1R - 465

WORKPLAN

1/07/2005

Larson & Associates, Inc.
Environmental Consultants

January 7, 2005

VIA FACSIMILE: (505) 393-0720

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

Re: Revised Unlined Surface Impoundment Investigation Work Plan, John H. Hendrix Corp., Will Cary Lease, Unit Letter F (SE/4, NW/4), Section 22, Township 22 South, Range 37 East, Lea County, New Mexico

Dear Mr. Sheeley:

Per your request, the above-referenced document has been revised to respond to your comments presented below:

- Form C-141, including site ranking;
- Drilling in center of pit or as close as possible;
- Landowner approval documentation;
- Remove first sentence of paragraph 7 or change to "quantative" or "screening";
- Paragraph 6: ....."according to OCD Guidelines"...That's it! Indicate analytically speaking what will justify stopping drilling.

John H. Hendrix Corp. ("JHHC") has retained Larson and Associates, Inc. ("LA") to investigate an unlined surface impoundment ("Pit") located on the Will Cary Lease in the southeast quarter (SE/4) of the northwest quarter (NW/4), Section 22, Township 22 South, Range 37 East, in Lea County, New Mexico. The Pit was associated with a tank battery that once served the Will Cary Lease. However, the tank battery has been dismantled, and the pit has remained inactive for an undetermined amount of time. The pit is located about 300 feet east of the Will Cary #5 well (API #30-025-10410-00-00). A copy of this correspondence has been provided to the surface owner, Mr. Jay D. Martin. Figure 1 presents a location and topographic map. Figure 2 presents a site drawing.

Site Ranking

The New Mexico Oil Conservation Division ("NMOCD") has established recommended remediation action levels ("RRAL") for benzene, total BTEX (sum of

benzene, toluene, ethylbenzene and xylenes) and total petroleum hydrocarbons ("TPH") using the following ranking criteria:

Criteria	Result	Ranking Score
Depth-to-Groundwater	50 – 99 feet	10
Wellhead Protection Area	No	0
Distance to Surface Water Body	>1000 Feet (Horizontal)	0
	Total Score:	**10**

The following RRAL are assigned to the Site:

Benzene **10 mg/kg**
Total BTEX **50 mg/kg**
TPH **1,000 mg/kg**

Form C-144 ("Pit or Below Grade Tank Registration or Closure") is presented in Appendix A.

Proposed Investigation

LA proposes to assess concentrations of hydrocarbons and chloride in soil from samples collected from five (5) borings that will be drilled around the perimeter and as close as possible to the center of the pit. The borings will be drilled using direct-push or air rotary drilling techniques. Soil samples will be collected continuously using a four-foot long stainless steel core barrel equipped with disposable sample liners if direct-push sampling is employed. However, if subsurface conditions prohibit direct-push sampling, soil samples will be collected at ground surface, and about every five (5) feet thereafter, using a split spoon or jam tube sampler in conjunction with air rotary drilling. The sampler will be washed between events using a solution of water and laboratory grade detergent, and rinsed with distilled water. The rig and down-hole equipment (i.e., bits, rods, etc.) will be washed between locations using a high-pressure washer. Figure 2 presents the approximate locations for the proposed borings.

The field headspace samples will be collected according to NMOCD guidelines by partially filling a clean glass sample jar to approximately ¾ full with soil, sealing the opening with a layer of aluminum foil, and replacing the cap. The concentration of organic vapors in the container headspace will be checked with a photoionization detector (PID) equipped with a 10.3 electron-volt (eV) lamp after the samples have reached ambient temperature (approximately 30 minutes), or the samples may be heated, depending on the ambient temperature. The PID probe will be passed through the aluminum foil into the headspace, and the peak concentration, in parts per million (ppm), will be recorded on the field boring record. The PID will be calibrated to isobutylene prior to recording the measurements. The laboratory samples will be collected in clean

glass sample jars, sealed, labeled, chilled in an ice chest and delivered under chain-of-custody control to an environmental laboratory.

