ChevronTexaco

REMEDIATION WORK PLAN
AND
RISK ASSESSMENT PROPOSAL

FOR THE
PRODUCTION FLUID RELEASE
ASSOCIATED WITH THE

CDU WELL #112 FLOWLINE
New Mexico Oil Conservation Division Case #

UL-G SW¼ OF THE NE¼ SECTION 28, T21S, R37E
~.5 mile north of Eunice
Lea County, New Mexico
Latitude 32°27'04.5"N Longitude 103°10'04.0"W

JANUARY 2002

Prepared by

Environmental Plus, Inc.
2100 Avenue O
P.O. Box 1558
Eunice, New Mexico 88231
Tele 505•394•3481 FAX 505•394•2601

ChevTex - 216419
API # 3002506866 0000
incident - nPAC0606839709
application - pPAC0606840781

ENVIRONMENTAL PLUS, INC. Micro-Blaze Micro-Blaze Gel™
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

February 13, 2002

Mr. Paul Sheeley, Environmental Engineer
Energy Minerals and Natural Resources Department
Oil Conservation Division Environmental Bureau
1625 North French
Hobbs, New Mexico 88240

Subject: ChevronTexaco CDU Well #112 Flowline site characterization and risk assessment proposal

Dear Mr. Sheeley,

Environmental Plus, Inc. (EPI), on behalf of Mr. Tom Sebastian and Mr. Rick Massey, ChevronTexaco Area Manager and Safety and Environmental Manager, respectively, submit the enclosed characterization report and proposed risk assessment. ChevronTexaco requests that the NMOCD approve the proposed risk assessment for this site.

Please direct all official communications to:

ChevronTexaco
Mr. Tom Sebastian, Area Manager
P.O. Box 1949
Eunice, New Mexico 88231

If there are any questions please call Mr. Ben Miller or myself at the office or at 505.390.0288 and 505.390.7864, respectively.

Sincerely,

Pat McCasland
EPI Technical Services Manager

cc: Tom Sebastian, ChevronTexaco w/enclosure
Rick Massey, ChevronTexaco w/enclosure
Ben Miller, EPI Vice President and General Manager
Sherry Miller, EPI President
file

ENVIRONMENTAL PLUS, INC.

P.O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 505•394•3481 FAX 505•394•2601

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

February 14, 2001

Mr. Tom Sebastian
ChevronTexaco
POB 1949
Eunice, NM 88231

Re: Remediation Work Plan and Risk Assessment Proposal
CDU Well #112 Flowline
Dated: February 13, 2001.

Dear Mr. Sebastian,

The Remediation Work Plan and Risk Assessment Proposal by Environmental Plus Inc., for ChevronTexaco CDU Well #112 Flowline is **hereby approved** according to the information provided.

Please be advised that OCD approval of this remediation does not ChevronTexaco of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve ChevronTexaco of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please feel free to write or call me at (505) 393-6161, x113 or email psheeeley@state.nm.us

Sincerely,

Paul Sheeley-Environmental Engineer
Cc: Roger Anderson - Environmental Bureau Chief
Chris Williams - District I Supervisor
Bill Olson - Hydrologist
Larry Johnson - Environmental Engr.

Table of Contents

EXECUTIVE SUMMARY

On December 28, 2001, a production fluid leak consisting of crude oil and formation water occurred in the ChevronTexaco CDU Well #112 Flowline on pasture land owned by Tom and Winnie Kennann.. The leak was due to sub-freezing temperature and internal corrosion. Estimated release volume was 24 barrels (42 gallons/barrel)(bbls) of water and 4 bbls of crude oil with 20 bbls of water and 3 bbls of crude oil recovered. The completed New Mexico Oil Conservation Division (NMOCD) release notification form C-141 was submitted on January 8, 2002. Initial mitigation consisted of replacing the defective sections of flowline and removing visibly contaminated soil to a plastic lined stock pile on site. The affected spill area was 1,533 square feet (ft^2), i.e., roughly 70'X35'. ChevronTexaco contracted Environmental Plus, Inc. (EPI) of Eunice, New Mexico to characterize the site in accordance with the NMOCD "Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)" and excavate and dispose of a portion of the contaminated soil at the NMOCD approved and permitted "Texaco Land Farm" (TLF). Ground water in the area occurs at 68 feet below ground surface ('bgs) and is based on recent water level measurements of a Texaco monitor well located ~700' south of the site. As of February 12, 2002, 890 yd^3 of visibly contaminated soil had been disposed of, resulting in an excavated area of 4,223 ft^2 approximately 5' deep. The excavation bottom was sampled on January 11th and 14th, 2002. Laboratory results for the "Constituents of Concern" (CoCs), i.e., Chloride, Total Petroleum Hydrocarbon EPA method 8015m (TPH^{8015m}), Benzene, and BTEX (BTEX is the mass sum of Benzene, Toluene, Ethyl Benzene, and m,p,o-Xylenes) indicated that all soil contaminated above the NMOCD site-specific remedial goals for TPH^{8015m} <1,000 mg/Kg, Benzene <10.0 mg/Kg, and BTEX <50.0 mg/Kg had been removed. Soil chloride residuals in the excavation bottom were reported to be 2,300 mg/Kg in the southern ⅓, 3,840 mg/Kg in the middle ⅓, and 4,320 mg/Kg in the northern ⅓. On January 22, 2002, after removing an additional one foot of soil, the bottom surface was sampled again with the following chloride results; 688 mg/Kg for the southern ⅓,192 mg/Kg in the northern ⅓, and 10,400 mg/Kg in the middle ⅓ composite sample. On February 11, 2002, to determine the vertical extent of chloride contamination in the middle ⅓ of the excavation, a sample trench was excavated to 18 feet below ground surface ('bgs) that identified a decreasing chloride gradient, i.e., 5'bgs = 431 mg/Kg, 12'bgs = 370, and 18'bgs = 308. On January 18, 2002 a borehole was advanced near the leak origin, considered to be the area of greatest impact, and discretely sampled at 5' intervals to delineate the soil chloride gradient. Laboratory data established a chloride gradient that decreases from 1456 mg/Kg at 10'bgs to 96 mg/Kg at the 20'bgs interval. Generally, the background soil chloride in the area is between 30 and 70 mg/Kg. To minimize hauling and disposal, the decision was made to develop a conservative risk assessment that would rely on the installation of a one foot thick impermeable clay barrier to isolate the residual chloride source term and be protective of the ground water resource, as well as, provide a 3' to 4' root zone above the barrier for adequate revegetation of the surface. An oversized barrier is required to establish a clean buffer zone around the residual chloride to prevent saturation and transverse leaching and dispersion during times of inundating storm events. To accommodate the necessary clean buffer zone around the perimeter of the contaminated soil and the 4' root zone, the excavation was deepened to approximately 5' and the perimeter expanded. Laboratory chloride results show the currently excavated perimeter to be acceptable. Preliminary simulations using the American Petroleum Institute VADSAT computer modeling software and a chloride source term of 10,400 mg/Kg, the highest concentration detected at the site and considered conservative, indicate that the installation of an impermeable barrier will prevent chloride from impacting ground water above the 250 mg/Kg threshold referenced in the NMOCD Rule 19.15.1.19, Prevention and Abatement of Water Pollution, Section B(1). The rule states, "The vadose zone (soil above the zone of saturation) shall be abated so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the standards in Paragraphs (2) and (3) below, through leaching, percolation, or other transport mechanisms, or as the water table elevation fluctuates". Paragraph (2) references the New Mexico Water Quality Control Commission (WQCC) standards for "Toxic Pollutants" as

defined in 20 NMAC 6.2.1101 and 6.2.3103. The WQCC chloride ground water standard is 250 mg/L.

1 CDU WELL #112 FLOWLINE REMEDIATION WORK PLAN

This plan proposes to restore the impacted surface area to an acceptable agricultural state and removes or isolates soil contaminated above New Mexico Oil Conservation Division (NMOCD) guidelines. The Constituents of Concern (CoCs) are Total Petroleum Hydrocarbon using EPA method 8015M (TPH^{8015m}), Benzene, BTEX, i.e., the sum of Benzene, Toluene, Ethyl Benzene, m, p, & o Xylene, and soil Chloride. This Site Specific Remediation Work Plan will provide quality analytical information and document remediation activities justifying a "no further action" declaration from the NMOCD.

1.1 Remediation Strategy and Objective

The remediation strategy for this site is to dispose of the upper 5' of soil contaminated above the NMOCD remedial goals in the NMOCD permitted "Texaco Landfarm." The remaining source term will be left in place and permanently isolated from the vertical transport effects of surficial infiltration of storm event water. This alternative will be justified and supported by conservative risk/exposure assessment simulations using the American Petroleum Institute VADSAT computer modeling software. Isolation will be accomplished with the installation of an oversized impermeable clay barrier, compacted to 95% of the Proctor density and certified. Delineation will occur during excavation activities and with boreholes or trenches advanced to determine vertical extent of contamination. The objectives of this plan are to;

- Provide the NMOCD with an acceptable risk/exposure assessment,
- Document achievement of acceptable environmental thresholds established by the NMOCD, and
- Restore the impacted surface area to an acceptable agricultural state.

1.2 Occurrence

On December 28,2001, a production fluid leak consisting of crude oil and formation water occurred in the ChevronTexaco CDU Well #112 Flowline on pasture land owned by Tom and Winnie Kennann. The leak was due to sub-freezing temperature and internal corrosion. Estimated release volume was 24 barrels (42 gallons/barrel)(bbls) of water and 4 bbls of crude oil with 20 bbls of water and 3 bbls of crude oil recovered. The completed New Mexico Oil Conservation Division (NMOCD) release notification form C-141 was submitted on January 8, 2002. Initial mitigation consisted of replacing the defective sections of flowline and removing visibly contaminated soil to a plastic lined stock pile on site. The affected spill area was 1,533 square feet (ft^2), i.e., roughly 70'X35'.

