May 21, 2019 Reference No. 11195988

Brad Billings
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Sent via Email

Dear Mr. Billings

Re: Work Plan for Additional Site Characterization and NET System
Phillips 66 Line NM 1-1, Lea County, New Mexico
NMOCD – AP 118

On behalf of Phillips 66 (P66) Risk Management (RM), GHD Services Inc. (GHD) is pleased to submit this Work Plan for Additional Site Characterization and NET System for the project referenced above. As reported to the New Mexico Oil Conservation Division (NMOCD) on April 25, 2019, light non-aqueous phase liquid (LNAPL) delineation has not been achieved on the eastern edge of the plume. GHD proposes installing four additional monitor wells to achieve delineation. Additionally, GHD has installed three permanent NAPL Extraction Tool (NET) systems in recovery wells RW-1, RW-2 and RW-3. GHD plans to operate one more NET on a quarterly basis to recover LNAPL in the surrounding monitor wells. This letter summarizes the planned site activities in 2019.

1. Site Description and History

The Site is located approximately one mile south of the City of Hobbs in Lea County, New Mexico (Unit N, Section 9, Township 19S, Range 38E; Attachment A - Figure 1 (Site)). The area around the release is largely undeveloped arid land primarily used for cattle grazing.

Site remedial activities commenced on October 27, 1998, when Phillips 66 personnel discovered a release of crude oil associated with a local well field gathering pipeline. Excavation activities took place following the discovery of the release. LNAPL recovery efforts began shortly after LNAPL was discovered on the water table. A comprehensive soil and groundwater treatment system was then installed and operated until September 2005. Xitech skimmer pumps have been used to recover LNAPL until 2018, when GHD began transitioning to NET systems for LNPAL recovery. The NET systems began continuous operation in February 2019.

Due to falling groundwater levels, GHD has installed 20 replacement monitor wells in 2017 and 2018 to obtain subsurface information relating to the extent of groundwater impacts. GHD abandoned several monitor and recovery wells that were consistently gauged dry or deemed unusable.

A complete history for the Site can be found in the annual groundwater monitoring and remediation reports.

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2. Regulatory Framework

The New Mexico Oil Conservation Division (NMOCD) is the regulatory agency overseeing the cleanup of petroleum hydrocarbon impacts associated with the Site. The NMOCD uses groundwater quality standards contained in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC) for groundwater cleanup.

3. Scope of Work

3.1 Monitor Well Installation

Following the installation of replacement monitor wells, gauging data suggest that the extent of LNAPL impacts have not been fully defined. GHD plans to install four additional monitor wells on the eastern edge of the LNAPL plume to achieve delineation. Attachment A- Figure 2 depicts the proposed locations for the new monitor wells.

3.1.1 Regulatory Compliance

Form WR-07 – Application for Permit to Drill a Well with No Water Right will be submitted and approved prior to drilling beings.

3.1.2 Monitor Well Installation and Construction

Prior to initiating any drilling activities, GHD and its subcontractors will take measures to identify the locations of underground utility lines at the Site and at each soil boring location. The monitor wells will be placed at least five feet from any surrounding underground utility marks.

A licensed driller will operate an air rotatory drill rig to advance the borings to a total depth of 55 feet below ground surface (fbgs). Soil cuttings will be collected every five feet for headspace readings of organic vapors by a photo ionization detector (PID). Each recording will be used to characterize possible petroleum impacts and identify soils for segregation for off-site disposal (if necessary). All readings will be recorded in the field notes.

Monitor wells will be completed using 2-inch diameter Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slot screen extending from approximately 55 fbgs to 35 fbgs. Blank PVC casing will extend from the screened interval to approximately three feet above ground surface. Sand will be placed from the bottom of each well to approximately two feet above the well screen using 20/40 silica sand. Bentonite will be used to seal each well from the top of sand pack to approximately 10 fbgs. Portland cement will extend from the bentonite seal to ground surface. Wells will be completed at the surface with an upright steel security monument and concrete pad.

Well development will be performed until the water is relatively clear based on the observation of the field geologist.

3.2 NET System Operation

The NET system is designed to recover LNAPL by rotating a belt of 99% efficient oleophilic/hydrophobic fabric through the LNAPL/groundwater interface before passing through a squeeze roller to desorb collected LNAPL (Attachment A – Figure 3). Collected LNAPL is stored in a 55-gallon drum prior to being transferred to the on-site 140 barrel above ground storage tank for eventual recycling. Each drum will be stored in secondary containment and will be fitted with an automatic high level shut off sensor.

