

March 20, 2018



Mr. Matthew Morris
Washington State Department of Ecology
Southwest Regional Office Toxics Cleanup Program
PO Box 47775
Olympia, Washington 98504-7775

Subject: **Remedial Investigation Work Plan Addendum**
 Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348
 1656 East J Street
 Tacoma, Washington

Dear Mr. Morris:

On behalf of Chevron Environmental Management Company (Chevron EMC), Leidos, Inc. (Leidos) prepared this memo detailing proposed modifications to the previously approved Work Plan at the Former Standard Oil Bulk Terminal/Chevron Facility No. 1001348 located at 1656 East J Street in Tacoma, Washington (Figure 1), herein referred to as the "Site." The former bulk terminal is under an Agreed Order (No. DE 7111) with the Washington State Department of Ecology (Ecology). The investigation activities proposed by this work plan will be performed per the requirements of Agreed Order No. DE 7111, and are consistent with the *Remedial Investigation Work Plan* dated June 4, 2010 as well as the *Remedial Investigation Sampling and Analysis Plan* dated May 25, 2010 and the *Remedial Investigation Quality Assurance Project Plan* dated May 25, 2010.

SITE DESCRIPTION

The fenced 3.5-acre former Standard Oil bulk terminal is located in an industrial area at in Tacoma, Washington (Figure 1). The former bulk terminal was in operation from 1905 to 1988. A summary of the regional geology, hydrogeology, and a complete summary of the site background, including investigative history were presented in SAIC's *Remedial Investigation Work Plan* dated June 4, 2010 as well as the *Draft Remedial Investigation* dated December 15, 2014.

The property is currently used for transportation offices, parking for transportation vehicles, and employee parking for the adjacent Northwest Detention Center. Three buildings are present on the property. The building in the center of the property is a tent hangar structure that is currently used for storage. The building located adjacent to East J Street is used for office space and is built on a four-foot thick concrete slab. The office concrete slab appears to be in good condition with no cracking. No utilities run through the slab (all are either routed from overhead or along the outside of the slab) therefore are no pathways for vapors to enter this building. A third building, also along East J Street, consists of a mobile office trailer, with no foundation.

COMPLETED ACTIVITIES

The following on-property borings were completed in late 2017: `

- Soil borings SB-72 through SB-74 were installed on the eastern side of the former bulk terminal property. As discussed previously these borings were placed capture any soil impacts east of SB-33, SB-16, SB-53, and SB-54. Soil samples from each of these borings exceeded MTCA Method A cleanup levels (Table 3-1, Figure 1 (highlighted in yellow));
- Soil borings SB-75 through SB-78 were installed in the central portion of the subject property to refine the extent of petroleum impacts surrounding monitoring well MW-20. As expected each of these soil borings were impacted and will serve to delineate the LNAPL near MW-20 (Table 3-1, Figure 1);
- D-13 was installed on the property near the office building (in the location of SB-72) and
- Monitoring well D-14 was installed on-property downgradient of MW-20. D-14 was installed using a hollow stem auger drill rig with casing and screened from 29 to 32 feet to evaluate the vertical extent of the dissolved-phase impacts to groundwater.
- D-13 and D-14 have not been sampled (this will be completed during the next field event), however development water from D-13 displayed a visible sheen.

PROPOSED ACTIVITIES

Borings SB-72 through SB-74 and D-13 were designed to delineate the eastern boundary of impacts. The field observations and data indicate that these boring do not meet cleanup standards. In order to close this data gap this addendum adds two additional paired well locations along J Street to further delineate both soil and dissolved petroleum hydrocarbon impacts. Deep wells are proposed to be paired with proposed wells MW-26 and MW-28. These proposed paired locations are highlighted on Figure 6 and summarized below:

- MW-30/D-18 (located between previously proposed wells MW-24 and MW-26);
- MW-31/D-19 (Located (50-100 feet) north of proposed well MW-24;

- D-17 (paired with previously proposed MW-26 along J Street); and
- D-16 (paired with previously proposed MW-28 in the BNRR ROW).