1.3 Site Description

The site is located ~.5 mile north of Eunice, New Mexico. A site map is included as Attachment I.

1.3.1 Historical Use

This land is owned by Tom and Winnie Kennann and used for livestock grazing and oil and gas production facilities access.

1.3.2 Legal Description

The legal description is Unit Letter-G, in the SW¼ of the NE¼ of Section 28, Township 21 South, Range 37 East at Latitude 32°27'04.5" North and Longitude 103° 10'04" West.

1.3.3 Photographic documentation

Photographs of the site are included as Attachment II.

1.3.4 Ecological Description

The area is an intergrade of the Lower Great Plains and the Upper Chihuahuan Desert Biomes consisting primarily of flat to hummocky sandhill terrain dominated by typical desert grasses and weeds with interspersions of Harvard Shin Oak (Querqus harvardi) and Honey Mesquite (Prosopis glandulosa). Mammals present, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species has not been conducted.

1.3.5 Environmental Media Characterization

Chemical parameters of the soil were characterized consistent with the New Mexico Oil Conservation Division (NMOCD) guidelines published in the following documents;

- Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable "Site Specific" thresholds for contaminants of concern, i.e., Benzene, Chloride, TPH^{8015m}, and BTEX, were determined based on the following;

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

1.3.5.1 Ground Water Level

Ground water in the area occurs at 68 feet below ground surface ('bgs) and is based on recent water level measurements of a Texaco monitor well located ~700' south of the site and is consistent with the Office of the New Mexico State Engineer ground water level database. Refer to the topographical map in Attachment I. The Office of the New Mexico State Engineer well report is included Attachment IV.

1.3.5.2 Depth to Ground Water Calculation

Depth to ground water, i.e., "the vertical distance from the lowermost contaminants to the seasonal high water elevation of the ground water." The hydrocarbon source term, i.e., TPH^{8015m}, Benzene, and BTEX, has been removed. The vertical extent of chloride is 15'bgs. The NMOCD calculated depth to ground water therefore is 53'bgs.

1.3.5.3 Ground Water Gradient

According to the USGS (Nicholson & Clbesch), the gradient is to the southeast.

1.3.5.4 Wellhead Protection Area

There are no domestic use wells located within a 1000' radius of the site.

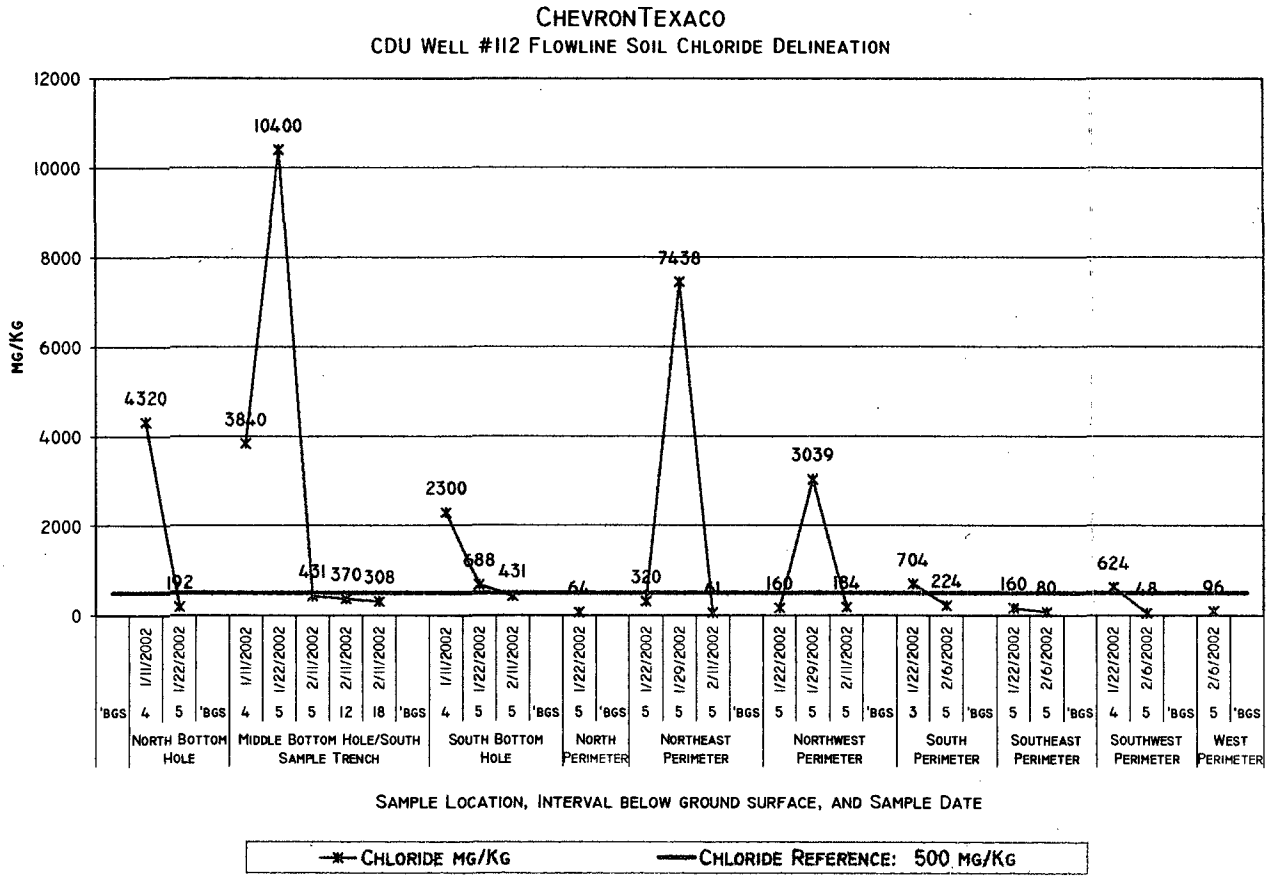
1.3.5.5 Distance to Nearest Surface Water Body

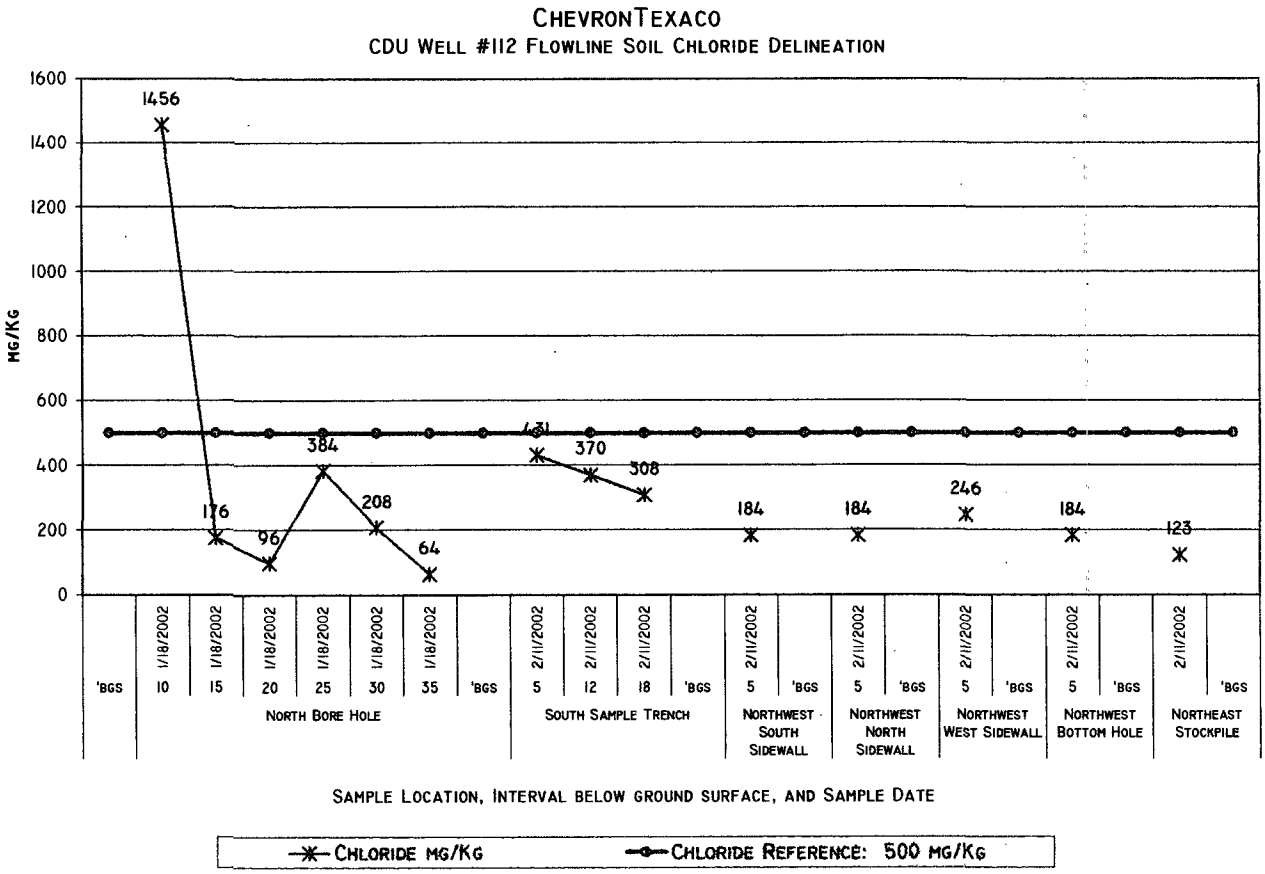
There are no naturally occurring surface water bodies located within a 1 mile radius of the site.

