1R - 345

# APPROVALS

# YEAR(S):

2003-2002

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**
Governor
**Joanna Prukop**
Cabinet Secretary

**Lori Wrotenbery**
Director
**Oil Conservation Division**

June 13, 2003

Mr. Neal Goates
Risk Management and Remediation Site Manager
ConocoPhillips
Threadneedle Office
PO Box 2197
Houston, TX 77252-2197

**CLOSURE FOR LOCKHART A-27 BATTERY NEAR EUNICE**
**MAXIM PROJECT 3690056 OCD FILE 1R-0345**

Dear Mr. Goates:

The New Mexico Oil Conservation Division (OCD) has reviewed Maxim Technologies Inc June 12, 2003 "REMEDIATION COMPLETION REPORT" for this project submitted on your behalf. This report contains results of work to close this site, including backfill, excavation of the fenced area down to four feet below ground surface, a one-foot layer of compacted clay barrier, and backfill with clean soil to original ground surface.

Based upon this report, OCD finds that the conditions of OCD's approval of March 26, 2003 have been met satisfactorily and this site is closed in that no further action is required at this time.

This closure letter does not relieve ConocoPhillips of responsibility should remaining contaminants pose a future threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve ConocoPhillips of responsibility for compliance with any other federal, state or local laws and regulations. If you have any questions, please contact me at 505-476-3493.

Sincerely,

Randolph Bayliss, P.E.
Hydrologist,
Environmental Bureau

cc: Chris Williams, Larry Johnson, OCD Hobbs District Office
L.V. Sims II

## Olson, William

**From:** Bayliss, Randy
**Sent:** Friday, June 13, 2003 2:25 PM
**To:** 'Goates, R. Neal'; 'TTangen@maximusa.com'
**Cc:** Williams, Chris; Johnson, Larry; Price, Wayne; Olson, William; Martin, Ed; Flap Sims (E-mail)
**Subject:** NFA Lockhart A-27

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**
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Sincerely,

Randolph Bayliss, P.E.
Hydrologist,
Environmental Bureau

cc: Chris Williams, Larry Johnson, OCD Hobbs District Office
L.V. Sims II

MAXIM TECHNOLOGIES INC
ENGINEERING & ENVIRONMENTAL CONSULTANTS

10601 Lomas Street NE
Suite 106
Albuquerque, NM 87112

PH 505.237.8440
FAX 505.237.8656

# MAX-FAX

Albuquerque, New Mexico

To: RANDY BAYLISS

Company: N MOCD

FAX Number: 505-476-3462 PH Code:

From: John McBEE Job Number:

Date: 3/27/03 Number of Pages: 3 (including this page)

If there are any problems receiving this FAX, please contact Maxim at 505.237.8440.

☐ Urgent ☐ Original Sent By Mail ☐ Express Courier
☐ Confidential ☐ Original Not Sent ☐ _____



Message:

Randy,

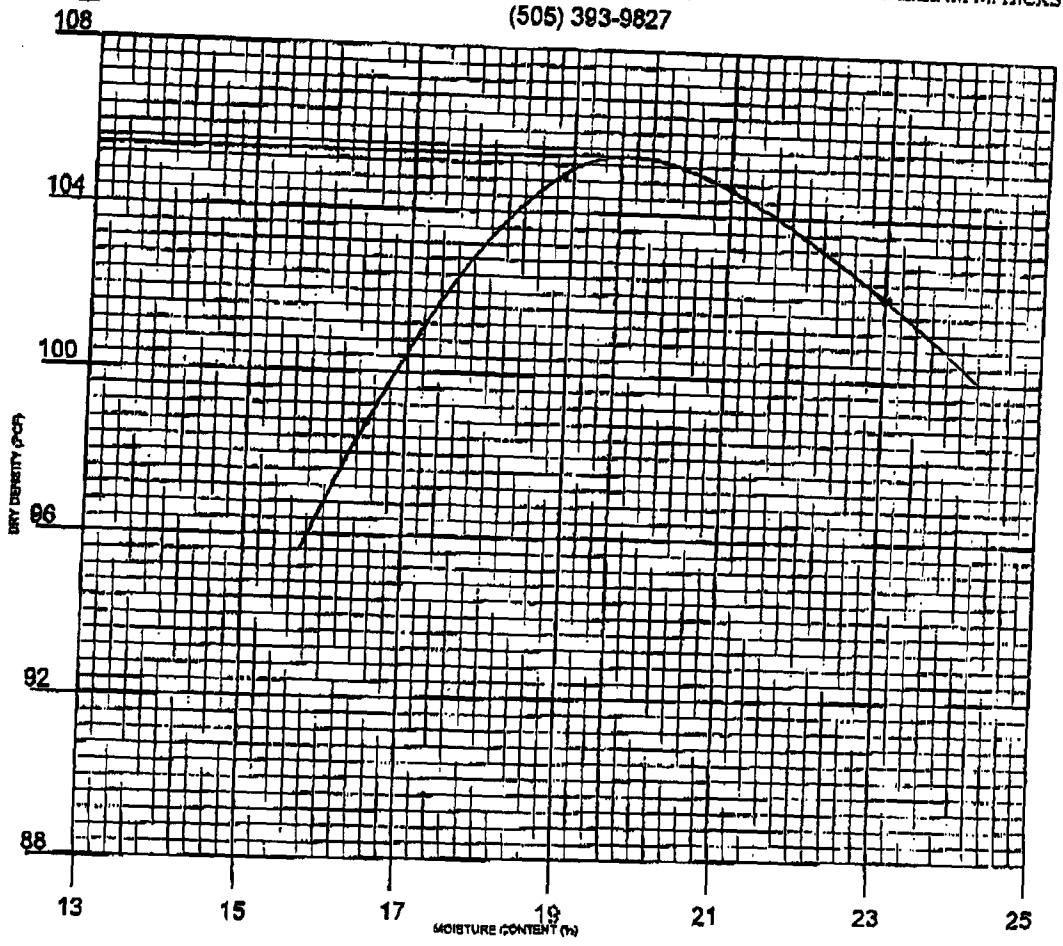
Attached are the lab tests results from the clay borrow source (Wallach Pit) that we are planning to use for the Lockhart A-27 project. I included the results from the other pit for your information.

If you have any questions, please call.

John McBee

**PETTIGREW and ASSOCIATES, P.A.**
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.I.
WILLIAM M. HICKS III, P.E./P.S.