In addition to these new well locations following modifications to the Work Plan are proposed:

- Replace D-3 (which appears to be screened across two water bearing zones - see attached cross-section figure.) with a paired set D-3A/MW-32. The boring log for well D-3 is not available, therefore per WAC 173-160-460 and WAC 173-162 the well will be over drilled and bentonite sealed;
- Move soil borings OB-6 through OB-9 to the west across the railroad tracks. Soil borings OB-6 through OB-9 will be installed west of the property on Burlington Northern Santa Fe (BNSF) Railway property to delineate soil impacts west of SB-57 and SB-59;
- Move soil borings OB-10, OB-11 and OB-12 further to the southwest off the property boundary and add OB-13. These borings along with D-11, MW-27, D-16 and MW-28 will be used to define upgradient edge of the soil and groundwater plumes.

The following sample locations remain unchanged from the 2017 Work Plan addendum:

- Soil borings OB-1 through OB-5 will be installed along East F Street just north of the former bulk terminal property. These borings will be installed to delineate soil impacts north of SB-36, SB-55, and SB-60;
- Monitoring wells D-8 and MW-23 will be installed in the City of Tacoma right-of-way northwest of the property;
- Monitoring wells MW-24 and D-9 will be installed in the City of Tacoma Right of way northeast of the former terminal along the parking strip of East J Street. These wells will provide a downgradient data point for the shallow and deep aquifers as well as detecting any impacts that may have migrated through the storm sewer corridor in J Street;
- Monitoring wells MW-25 and D-10 will be installed on the Steeler property (west of MW-13);
- MW-26 will be installed east of MW-10;
- MW-27, MW-28 and D-11 will be installed on BNSF property upgradient from the property; and
- MW-29 and D-15 will be installed on the Rainer plywood (north of D-6 and MW-18).

All investigations activities will follow the June 4, 2010 *Remedial Investigation Sampling and Analysis Plan* and the May 2017 *Supplemental Remedial Investigation Work Plan*.

SCHEDULE

Right of way access with the City is currently being pursued, access with private property owners will be negotiated following Ecology's acceptance of the sample locations.

Right of Way access with the City of Tacoma is ongoing and anticipated to be completed by the end of March. Field work in the city right of ways is scheduled to commence by April 30, 2018. If this date cannot be met due to unforeseen circumstances an extension request should be provided to Ecology indicating any reasons for the delay and steps taken to address any issues with the proposed schedule.

The schedule for completion of the borings and wells on private property is dependent on the negotiation and signing of access agreements between Chevron and these parties. Ecology will be updated in monthly status reports as to the progress of these agreements. A firm schedule will be proposed once access is obtained.

Thank you for reviewing this Work Plan Addendum. Please direct any questions or comments to Don Wyll (Leidos Principal Project Manager) at 425-482-3315 or wylld@leidos.com.

Sincerely,

Leidos. Inc.



