TAT (Pre-Schedule) | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 012 01-01 | SS12' | 7-27-01 | 0800 | 1 | ✓ | | | | | | | | ✓ | | | | | ✓ | ✓ | | | ✓ | ✓ | | |
| 02 | SS21' | 7-27-01 | 1260 | 1 | ✓ | | | | | | | | ✓ | | | | | ✓ | ✓ | | | ✓ | ✓ | | |

TCLP: TOTAL ✓

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 3.5°C

| Relinquished by | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| B L Sullivan | 7-30-01 | 0600 | Randy Gilbreath | 7-30-01 | 0600 |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |
| Randy Gilbreath | 7-30-01 | 1110 | Joanne McMurray | 7-30-01 | 1110 |

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/27/01
Receiving Date: 07/30/01
Analysis Date: 07/30/01

| ELT # | FIELD CODE | Chloride mg/kg |
|---|---|---|
| 0101241-01 | S1 2' | 2300 |
| 0101241-02 | S5 2' | 1100 |

| | |
|---|---|
| QUALITY CONTROL | 5140 |
| TRUE VALUE | 5000 |
| % INSTRUMENT ACCURACY | 103 |
| SPIKED AMOUNT | 5000 |
| ORIGINAL SAMPLE | 1860 |
| SPIKE | 7440 |
| SPIKE DUP | 7530 |
| % EXTRACTION ACCURACY | 112 |
| BLANK | <5.0 |
| RPD | 1.20 |

Methods: EPA SW 846-9253

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/27/01
Receiving Date: 07/30/01
Analysis Date: 07/30/01

| ELT# | FIELD CODE | GRO C6-C10 mg/kg | DRO >C10-C28 mg/kg |
|---|---|---|---|
| 0101241-01 | S1 2' | <10 | <10 |
| 0101241-02 | S5 2' | <10 | <10 |
| | QUALITY CONTROL | 500 | 485 |
| | TRUE VALUE | 500 | 500 |
| | % INSTRUMENT ACCURACY | 100 | 97 |
| | SPIKED AMOUNT | 476 | 476 |
| | ORIGINAL SAMPLE | <10 | <10 |
| | SPIKE | 474 | 424 |
| | SPIKE DUP | 457 | 459 |
| | % EXTRACTION ACCURACY | 96 | 96 |
| | BLANK | <10 | <10 |
| | RPD | 4 | 8 |

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R. SULLIVAN
P.O. BO 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg. C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/27/01
Receiving Date: 07/30/01
Analysis Date: 08/03/01

TOTAL METALS (mg/kg)

| ELT# | Field Code | Ag | As | Ba | Cd | Cr | Hg | Pb | Se |
|---|---|---|---|---|---|---|---|---|---|
| 0101241-01 | S1 2' | ND | 2.86 | 241 | 0.955 | 5.67 | ND | ND | ND |
| 0101241-02 | S5 2' | ND | 7.67 | 365 | 1.63 | 6.76 | ND | 1.06 | ND |
| | REPORT LIMIT | 0.100 | 0.400 | 0.050 | 0.050 | 0.100 | 0.100 | 0.550 | 0.200 |
| | QUALITY CONTROL | 1.04 | 1.01 | 0.998 | 0.993 | 0.993 | 0.017 | 0.990 | 1.01 |
| | TRUE VALUE | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.015 | 1.00 | 1.00 |
| | % INSTRUMENT ACCURACY | 104 | 100 | 100 | 99 | 99 | 111 | 99 | 101 |
| | ORIGINAL SAMPLE | <0.100 | <0.400 | <0.050 | <0.050 | <0.100 | <0.100 | <0.550 | <0.200 |
| | SPIKED AMOUNT | 50.0 | 10.0 | 50.0 | 10.0 | 50.0 | 0.015 | 50.0 | 10.0 |
| | SPIKE | 48.1 | 8.89 | 46.8 | 9.12 | 45.5 | 0.017 | 46.7 | 8.22 |
| | SPIKE DUP | 49.1 | 9.20 | 46.6 | 9.19 | 46.8 | 0.018 | 46.5 | 8.09 |
| | % EXTRACTION ACCURACY | 98 | 92 | 93 | 92 | 94 | 111 | 93 | 81 |
| | BLANK | <0.100 | <0.400 | <0.050 | <0.050 | <0.100 | <0.100 | <0.550 | <0.200 |
| | RPD | 2.06 | 3.31 | 1.07 | 1.09 | 3.24 | 8.04 | 0.00 | 1.23 |

ND= Not detected at report limit.

