



**ENVIRONMENTAL PLUS, INC.**  
 STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

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PU  
11/23/04

August 24, 2004

Mr. Larry Johnson  
 Environmental Engineer  
 New Mexico Oil Conservation Division  
 1625 North French  
 Hobbs, New Mexico 882401

Subject: McDonnold Operating, Inc. Delineation Work Plan

Re: George Erwin Well #2 (API#3002511360)  
 UL-L, NW¼ of the SW¼ of Section 35-T24S-R37E  
 Latitude: 32°-10'-18.60"N and Longitude: 103°-08'-28.38"W  
 Landowner:

Dear Mr. Johnson,

Environmental Plus, Inc. (EPI), on behalf of McDonnold Operating, Inc., submits for your consideration, this delineation work plan for the above referenced release site located approximately 5.1 northeast of Jal, New Mexico. The New Mexico Office of the State Engineer Website Database and the USGS water well database records a water well approximately 500-feet south of the site associated with a residential dwelling with a water level of 72 feet below ground surface ('bgs). The attached site information and metrics form ranks the site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993) and the NMOCD Interim Pit and Below-Grade Tank Guidelines (July 2004). Site maps and photographs are also attached.

In August 2004, approximately 30 barrels of production fluid consisting primarily of saline produced water and a nominal amount of crude oil was discharged into an unlined pit during well maintenance activities and allowed to evaporate and infiltrate. The Constituents of Concern (CoCs) are: Chloride, Total Petroleum Hydrocarbon EPA method 8015m (TPH<sup>8015m</sup>), Benzene, and BTEX, i.e., the mass sum of Benzene, Toluene, Ethyl Benzene, and Xylenes. The NMOCD Guidelines allow submission of VOC headspace survey data <100 ppm collected in the field in lieu of laboratory Benzene and BTEX closure analyses. The impacted soil is exempted from RCRA 40 CFR Part 261.

**Delineation Work Plan**

The purpose of this work plan will be to determine the vertical and horizontal extents of production fluid impact above the site specific NMOCD CoC remedial guidelines and provide a basis for the remediation proposal. To delineate the vertical extent, it is proposed to initially excavate a trench in the center of the pit with a backhoe and collect discrete soil samples at 2-foot intervals down to approximately 13'bgs, i.e., the maximum reach of the backhoe. If acceptable CoC concentrations are not monitored in the 13'bgs delineation, the alternative is to advance and sample a soil boring to greater depth. The horizontal extents of impact will initially be considered to be coincident with the pit perimeter and will be confirmed by sampling the sidewalls following initial excavation. All soil boring samples will be collected discretely at 5-foot vertical intervals beginning at the surface and will be terminated

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

incident - nPAC 0602335238

McDonnold op - 14372

application - pPAC 060313826

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when the sample VOC headspace and the field chloride are surveyed to be acceptable, i.e., <100ppm and 250 mg/Kg, respectively. The borings will be advanced with a trailer mounted drilling rig using 5¼" hollow stem auger and inner rod. Discrete samples will be collected with a 1-inch stainless steel probe with a disposable vinyl liner, moreover, if probe samples cannot be obtained, cutting samples will be collected and surveyed. Laboratory samples will be immediately jarred and refrigerated and the remainder surveyed for volatile organics and chloride. Laboratory samples will be submitted to Cardinal Laboratories in Hobbs, New Mexico under chain of custody protocols. All processes and procedures will be in accordance with the Environmental Plus, Inc. Standard Operating Procedures and Quality Assurance Quality Control Plan. Upon receipt of the analytical results, a site delineation report will be developed and a remediation proposal submitted to the NMOCD for consensus. Annotated maps and photographs are attached.

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: Craig McDonnold, McDonnold Operating, Inc.  
Ben Miller, EPI Vice President and General Manager  
Sherry Miller, EPI President  
file

ENVIRONMENTAL PLUS, INC.