CLIENT: Maxim Technologies PROJECT: General Information

SAMPLE LOCATION: Stockpile at Wallach Pit

SOIL DESCRIPTION: Red Lean Clay

SOIL CLASSIFICATION: CL TEST METHOD: ASTM: D 698

ATTERBERG: LL 48 PI 29 Sampled & Delivered 3/13/03

DATE: 3/17/03 LAB NO. 03 2082- 2088

DRY WEIGHT LB/CU. FT. 105.4 MOISTURE CONTENT % 19.6

| SIEVE ANALYSIS - % PASSING | | | | | | |
|---|---|---|---|---|---|---|
| #4 | #10 | #40 | #80 | #200 | | Permeability: 3.53E -08 |
| 100 | 99 | 97 | 95 | 92.6 | | 95.4% Compaction<br>22.2% Moisture |

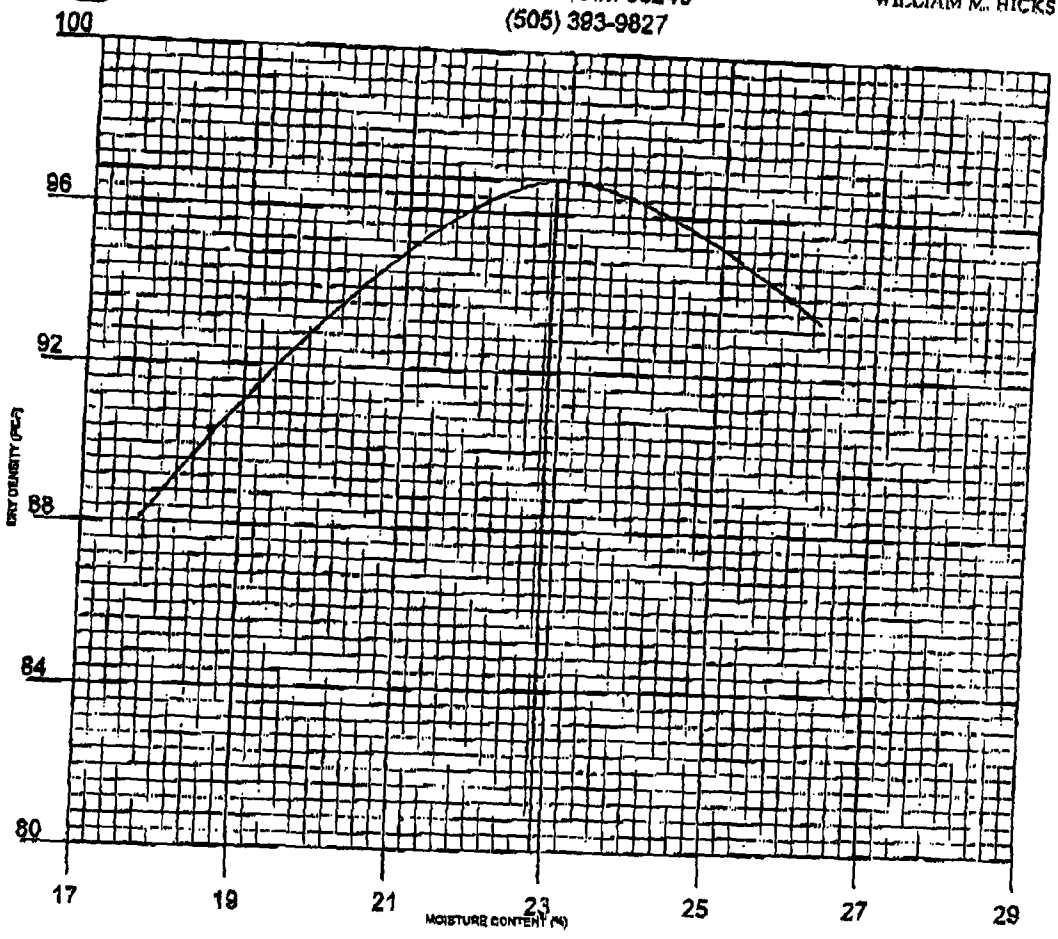
**PETTIGREW and ASSOCIATES**

COPIES: Maximum - Tom Tangen

BY: [signature] S.E.T.

**PETTIGREW and ASSOCIATES, P.A.**
1110 N. GRIMES ST.
HOBBS, NM 88240
(505) 393-9827

DEBRA P. HICKS, P.E./L.S.
WILLIAM M. HICKS III, P.E./P.S.




CLIENT: Maxim Technologies PROJECT: General Information

SAMPLE LOCATION: Byrd Pit

SOIL DESCRIPTION: Red Fat Clay

SOIL CLASSIFICATION: CH TEST METHOD: ASTM: D 698

ATTERBERG: LL 54 PI 28 Sampled & Delivered 3/13/03

DATE: 3/17/03 LAB NO. 03 2089- 2095

DRY WEIGHT LB/CU. FT. 96.8 MOISTURE CONTENT % 22.9

| SIEVE ANALYSIS - % PASSING | | | | | | |
|---|---|---|---|---|---|---|
| #4 | #10 | #40 | #80 | #200 | | Permeability: 3.65E -07<br>95.4% Compaction - 25.5% Moisture |
| 100 | 100 | 99 | 99 | 98.0 | | |

**PETTIGREW and ASSOCIATES**

COPIES: Maximum - Tom Tangen

BY: [signature] E.I.T.

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**
Governor
**Joanna Prukop**
Cabinet Secretary

**Lori Wrotenbery**
Director
**Oil Conservation Division**


March 26, 2003

Mr. Neal Goates
Risk Management and Remediation Site Manager
ConocoPhillips
Threadneedle Office
PO Box 2197
Houston, TX 77252-2197

**RE: LOCKHART A-27 BATTERY NEAR EUNICE**
**MAXIM PROJECT 2690022.10 OCD FILE 1R-0345**

Dear Mr. Goates:

The New Mexico Oil Conservation Division (OCD) has reviewed Maxim Technologies Inc August 13, 2001 "RESULTS OF COMPILATION OF DATA FROM SUBSUFACE INVESTIGATIONS" for this project submitted on your behalf. This report contains results of two field investigations and proposes a work plan for cleanup of the site located in the SW ¼ of the NE ¼ of Section 27, T21S, R37E, Lea County, New Mexico, just north of Continental Road, north of Eunice. The OCD has also reviewed Maxim's letter of January 15, 2003 which answers questions raised in OCD's email of October 28, 2002.

OCD has reviewed L.V. Sims II's December 2002 "INDEPENDENT GROUND WATER INVESTIGATION DOWN-GRADIENT OF THE CONOCO LOCKHART A-27 BATTERY PIT" which reports results of ground water sampling at the southeast corner of the Lockhart A-27 pit. These results show 508 mg/L chlorides in the ground water underlying the pit.

OCD has reviewed Arcadis' January 30, 2003 "CHEVRON TEXACO #2 (NORTH) GAS PLANT – ANALYTICAL RESULTS, EUNICE, LEA COUNTY, NEW MEXICO" which presents results of ground water sampling and a hydraulic gradient map of the area. Samples taken from monitoring wells about 950 feet upgradient of the Lockhart A-27 pit show chlorides in ground water of up to 1,300 mg/L. The hydraulic gradient of ground water in this area is to the northeast.