The borings will be advanced until field headspace readings decrease below 100 parts per million (ppm) or groundwater is encountered, whichever occurs first. All soil samples exhibiting field headspace readings above 100 ppm will be analyzed by the laboratory for BTEX using method SW-846-8021B, total petroleum hydrocarbons ("TPH") using method SW-846-8015 for gasoline range organics ("GRO") and diesel range organics ("DRO"), and chloride using method SW-846-9253. Additional samples will be analyzed for TPH and chloride to assess the vertical and horizontal extent of impact. Field boring logs will be prepared in accordance with the Unified Soil Classification System (USCS). Drill cuttings will be placed on the ground adjacent to the borings, and the borings will be plugged with bentonite.

The laboratory data will be evaluated and discussed with the NMOCD to determine the need for monitoring wells. Monitoring wells will be constructed in accordance with NMOCD guidelines, if required. The wells will be surveyed by a professional land surveyor licensed in New Mexico, and a ground water flow map prepared from depth-to-ground water measurements. Ground water samples will be analyzed for volatile organics, semi-volatile organics, dissolved metals, anions, cations and total dissolved solids ("TDS").

Notification will be given to the NMOCD at least 72 hours prior to conducting the investigation, and a report, including remediation proposal, will be prepared for submittal to the NMOCD on or before March 1, 2005. Please call Mr. Ron Westbrook at (432) 684-6631 or myself at (432) 687-0901 if you have questions.

Sincerely,
Larson and Associates, Inc.