McDonnold Operating, Inc. Site Information and Metrics		Incident Date:	NMOCD Notified: 8/12/2004
SITE: George Erwin Well #2 (API#3002511360)		Assigned Site Reference #:	
Company: McDonnold Operating, Inc.			
Street Address:			
Mailing Address: 505 North Big Spring, Suite 204			
City, State, Zip: Midland, Texas 79701			
Representative: Craig M. McDonnold			
Representative Telephone: 432.682.3499			
Telephone:			
Fluid volume released (bbls): 120 bbls		Recovered (bbls): 0 bbls	
>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: George Erwin Well #2 (API#3002511360)			
Source of contamination: Workover pit			
Land Owner, i.e., BLM, ST, Fee, Other:			
LSP Dimensions 20' x 8'			
LSP Area: 179 sqft ft <sup>2</sup>			
Location of Reference Point (RP)			
Location distance and direction from RP			
Latitude: 32° 10' 18.60"N			
Longitude: 103° 08' 28.38"W			
Elevation above mean sea level: 3,188' amsl			
Feet from South Section Line			
Feet from West Section Line			
Location- Unit or ¼¼: NW¼ of the SW¼		Unit Letter: L	
Location- Section: 35			
Location- Township: T24S			
Location- Range: R37E			
Surface water body within 1000' radius of site: none			
Surface water body within 1000' radius of site:			
Domestic water wells within 1000' radius of site: One, approximately 500' south of the site.			
Domestic water wells within 1000' radius of site:			
Agricultural water wells within 1000' radius of site: none			
Agricultural water wells within 1000' radius of site:			
Public water supply wells within 1000' radius of site: none			
Public water supply wells within 1000' radius of site:			
Depth from land surface to ground water (DG) 72'bgs			
Depth of contamination (DC) -			
Depth to ground water (DG - DC = DtGW) -			
<b>1. Ground Water</b>		<b>2. Wellhead Protection Area</b>	<b>3. Distance to Surface Water Body</b>
If Depth to GW <50 feet: 20 points		If <1000' from water source, or; <200' from	<200 horizontal feet: 20 points
If Depth to GW 50 to 99 feet: 10 points		private domestic water source: 20 points	200-100 horizontal feet: 10 points
If Depth to GW >100 feet: 0 points		If >1000' from water source, or; >200' from	>1000 horizontal feet: 0 points
private domestic water source: 0 points		Wellhead Protection Area Score= 0	Surface Water Score= 0
Ground water Score = 20			
Site Rank (1+2+3) = 210			
<b>Total Site Ranking Score and Acceptable Concentrations</b>			
Parameter	>19	10-19	0-9
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
<sup>1</sup> 100 ppm field VOC headspace measurement may be substituted for lab analysis			

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes  No

Type of action: Registration of a pit or below-grade tank  Closure of a pit or below-grade tank

Operator: McDonnold Operating, Inc. Telephone: 432.682.3499 e-mail address: Craig@McDonnold.net  
Address: 505 North Big Spring, Suite 204 Midland, Texas 79701  
Facility or well name: George Erwin Well #2 API #: 3002511360 U/L or Qtr/Qtr NW of the SW UL-L Sec 35 T24S R 37E  
County: Lea Latitude 32° 10' 18.60"N Longitude 103° 08' 28.38"W NAD: 1927  1983  Surface Owner Federal  State  Private  Indian

<b>Pit</b>	<b>Below-grade tank</b>	
Type: Drilling <input type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input checked="" type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input checked="" type="checkbox"/> Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/> Pit Volume <u>120</u> bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>~72'bgs</u>	Less than 50 feet <b>50 feet or more, but less than 100 feet</b> 100 feet or more	(20 points) <b>(10 points)</b> ( 0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	<b>(20 points)</b> ( 0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet <b>1000 feet or more</b>	(20 points) (10 points) <b>( 0 points)</b>
	<b>Ranking Score (Total Points)</b>	<b>(20 points)</b>

**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite  offsite  If offsite, name of facility Sundance. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No  Yes  If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