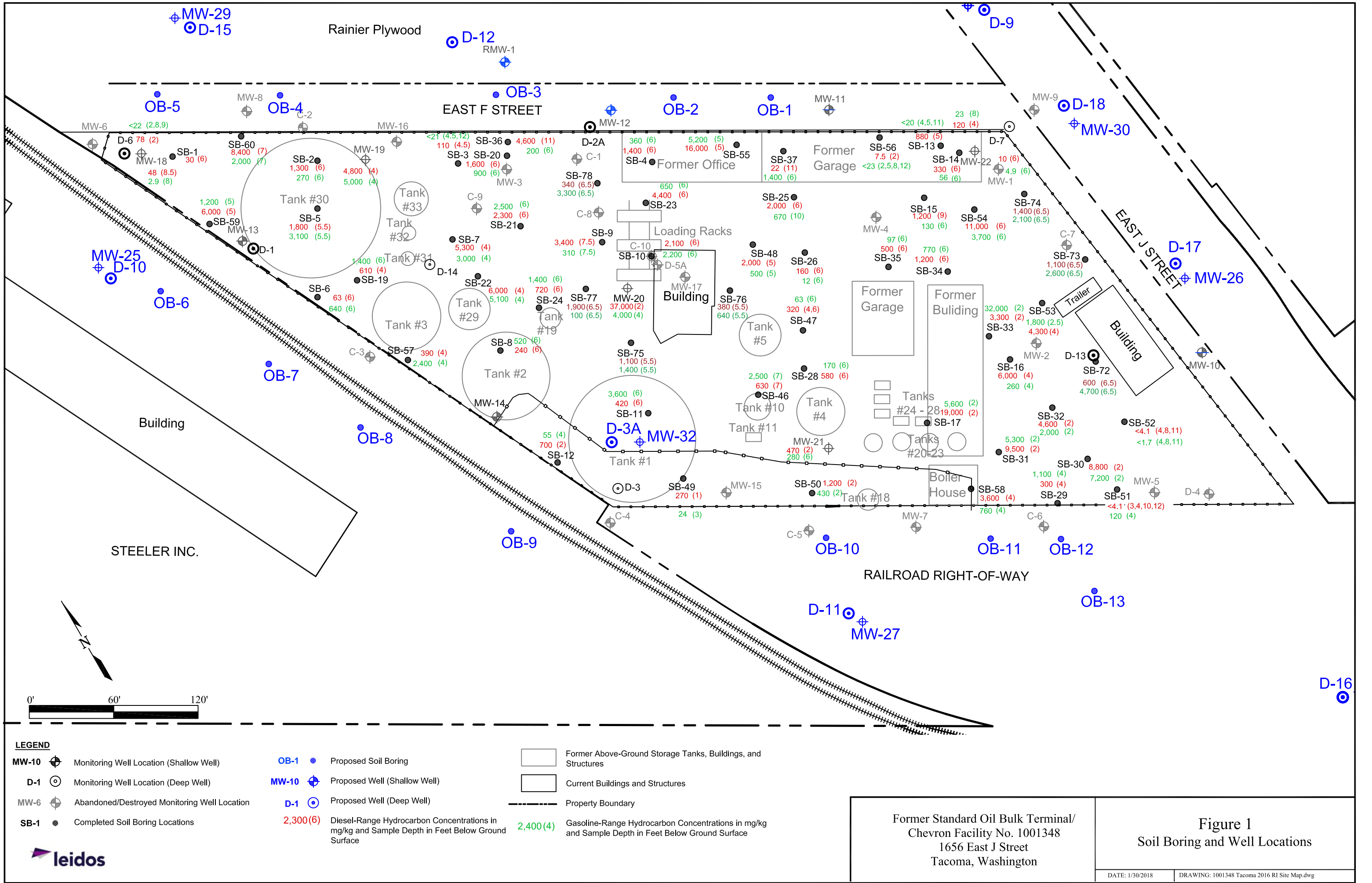
Don Wyll
Principal Project Manager

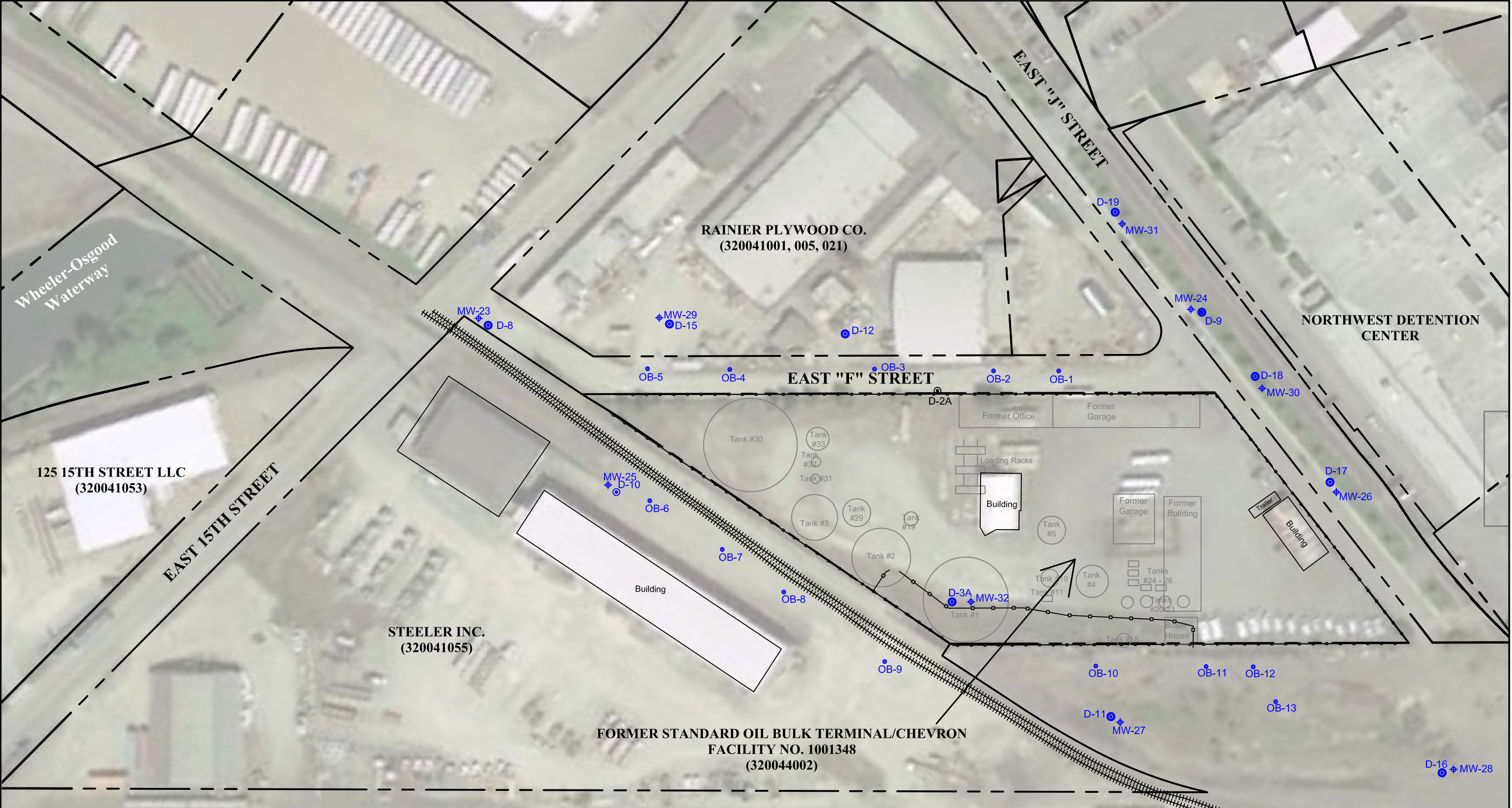
Enclosures:

Figure 1. Proposed Soil Boring Locations

Figure 6. Proposed Monitoring Well Locations

Geologic Cross Section A-A'

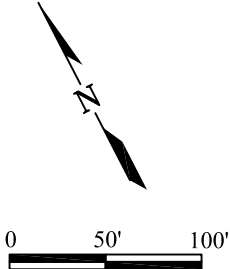




LEGEND

- Former Above-Ground Storage Tanks, Buildings, and Structures
- Current Buildings and Structures
- Parcel Boundary