OCD has reviewed Arcadis' March 25, 2003 fax which transmitted results of ground water testing at wells recently installed about 450 feet upgradient of the Lockhart A-27 pit. Chlorides in these wells were 1,400 mg/l and 1,300 mg/L.

Based upon this information, it appears that chlorides contamination in the Lockhart A-27 pit area orginates from the North Eunice Chevron Texaco gas plant. Therefore, OCD approves the work plan, or path forward on page 8 of 8 of the August 13, 2002 Maxim report, with the following conditions.

1. ConocoPhillips shall install an impermeable barrier to cover the impacted area, which is that area encompassed by the fence shown on Figure 2. The barrier shall meet a hydraulic conductivity of no greater than $10^{-7}$ centimeters per second throughout its thickness. If a clay cover is used, it shall be either two feet thick, after compaction, or compacted so as to meet or exceed 95% of a Proctor Test ASTM-D-698, as shown by three tests on the site, and have the following physical characteristics:
    a. plasticity index greater than 10%;
    b. liquid limit between 25% and 50%;
    c. more than 40% by weight of the material passing a No. 200 sieve;
    d. clay content greater than 18% by weight; and
    e. be free of particles greater than one inch in any dimension.

2. The impermeable barrier must be covered with a protective soil layer at least three feet thick composed of clean porous soil and mounded or domed to account for settling and promote lateral diversion of water from the impacted area. The final surface shall be contoured to be compatible with the adjacent elevations.

3. All wastes taken for offsite disposal shall be disposed of at an OCD approved facility.

4. ConocoPhillips shall notify the OCD Hobbs District Office at least four working days in advance of installation of the impermeable barrier and other significant activities so that the OCD has the opportunity to witness the events.

5. ConocoPhillips shall implement measures to prevent runoff from the site during the backfilling and barrier installation operations.

6. Upon completion of barrier installation, ConocoPhillips shall implement site or institutional controls to protect this site from intrusion in the future. These controls may consist of signs, fencing, and notices on deeds as appropriate.

7. ConocoPhillips shall submit a report on all remediation activities to the OCD Santa Fe Office within 60 days of completion of the work with a copy provided to the OCD Hobbs District Office. OCD encourages submittal of reports and photographs using electronic means. The report shall contain the following.
    a. A description of all remediation activities that occurred.
    b. A site map showing the location of the pit, impacted areas, excavated areas, sample locations, blending and stockpile locations, impermeable barrier perimeter, and any other pertinent site features.

c. A cross-sectional diagram of the excavation showing the area excavated and backfilled including the clay cover and clean fill.
d. Information and test results showing that the clay cover was constructed according to ASTM standards and conditions listed above.
e. The disposition and volume of all wastes generated and disposed of.
f. A description of site or institutional controls.
g. Photographic documentation of remediation activities.

Upon receipt and review of this report, OCD will determine if remedial activities meet the conditions of this approval and, upon a satisfactory finding, will issue a "closure" letter. A closure letter does not relieve ConocoPhillips of responsibility should remaining contaminants pose a future threat to ground water, surface water, human health or the environment.

Please be advised that OCD approval does not relieve ConocoPhillips of responsibility if the proposed work plan fails to adequately remediate contamination related to ConocoPhillips activities. In addition, OCD approval does not relieve ConocoPhillips of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at 505-476-3493.

Sincerely,

Randolph Bayliss, P.E.
Hydrologist,
Environmental Bureau

cc: Chris Williams, OCD Hobbs District Office
Larry Johnson, OCD Hobbs District Office
Tom Tangen, Maxim
L.V. Sims II

# ARCADIS

*Infrastructure, buildings, environment, communications*

ARCADIS G&M, Inc.
1004 N. Big Spring
Suite 300
Midland Texas 79701
Tel 915-687-5400
Fax 915-687-5401