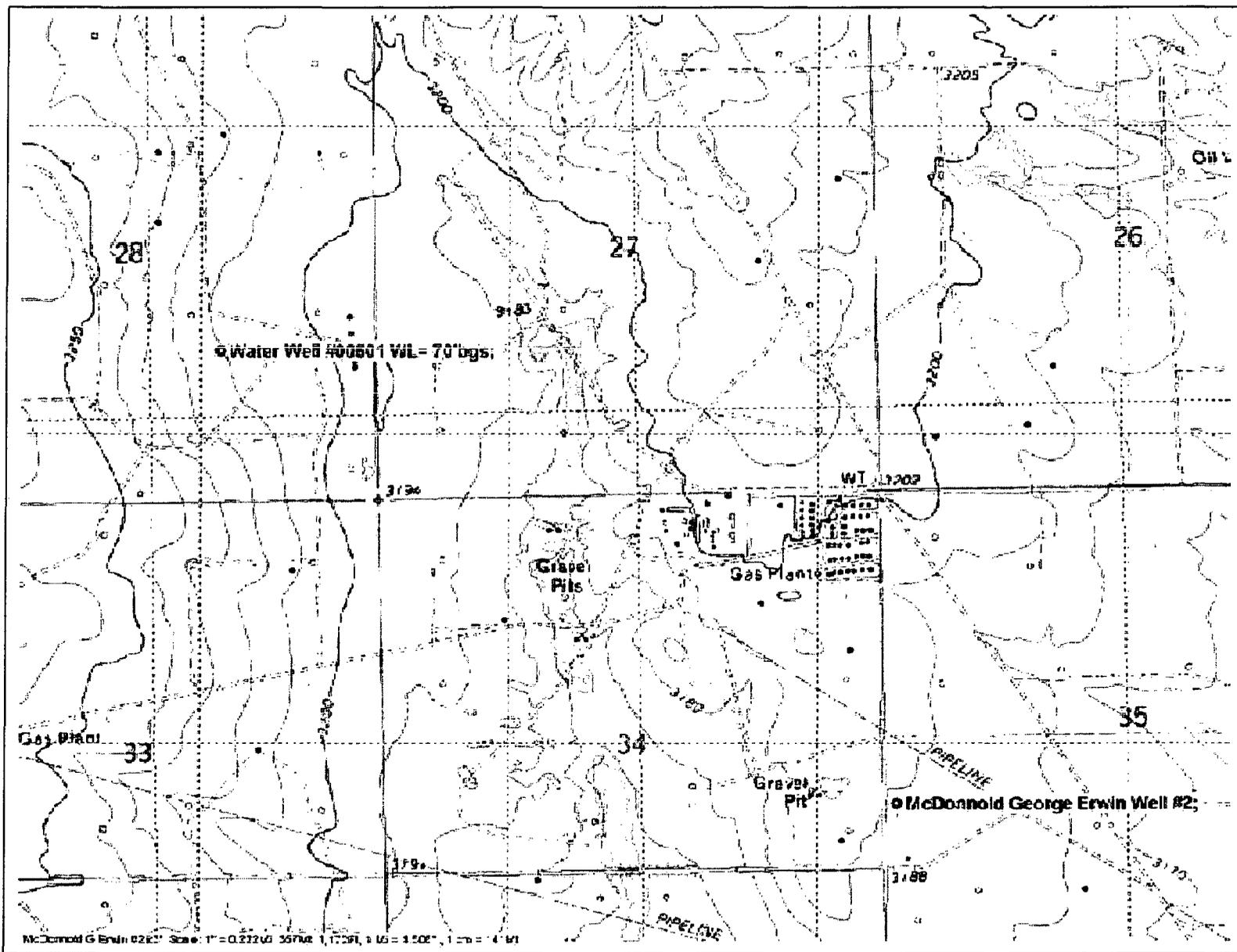
Additional Comments: Pit located approximately 40' from wellhead. No other equipment on location. Visually stained soil to be removed and taken to solid waste disposal site. Soil sample results will be sent in at a later date. Approximately 120 bbls of production fluid, primarily produced water, was discharged into the pit and allowed to evaporate and infiltrate. The vertical and horizontal extents of hydrocarbon and chloride impact will be determined and the impacted soil disposed of in an approved NMOCD facility.

