STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Central Region Office
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

January 19, 2024

Audrey Bonafede
Phillips 66
3900 Kilroy Airport Way, Suite 210
Long Beach, CA 90806

Re: No Further Action Opinion for the Following Site:

- **Site name:** Unocal Bulk Plant 0766
- **Site address:** 511 Lincoln Avenue, Sunnyside
- **Facility/Site ID:** 539
- **Cleanup Site ID:** 1907
- **VCP Project No.:** CE0467

Dear Audrey Bonafede:

This letter supersedes the letter dated January 8, 2024.

The Washington State Department of Ecology (Ecology) received your request on June 9, 2021 for an opinion regarding the sufficiency of your independent cleanup of the Unocal Bulk Plant 0766 facility (Site) under the Voluntary Cleanup Program (VCP).[1] To provide an opinion, we requested additional information from you in writing on September 7, 2021. We received the additional information on March 14, 2022. This letter provides our opinion and analysis. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.[2]

Opinion

Ecology has determined that **no** further remedial action is necessary to clean up contamination at the Site.

Ecology bases this opinion on an analysis of whether the remedial action meets the substantive requirements of MTCA and its implementing regulations, which are specified in Chapter 70A.305 RCW and Chapter 173-340 WAC[3] (collectively called "MTCA"). The chosen cleanup alternative uses Model Remedy 5 from Ecology's Model Remedies for Sites with Petroleum Impacts to Groundwater.

[1] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

Site Description

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release(s):

- Diesel in soil and groundwater.
- Gasoline in soil and groundwater.

The GHD report titled "Cleanup Action Report Former Unocal Bulk Fuel Plant 0766," dated June 7, 2021 (referred to as GHD Cleanup Action Report, June 7, 2021) includes Site description, history, and diagrams.

Please note that releases from multiple sites can affect a parcel of real property. At this time, Ecology has no information that other sites affect the parcel(s) associated with this Site.

Basis for the Opinion

Ecology bases this opinion on the information contained in the following documents:

- GHD, "Cleanup Action Report," dated June 7, 2021[4]
- GHD, "Interim Action and Well Installation Report," dated September 20, 2019[5]
- GHD, "Site Assessment Work Plan," dated December 14, 2017[6]

You can request these documents by filing a records request.[7] For help making a request, contact the Public Records Officer at recordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check if the documents are available on the Unocal Bulk Plant 0766 web page.[8]

This opinion is void, if information in any of the listed documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no** further remedial action is necessary to clean up contamination at the Site. Ecology bases its conclusion on the following analysis:

Characterizing the Site

Ecology has determined your completed Site characterization is sufficient for setting cleanup standards and selecting a cleanup action.

[4] https://apps.ecology.wa.gov/cleanupsearch/document/101870
[5] https://apps.ecology.wa.gov/cleanupsearch/document/87011
[6] https://apps.ecology.wa.gov/cleanupsearch/document/69316
[7] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[8] https://apps.ecology.wa.gov/cleanupsearch/site/1907#site-documents

Site Characterization occurred for several years beginning with an assessment in 1989. A total of 82 soil samples ranging from 3 to 16 feet below ground surface (ft bgs) provides sufficient data to understand the nature and extent of contamination within the soil.

Samples from 14 groundwater monitoring wells adequately bounds the extent of groundwater contamination. Two soil vapor locations indicate there is no soil gas contamination and therefore vapor intrusion is not a concern. There is no surface water or sediments affected by the Site contamination. This means that the only media of concern are soil and groundwater.

Setting Cleanup Standards

Ecology has determined the cleanup levels and points of compliance you set for the Site meet the substantive requirements of MTCA.

Cleanup standards are meant to be protective of human health and the environment. Therefore, standard points of compliance for both soil and groundwater were selected. A mixture of MTCA Methods A and B were used at the site, as outlined in the GHD "Cleanup Action Report," dated June 7, 2021. Soil samples were compared to the generic MTCA Method B Cleanup Standards for total petroleum hydrocarbons (TPH) of 1,500 mg/kg and are based on direct contact with standard points of compliance. This is defined as all soils throughout the site from ground surface to 15 ft bgs. This standard is protective of groundwater and confirmed through empirical demonstration.

For groundwater, the MTCA Method A Cleanup Standards were chosen. The standard points of compliance for beneficial use of groundwater are defined as all groundwater from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the site. Site groundwater cleanup standards are:

- 800 µg/L for gasoline.
- 500 µg/L for diesel.

The established cleanup standards are protective of human health and the environment and meet the substantive requirements for Model Remedy No. 5 of Ecology's Model Remedies for Sites with Petroleum Impacts to Groundwater.

Selecting the Cleanup Action

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

Remedial action occurred through a series of interim actions starting in 1989 with limited over-excavation during removal of a heating oil underground storage tanks. Light non-aqueous phase liquid (petroleum floating on the groundwater surface, LNAPL) was removed with use of passive skimmers, absorbent socks, and vacuum trucks between 1990 and 2011.

The main remedial effort occurred in 2018 with excavation and disposal of the petroleum impacted soils from ground surface to 15 ft bgs (direct contact standard points of compliance). The 2018 effort included the application of an oxygen release compound to treat remaining contamination. 901 tons of petroleum contaminated soil and 8,138 gallons of groundwater from dewatering activities were appropriately disposed at an offsite location.