1.3.5.6 Soil Assessment

Visibly contaminated soil (890 yd^3) was disposed of and the 3 sections of the excavation sampled for the CoCs. The excavation bottom was sampled on January 11th and 14th, 2002. Laboratory results for the "Constituents of Concern" (CoCs), i.e., Chloride, Total Petroleum Hydrocarbon EPA method 8015m (TPH^{8015m}), Benzene, and BTEX (BTEX is the mass sum of Benzene, Toluene, Ethyl Benzene, and m,p,o-Xylenes) indicated that all soil contaminated above the NMOCD site-specific remedial goals for TPH^{8015m} <1,000 mg/Kg, Benzene <10.0 mg/Kg, and BTEX <50.0 mg/Kg had been removed. For BTEX analyses, discrete "grab" samples of the centers of the three sectors were collected and ascensioned to the laboratory. Soil chloride residuals were reported to be 2,300 mg/Kg in the southern ⅓, 3,840 mg/Kg in the middle ⅓, and 4,320 mg/Kg in the northern ⅓. On January 22, 2002,

after removing an additional one foot of soil, the bottom surface was sampled again with the following chloride results; 688 mg/Kg for the southern ⅓, 192 mg/Kg in the northern ⅓, and 10,400 mg/Kg in the middle ⅓ composite sample. On February 11, 2002, to determine the vertical extent of chloride contamination in the middle ⅓ of the excavation, a sample trench was excavated to 18 feet below ground surface ('bgs) that identified a decreasing chloride gradient, i.e., 5'bgs = 431 mg/Kg, 12'bgs = 370, and 18'bgs = 308. On January 18, 2002 a borehole was advanced near the leak origin, considered to be the area of greatest impact, and discretely sampled at 5' intervals to delineate the soil chloride gradient. Laboratory data established a chloride gradient that decreases from 1456 mg/Kg at 10'bgs to near background, i.e., 96 mg/Kg, at the 20'bgs interval. Generally the background soil chloride in the area is between 30 and 70 mg/Kg. To accommodate the necessary clean buffer zone around the perimeter of the contaminated soil being left in place and the 4' root zone, the excavation was deepened to and leveled to approximately 5' and the perimeter expanded. Laboratory chloride results show the currently excavated perimeter to be acceptable. The data is illustrated below with the summary and original reports included in Attachment III.





1.3.5.7 Ground Water Assessment

The ground water level is conservatively estimated to occur at ~68 feet bgs. The soil assessment did not indicate that the CoCs had impacted the ground water.

1.3.6 NMOCD Site Ranking and Remedial Goals

The Site information and Metrics form in Attachment V summarizes the information about the site, shows a site ranking of 10 points, and sets the following remedial goals for the CoCs.

Benzene	**10 ppm**
BTEX	**50 ppm**
TPH^{8015m}	**1000 ppm**

1.4 Data Quality

All laboratory analytical results were within the data quality objectives listed below.

- Laboratory data must have > 85% recovery for TPH and BTEX and >75% recovery for general chemistry parameters.
- Laboratory data must have <15% Relative Percent Difference
- Field headspace analyses must be supported with instrument calibration data and calibration gas certification.

Duplicates or blanks were not submitted to the laboratory.

1.5 Project Safety

Hazards encountered at this site include the following;

- Moving equipment
- Buried pipelines
- Highway ingress/egress
- Excavation
- Potential Hydrogen Sulfide Gas

Employees and subcontractors were required to confirm current training in these hazards. Standard personal protective equipment included;

- Personal H_2S Monitor
- Hard-hat
- Excavation Safety
- Steel Toed Boots/Shoes
- Safety Glasses

1.6 Process/Procedure

The following sequence was used to guide project implementation.

1. Site visit: Photograph and map
2. Issue "One Call" and notifying utilities
3. Complete the "ChevronTexaco Digging Permit" and signature approval process
4. Locate, hand spot, and mark buried lines or other structures
5. Overhead powerlines are present and will be a hazard.
6. Lockout/Tagout: Pipeline companies notified of activity but LO/TO unnecessary
7. Procedure: Equipment required will be: Backhoe, Excavator, Dump Trucks
    - Daily Tail gate safety meetings and PPE check
    - Excavation Safety Checklist Form
    - Excavate visibly contaminated soil and stockpile
    - Haul stockpiled soil to NMOCD approved facility
    - Conduct field VOC headspace field chloride analyses on selected samples
    - Collect Composite and Grab Samples of the selected areas for laboratory analysis
    - Review data and calculate "Depth to Ground Water"
    - Obtain approval of remediation plan and risk/exposure assessment from the NMOCD
    - Install oversized clay barrier and test
    - Backfill excavations with volume consistent with disposal volume
    - Photograph
    - Develop and issue site specific report
    - Reseed surface

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company ChevronTexaco	Contact Tom Sebastain
Address 2401 Ave. O Eunice, NM 88231	Telephone No. 394-1242
Facility Name CDU Well # 112	Facility Type Flowline from producing well

Surface Owner Tom & Winnie Kennann	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	28	21S	37E	2220	North	2600	East	Lea

68'

NATURE OF RELEASE

Type of Release Produced water and oil	Volume of Release 24 bbls water & 4 bbls oil	Volume Recovered 20 bbls water & 3 bbls oil
Source of Release flowline collar	Date and Hour of Occurrence 12-28-01 1:00 am	Date and Hour of Discovery 12-28-01 8:00 am
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Flowline had frozen, threads worn from internal corrosion pulled loose from collar. Flowline has been repaired. 23 bbls. of fluid recovered. Saturated soils placed on plastic.

Describe Area Affected and Cleanup Action Taken.*
Soil will be excavated to NMOCD guidelines. Contaminated soils will be removed to Texaco landfarm. Affected area 60' x 30'. Approx. depth to GW ~~59'~~ 71' Rum

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Tom Sebastain	OIL CONSERVATION DIVISION Approved byDistrict Supervisor:	
Printed Name: Tom Sebastain		
Title: Operations Supervisor	Approval Date:	Expiration Date:
Date: 1/08/02 Phone: 394-1242	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary

2 RISK/EXPOSURE ASSESSMENT

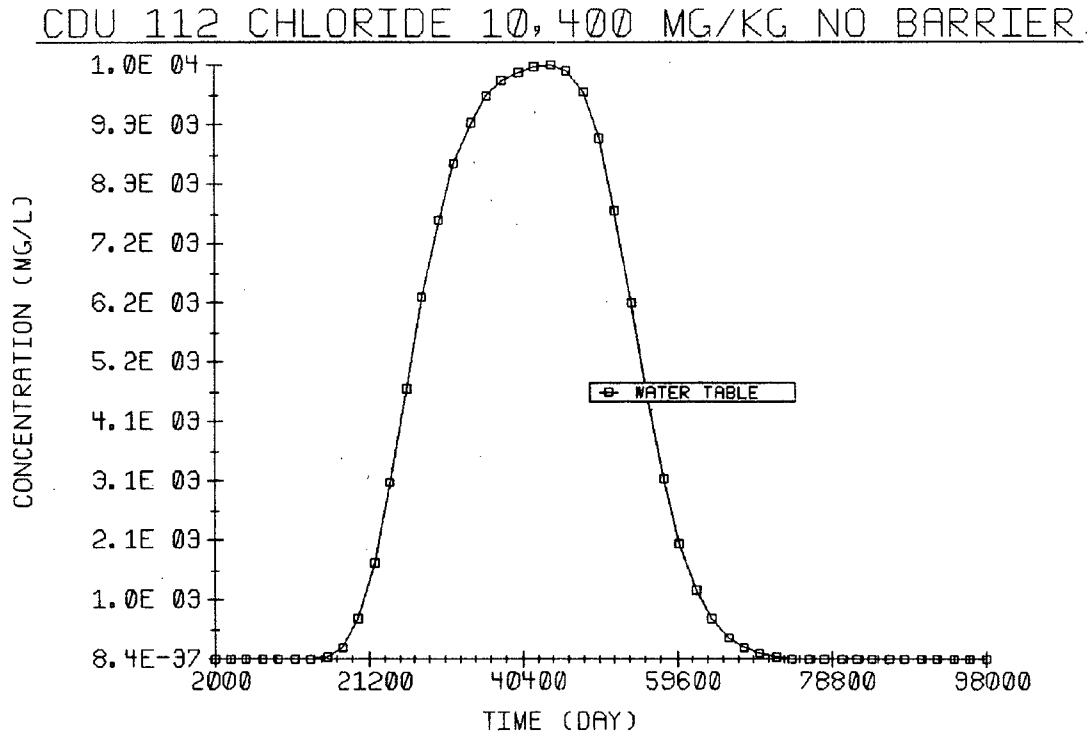
This Risk/Exposure Assessment utilizes the American Petroleum Institute VADSAT 3.0 Risk/Exposure Assessment computer model to simulate transport of the chloride source term to the receptor, i.e., local ground water. The model variables are conservative and listed below.