Currently, LNAPL impacts extend outside of the radius of influence of the newly installed NET systems installed in RW-1, RW-2 and RW-3. GHD plans to use another NET system to recover LNAPL in surrounding wells to reduce the size of the LNAPL plume while performing recovery potential tests on the surrounding wells. The satellite NET operation is currently planned to take place on a quarterly basis, but may change if conditions indicate another frequency is more appropriate.

Recovery volumes will be recorded on the operations and maintenance check lists and will be summarized in the annual groundwater monitoring and remediation reports.

4. Closing

Delineation of LNAPL has not been achieved on the eastern edge of the plume. GHD proposes installing four additional monitor wells in June 2019. GHD also plans to operate one more NET on a quarterly basis to recover LNAPL in the surrounding monitor wells with measureable LNAPL.

Sincerely,

GHD

David Bonga
Project Manager

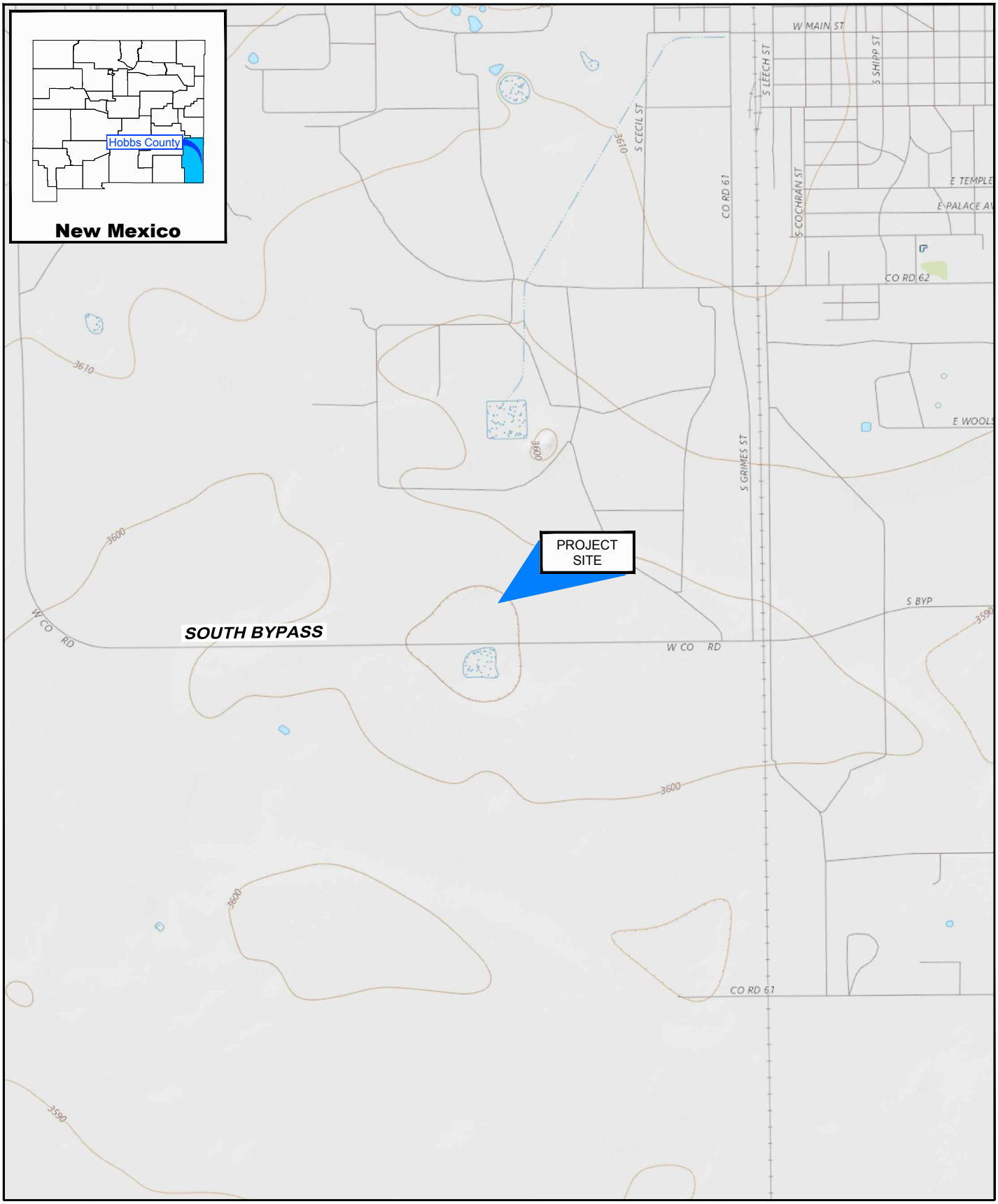
Christina Ruby
Program Manager

DB/bh/1

Encl. Attachment A Figures

cc: Becky Hesslen, Phillips 66 Risk Management Program Manager

Attachment A
Figures



Source: USGS 7.5 Minute Quad "Hobbs West and Hobbs East, New Mexico"

