



Environmental Services Group  
Southern Region

Flora Vista No. 1  
Meter Code 75718

*F-22-30N-12W*

Pit was excavated to 12 feet beneath ground surface. Headspace soil readings from excavation bottom were 195 parts per million. Soil analytical were as follows; benzene - < 0.5 mg/kg, total BTEX - 515 mg/kg, TPH - 8,030 mg/kg.

One soil boring was completed and no monitoring well installed. Groundwater was encountered at 17.5 feet. No soil or groundwater samples were collected.

Pit was re-excavated to 20 feet beneath ground surface. A headspace soil reading was as follows: pit bottom composite- 1,045 ppm. Soil analytical from composite were as follows; benzene - < .5 mg/kg, total BTEX - 22.2 mg/kg, TPH - 1,460 mg/kg.

A RECON® survey was conducted and three groundwater samples were collected between the pit and valley bottom. The samples were collected and analyzed using a laboratory-grade gas chromatograph by Philip Environmental's RECON® System. The on-site analytical results are as follows; PH-01 benzene - <1 ug/L, toluene - 1 ug/L, ethylbenzene - <1 ug/L, xylenes - 3 ug/l, PH-02 benzene 1 ug/L, toluene - 2 ug/L, ethylbenzene - <1 ug/L, xylenes - 2 ug/l, PH-03 benzene <1 ug/L, toluene - ND, ethylbenzene-ND, xylenes-ND.

*Dennys L. Faust*  
DEPUTY OIL & GAS INSPECTOR

FEB 06

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# FIELD PIT SITE ASSESSMENT FORM

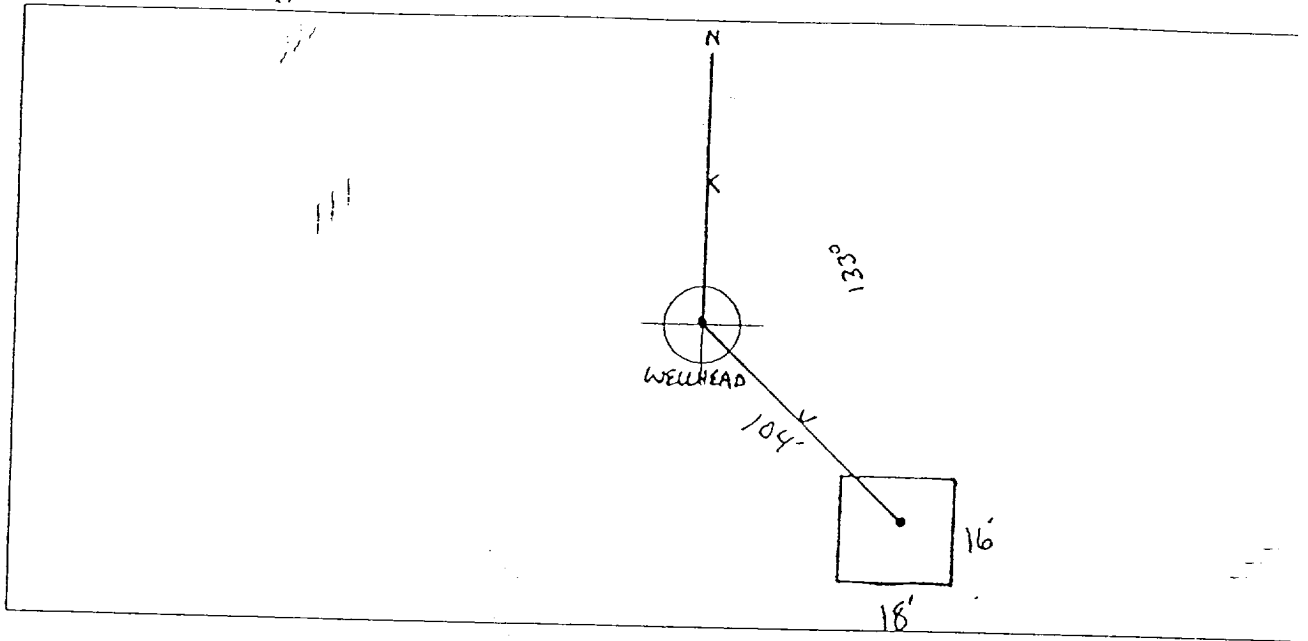
|         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GENERAL | <p>Meter: <u>75718</u> Location: <u>FLORA VISTA #1</u></p> <p>Operator #: <u>8367</u> Operator Name: <u>SOUTHLAND ROYALTY</u> P/L District: <u>KUTZ</u></p> <p>Coordinates: Letter: <u>F</u> Section <u>22</u> Township: <u>30</u> Range: <u>12</u></p> <p>Or Latitude _____ Longitude _____</p> <p>Pit Type: Dehydrator <input checked="" type="checkbox"/> Location Drip: _____ Line Drip: _____ Other: _____</p> <p>Site Visit Date: <u>3.31.94</u> Run: <u>02</u> <u>63</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|         | <p><b>NMOCD Zone:</b> Inside _____ Land Type: BLM <input type="checkbox"/><br/>         (From NMOCD Vulnerable _____ State <input type="checkbox"/><br/>         Maps) Zone <input checked="" type="checkbox"/> Fee <input checked="" type="checkbox"/><br/>         Outside <input type="checkbox"/> Indian _____</p> <p><b>Depth to Groundwater</b></p> <p>Less Than 50 Feet (20 points) <input checked="" type="checkbox"/><br/>         50 Ft to 99 Ft (10 points) <input type="checkbox"/><br/>         Greater Than 100 Ft (0 points) <input type="checkbox"/></p> <p><b>Wellhead Protection Area :</b></p> <p>Is it less than 1000 ft from wells, springs, or other sources of fresh water extraction? , or ; Is it less than 200 ft from a private domestic water source? <input type="checkbox"/> YES (20 points) <input checked="" type="checkbox"/> NO (0 points)</p> <p><b>Horizontal Distance to Surface Water Body</b></p> <p>Less Than 200 Ft (20 points) <input type="checkbox"/><br/>         200 Ft to 1000 Ft (10 points) <input type="checkbox"/><br/>         Greater Than 1000 Ft (0 points) <input checked="" type="checkbox"/></p> <p>Name of Surface Water Body _____</p> <p>(Surface Water Body : Perennial Rivers, Major Wash, Streams, Creeks, Irrigation Canals, Ditches, Lakes, Ponds)</p> <p><b>TOTAL HAZARD RANKING SCORE:</b> <u>20</u> POINTS</p> |
| REMARKS | <p>Remarks : <u>ONLY PIT ON LOCATION. PIT IS DRY. LOCATION IS IN FLORA VISTA ABOUT A 1/4 MILE SOUTH OF HWY. 550</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