Preliminary simulations were executed using the following input parameters;

Parameter	Description or Value
Unsaturated ZoneWaste zone thickness	13' bgs (estimated and considered conservative)
Depth to Ground water	68' bgs
Total Petroleum Hydrocarbon	na
Benzene	na
Ethyl Benzene	na
Toluene	na
Total Xylene	na
BTEX (as Benzene)	na
Chloride	10,400 mg/Kg
Lithology	Sand (conservative)
Hydrogeology	Sand and Gravel (conservative)
bgs=below ground surface	

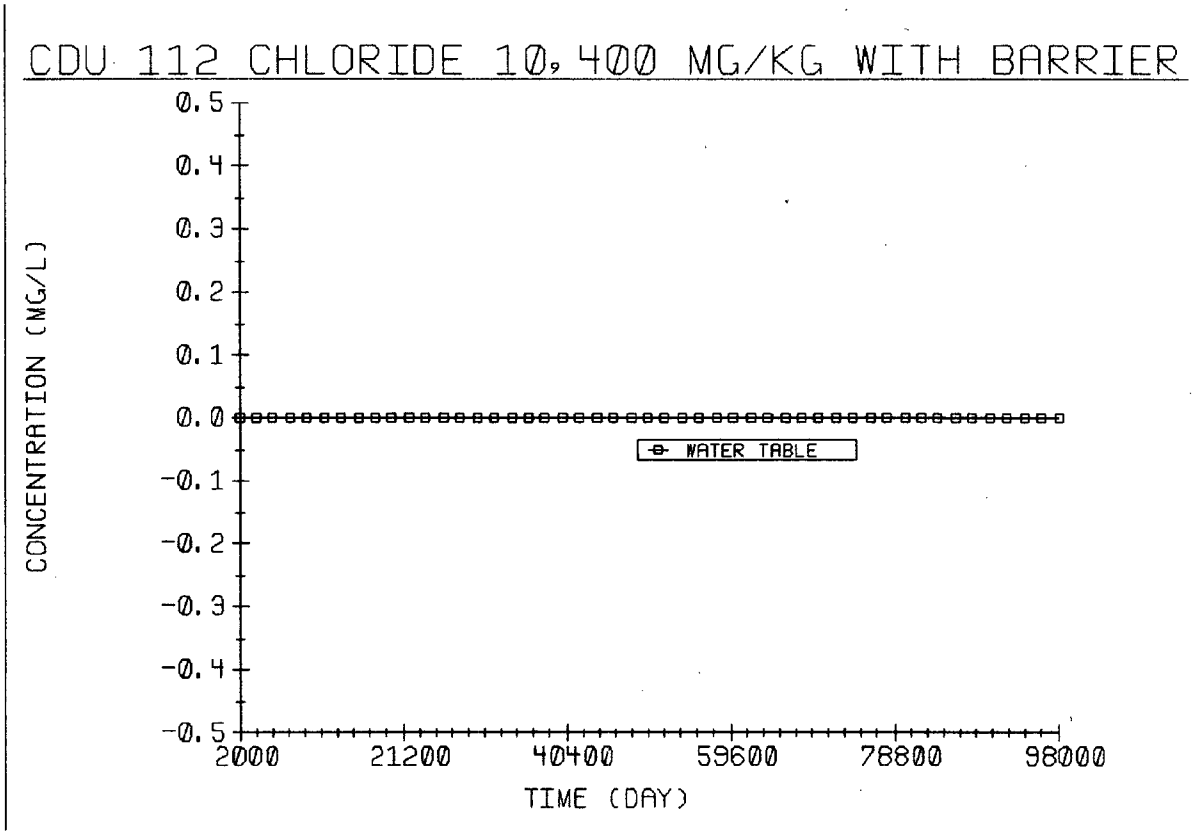
2.1 Simulation without Barrier

The illustration below shows that the local ground water will be impacted above the WQCC standard of 250 mg/Kg in approximately 47 years and will peak at ~10,000 mg/Kg in approximately 121 years.



2.2 Simulation with Barrier

The illustration below indicates that an installed impermeable barrier will isolate the chloride source term and prevent ground water impact.



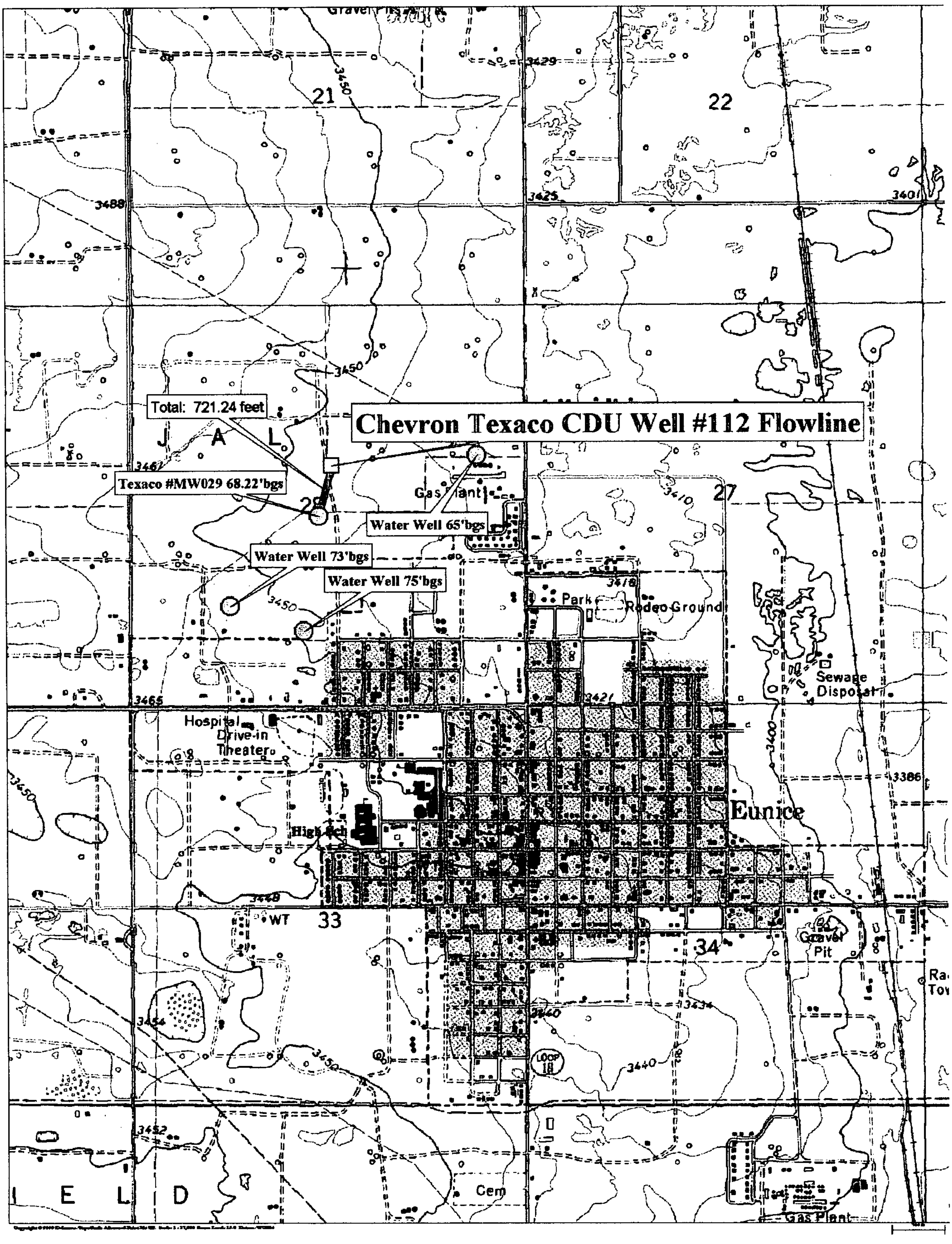
2.3 Conclusions

Given the above simulations, it is reasonable to conclude that the installation of a one foot thick oversized impermeable clay barrier over the remaining chloride contaminated soil will be effective in isolating the source term from the near surface environment allowing for acceptable revegetation and be protective of the ground water.

3 Follow Up

The site will be reseeded with native grasses at a time amenable to germination.