Lat/Long: 32.669285° North, 103.156255° West

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

PHILLIPS 66 COMPANY
HOBBS, LEA COUNTY, NEW MEXICO
LINE NM 1-1

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SITE LOCATION MAP

FIGURE 1

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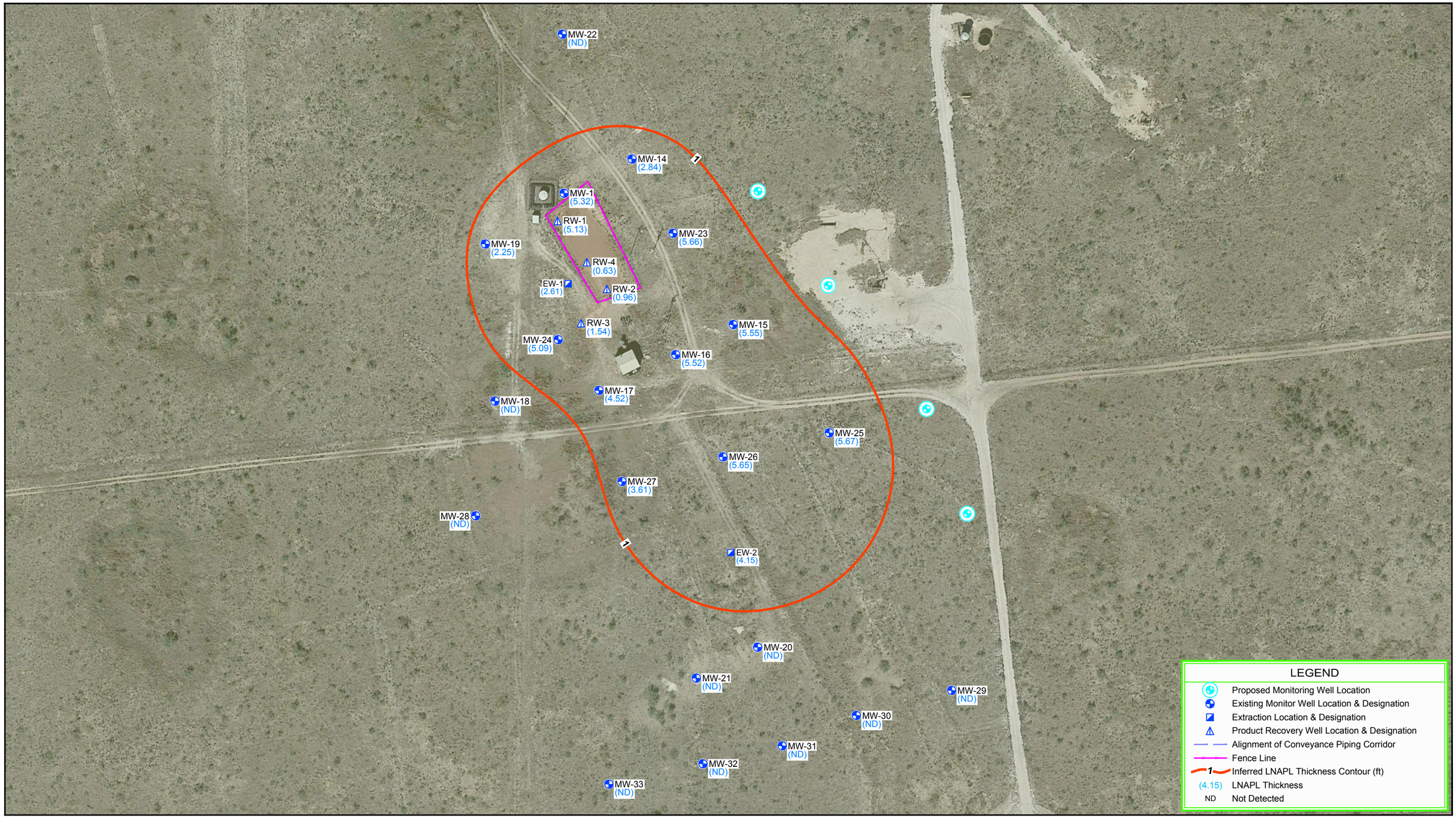