TELEFAX

To:
Randy Bayliss
Wayne Price

ENVIRONMENTAL

Fax:
505-476-3462

Total pages:
5

Date:
March 25, 2003

Subject:
N. Eunice Gas Plant Groundwater Analytical Data

Project Number:
MT000700.0002.00006

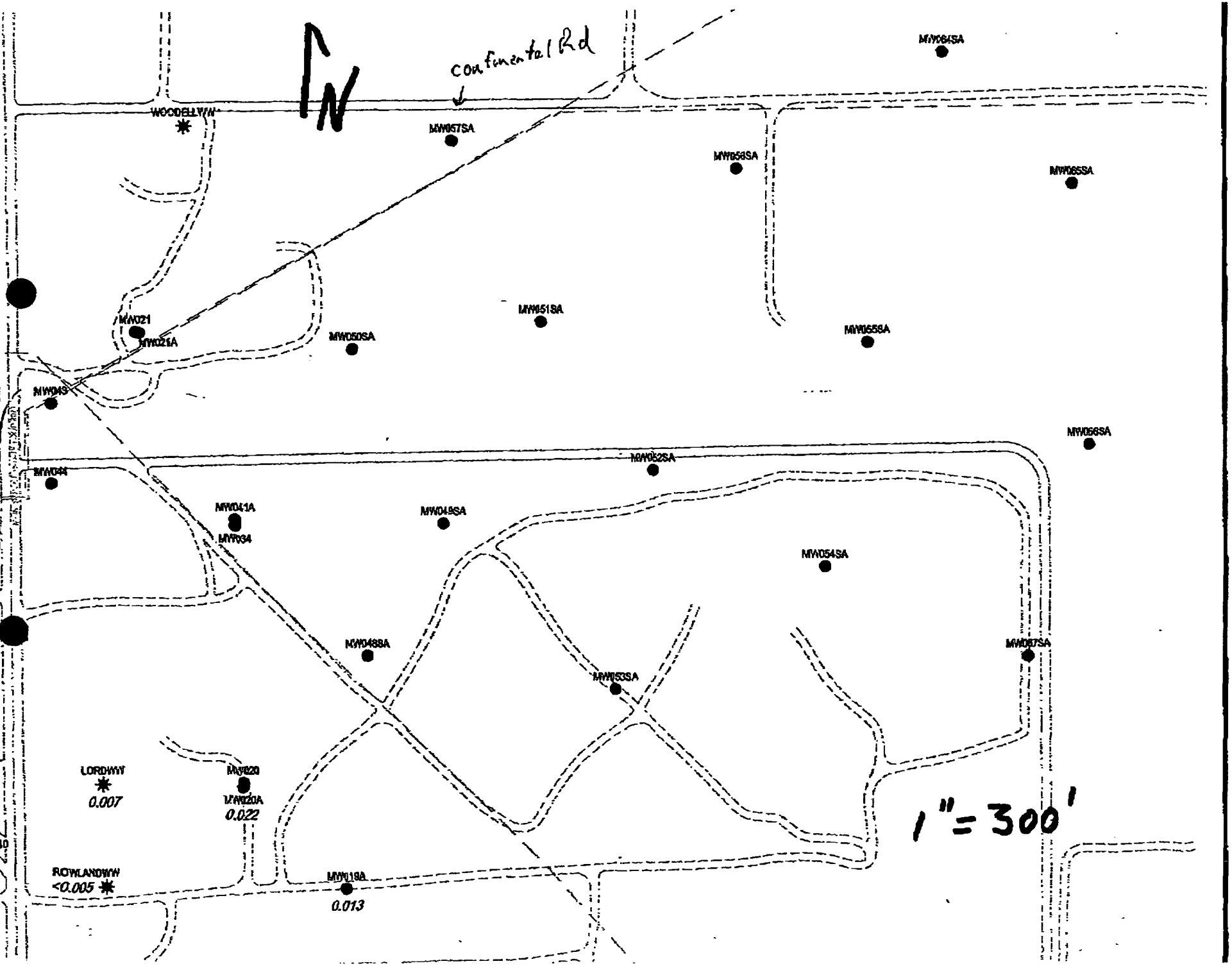
From:
Hank McConnell

If you do not receive all pages, please call to let us know as soon as possible.

Enclosed is a portion of the information you requested concerning groundwater quality East of the North Eunice Gas Plant.
Please call me if you have any questions.



*Part of a bigger picture*


N
Continental Rd
WOODELLWW
MW057SA
MW064SA
MW058SA
MW065SA
MW021
MW021A
MW050SA
MW051SA
MW055SA
MW043
MW066SA
MW044
MW052SA
MW041A
MW034
MW049SA
MW054SA
MW048SA
MW053SA
MW067SA
LORDWW
0.007
MW020
MW020A
0.022
ROWLANDWW
<0.005
MW019A
0.013
1"=300'

SEVERN TRENT STL

# LABORATORY TEST RESULTS

Job Number: 217467 Date: 03/14/2003

CUSTOMER: ARCADIS / G&M PROJECT: MT000700.0006.00002 ATTN: Steve Tischer

Customer Sample ID: MW064SA
Date Sampled.....: 02/26/2003
Time Sampled.....: 11:30
Sample Matrix.....: Water

Laboratory Sample ID: 217467-1
Date Received.....: 02/27/2003
Time Received.....: 09:55

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | REPORTING LIMIT | UNITS | DATE | TECH |
|---|---|---|---|---|---|---|
| SW-846 7197 | Hexavalent Chromium, Dissolved | 0.071 | 0.005 | mg/L | 02/27/03 | cdr |
| SW-846 7470A | Mercury (Hg) | <0.0002 | 0.0002 | mg/L | 03/06/03 | edr |
| EPA 160.1 | Solids, Total Dissolved (TDS) | 3100 | 10 | mg/L | 02/27/03 | dml |
| SM 2320 B | Alkalinity, Total as CaCO3 | 246 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| SM 2320 B | Bicarbonate (HCO3) | 246 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| SM 2320 B | Carbonate (CO3) | <5.0 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| EPA 300.0 | Chloride | 1400 | 100 | mg/L | 03/05/03 | cnw |
| EPA 300.0 | Sulfate (SO4) | 600 | 100 | mg/L | 03/05/03 | cnw |
| SW-846 6010B | Arsenic (As), Total | <0.05 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Barium (Ba), Total | 0.07 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Cadmium (Cd), Total | <0.05 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Calcium (Ca), Total | 308 | 10 | mg/L | 03/11/03 | jem |
| SW-846 6010B | Chromium (Cr), Dissolved | 0.09 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Lead (Pb), Total | <0.05 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Magnesium (Mg), Total | 142 | 0.1 | mg/L | 03/11/03 | jem |
| SW-846 6010B | Potassium (K), Total | 11.0 | 1.0 | mg/L | 03/11/03 | jem |
| SW-846 6010B | Selenium (Se), Total | <0.05 | 0.05 | mg/L | 03/03/03 | jem |
| SW-846 6010B | Silver (Ag), Total | <0.05 | 0.05 | mg/L | 03/11/03 | jem |
| SW-846 6010B | Sodium (Na), Total | 576 | 10 | mg/L | 03/11/03 | jem |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate | Complete | | | 02/28/03 | dml |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate, Dissolved | Complete | | | 02/28/03 | dml |
| SW-846 8021B | Volatile Organics - Aromatics | | | | | |
| | Benzene | ND | 2 | mg/L | 03/03/03 | rh |
| | Ethylbenzene | ND | 2 | mg/L | 03/03/03 | rh |
| | Toluene | ND | 2 | mg/L | 03/03/03 | rh |
| | Xylenes (total) | ND | 2 | mg/L | 03/03/03 | rh |



1733 North Padre Island Drive • Corpus Christi, TX 78408 • Tel: 361 289 2673 • Fax: 361 289 2471 • www.stl-inc.com

SEVERN TRENT STL

# LABORATORY TEST RESULTS

Job Number: 217485 Date: 03/14/2003

CUSTOMER: ARCADIS / G&M PROJECT: NT000700.0006.00002 ATTN: Steve Tischer

Customer Sample ID: MW065SA
Date Sampled.....: 02/27/2003
Time Sampled.....: 14:40
Sample Matrix.....: Water

Laboratory Sample ID: 217485-1
Date Received.....: 02/28/2003
Time Received.....: 10:00

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | REPORTING LIMIT | UNITS | DATE | TECH |
|---|---|---|---|---|---|---|
| SW-846 7197 | Hexavalent Chromium, Dissolved | 0.010 | 0.005 | mg/L | 02/28/03 | edr |
| SW-846 7470A | Mercury (Hg) | <0.0002 | 0.0002 | mg/L | 03/06/03 | edr |
| EPA 160.1 | Solids, Total Dissolved (TDS) | 2880 | 10 | mg/L | 03/06/03 | dml |
| SM 2320 B | Alkalinity, Total as CaCO3 | 234 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| SM 2320 B | Bicarbonate (HCO3) | 234 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| SM 2320 B | Carbonate (CO3) | <5.0 | 5.0 | mg/L CaCO3 | 03/04/03 | hmz |
| EPA 300.0 | Chloride | 1300 | 100 | mg/L | 03/05/03 | cnw |
| EPA 300.0 | Sulfate (SO4) | 400 | 100 | mg/L | 03/05/03 | cnw |
| SW-846 6010B | Arsenic (As), Total | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Barium (Ba), Total | 0.07 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Cadmium (Cd), Total | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Calcium (Ca), Total | 398 | 10 | mg/L | 03/12/03 | jem |
| SW-846 6010B | Chromium (Cr), Dissolved | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Lead (Pb), Total | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Magnesium (Mg), Total | 177 | 0.1 | mg/L | 03/12/03 | jem |
| SW-846 6010B | Potassium (K), Total | 11.0 | 1.0 | mg/L | 03/12/03 | jem |
| SW-846 6010B | Selenium (Se), Total | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Silver (Ag), Total | <0.05 | 0.05 | mg/L | 03/04/03 | jem |
| SW-846 6010B | Sodium (Na), Total | 348 | 1.0 | mg/L | 03/12/03 | jem |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate | Complete | | | 03/03/03 | dml |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate, Dissolved | Complete | | | 03/03/03 | dml |
| SW-846 8021B | Volatile Organics - Aromatics | | | | | |
| | Benzene | ND | 0.002 | mg/L | 03/05/03 | rh |
| | Ethylbenzene | ND | 0.002 | mg/L | 03/05/03 | rh |
| | Toluene | ND | 0.002 | mg/L | 03/05/03 | rh |
| | Xylenes (total) | ND | 0.002 | mg/L | 03/05/03 | rh |