Attachment I: Site Maps


Chevron Texaco CDU Well #112 Flowline
Total: 721.24 feet
Texaco #MW029 68.22'bgs
Water Well 65'bgs
Water Well 73'bgs
Water Well 75'bgs
21
22
27
28
33
34
Gas Plant
Park
Rodeo Ground
Sewage Disposal
Hospital
Drive-in Theater
High Sch
Eunice
WT
Gravel Pit
Cem
LOOP 18
J A L
I E L D
3450
3429
3425
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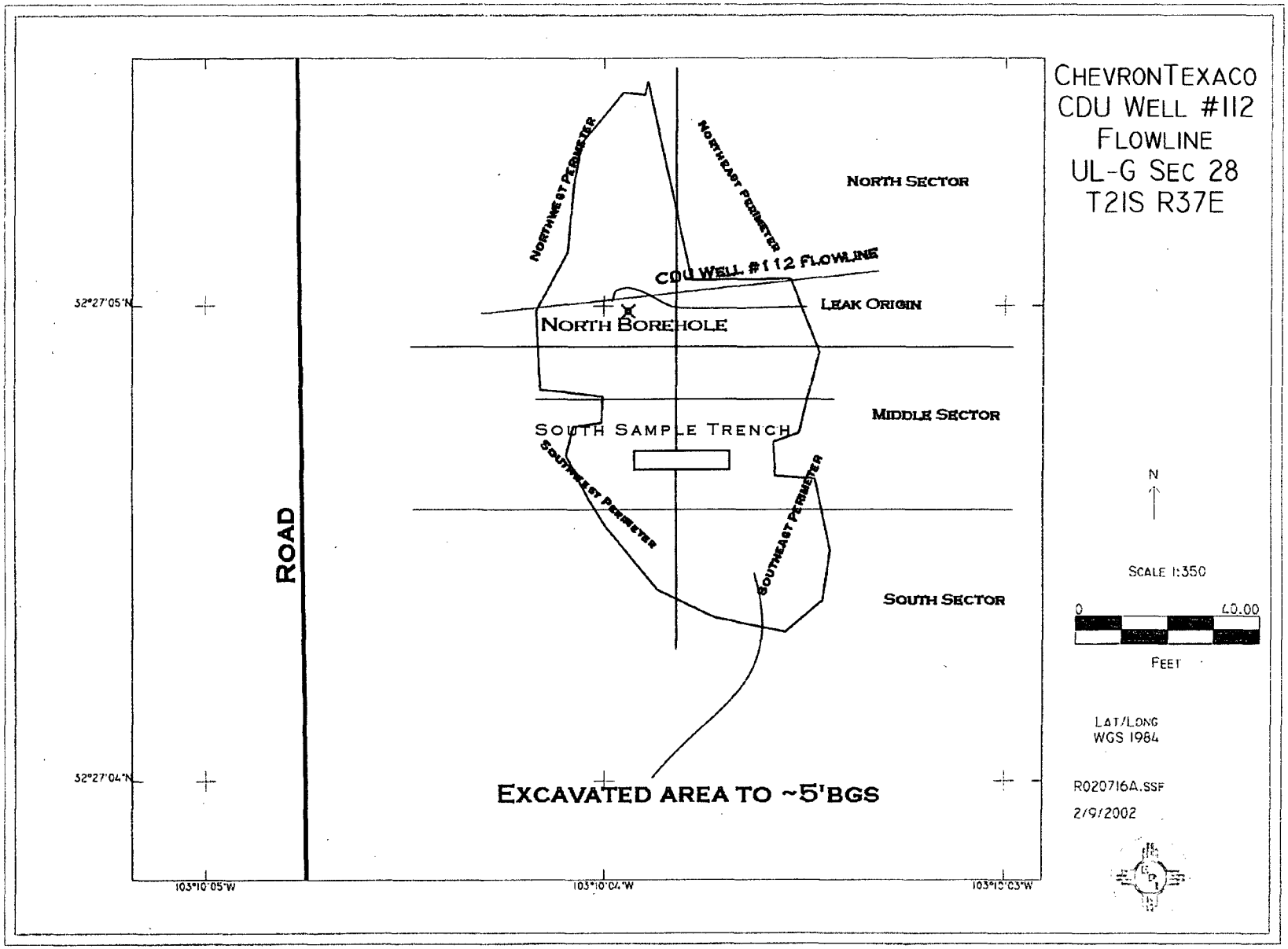
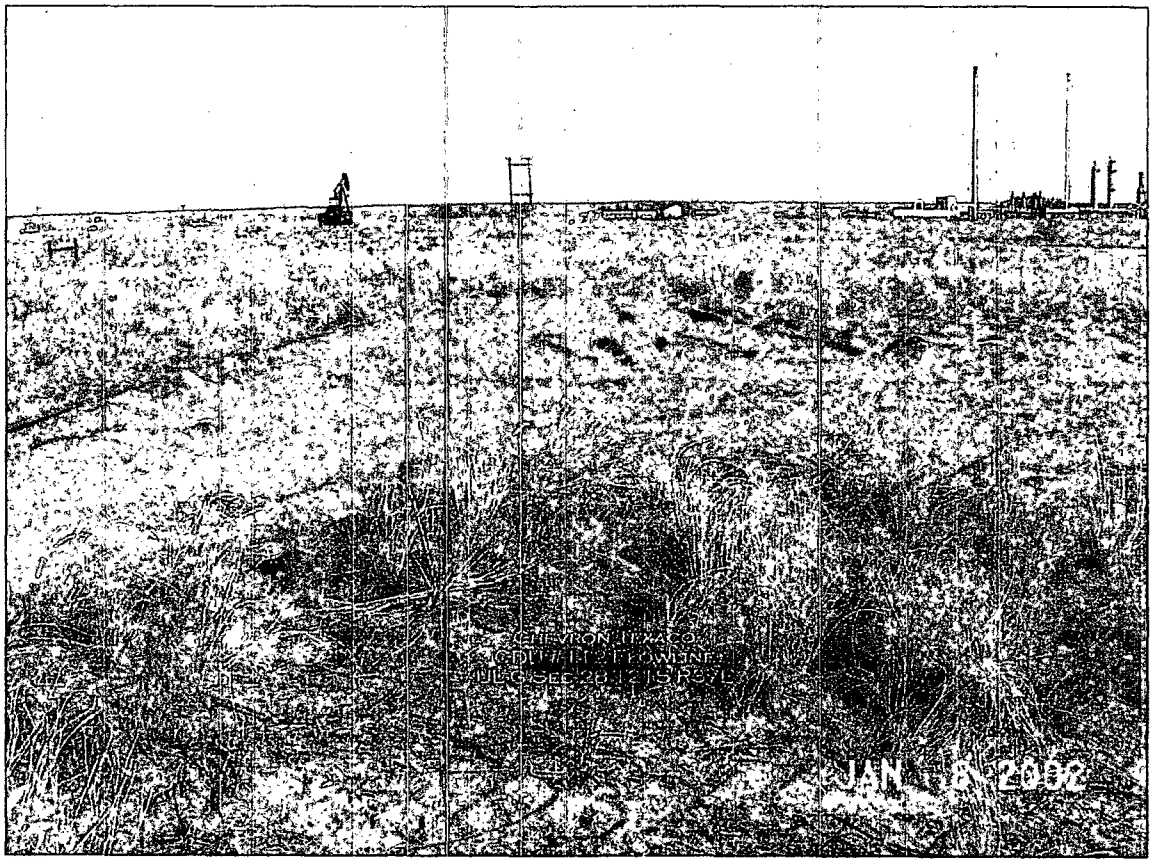
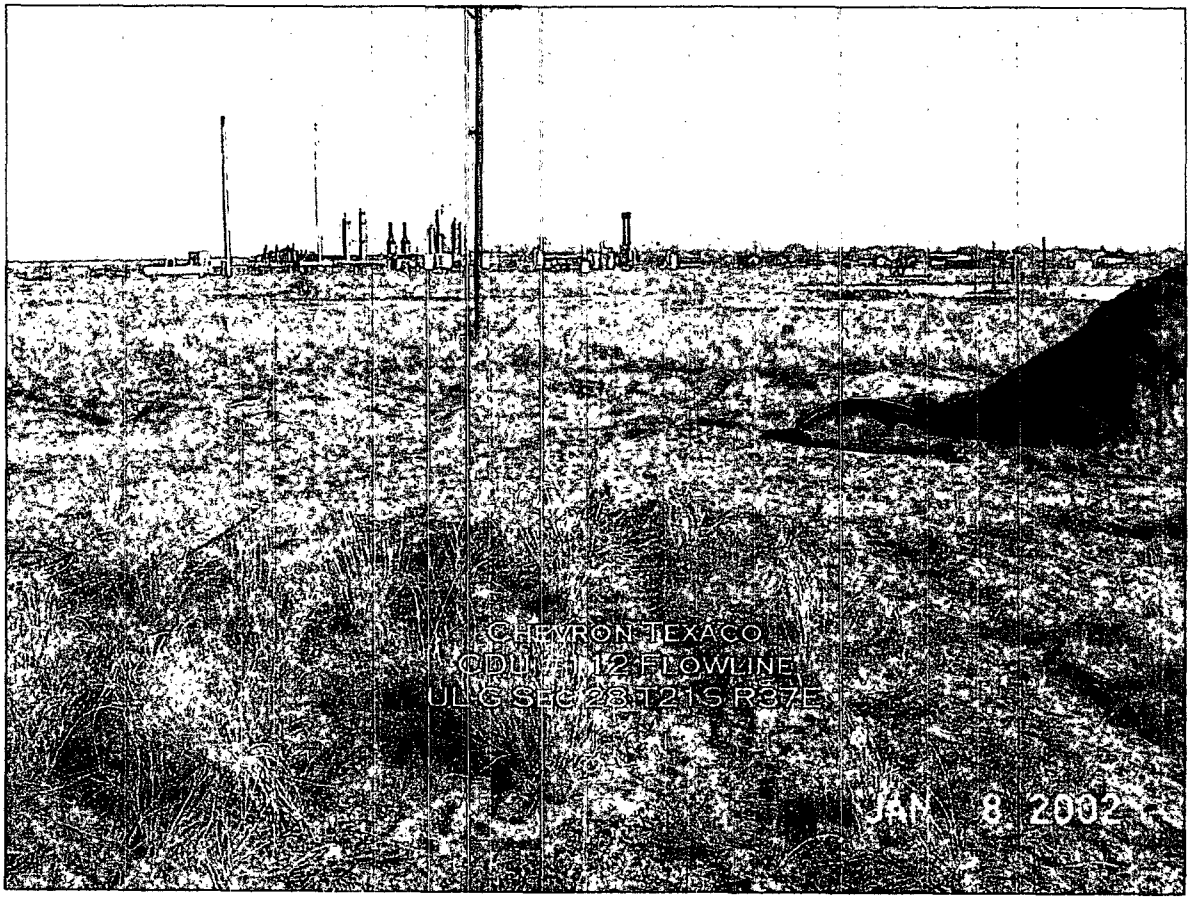

ROAD
NORTHWEST PERIMETER
NORTHEAST PERIMETER
NORTH SECTOR
CDU WELL #112 FLOWLINE
LEAK ORIGIN
NORTH BOREHOLE
MIDDLE SECTOR
SOUTH SAMPLE TRENCH
SOUTHWEST PERIMETER
SOUTHEAST PERIMETER
SOUTH SECTOR
EXCAVATED AREA TO ~5'BGS
52°27'05"N
52°27'04"N
103°10'05"W
103°10'04"W
103°10'03"W
CHEVRONTEXACO
CDU WELL #112
FLOWLINE
UL-G SEC 28
T21S R37E
N
SCALE 1:350
0
40.00
FEET
LAT/LONG
WGS 1984
R020716A.SSF
2/9/2002