75718

# ORIGINAL PIT LOCATION

Original Pit : a) Degrees from North 133° Footage to Wellhead 16  
 b) Degrees from North \_\_\_\_\_ Footage to Dogleg \_\_\_\_\_  
 Dogleg Name \_\_\_\_\_  
 c) Length : 18' Width : 16' Depth : 3'

ORIGINAL PIT LOCATION



Remarks :

STARTED TAKING PICTURES AT 3:25 P.M.  
END DUMP

REMARKS

Completed By:

Robert Thompson  
 Signature

3-31-94  
 Date

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## **Phase I Excavation**

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# FIELD PIT REMEDIATION/CLOSURE FORM

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GENERAL</b>            | Meter: <u>75718</u> Location: <u>Flora Vista #1</u><br>Coordinates: Letter: <u>F</u> Section <u>22</u> Township: <u>30</u> Range: <u>12</u><br>Or Latitude _____ Longitude _____<br>Date Started : <u>4-26-94</u> Area: <u>02</u> Run: <u>63</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>FIELD OBSERVATIONS</b> | Sample Number(s): <u>VW32</u><br>Sample Depth: <u>12</u> Feet<br>Final PID Reading <u>195</u> PID Reading Depth <u>12</u> Feet<br><div style="text-align: center;">Yes      No</div> Groundwater Encountered <input type="checkbox"/> (1) <input checked="" type="checkbox"/> (2) Approximate Depth _____ Feet                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>CLOSURE</b>            | Remediation Method :<br><div style="display: flex; justify-content: space-between;"> <div>Excavation</div> <div><input checked="" type="checkbox"/> (1) Approx. Cubic Yards <u>45</u></div> </div> <div style="display: flex; justify-content: space-between;"> <div>Onsite Bioremediation</div> <div><input type="checkbox"/> (2)</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Backfill Pit Without Excavation</div> <div><input type="checkbox"/> (3)</div> </div> Soil Disposition:<br><div style="display: flex; justify-content: space-between;"> <div>Envirotech</div> <div><input type="checkbox"/> (1)</div> <div><input checked="" type="checkbox"/> (3) Tierra</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Other Facility</div> <div><input type="checkbox"/> (2) Name: _____</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Pit Closure Date: <u>4-26-94</u></div> <div>Pit Closed By: <u>BEI</u></div> </div> |
| <b>REMARKS</b>            | Remarks : <u>No Line Markers. Pit discolored</u><br>_____<br>_____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                           | Signature of Specialist: <u>Vale Wilgerson</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |