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SEVERN TRENT STL

# LABORATORY TEST RESULTS

Job Number: 217558 Date: 03/20/2003

CUSTOMER: ARCADIS / G&M PROJECT: MT000700.0004.00002 ATTN: Steve Tischer

Customer Sample ID: MW067SA
Date Sampled.....: 03/04/2003
Time Sampled.....: 11:45
Sample Matrix.....: Water

Laboratory Sample ID: 217558-1
Date Received.....: 03/05/2003
Time Received.....: 09:40

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | REPORTING LIMIT | UNITS | DATE | TECH |
|---|---|---|---|---|---|---|
| SW-846 7197 | Hexavalent Chromium, Dissolved | <0.005 | 0.005 | mg/L | 03/05/03 | edr |
| SW-846 7470A | Mercury (Hg) | <0.0002 | 0.0002 | mg/L | 03/11/03 | edr |
| EPA 160.1 | Solids, Total Dissolved (TDS) | 1350 | 10 | mg/L | 03/06/03 | dml |
| SM 2320 B | Alkalinity, Total as CaCO3 | 278 | 5.0 | mg/L CaCO3 | 03/07/03 | hmz |
| SM 2320 B | Bicarbonate (HCO3) | 278 | 5.0 | mg/L CaCO3 | 03/07/03 | hmz |
| SM 2320 B | Carbonate (CO3) | <5.0 | 5.0 | mg/L CaCO3 | 03/07/03 | hmz |
| EPA 300.0 | Chloride | 340 | 50 | mg/L | 03/14/03 | cnw |
| EPA 300.0 | Sulfate (SO4) | 300 | 100 | mg/L | 03/14/03 | cnw |
| SW-846 6010B | Arsenic (As), Total | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Barium (Ba), Total | 0.13 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Cadmium (Cd), Total | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Calcium (Ca), Total | 171 | 10 | mg/L | 03/13/03 | jem |
| SW-846 6010B | Chromium (Cr), Dissolved | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Lead (Pb), Total | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Magnesium (Mg), Total | 57.5 | 0.1 | mg/L | 03/13/03 | jem |
| SW-846 6010B | Potassium (K), Total | 9.7 | 1.0 | mg/L | 03/13/03 | jem |
| SW-846 6010B | Selenium (Se), Total | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Silver (Ag), Total | <0.05 | 0.05 | mg/L | 03/06/03 | edr |
| SW-846 6010B | Sodium (Na), Total | 318 | 10 | mg/L | 03/13/03 | jem |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate | Complete | | | 03/05/03 | dml |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate, Dissolved | Complete | | | 03/05/03 | dml |
| SW-846 8021B | Volatile Organics - Aromatics | | | | | |
| | Benzene | ND | 2 | mg/L | 03/07/03 | rh |
| | Ethylbenzene | ND | 2 | mg/L | 03/07/03 | rh |
| | Toluene | ND | 2 | mg/L | 03/07/03 | rh |
| | Xylenes (total) | ND | 2 | mg/L | 03/07/03 | rh |



1733 North Padre Island Drive • Corpus Christi, TX 78408 • Tel: 361 289 2673 • Fax: 361 289 2471 • www.stl-inc.com

## Olson, William

**From:** Bayliss, Randy
**Sent:** Friday, March 07, 2003 1:09 PM
**To:** Anderson, Roger; Price, Wayne; Olson, William
**Subject:** FW: Lockhart A-27

FYI

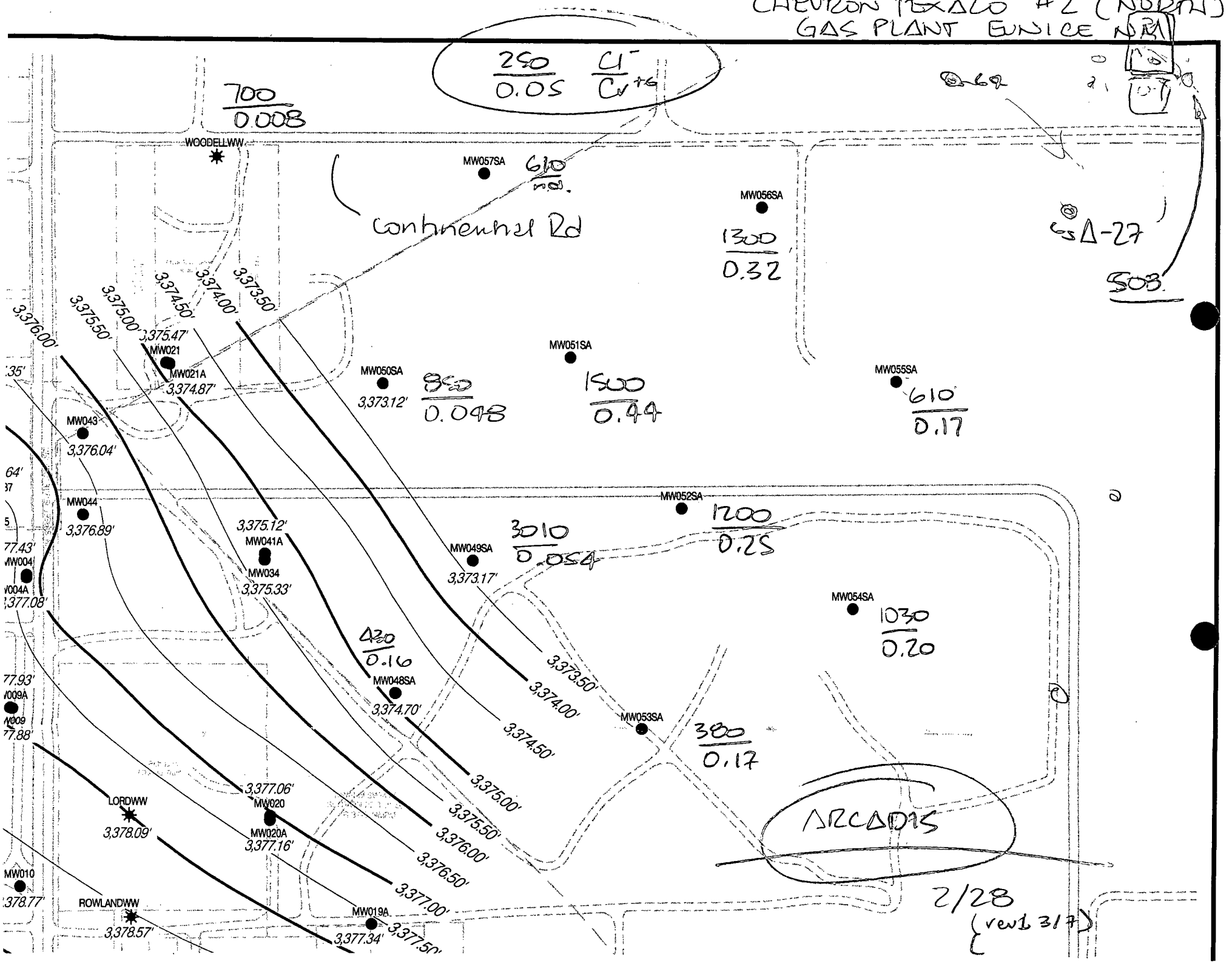
-----Original Message-----
**From:** Goates, R. Neal [mailto:Neal.Goates@conocophillips.com]
**Sent:** Friday, March 07, 2003 11:39 AM
**To:** Bayliss, Randy
**Subject:** RE: Lockhart A-27