Mark J. Larson, P.G., C.P.G., C.G.W.P.
Senior Hydrogeologist/President

Enclosures

cc: Ron Westbrook
Michael Klein
Jay D. Martin

FIGURES

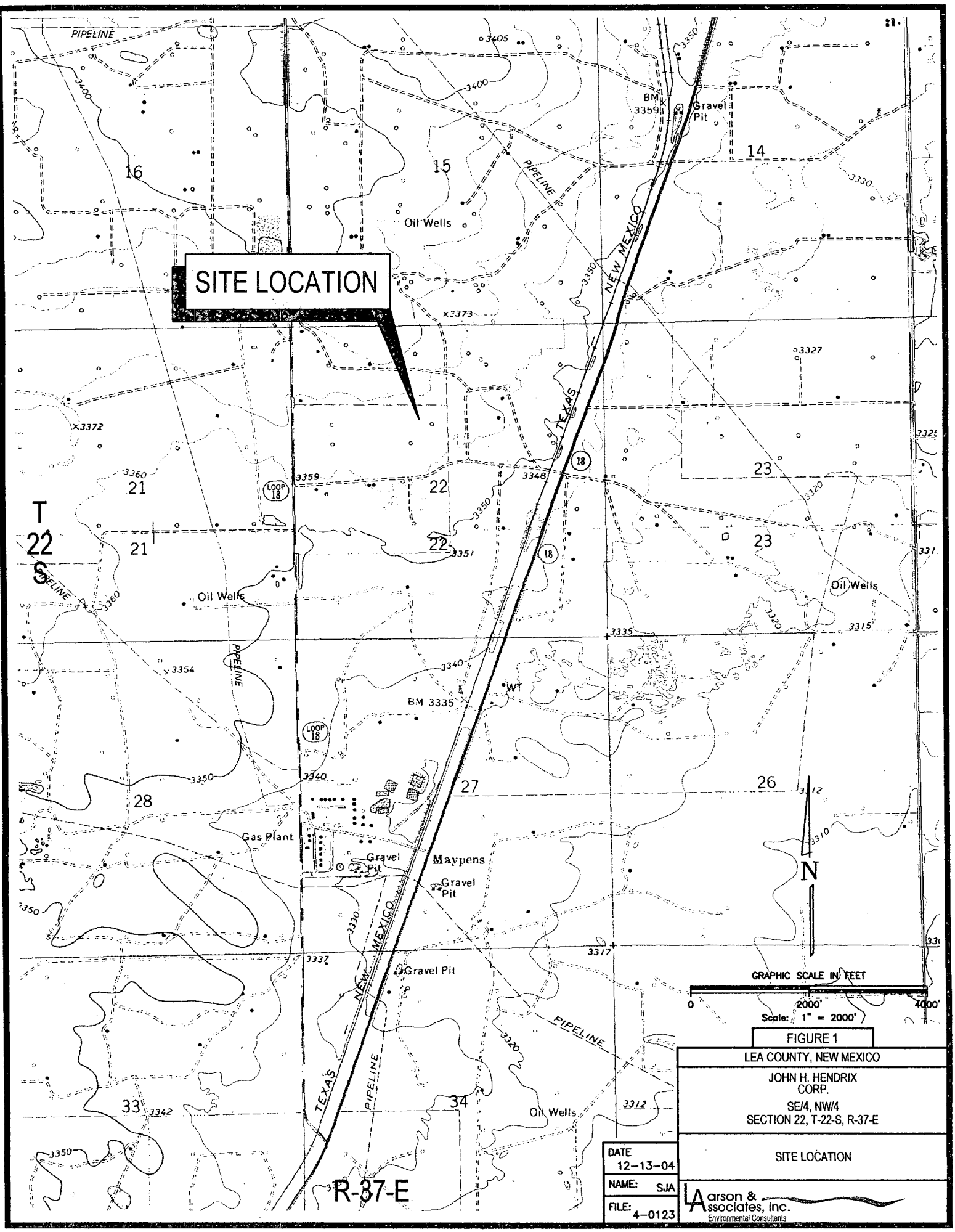

FIGURE 1

LEA COUNTY, NEW MEXICO

JOHN H. HENDRIX CORP.

SE/4, NW/4
SECTION 22, T-22-S, R-37-E

SITE LOCATION

DATE	12-13-04
NAME:	SJA
FILE:	4-0123

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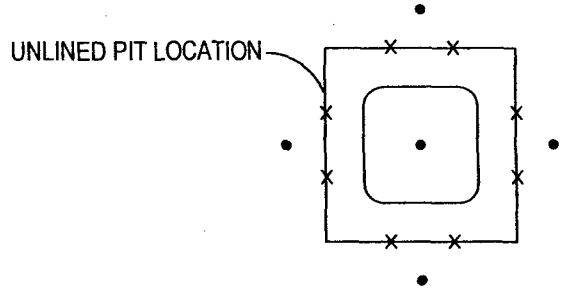

▲ JOHN H. HENDRIX CORP.
WILL CARY #5 WELL

GRAPHIC SCALE IN FEET

0 50' 100'

Scale: 1" = 50'

LEGEND

- PROPOSED BORING LOCATION

▲ - OIL WELL LOCATION

FIGURE # 2

LEA COUNTY, NEW MEXICO

JOHN H. HENDRIX CORP.

SE/4, NW/4
SECTION 22, T-22-S, R-37-E

SITE DRAWING

DATE 12-13-04

NAME: SJA

FILE: 4-0123

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APPENDIX A

Form C-144

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

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

Form C-144
June 1, 2004

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: John H. Hendrix Corp. Telephone: (432) 684-6631 e-mail address: ronniew@jhhc.org
Address: 110 N. Marienfeld St., Ste. 400, Midland, Texas 79701
Facility or well name: Will Cary #005 API #: 30-025-10410-00 U/L or Qtr/Qtr F Sec 22 T 22S R 37E
County: Lea Latitude N32° 22.809' Longitude W103° 09.064 NAD: 1927 ☐ 1983 ☒
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐ Jay D. Martin

Pit	**Below-grade tank**	
Type: Drilling ☐ Production ☐ Disposal ☐ Workover ☐ Emergency ☒ Lined ☐ Unlined ☒ Liner type: Synthetic ☐ Thickness ____ mil Clay ☐ Pit Volume 250 bbl	Volume: ____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain why not.	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) (10 points) 10 (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	(20 points) (0 points) 0
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 1000 feet or more	(20 points) (10 points) (0 points) 0
	Ranking Score (Total Points)	10

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 your are burying in place) onsite ☐ offsite ☒ If offsite, name of facility Hendrix Landfarm (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: Form to be completed with laboratory analysis upon completion of investigation and final remediation soil samples.

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: 01/07/05
Printed Name/Title Ronnie Westbrook/VP Signature Ronnie Westbrook

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 laws and/or regulations.

Approval:
Printed Name/Title _____ Signature _____ Date: _____