## FIELD SERVICES LABORATORY

## ANALYTICAL REPORT

## PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

## SAMPLE IDENTIFICATION

|                            | Field ID | Lab ID          |
|----------------------------|----------|-----------------|
| SAMPLE NUMBER:             | VW32     | 945020          |
| MTR CODE   SITE NAME:      | 75718    | Flora Vista #1  |
| SAMPLE DATE   TIME (Hrs):  | 04/26/94 | 1340            |
| PROJECT:                   | Phase I  |                 |
| DATE OF TPH EXT.   ANAL.:  | 04/28/94 | 04/28/94        |
| DATE OF BTEX EXT.   ANAL.: | 05/09/94 | 05/10/94        |
| TYPE   DESCRIPTION:        | VC       | Brown fine sand |

Field Remarks: \_\_\_\_\_

## RESULTS

| PARAMETER      | RESULT | UNITS | QUALIFIERS |     |      |       |
|----------------|--------|-------|------------|-----|------|-------|
|                |        |       | DF         | Q   | M(g) | V(ml) |
| BENZENE        | <0.50  | MG/KG |            | X10 |      |       |
| TOLUENE        | 32     | MG/KG |            | X10 |      |       |
| ETHYL BENZENE  | 42     | MG/KG |            | X10 |      |       |
| TOTAL XYLENES  | 440    | MG/KG |            | X10 |      |       |
| TOTAL BTEX     | 515    | MG/KG |            |     |      |       |
| TPH (418.1)    | 8030   | MG/KG |            |     | 1.0  | 28    |
| HEADSPACE PID  | 195    | PPM   |            |     |      |       |
| PERCENT SOLIDS | 82     | %     |            |     |      |       |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 130 % for this sample All QA/QC was acceptable.  
Narrative:

I performed analyses. Surrogate recovery was outside ATI QC limits due to matrix interference.

DF = Dilution Factor Used

[illegible]

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## **Phase II Soil Boring**

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# RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

Monroe Road

Hamington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole #

BH-1

Well #

Page

of

Project Name

EPNG Pits

Project Number

14509

Phase

601 6000

Project Location

Flora Vista #1, 75718

Elevation

Borehole Location T30, R12, S.22, E

GWL Depth

Logged By

S.Kelly

Drilled By

M. Donohue

Date/Time Started

10/5/95, 1315

Date/Time Completed

10/5/95, 1415

Well Logged By

S.Kelly

Personnel On-Site

M. Donohue, J. Long

Contractors On-Site

Client Personnel On-Site

Drilling Method

4 1/4" ID HSA

Air Monitoring Method

CGI, PID

| Depth<br>(Feet) | Sample<br>Number | Sample<br>Interval | Sample<br>Type &<br>Recovery<br>(inches) | Sample Description<br>Classification System: USCS                                                                | USCS<br>Symbol | Depth<br>Lithology<br>Change<br>(feet) | Air Monitoring<br>Units: NDU 5/15<br>BZ BH S |  |  | Drilling Conditions<br>& Blow Counts |
|-----------------|------------------|--------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------|----------------------------------------------|--|--|--------------------------------------|
| 0               |                  |                    |                                          | Backfill                                                                                                         |                |                                        |                                              |  |  |                                      |
| 5               |                  |                    |                                          | to 12'                                                                                                           |                |                                        |                                              |  |  |                                      |
| 10              |                  |                    |                                          |                                                                                                                  |                |                                        |                                              |  |  |                                      |
| 15              |                  |                    |                                          | Hit water at 17.5'<br>Waited 10min. rose to<br>17.1' did not take<br>split spoon sample due<br>to water in hole. |                |                                        |                                              |  |  |                                      |
| 20              |                  |                    |                                          | TOB- 18.0'                                                                                                       |                |                                        |                                              |  |  |                                      |
| 25              |                  |                    |                                          |                                                                                                                  |                |                                        |                                              |  |  |                                      |
| 30              |                  |                    |                                          |                                                                                                                  |                |                                        |                                              |  |  |                                      |
| 35              |                  |                    |                                          |                                                                                                                  |                |                                        |                                              |  |  |                                      |
| 40              |                  |                    |                                          |                                                                                                                  |                |                                        |                                              |  |  |                                      |