Source: Image © 2018 Google - Imagery Date: November 2, 2017

Lat/Long: 32.669285° North, 103.156255° West

0 60 120ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

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PROPOSED MONITOR WELL LOCATIONS

FIGURE 2

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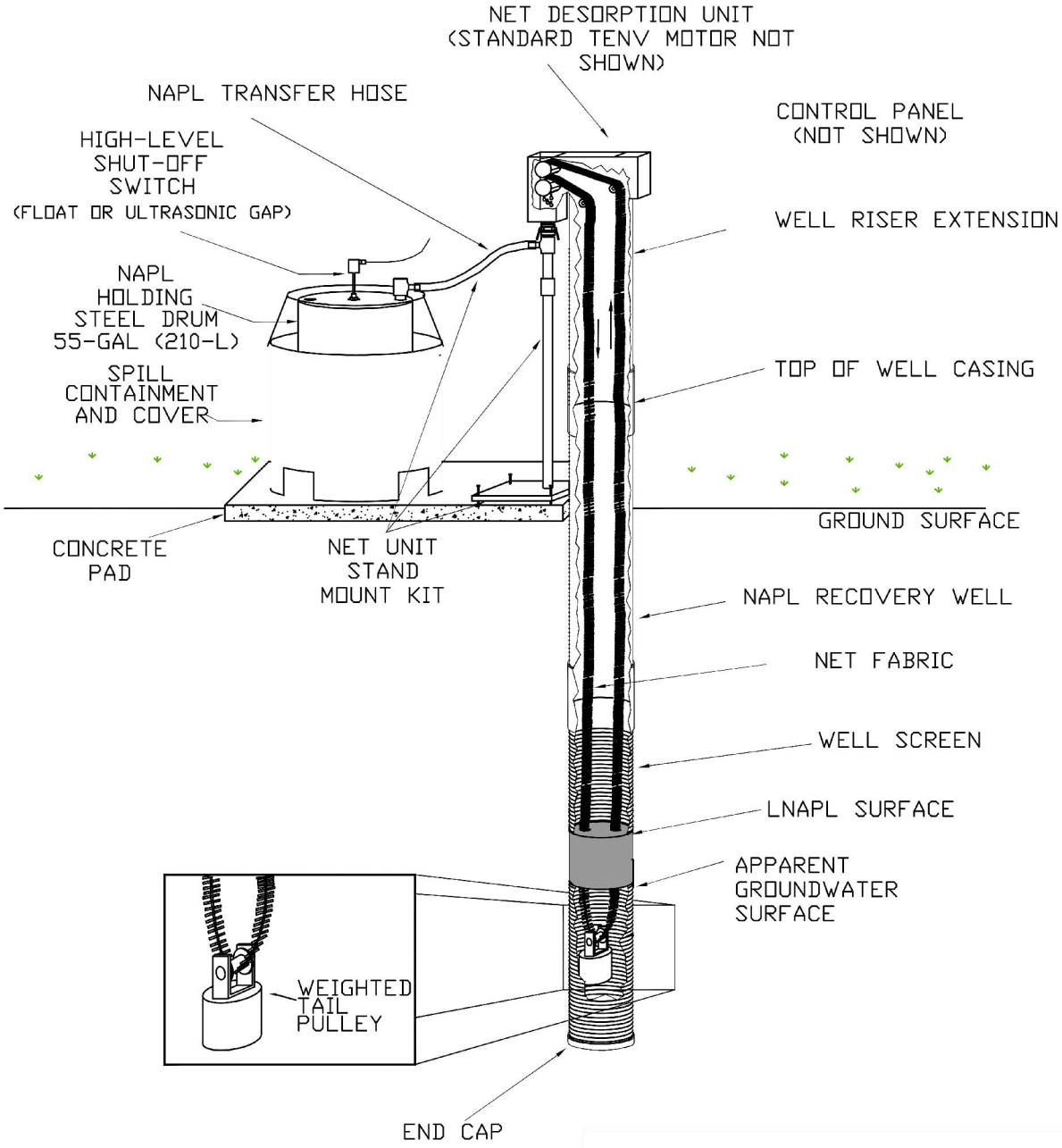

SOURCE: Environmental Int'l Corporation; Schematic of DN Series Net for LNAPL Recovery - Figure 1-1

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

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TYPICAL NET SYSTEM

FIGURE 3

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