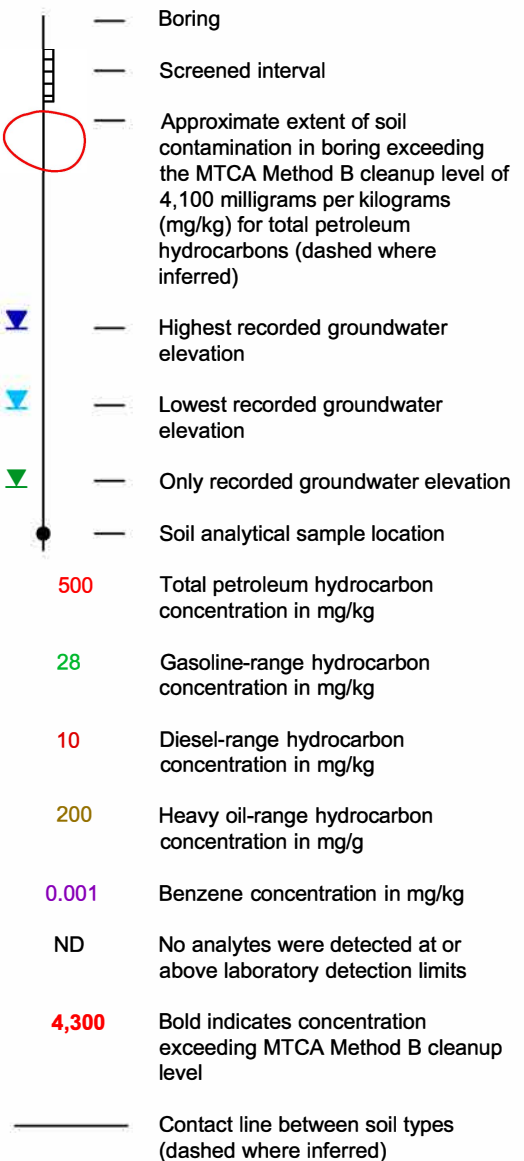
- Proposed Deep Aquifer Monitoring Well Location
- Proposed Shallow Aquifer Monitoring Well Location