Comments:

No sample collected due to hitting water before the  
first split spoon was driven. BH grouted to surface.

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## **Phase III Excavation**

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## FIELD PIT REMEDIATION/CLOSURE FORM/PHASE II

Meter: 75718 Location: Flora Vista #1

Coordinates: Letter: E Section 22 Township: 30 Range: 12

Or Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

Date Started : 11-28-95 Area: 02 Run: 63

Sample Number(s): 4P93

Sample Depth: 20 Feet

Final PID Reading 1045 PID Reading Depth 20 Feet  
Yes No

Groundwater Encountered ☐ (1) ☒ (2) Approximate Depth \_\_\_\_\_ Feet

Final Dimensions: Length 39 Width 30 Depth 20

### Remediation Method :

Excavation ☒ (1) Approx. Cubic Yards 850 LT <sup>12/1/95</sup>

Onsite Bioremediation ☐ (2)

Backfill Pit Without Excavation ☐ (3)

Overburden Cubic Yards 32 LT <sup>12/1/95</sup>

### Soil Disposition:

Envirotech ☐ (1) ☒ (3) Tierra

Other Facility ☐ (2) Name: \_\_\_\_\_

Pit Closure Date: 11-29-95 Pit Closed By: Philip Env  
Phase III Used 100 Lbs Fertilizer

Remarks : Dug to 20 Ft, did not encounter groundwater  
Took PID N wall 1231 ppm S wall 01 ppm E wall 03 ppm  
W wall 1028 ppm Bot 576 ppm Comp 1045 ppm. Had to  
stop digging North & West walls due to compressor & meter  
Run positions.

Signature of Specialist: James F. Lemor



FIELD SERVICES LABORATORY  
ANALYTICAL REPORT

PIT CLOSURE PROJECT - Soil Samples Inside the GWV Zone

SAMPLE IDENTIFICATION

|                            |                      |                   |
|----------------------------|----------------------|-------------------|
|                            | Field ID             | Lab ID            |
| SAMPLE NUMBER:             | JP93                 | 947815            |
| MTR CODE   SITE NAME:      | 75718                | Flora Vista #1    |
| SAMPLE DATE   TIME (Hrs):  | 11/29/95             | 1015              |
| PROJECT:                   | Phase III Excavation |                   |
| DATE OF TPH EXT.   ANAL.:  | 11/30/95             | 12/02/95          |
| DATE OF BTEX EXT.   ANAL.: | 12/01/95             | 12/01/95          |
| TYPE   DESCRIPTION:        | VC                   | Brown sand & clay |

Field Remarks:

RESULTS

| PARAMETER      | RESULT | UNITS | QUALIFIERS |   |      |       |
|----------------|--------|-------|------------|---|------|-------|
|                |        |       | DF         | Q | M(g) | V(ml) |
| BENZENE        | <0.5   | MG/KG |            |   |      |       |
| TOLUENE        | <0.5   | MG/KG |            |   |      |       |
| ETHYL BENZENE  | 1.1    | MG/KG |            |   |      |       |
| TOTAL XYLENES  | 21.1   | MG/KG |            |   |      |       |
| TOTAL BTEX     | 22.2   | MG/KG |            |   |      |       |
| TPH (418.1)    | 1460   | MG/KG |            |   | 2.11 | 28    |
| HEADSPACE PID  | 1045   | PPM   |            |   |      |       |
| PERCENT SOLIDS | 84.2   | %     |            |   |      |       |