Sorry, I was on the phone. Randy what other information is out there? I thought the last time we talked that the closest well was 950' away up gradient and the minute we received the analysis if it was greater or equal to 500 ppm cl that we could pursue our restoration plan. The field representatives and management are losing confidence that we are communicating. According to Clyde Yansey with Maxim you guys talked last Friday and there was no mention of other data in progress. I feel we have been patient and have spent valuable resources to reach of point of consensus on both sides. I would appreciate a final plan.

Thanks.

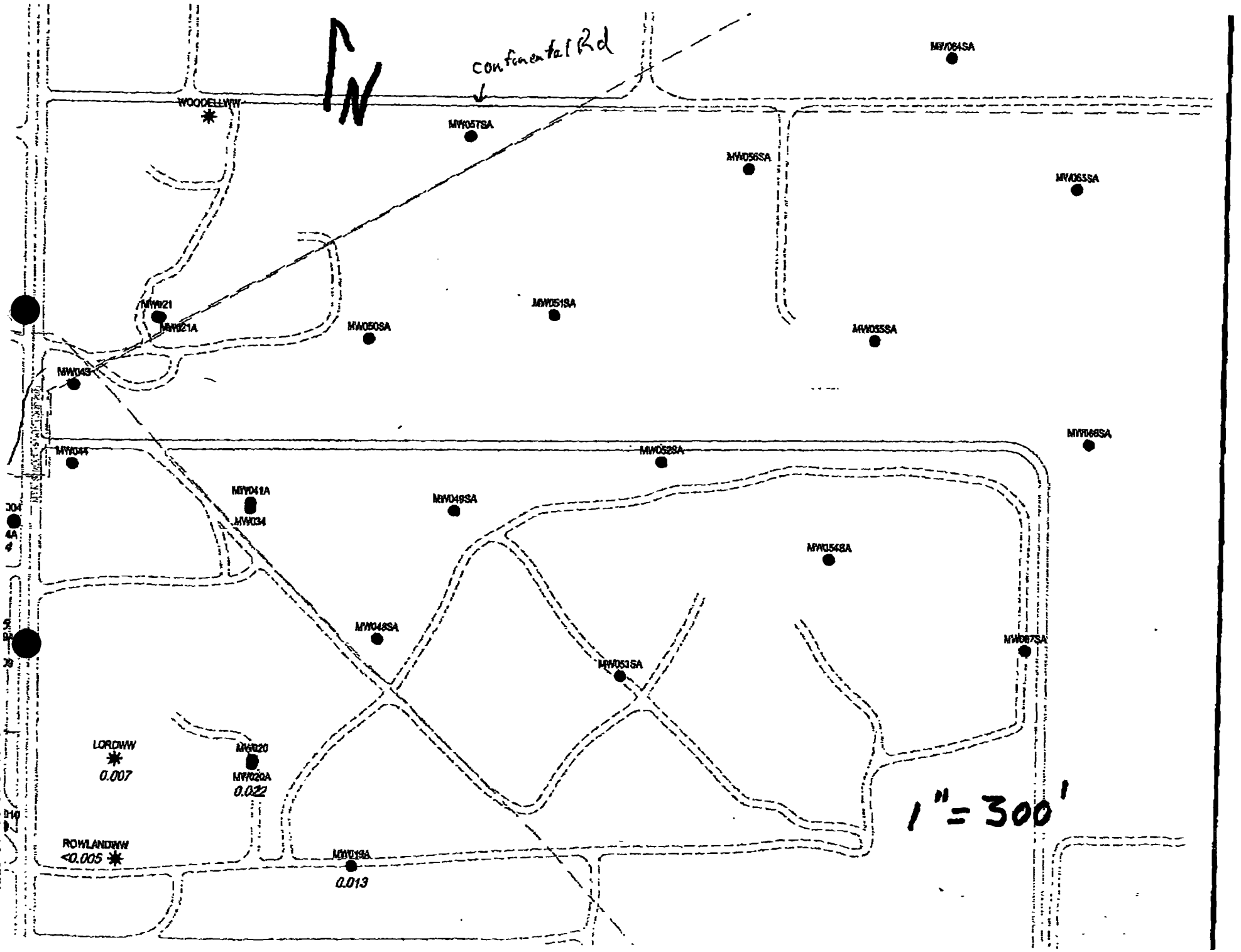
*Neal Goates*
*RM&R Site Manager*
*ConocoPhillips*
*Threadneedle Office*
*PO Box 2197*
*Houston, TX 77252-2197*
*phone: 832-379-6427*
*etn: 679-6427*
*fax: 801-382-1674*
*cell: 832-465-4123*
*email: Neal.Goates@conocophillips.com*

> -----Original Message-----
> **From:** Bayliss, Randy [mailto:RBayliss@state.nm.us]
> **Sent:** Friday, March 07, 2003 11:52 AM
> **To:** Goates, R. Neal
> **Subject:** Lockhart A-27
>
> I just tried to call but could not get through to you.
>
> We've received some information from Arcadis showing the locations for the four new monitoring wells near your A-27 pit. Two of these wells are upgradient and about 400 feet from your pit. The samples are at the lab and results will be available in the next week or ten days. We feel that having better infomration about the ground water near your site is essential to our decision and feel it prudent to wait for that information.