Attachment II: Photographs


JAN 8 2002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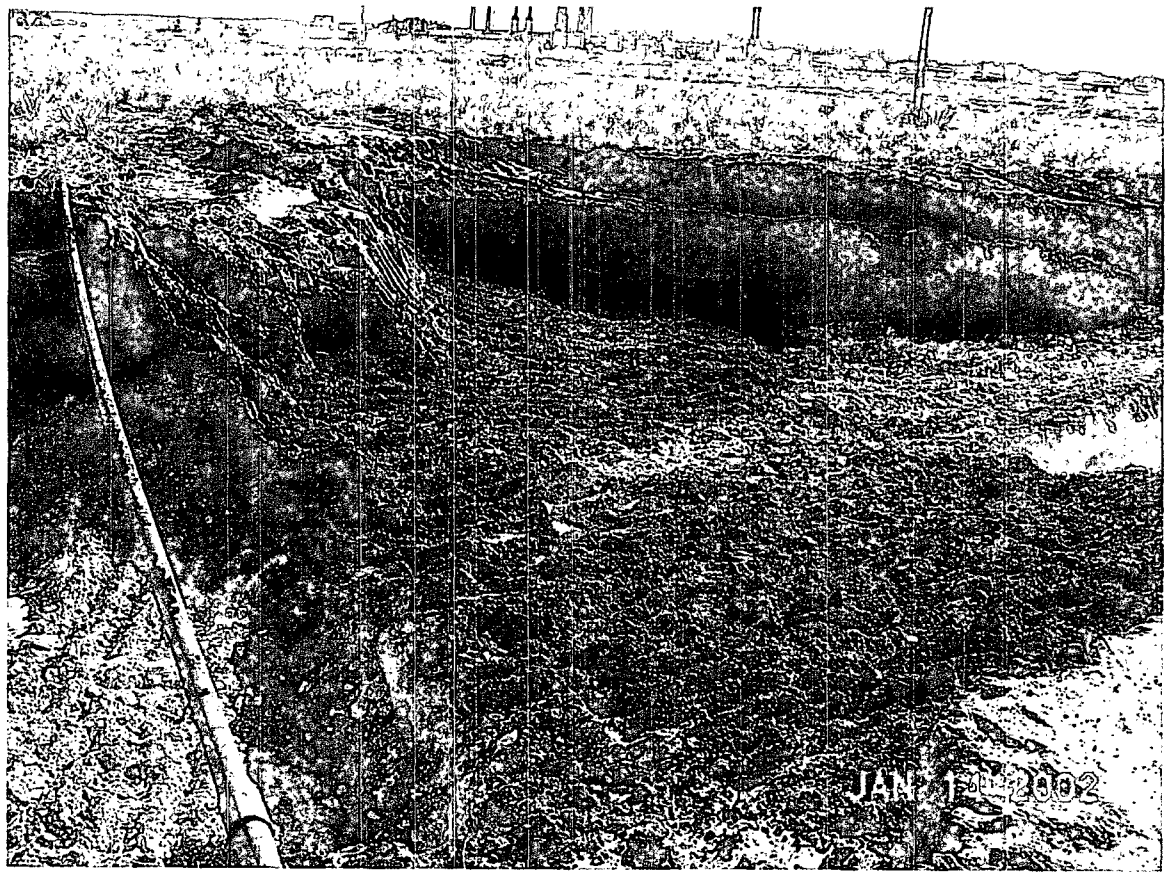
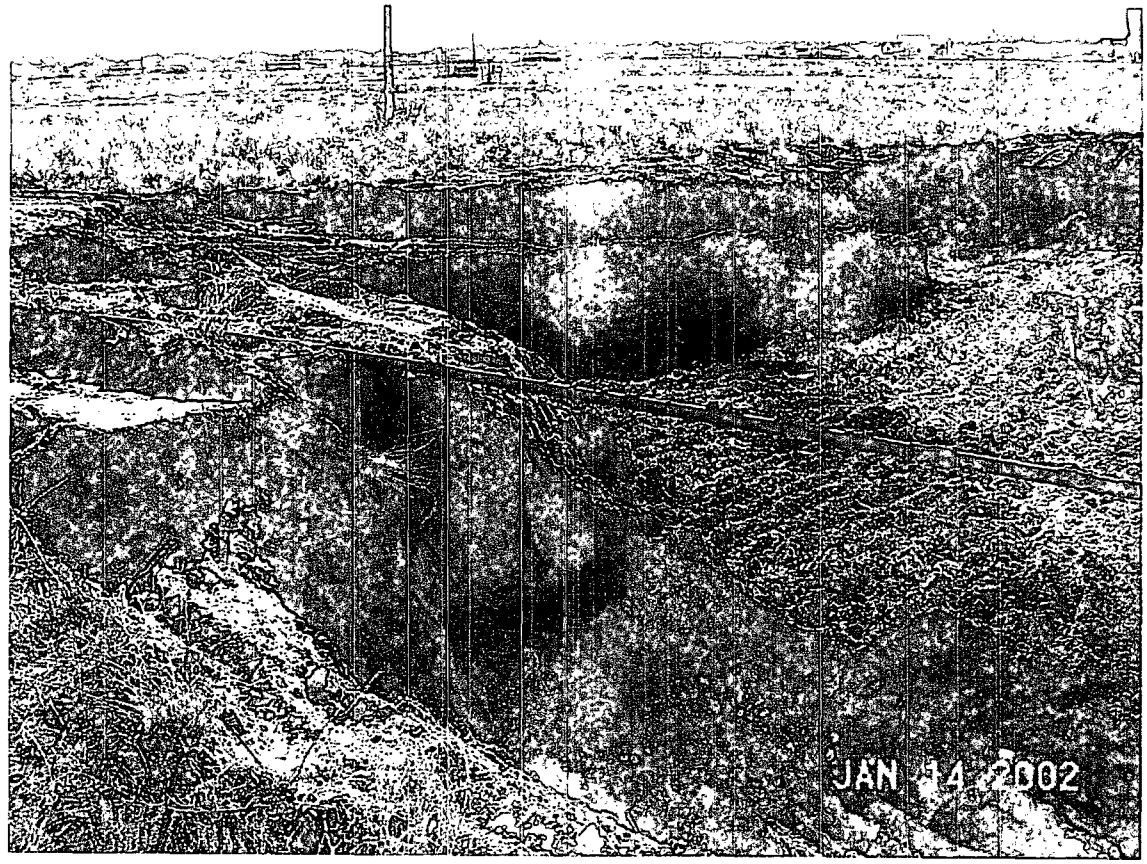
CDU #112 FLOWLINE
UL-G SEC 23 T21S R37E
JAN 8 2002


JAN 14 2002


JAN 14 2002

Attachment III: Analyses

ChevronTexaco CDU #112														
Sample Location	Sampling Interval (FT. BGS[1])	SAMPLE ID#	Sample Type	Sample Date	Lithology	GRO[3] mg/Kg	DRO[4] mg/Kg	TPH[5] mg/Kg	BTEX mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl Benzene mg/Kg	m,p,o-Xylenes mg/Kg	Chloride mg/Kg
Middle Bottom Hole	4	SCTCDU11102MBHC	Composite	1/11/2002	Brown Sand	50	66.6	116.6	na	na	na	na	na	3840
Middle Bottom Hole	5	SCTCDU11402MBHG	Grab	1/14/2002	Brown Sand				*0.03*	*0.005*	*0.005*	*0.005*	*0.015*	NA
Middle Bottom Hole	5	SCT12202CDU112MB-5'	Composite	1/22/2002	Brown Sand									10400
North Bore Hole	10	SCT11802CDU112-10'	Discrete	1/18/2002	Caliche									1456
North Bore Hole	15	SCT11802CDU112-15'	Discrete	1/18/2002	Caliche									176
North Bore Hole	20	SCT11802CDU112-20'	Discrete	1/18/2002	Caliche									96
North Bore Hole	25	SCT11802CDU112-25'	Discrete	1/18/2002	Light Brown Sand/Caliche									384
North Bore Hole	30	SCT11802CDU112-30'	Discrete	1/18/2002	Light Brown Sand/Caliche									208
North Bore Hole	35	SCT11802CDU112-35'	Discrete	1/18/2002	Light Brown Sand									64
South Sample Trench	5	South Tranch-5'	Discrete	2/11/2002	Caliche									431
South Sample Trench	12	South Tranch-12'	Discrete	2/11/2002	Caliche									370
South Sample Trench	18	South Tranch-18'	Discrete	2/11/2002	Caliche									308
Northeast Perimeter	5	SCTCDU21102NESW	Composite	2/11/2002	Dark Brown Sand									61
Northwest South Sidewall	5	SCTCDU21102NWSSW	Composite	2/11/2002	Dark Brown Sand									184
Northwest North Sidewall	5	SCTCDU21102NWNSW	Composite	2/11/2002	Caliche									184
Northwest West Sidewall	5	SCTCDU21102NWWSW	Composite	2/11/2002	Dark Brown Sand									246
Northwest Bottom Hole	5	SCTCDU21102NWSBH	Composite	2/11/2002	Caliche									184
North Bottom Hole	4	SCTCDU11102NBHC	Composite	1/11/2002	Brown Sand	*50*	*50*	*100*	na	na	na	na	na	4320
North Bottom Hole	4	SCTCDU11402NBHG	Grab	1/14/2002	Brown Sand				*0.039*	*0.005*	0.014	*0.005*	*0.015*	NA
North Bottom Hole	5	SCT12202CDU112NB-5'	Composite	1/22/2002	Brown Sand									192
Northeast Stockpile		Northeast Stockpil	Composite	2/11/2002	Dark Brown Sand									125
North Perimeter	5	SCT12202CDU112NP-5'	Composite	1/22/2002	Brown Sand									64
Northeast Perimeter	5	SCT12202CDU112NEP-5'	Composite	1/22/2002	Brown Sand									320
Northeast Perimeter	5	SCTCDU012902NEP-5'	Composite	1/29/2002	Brown Sand									7758
Northwest Perimeter	5	SCT12202CDU112NWP-5'	Composite	1/22/2002	Brown Sand									160
Northwest Perimeter	5	SCTCDU012902NWP-5'	Composite	1/29/2002	Brown Sand									2799
South Bottom Hole	4	SCTCDU11102SBHC	Composite	1/11/2002	Brown Sand	*50*	*50*	*100*	na	na	na	na	na	2300
South Bottom Hole	4	SCTCDU11402SBHG	Grab	1/14/2002	Brown Sand				*0.03*	*0.005*	*0.005*	*0.005*	*0.015*	NA
South Bottom Hole	5	SCT12202CDU112SB-5'	Composite	1/22/2002	Brown Sand									688
South Perimeter	3	SCT12202CDU112SP-3'	Composite	1/22/2002	Brown Sand									704
South Perimeter	5	SCT2602CDU112SSW-5'	Composite	2/6/2002	Brown Sand									224
Southeast Perimeter	5	SCT12202CDU112SEP-5'	Composite	1/22/2002	Brown Sand									160
Southeast Perimeter	5	SCT2602CDU112SESW-5'	Composite	2/6/2002	Brown Sand									80
Southwest Perimeter	4	SCT12202CDU112SWP-4'	Composite	1/22/2002	Brown Sand									624
Southwest Perimeter	5	SCT2602CDU112SWSW-5'	Composite	2/6/2002	Brown Sand									48
West Perimeter	5	SCT2602CDU112WSW-5'	Composite	2/6/2002	Brown Sand									96