-- TPH is by EPA Method 418.1 and BTEX is by EPA Method 8020 --

The Surrogate Recovery was at 90 % for this sample All QA/QC was acceptable.  
Narrative:

DF = Dilution Factor Used

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# CHAIN OF CUSTODY RECORD

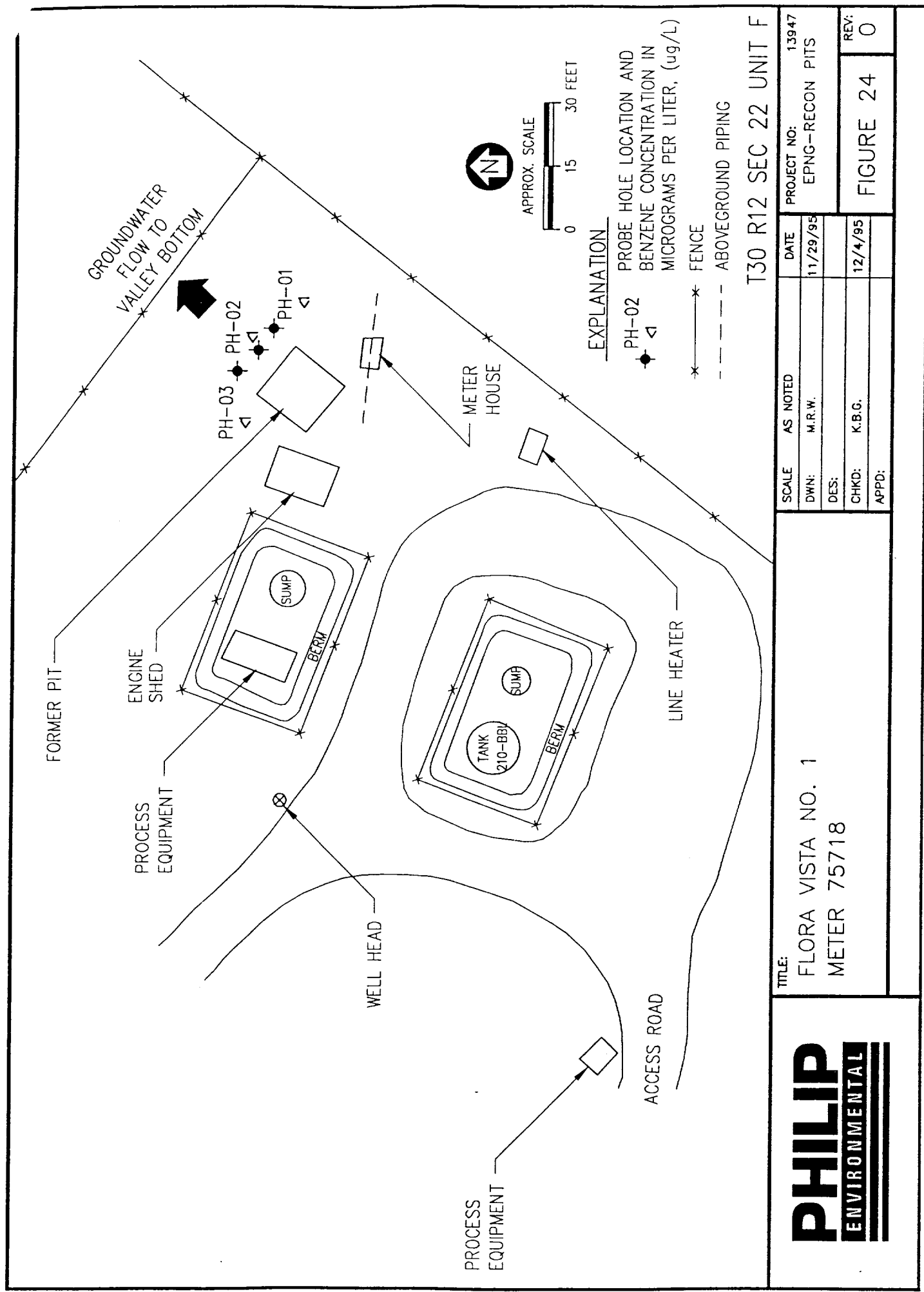
Page \_\_\_\_\_ of \_\_\_\_\_

FM-08-0565A (Rev. 03-94)