METHODS: EPA SW 846- 3050, 7470, 6010B

Raland K. Tuttle

8-3-01
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R. SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 3.5 deg C
Project #: Saga SW Pit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/27/01
Receiving Date: 07/30/01
Analysis Date: 07/30/01

| ELT# | FIELD CODE | BENZENE mg/kg | TOLUENE mg/kg | ETHYLBENZENE mg/kg | m,p-XYLENE mg/kg | o-XYLENE mg/kg |
|---|---|---|---|---|---|---|
| 0101241-01 | S1 2' | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| 0101241-02 | S5 2' | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| QUALITY CONTROL | | 0.088 | 0.086 | 0.086 | 0.180 | 0.088 |
| TRUE VALUE | | 0.100 | 0.100 | 0.100 | 0.200 | 0.100 |
| % INSTRUMENT ACCURACY | | 88 | 86 | 86 | 90 | 088 |
| SPIKED AMOUNT | | 0.100 | 0.100 | 0.100 | 0.200 | 0.100 |
| ORIGINAL SAMPLE | | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| SPIKE | | 0.090 | 0.090 | 0.088 | 0.196 | 0.092 |
| SPIKE DUP | | 0.089 | 0.089 | 0.087 | 0.192 | 0.091 |
| % EXTRACTION ACCURACY | | 90 | 90 | 88 | 98 | 92 |
| BLANK | | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 |
| RPD | | 1 | 1 | 1 | 2 | 1 |

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

Date

# Environmental Lab of Texas, Inc.

12600 West I 20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Billy Sullivan
Company Name: ALLSTATE SERVICES ENVIRONMENTAL
Company Address: MIDLAND, TEXAS
City/State/Zip:
Telephone No: 682-3547 Fax No: 915-682-4182
Sampler Signature: E L Sulli

Project Name: Saga
Project #: Saga SWpit
Project Loc:
PO #:

| LAB # (lab use only) | FIELD CODE | Date Sampled | Time Sampled | No. of Containers | Preservative: Ice | HNO | HCl | NaOH | $H_2SO_4$ | None | Other (Specify) | Matrix: Water | Sludge | Soil | Other (specify) | Analyze For: TCLP / TOTAL: TDS / Cl / SAR / EC | TPH 418.1 | TPH TX 1005/1006 | TPH 8015M GRO/DRO | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 | Chlorides | | | | | RUSH TAT (Pre-Schedule) | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0101252-01 | S1 70' | 7-31-01 | | 1 | | | | | | | | | | X | | | | | | | | | | ✓ | | | | | | |
| 02 | S2 60' | | | 1 | | | | | | | | | | | | | | | | | | | | ✓ | | | | | | |
| 03 | S3 70' | | | 1 | | | | | | | | | | | | | | | | | | | | ✓ | | | | | | |
| 04 | S4 70' | | | 1 | | | | | | | | | | | | | | | | | | | | ✓ | | | | | | |
| 05 | S5 - 60 | | | 1 | | | | | | | | | | | | | | | | | | | | ✓ | | | | | | |
| 06 | S6 90 | 7-31-01 | | 1 | | | | | | | | | | | | | | | | | | | | ✓ | | | | | | |

Special Instructions:

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: -7.5°C

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| E L Sulli | 8-1-01 | 1130 | | | |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |
| | | | Jeanne McNinny | 8-1-01 | 1130 |

Aug 01 01 08:02a

p.2

# ENVIRONMENTAL LAB OF , INC.

*"Don't Treat Your Soil Like Dirt!"*

ALLSTATE SERVICES ENVIRONMENTAL
ATTN: MR. B.R SULLIVAN
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 682-4182

Sample Type: Soil
Sample Condition: Intact/ Iced/ 7.5 deg C
Project #: Saga Unit
Project Name: Saga
Project Location: None Given

Sampling Date: 07/31/01
Receiving Date: 08/01/01
Analysis Date: 08/02/01

| ELT# | FIELD CODE | Chloride mg/kg |
|---|---|---|
| 0101252-01 | S1 70' | 87 |
| 0101252-02 | S2 60' | 177 |
| 0101252-03 | S3 70' | 80 |
| 0101252-04 | S4 70' | 47 |
| 0101252-05 | S5 60' | 71 |
| 0101252-06 | S6 90' | 71 |

| | |
|---|---|
| QUALITY CONTROL | 5140 |
| TRUE VALUE | 5000 |
| % INSTRUMENT ACCURACY | 103 |
| SPIKED AMOUNT | 5000 |
| ORIGINAL SAMPLE | 87 |
| SPIKE | 5670 |
| SPIKE DUP | 5760 |
| % EXTRACTION ACCURACY | 112 |
| BLANK | <5.0 |
| RPD | 1.57 |

Methods: EPA SW 846-9253

Raland K. Tuttle

8-3-01
Date