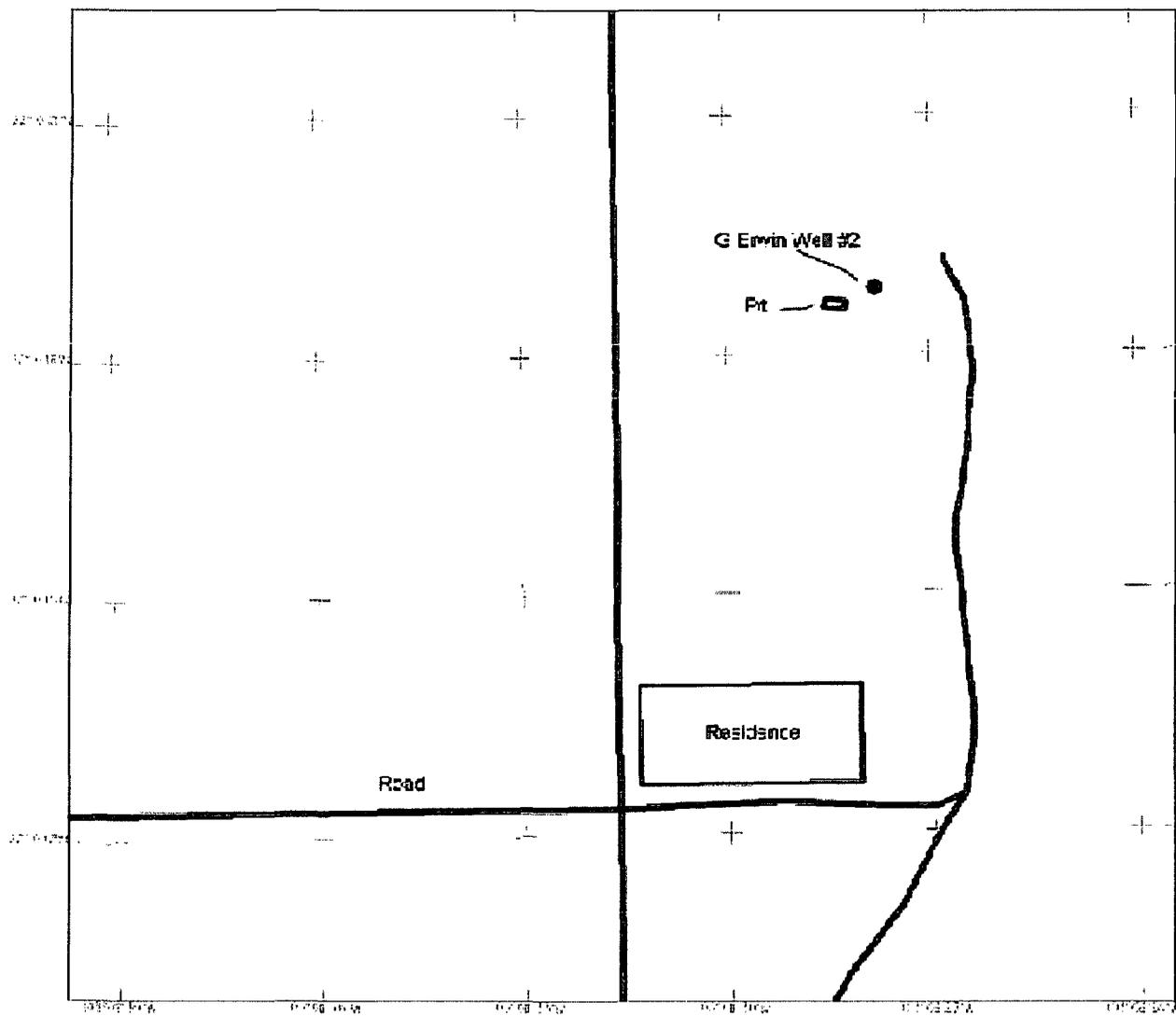
I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines , a general permit , or an (attached) alternative OCD-approved plan .

Date: \_\_\_\_\_  
Printed Name/Title \_\_\_\_\_ Signature \_\_\_\_\_

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local

Approval:  
Printed Name/Title \_\_\_\_\_ Signature \_\_\_\_\_ Date: \_\_\_\_\_





MCDONNOLD  
OPERATING, INC.  
GEORGE ERWIN  
WELL #2  
UL-L SEC 35  
T24S R37E  
LEA CO NY

N



SCALE 1:2,500



FEET

UNLESS OTHERWISE SPECIFIED  
IS NORTH  
AND RESIDES TO BE READ

G ERWIN PIT AND RESIDENCE SET  
8/21/2004