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**RECON®**

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|                   |  |                   |  |
|-------------------|--|-------------------|--|
| TITLE:            |  | PROJECT NO: 13947 |  |
| FLORA VISTA NO. 1 |  | EPNG-RECON PITS   |  |
| METER 75718       |  | DATE 11/29/95     |  |
|                   |  | SCALE AS NOTED    |  |
|                   |  | DWN: M.R.W.       |  |
|                   |  | DES:              |  |
|                   |  | CHKD: K.B.G.      |  |
|                   |  | APPD:             |  |
|                   |  | REV: 12/4/95      |  |
|                   |  | FIGURE 24         |  |
|                   |  | O                 |  |

## RECON SAMPLE ANALYSIS DATA SUMMARY TABLE Project: 13947

| Sample I.D.       | Probe Hole Number | Depth (feet) | Benzene (ug/L) | Toluene (ug/L) | Ethyl benzene (ug/L) | m+p-Xylene (ug/L) | o-Xylene (ug/L) | Comments             |
|-------------------|-------------------|--------------|----------------|----------------|----------------------|-------------------|-----------------|----------------------|
| L2C-22No3LD-03-D  | PH-03             | 18-21        | <1             | 5              | 1                    | 6                 | 2               | QC - Duplicate       |
| Blank-59          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| QCRT-23           | N/A               | N/A          | 203            | 211            | 208                  | 207               | 207             | QC - Retention Times |
| Blank-60          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| STD-1118          | N/A               | N/A          | 232            | 232            | 232                  | 232               | 232             | Calibration Standard |
| Blank-61          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| Blank-62          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| NICKELS#1DK-01    | PH-01             | 12-15        | 2,406          | 2,159          | 134                  | 1,122             | 313             | QC - Probe Rod Blank |
| NICKELS#1DK-02    | PH-02             | 12-15        | 2,521          | 196            | 232                  | 1,638             | 481             | Groundwater          |
| NICKELS#1DK-03    | PH-03             | 12-15        | 85             | 11             | 18                   | 164               | 26              | Groundwater          |
| NICKELS#1DK-04    | PH-04             | 12-15        | <1             | 4              | 1                    | 7                 | 2               | Groundwater          |
| NICKELS#1DK-05    | PH-05             | 12-15        | <1             | 4              | <1                   | 3                 | 1               | Groundwater          |
| NICKELS#1DK-05-D  | PH-05             | 12-15        | <1             | 4              | <1                   | 4                 | 1               | QC - Duplicate       |
| Blank-63          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| QCRT-24           | N/A               | N/A          | 189            | 203            | 220                  | 232               | 250             | QC - Retention Times |
| Blank-64          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| STD-1120          | N/A               | N/A          | 232            | 232            | 232                  | 232               | 232             | Calibration Standard |
| Blank-65          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| Blank-66          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| MACGRATH#1-01     | PH-01             | 9            | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | Soil-gas             |
| MACGRATH#1-02     | PH-02             | 9            | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | Soil-gas             |
| MACGRATH#1-03     | PH-03             | 9            | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | Soil-gas             |
| FLORAVISTA#1-01   | PH-01             | 24-30        | <1             | 1              | <1                   | 3                 | <1              | Groundwater          |
| FLORAVISTA#1-02   | PH-02             | 24-30        | 1              | 2              | <1                   | 2                 | <1              | Groundwater          |
| FLORAVISTA#1-03   | PH-03             | 24-30        | <1             | ND(1)          | ND(1)                | ND(1)             | ND(1)           | Groundwater          |
| FLORAVISTA#1-03-D | PH-03             | 24-30        | <1             | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - Duplicate       |
| Blank-67          | N/A               | N/A          | ND(1)          | ND(1)          | ND(1)                | ND(1)             | ND(1)           | QC - System Blank    |
| QCRT-25           | N/A               | N/A          | 190            | 189            | 175                  | 169               | 160             | QC - Retention Times |

D = duplicate analysis.

QC = quality control.

ug/L = micrograms of compound detected per liter of soil or groundwater vapor analyzed.

ND = not detected at the lower quantifiable limit indicated in parenthesis.

N/A = not applicable.

QA Review: *Paul G. Anderson*

Review Date: 1-31-96

SK 2/13/96