CHEVRON TEXACO #2 (NORTH)
GAS PLANT EUNICE NM
250
0.05
Cl⁻
Cw+g
700
0.008
WOODELLWW
MW057SA
610
n.d.
Continental Rd
MW056SA
1300
0.32
65Δ-27
503
MW051SA
MW050SA
3,373.12'
850
0.048
1500
0.44
MW055SA
610
0.17
MW021
MW021A
3,374.87'
3,375.47'
3,376.00'
3,375.50'
3,375.00'
3,374.50'
3,374.00'
3,373.50'
MW043
3,376.04'
MW044
3,376.89'
MW052SA
1200
0.25
3010
0.054
MW049SA
3,373.17'
3,375.12'
MW041A
MW034
3,375.33'
MW054SA
1030
0.20
420
0.16
MW048SA
3,374.70'
MW053SA
380
0.17
3,373.50'
3,374.00'
3,374.50'
3,375.00'
3,375.50'
3,376.00'
3,376.50'
3,377.00'
3,377.50'
3,377.06'
LORDWW
3,378.09'
MW020
MW020A
3,377.16'
ARCADIS
MW010
ROWLANDWW
3,378.57'
MW019A
3,377.34'
2/28
(rev1 3/7)

FAX NO.

MAR-07-03 FRI 11:50 AM



SEVERN TRENT STL

# LABORATORY TEST RESULTS

Job Number: 217056 Date: 02/12/2003

CUSTOMER: ARCADIS / G&M PROJECT: MT000700.0006.00002 ATTN: Steve Tischer

Customer Sample ID: MW057SA
Date Sampled.....: 01/28/2003
Time Sampled.....: 10:00
Sample Matrix.....: Water

Laboratory Sample ID: 217056-1
Date Received.....: 01/29/2003
Time Received.....: 09:15

| TEST METHOD | PARAMETER/TEST DESCRIPTION | SAMPLE RESULT | REPORTING LIMIT | UNITS | DATE | TECH |
|---|---|---|---|---|---|---|
| SW-846 7197 | Hexavalent Chromium, Dissolved | 0.007 | 0.005 | mg/L | 01/29/03 | edr |
| SW-846 7470A | Mercury (Hg) | <0.0002 | 0.0002 | mg/L | 01/31/03 | edr |
| EPA 160.1 | Solids, Total Dissolved (TDS) | 2020 | 10 | mg/L | 01/30/03 | dml |
| SM 2320 B | Alkalinity, Total as CaCO3 | 282 | 5.0 | mg/L CaCO3 | 02/03/03 | hmz |
| SM 2320 B | Bicarbonate (HCO3) | 282 | 5.0 | mg/L CaCO3 | 02/03/03 | hmz |
| SM 2320 B | Carbonate (CO3) | <5.0 | 5.0 | mg/L CaCO3 | 02/03/03 | hmz |
| EPA 300.0 | Chloride | 610 | 50 | mg/L | 01/31/03 | cnw |
| EPA 300.0 | Sulfate (SO4) | 450 | 40 | mg/L | 01/31/03 | cnw |
| SW-846 6010B | Arsenic (As), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Barium (Ba), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Cadmium (Cd), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Calcium (Ca), Total | 243 | 10 | mg/L | 02/06/03 | jem |
| SW-846 6010B | Chromium (Cr), Dissolved | <0.05 | 0.05 | mg/L | 01/30/03 | jem |
| SW-846 6010B | Lead (Pb), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Magnesium (Mg), Total | 105 | 0.1 | mg/L | 02/06/03 | jem |
| SW-846 6010B | Potassium (K), Total | 9.4 | 1.0 | mg/L | 02/06/03 | jem |
| SW-846 6010B | Selenium (Se), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Silver (Ag), Total | <0.05 | 0.05 | mg/L | 01/29/03 | jem |
| SW-846 6010B | Sodium (Na), Total | 313 | 10 | mg/L | 02/06/03 | jem |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate | Complete | | | 01/29/03 | crw |
| SW-846 3010A | Acid Dig., Total Metals, 2X Concentrate, Dissolved | Complete | | | 01/29/03 | crw |
| SW-846 8021B | Volatile Organics - Aromatics | | | | | |
| | Benzene | ND | 0.002 | mg/L | 01/30/03 | rcd |
| | Ethylbenzene | ND | 0.002 | mg/L | 01/30/03 | rcd |
| | Toluene | 0.002 | 0.002 | mg/L | 01/30/03 | rcd |
| | Xylenes (total) | ND | 0.002 | mg/L | 01/30/03 | rcd |



1733 North Padre Island Drive • Corpus Christi, TX 78408 • Tel: 361 289 2673 • Fax: 361 289 2471 • www.stl-inc.com

# ConocoPhillips Unlined Surface Impoundment Characterization and Surface Restoration Plan Southeastern New Mexico

Table of Contents

## SUMMARY

ConocoPhillips is submitting to the New Mexico Oil Conservation Division our restoration program for legacy pit sites in New Mexico southeastern production region. The historic earthen pit sites (i.e. overflow, basic sediment, or production pits) are generally located at or near current or abandoned production tank batteries at upstream operations. The subject sites were constructed of native soils used to contain sediments and fluids during historic operation. At the time the pit was operational, the material was allowed to equilibrate through subsoil and surface evaporation. Standard practice historically was to burn residual hydrocarbon sheen to allow the evaporation to persist. Upon original abandonment, surrounding native material was used for backfill and soil conditioning conducive for vegetation was generally omitted. Preeminence of this issue is found primarily in Lea County New Mexico. ConocoPhillips is requesting that NMOCD work in a collaborate effort to address logical restoration for the descriptive historic sites.

Our objective will be to:

1. Improve sustainable development by incorporating sound scientific principles and evaluations for aged/weathered upstream constituents.
2. Utilize assessment guidelines published by the NMOCD Unlined Surface Impoundment Closure Guidelines.
3. Implement surface restoration and incorporate controls protective to human health and the environment.