100 ppm Isobutylene calibration gas = 101 ppm

[1]bgs – below ground surface

[2]VOC–Volatile Organic Contaminants/Constituents

[3]GRO-Gasoline Range Organics

[4]DRO-Diesel Range Organics

[5]TPH-Total Petroleum Hydrocarbon = GRO+DRO.

[6]Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

[7]Italicized values are < the instrument detection limit.

[8]N/A Not Analyzed

Reported detection limits are considered "de minimus" values and are included in the GRO/DRO and BTEX summations.

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CHEVRON TEXACO
ATTN: RICK MASSEY
P.O. BOX 3109
MIDLAND, TX 79702
FAX TO:

Receiving Date: 01/14/02
Reporting Date: 01/15/02
Project Owner: LANDOWNER KENNAN
Project Name: CDU 112 FLOWLINE
Project Location: ULG SEC28 T21S R37E

Sampling Date: 01/14/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		01/14/02	01/14/02	01/14/02	01/14/02
H6433-4	SCTCDU11402NBHG	<0.005	0.014	<0.005	<0.015
H6433-5	SCTCDU11402MBHG	<0.005	<0.005	<0.005	<0.015
H6433-6	SCTCDU11402SBHG	<0.005	<0.005	<0.005	<0.015
Quality Control		0.094	0.093	0.098	0.291
True Value QC		0.100	0.100	0.100	0.300
% Recovery		93.8	92.7	98.3	97.0
Relative Percent Difference		6.4	12.2	9.9	8.1

METHOD: EPA SW-846 8260

Burgess J. A. Cooke
Chemist

1/15/02
Date

H6433B.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CHEVRON TEXACO
ATTN: RICK MASSEY
P.O. BOX 3109
MIDLAND, TX 79702
FAX TO:

Receiving Date: 01/14/02
Reporting Date: 01/15/02
Project Owner: LANDOWNER KENNAN
Project Name: CDU 112 FLOWLINE
Project Location: ULG SEC28 T21S R37E

Sampling Date: 01/11/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		01/14/02	01/14/02	01/15/02
H6433-1	SCTCDU11102NBHC	<50	<50	4320
H6433-2	SCTCDU11102MBHC	<50	66.6	3840
H6433-3	SCTCDU11102SHBC	<50	<50	2300
Quality Control		801	742	1040
True Value QC		800	800	1000
% Recovery		100	92.8	104
Relative Percent Difference		1.8	7.7	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analyses performed on 1:4 w:v aqueous extracts.

Burgess J. Cooke
Chemist

1/15/02
Date

H6433A.XLS

Cardinal Laboratories Inc.

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

Company Name	Devon Texas
Project Manager	Rick Massey
Address	P.O. Box 3109
City, State, Zip	MIDLAND, TX 79702
Phone#/Fax#	
Project #/Owner	Landowner Kennann
Project Name	CDU 112 Flowline
Project Location	ULG Sec 28 T21S R37E
Sampler Name	Roger Boone

Bill To

EPI

Analysis Request

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CL
H6433-1	SCTCDU11102NBHC	C	1			X					X		1-11-02	9:20		X	X
-2	SCTCDU11102MBHC	C	1			X					X		1-11-02	2:00		X	X
-3	SCTCDU11102SBHC	C	1			X					X		1-11-02	2:45		X	X
-4	SCTCDU11402NBHG	G	1			X					X		1-14-02	8:00	X		
-5	SCTCDU11402MBHG	G	1			X					X		1-1402	8:10	X		
-6	SCTCDU11402SBHG	G	1			X					X		1-1402	8:15	X		

Sampler Relinquished: Roger Boone	Date 1-14-02 Time 8:30	Received By: B. T CIAY	Fax Results To Pat McCasland 505-394-2601
Relinquished by: B. T CIAY	Date 1-14-02 Time 10:15 AM	Received By: (lab staff) Burgess J. Cooke	REMARKS:
Delivered by Sampler	Sample Cool & Intact (Yes) No	Checked By:	

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO:

Receiving Date: 01/23/02
Reporting Date: 01/25/02
Project Owner: CHEVRON TEXACO
Project Name: CDU 112 FLOW LINE
Project Location: NOT GIVEN

Analysis Date: 01/25/02
Sampling Date: 01/22/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: GP

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6460-1	SCT12202CDU112SP-3'	704
H6460-2	SCT12202CDU112SWP-4'	624
H6460-3	SCT12202CDU112SEP-5'	160
H6460-4	SCT12202CDU112SB-5'	688
H6460-5	SCT12202CDU112MB-5'	10400
H6460-6	SCT12202CDU112NEP-5'	320
H6460-7	SCT12202CDU112NWP-5'	160
H6460-8	SCT12202CDU112NB-5'	192
H6460-9	SCT12202CDU112NP-5'	64
Quality Control		1039
True Value QC		1000
% Recovery		104
Relative Percent Difference		0.8

METHOD: Std. Methods	4500-Cl^-B

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

01/31/2002
Date

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Company Name:	Chevron - Texaco	**BILL TO**	
Project Manager:	Rick Massey	P.O. #:	
Address:		Company:	EPI
City:	Eunice State: N.M Zip: 88231	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	CDU 112 Flow Line	State: Zip:	
Project Location:		Phone #:	
Sampler Name:	Bradley Blanco	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Chloride
16460-1	SCT12202CDU112SP-3'	G	1			X					X		1-22-02	8:00	X
-2	SCT12202CDU112SWP-4'	G	1			X					X		1-22-02	8:05	X
-3	SCT12202CDU112SEP-5	G	1			X					X		1-22-02	8:10	X
-4	SCT12202CDU112SB-5'	G	1			X					X		1-22-02	8:15	X
-5	SCT12202CDU112NB-5'	G	1			X					X		1-22-02	8:20	X
-6	SCT12202CDU112NEP 5'	G	1			X					X		1-22-02	8:25	X
-7	SCT12202CDU112 NWP-5'	G	1			X					X		1-22-02	8:30	X
-8	SCT12202CDU112NB-5	G	1			X					X		1-22-02	8:35	X
-9	SCT12202CDU112NP-4'	G	1			X					X		1-22-02	8:40	X

Sampler Relinquished: Bradley Blanco	Date: 1-22-02 Time: 9:00	Received By: Gonzales	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
Relinquished By:	Date: 01/23/2002 Time: 10:00 A	Received By: (Lab Staff)	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
			REMARKS:		

Delivered By: (Circle One)
Sampler - UPS - Bus - (Other:)

Sample Condition		CHECKED BY: (Initials)
Cool	Intact	
☒ Yes ☐ No	☒ Yes ☐ No	

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 02/07/02
Reporting Date: 02/08/02
Project Owner: CHEVRON-TEXACO
Project Name: CDU 112 FLOWLINE
Project Location: NOT GIVEN

Analysis Date: 02/08/02
Sampling Date: 02/06/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6489-1	SCT2602CDU112WSW 5'	96
H6489-2	SCT2602CDU112SWSW 5'	48
H6489-3	SCT2602CDU112SESW 5'	80
H6489-4	SCT2602CDU112SSW 5'	224
Quality Control		1039
True Value QC		1000
% Recovery		104
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-Cl^-B

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

2-8-02
Date

H6489

Cardinal Laboratories Inc.

2111 Beechwood, Abilene, TX 79603 915-673-7001 Fax 915-673-7020

101 East Marland, Hobbs, NM 88240 505-393-2326 Fax 505-393-2476

Company Name	Environmental Plus Inc.
Project Manager	Pat McCasland
Address	PO Box 1558
City, State, Zip	Eunice, NM
Phone#/Fax#	505-394-2870/505-394-2601
Project #/Owner	CHEVRON TEXACO
Project Name	CDU112 Flow Line
Project Location	
Sampler Name	CODY MILLER

Bill To

Environmental Plus Inc.