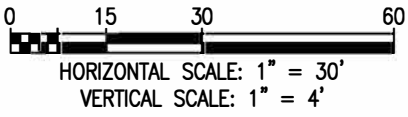
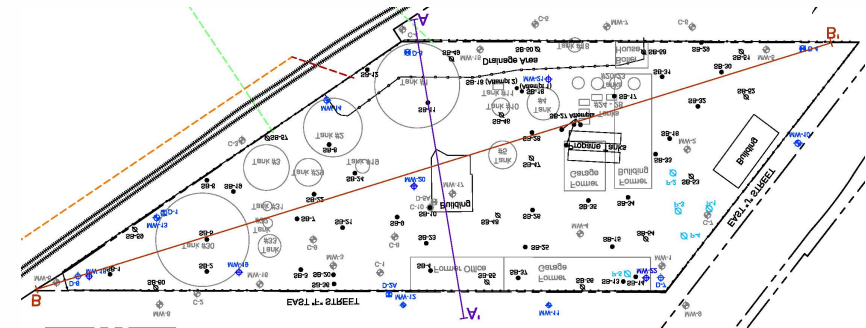
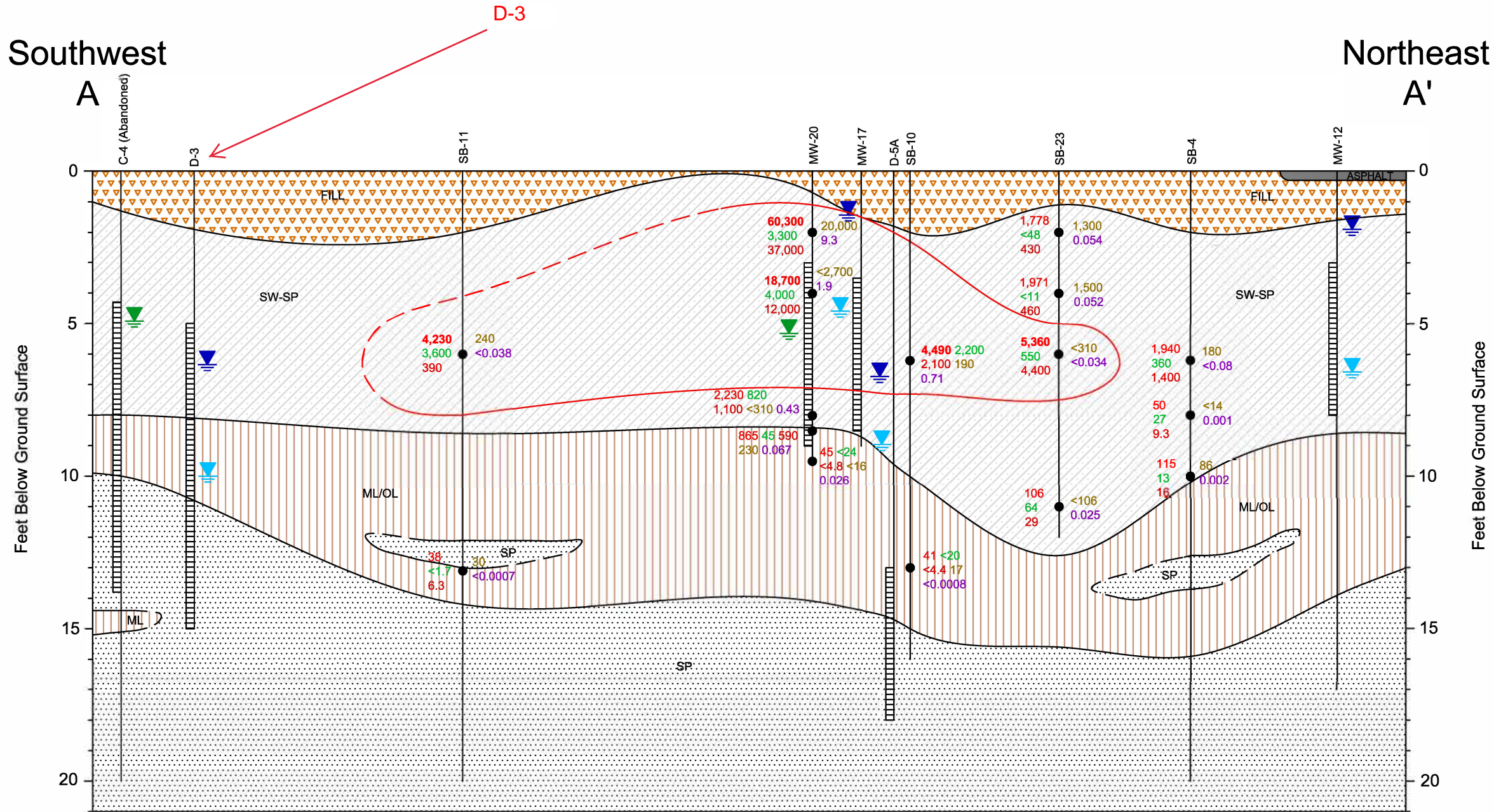
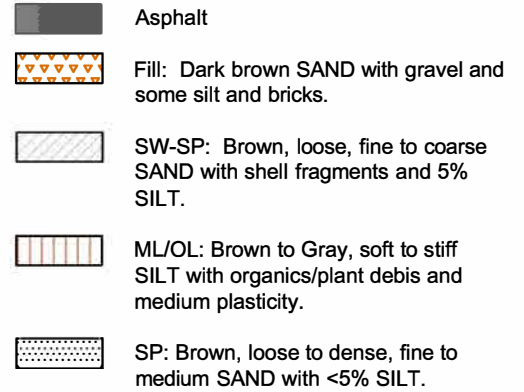
Former Standard Oil Bulk Terminal/
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Figure 6
Proposed Monitoring Well Locations

LEGEND:



SOIL/ROCK CLASSIFICATION LEGEND:



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Geologic Cross Section A-A'