**SUMMARY TABLE OF STEPS, AND ACTIONS TO BE TAKEN BY OPERATOR**

| Step | Descriptive Title | Actions |
|---|---|---|
| **1** | Submit General Site Closure Plan Request | Collaborate with appointed NMOCD personnel and ConocoPhillips for an approved general action plan and administrative tasks for site closure. |
| **2** | Site Assessment Characterization | Collect soil/water/other site data. |
| **3** | Is groundwater unimpacted? Can restoration plan be implemented? | Yes, ⇒ Step 5 considerations<br><br>No, ⇒ Step 4 |
| **4** | Groundwater or surface water impact plan | Choose what actions are to be done (groundwater abatement plan, active/passive system).<br>Repeat steps 1 and 2 and 4 as needed then proceed to step 5 |
| **5** | Surface Restoration Plan | • Implement a programmatic approach to restoration plan. |
| **6** | Submit Information, Request No Further Action | Submit to NMOCD final report and request for no further action. |

## INITIAL REPORTING, ACTIONS, AND CLEANUP

### STEP 1 – Submit General Site Closure Plan Request

Submit to NMOCD location and specific site description and maps prior to the commencement of work. Notification will also be given to appropriate surface stakeholders for each site. This list will be reviewed and if necessary revised and resubmitted whenever new site information is obtained.

### STEP 2 – Site Assessment Characterization

The purpose of a limited site assessment is to document whether or not there is impact at or from the site that could cause a significant risk to human health or the environment.

A typical limited site assessment includes the following:

- Background data and maps.
    1. Site legal location (qtr-qtr-qtr, Sec-Twp-Rng).
    2. Location site on an aerial photo or a topographic, county road, or other appropriate map that is labeled with the site's section, township, and range.
    3. Include the Latitude/Longitude from GPS readings or other sources when available.
    4 Topographic map, area geological and hydrological data (including water table depth and water quality) if available can help in determining possible migration pathways (see glossary). Soils information can be obtained from the USDA-NRCS soil survey maps and descriptions.

- Site information - Provide a short, written narrative and a site map for the following:
    1. A visual site inspection at and near the pit area (e.g. impairments seen, including damage to crops or pasture; surface soil type; hydrocarbon stains, odors, and seeps; buildings, equipment, and power lines; evidence of underground utilities or pipelines). Draw structure and observation locations on a site map.
    2. Observable area information (e.g. agricultural or other land use; all wells and water bodies within 1000 feet; known and flagged oil and gas lines).
    3. Obtainable records, such as data on rural water lines, water well records, and local water system wellhead protection area.

- Sampling Data - delineate the horizontal/vertical extent and concentration(s) of the impact area(s) extent with samples taken in, around, and under the affected soil.
    1. All sampling shall be:
        a. NMOCD personnel witness, or
        b. Performed by or under the oversight of a qualified geoscientist (see glossary, App. VII) or
        c. Performed by other qualified person(s) with appropriate soil and/or water sampling training and/or experience; document training/experience.

2. Utilize NMOCD's standard operating procedure for sampling.
3. A field kit, field PID, soil gas analyses, or other on-site testing or screening methodology may be used to identify the impacted versus unimpacted areas. The task will also pinpoint the areas for confirmation sampling prior to site restoration.
4. The plan will include one soil background sample to assist former pit dimension.
5. Sampling includes borings (or other excavations) in the site area(s) most likely to be impacted based on site screening data, visual criteria, normal movement of liquid contaminants downhill/downgradient, and/or other information.
    a. Step 3 Sampling Data will be implemented for center site assessment consisting of 5-foot intervals below ground surface (bgs). Confirmation samples will be analyzed at an NMOCD/ConocoPhillips approved laboratory for confirmation TPH and Chlorides for each boring.
    b. A detailed descriptive log from the surface to total depth (TD), with information as to changes in soil (using sand-silt-clay percentages) and/or rock types and apparent degree of contamination, should be made for each boring or excavation using a standard classification system such as the Unified Soil Classification System or Wentworth, and the Munsel color charts.
    c. Cross-sections will be made from these logs showing changes across the site in soil/rock type, contamination with depth, and relative water table information.
    d. Sampling for geochemical parameters will be completed in the center boring using EPA method 1312 synthetic precipitation leachate procedures (SPLP) for determining the potential for pit material to migrate downward.
    e. The horizontal extent of each site will be sampled again using step 3 of this section.
    f. Submit a table of sampling data with a map showing sampling locations.
    g. Borings not converted to monitoring wells will be properly plugged back to surface using cement, bentonite, or other means as required by the NMOCD.

**STEP 3 – Is groundwater unimpacted? Can restoration plan be implemented?**

Make any necessary revisions following the Site Assessment if groundwater was found at a different depth than predicted or surface water or groundwater is impacted. If water is not impacted then proceed to Step 5. If cleanup criteria are not met, go to Step 4 and repeat steps 1,2,4 and necessary.

**STEP 4 - Groundwater or surface water impact plan**

- Discuss with NMOCD for developing a site-specific plan for each site.

**STEP 5 - Surface Restoration Plan**

Demonstrate stabilization

- Fully document the extent of the impacted area.
- Demonstrate stabilization by the following:
  - Restore surface by stripping and stockpiling topsoil 2 feet below surface and installing a clay cap or geo-membrane. The clay barrier would suffice for containment/isolation of impact and prevention of downward percolation or migration from surface or near surface influences. The installation would consist of a compacted clay liner approximately 12"thick. The clay will meet or exceed 95% of a Proctor Test ASTM-D-698 with permeability (hydraulic conductivity) equal to or less than $1x10^{-6}$ cm/sec. The material would be tested for density randomly for compliance. According to reliable sources this material is available at a local site between Eunice and Hobbs NM. If clay is not available in sufficient quantity and of acceptable quality within a reasonable haul distance of the site, the clay barrier will be replaced with a geo-membrane of sufficient quality, density, and thickness to provide $1X10^{-6}$cm/sec permeability.
  - Top dress surface with 12 inches of unimpacted topsoil.
  - Remove stockpile to approved area for disposal or treatment.
  - Re-vegetate according to NMOCD/BLM preferred practice.

**DATA SUBMISSION AND CLOSURE REQUEST**

**STEP 6 – Submit Information, Request No Further Action.**

- Submit necessary maps:
- Submit copy of the Site Assessment report.
- Restoration documentation completed.
- Surface restoration demonstrated by site photography
- Cover letter requesting no further action for each site

## Price, Wayne

**From:** Price, Wayne
**Sent:** Tuesday, February 26, 2002 9:54 AM
**To:** 'r-neal.goates@conoco.com'; 'cyancey@maximusa.com'
**Cc:** Sheeley, Paul; Johnson, Larry
**Subject:** Conoco Lockhart A-27 OCD Case #1R0345

**Contacts:** Neal Goates

Dear Mr. Goates:

The OCD approves of the work plan dated January 15, 2002 submitted by Maxim Technologies with the following conditions:

1. Notify the OCD Santa Fe office and the OCD District office at least 72 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples during OCD's normal business hours.

2. Provide a closure report for OCD approval with photos, waste manifest, and final bottom hole sampling results by April 01, 2002.

Please be advised that NMOCD approval of this plan does not relieve Conoco Inc. Company 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 Conoco Inc. Company of responsibility for compliance with any other federal, state, or local laws and/or regulations.