Analysis Request

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	Cl
H6489-1	SCT2602CDU112WSW 5'	C	1			X					X		2/6/02	1:00	X
-2	SCT2602CDU112SWSW 5'	C	1			X					X		2/6/02	2:00	X
-3	SCT2602CDU112SESW 5'	C	1			X					X		2/6/02	3:00	X
-4	SCT2602CDU112SSW 5'	C	1			X					X		2/6/02	4:00	X

Sampler Relinquished: Cody Miller	Date 2/6/02 Time 7:00	Received By: Roger Boone	Fax Results To Pat McCasland 505-394-2601
Relinquished by: Roger Boone	Date 2-7-02 Time 8:30	Received By: (lab staff) Amy Hill	REMARKS:
Delivered by Sampler	Sample Cool & Intact Yes / No	Checked By:	

Cardinal Laboratories Inc.

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

Company Name	~~Chevron Texaco~~ EPI
Project Manager	~~Rick Massey~~ PAT MCCASLAND
Address	
City, State, Zip	
Phone#/Fax#	
Project #/Owner	Chevron-Texaco
Project Name	CDU 112 Flowline
Project Location	ULG Sec 28 T21S R37E
Sampler Name	Roger Boone

Bill To: EPI

Analysis Request

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	Chlorides
#6474-1	SCTCDU012902NEP-5'		✓			X					X		1-29-02	10:05			X
-2	SCTCDU012902NWP-5'		✓			X					X		1-29-02	10:10			X

Sampler Relinquished: Roger Boone	Date 1-30-02 Time 11:30	Received By: Cody Mills	Fax Results To Pat McCasland 505-394-2601
Relinquished by: Cody Mills	Date 1-30-02 Time 12:25	Received By: (lab staff) Amy Hill	REMARKS:
Delivered by Sampler	Sample Cool & Intact: Yes / No	Checked By:	

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 397-1471

Receiving Date: 01/30/02
Reporting Date: 01/31/02
Project Owner: CHEVRON-TEXACO
Project Name: CDU 112 FLOWLINE
Project Location: ULG SEC28 T21S R37E

Analysis Date: 01/31/02
Sampling Date: 01/29/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6474-1	SCTCDU01902NEP-5'	7438
H6474-2	SCTCDU01902NWP-5'	3039
Quality Control		1039
True Value QC		1000
% Recovery		104
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-ClˉB

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

1-31-02
Date

H6474

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CHEVRON TEXACO
ATTN: RICK MASSEY
P.O. BOX 3109
MIDLAND, TX 79702
FAX TO:

Receiving Date: 01/18/02
Reporting Date: 01/21/02
Project Number: NOT GIVEN
Project Name: CDU 112 FLOWLINE
Project Location: UL-G SEC28-T21S R37E

Analysis Date: 01/18/02
Sampling Date: 01/18/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H6447-1	SCT11802CDU112-10'	1456
H6447-2	SCT11802CDU112-15'	176
H6447-3	SCT11802CDU112-20'	96
H6447-4	SCT11802CDU112-25'	384
H6447-5	SCT11802CDU112-30'	208
H6447-6	SCT11802CDU112-35'	64
Quality Control		1040
True Value QC		1000
% Recovery		104
Relative Percent Difference		1.0

METHOD: Standard Methods	4500-ClB

Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill
Chemist

1-21-02
Date

h6447

Cardinal Laboratories Inc.

111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

Company Name: Chevron Texaco
Project Manager: Rick Massey
Address:
City, State, Zip: Eunice N.M 88231
Phone#/Fax#: 390-7188
Project #/Owner:
Project Name: CDU 112 Flow Line
Project Location: UL-G Sec 28 - T21S R37E
Sampler Name: Bradley Blevins

Bill To

Analysis Request

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	Chloride
H16447-1	SCT11802CDU112-10'	G	1			X					X		1-18-02	8:30			X
-2	SCT11802CDU112-15'	G	1			X					X		1-18-02	8:45			X
-3	SCT11802CDU112-20'	G	1			X					X		1-18-02	9:05			X
-4	SCT11802CDU112-25'	G	1			X					X		1-18-02	9:20			X
-5	SCT11802CDU112-30'	G	1			X					X		1-18-02	10:40			X
-6	SCT11802CDU112-35'	G	1			X					X		1-18-02	11:15			X

Sampler Relinquished: Bradley Blevins	Date: 1-18-02 Time: 1:50	Received By: Matt Cy	Fax Results To Pat McCasland 505-394-2601
Relinquished By: Matt Cy	Date: Time:	Received By: (lab staff) Tammy Hill	REMARKS:
Delivered by Sampler	Sample Cool & Intact (Yes) (No)	Checked By:	

Attachment IV: New Mexico Office of the State Engineer Well Report

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 21S Range: 37E Sections: 28

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report | Clear Form | WATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 02/09/2002

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
CP	21S	37E	28				3	65	75	71

Record Count: 3

Attachment V: Site Metrics and Information Form

Site Metrics and Information Form			
SITE:ChevronTexaco CDU Well #112 Flowline	Assigned Site Reference #:		
Company: Chevron Texaco			
Company Street Address: 2401 Avenue O			
Company Mailing Address: P.O. Box 1949			
Company City, State, Zip: Eunice, New Mexico			
Company Representative: Nathan Mouser/Rick Massey			
Company Representative Telephone: 505.390.7188			
Company Telephone: 505.394.1237 Fax:			
Fluid volume released (bbls) = 4 oil / 24 water Recovered 3 oil / 20 water			
>25 bbls : Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
Leak, Spill, or Pit (LSP) Name: CDU Well #112 Flowline			
Source of contamination: Internally corroded flowline			
Land Owner, i.e., BLM, ST, Fee, Other: Tom and Winnie Kennann			
LSP Dimensions: 70' x 35'			
LSP Area = ~1,533 ft^2			
Location of Reference Point (RP):			
Location distance and direction from RP:			
Latitude 32°27'04.5"N			
Longitude 103°10'04.0"W			
Elevation above mean sea level: ~ 3,445 amsl			
Feet from South Section Line			
Feet from West Section Line			
Location- Unit or ¼¼ =SW¼ NE¼ UL-G			
Location- Section = 28			
Location- Township = 21S			
Location- Range = 37E			
Surface water body within 1000 ' radius of site: None			
Domestic water wells within 1000' radius of site: None			
Agricultural water wells within 1000' radius of site: None			
Public water supply wells within 1000' radius of site: None			
Depth from land surface to ground water (DG): ~68'bgs			
Depth of contamination (DC): 15'bgs			
Depth to ground water (DG – DC = Calculated Depth to GW) 53'bgs			

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*
Ground water Score =10	*Wellhead Protection Area Score= 0*	*Surface Water Score= 0*
Site Rank (1+2+3) = 10 points		

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	**10-19**	0-9
Benzene[1]	10 ppm	**10 ppm**	10 ppm
BTEX[1]	50 ppm	**50 ppm**	50 ppm
TPH	100 ppm	**1000 ppm**	5000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis

Attachment VI: Chevron Digging Permit

CHEVRON U.S.A. INC.

WEST ASSET TEAM / DIGGING PERMIT

PERMIT FOR DIGGING, TRENCHING, OR EXCAVATING WITH ANY TYPE OF POWERED TOOL OR MECHANIZED EQUIPMENT

Supervisor: Tom Sebastian Date Authorized: 1/8/02
Field Location: CDU #112
Type Work: Excavation of Flowline & Oil Spill

Specific Restrictions:
Other:

Mechanical digging equipment should not be used within 12" of an underground line.

PERMIT REQUIREMENTS:

Basic Precautions:

	Yes	No	N/A
1. Has an underground line map been reviewed? *Piping plan must be used when work is performed within a facility.*			✓
2. Has the person operating the digging equipment isolated the energy source and performed LOTO? *If electrical energy source cannot be accurately located, utilize electrical contractor with electric line locating equipment.*			✓
3. Have digging operations been discussed w/ an employee familiar with the area?	✓		
4. Has a metal detecting line finder been used in the area to be excavated?	✓		
5. Are there any line markers near the excavation area?		✓	
6. Is there a visible right-of-way where the digging will be done?		✓	
7. Are there special concerns with any equipment, i.e., tank batteries, satellites, wells, buildings, power poles, etc., within 150' of the excavation area?	✓		
8. Are there special concerns with overhead power lines within 100' of the excavation?	✓		
9. Will digging exceed 16" in depth? *If yes, see Special Precaution below.*	✓		
10. Have you discussed the importance of not creating a spill and what to do if one occurs?	✓		

If contact with a line results in a release of oil and or produced water contact Chevron Representative at Emergency Phone # listed below immediately.

Special Precaution:

If work is to be performed within a 3rd party right-of-way, location near a populated area, designated area, or if underground utilities are in the vicinity then 1-800-545-6005 (TX) or 1-800 321-2537 (NM) (One-Call Notification) **MUST** be made 48 hours in advance of any excavation work.

1. Has One-Call Notification been called? YES Date of call: 1-8-02 Time of call: 2:30pm
2. Permitted start date and time: 2:30 1-10-02 Estimated duration of job:
3. One-Call Notification confirmation # 2002-021102 Roger Acree

THIS PERMIT MUST BE COMPLETED PRIOR TO MECHANICAL DIGGING AND AVAILABLE FOR REVIEW AT THE WORKSITE.

If contact is made with an underground line or cable, this permit will be attached to the accident report, otherwise, it should be attached to the work ticket.

R.W. Mains	390-1566		1-8-02
Chevron Representative /	Emergency Phone #	Contractor	Date

REVISED
02/05/01

394-1200