MTCA permits the use of the selected treatment options in WAC 173 340 360.[9]

Implementing the Cleanup Action

Ecology has determined your cleanup meets the standards set for the Site.

Prior to 2018 several interim actions occurred as part of remedial investigations. These interim actions consisted of contaminated soil excavation and removal. LNAPL was also removed using vacuum trucks and other technologies to separate petroleum from water.

2018 cleanup action consisted of soil excavation. The top 15 feet of soil was excavated extending from the eastern edge of the office building to approximately 30 to 34 feet east, and from the northern property boundary to approximately 57 feet south (approximate excavation boundaries are shown on the enclosed map, Enclosure A). An oxygen-release compound was applied before backfilling the excavation to treat the remaining contaminated soils. The excavation effort removed 901 tons of contaminated soil. These activities required dewatering which yielded 8,138 gallons of contaminated groundwater. The contaminated soil and groundwater were appropriately disposed of at an offsite location.

PetroFix™, a solution that absorbs petroleum hydrocarbons and enhances hydrocarbon biodegradation, was injected along the eastern edge of the office building in 2020. Confirmational samples indicate contamination no longer remains along the eastern edge of the office building.

The following provides the samples which exceeded cleanup standards and the subsequent samples that are indicative of current site conditions:

- Sample location TP-5 had an exceedance of TPH at 8 ft bgs of 15,000 mg/kg (sample ID TP-5-S-2), following excavation TPH is 940 mg/kg at 10 ft bgs (sample ID TP-5-S-3).
- Sample location B-1 had a diesel exceedance of 9,150 mg/kg at 8.5 ft bgs (sample ID B-1-8.5), following excavation diesel measured 106 mg/kg at 14 ft bgs (sample ID S-101118-EM-NW-14, location NW).
- Sample location B-10 had a diesel exceedance of 16,200 mg/kg at 7.5 ft bgs (sample ID B-10-7.5), following excavation diesel measured 10.2 mg/kg at 10.5 ft bgs (sample ID B-10-10.5)
- Sample location 22 had gasoline exceedances of 3,850 mg/kg and diesel of 18,200 mg/kg (sample ID S-101018-EM-22-7), following excavation gasoline and diesel were not detected at 9 ft bgs (sample ID SO-11145922-040419-BP-MW-11-9, location MW-11).

[9] https://app.leg.wa.gov/wac/default.aspx?cite=173-340-360

- Sample location 16 had a diesel exceedance of 10,300 mg/kg at 7 fbgs (sample ID S-101018-EM-16-7), this location was excavated to 15 ft bgs (direct contact standpoints of compliance).
- Sample location 24 exceeds the MTCA Method A Cleanup Level of 100 mg/kg for gasoline but meets the Site's generic TPH Method B Cleanup Level of 1500 mg/kg.

The last four quarters of groundwater sampling returned concentrations below site cleanup standards. Groundwater monitoring wells MW-1, MW-2, MW-4, MW-5, MW-9, and MW-13 have never exceeded Site cleanup standards. Monitoring wells MW-3A, MW-6, MW-7, and MW-8 were decommissioned in 2015 and all recorded contamination above cleanup standards prior to the 2018 cleanup action. Monitoring wells MW-10, MW-11, and MW-12 were installed after the 2018 cleanup action and recorded concentrations of contaminants above Site cleanup standards but have not exceeded cleanup standards since the 2020 PetroFix™ treatment. Monitoring wells MW-10 and MW-11 were installed within the 2018 soil excavation boundaries and represent the current Site groundwater conditions.

You must decommission resource protection wells[10] installed as part of the remedial action that are not needed for any other purpose at the Site. Wells must be decommissioned in accordance with WAC 173-160-460.[11]

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from its lists of contaminated sites, including the:

- Hazardous Sites List
- Confirmed and Suspected Contaminated Sites List.

That process includes providing public notice and the opportunity to comment. Based on the comments received, Ecology will either remove the Site from the applicable lists or rescind this opinion.

Limitations of the Opinion

Opinion does not settle liability with the state

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion does not:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).[12]

[10] https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-410
[11] https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-460
[12] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040

Opinion does not constitute a determination of substantial equivalence

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine if the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080[13] and WAC 173-340-545.[14]

State is immune from liability

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70A.305.170(6).[15]

Termination of Agreement

Thank you for cleaning up the Site under the VCP. This opinion terminates the VCP Agreement governing VCP Project No. CE0467.

Questions

If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at 509-406-6959 or email at kyle.parker@ecy.wa.gov.

Sincerely,

Kyle Parker
Central Regional Office
Toxics Cleanup Program

Enclosures (1): A – Site Description, History, and Diagrams

cc: Kinga Kozlowska, GHD Services, Inc.
Ed Ralston, Phillips 66 Company
Fiscal, VCP Fiscal Analyst
TCP, Operating Budget Analyst

[13] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080
[14] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545
[15] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170

Enclosure A

Site Description, History, and Diagrams

Site Description

Petroleum impacted soil was discovered during a 1989 investigation for a potential property transfer. Monitoring wells and test pits indicated impacts of gasoline and diesel to both soil and groundwater. Contamination was encountered from the office building to approximately 30 to 34 feet east, and from the northern property boundary to approximately 57 feet south (the approximate excavation boundaries are shown on enclosed map, Enclosure A) and extends deeper than 15 feet below ground surface.

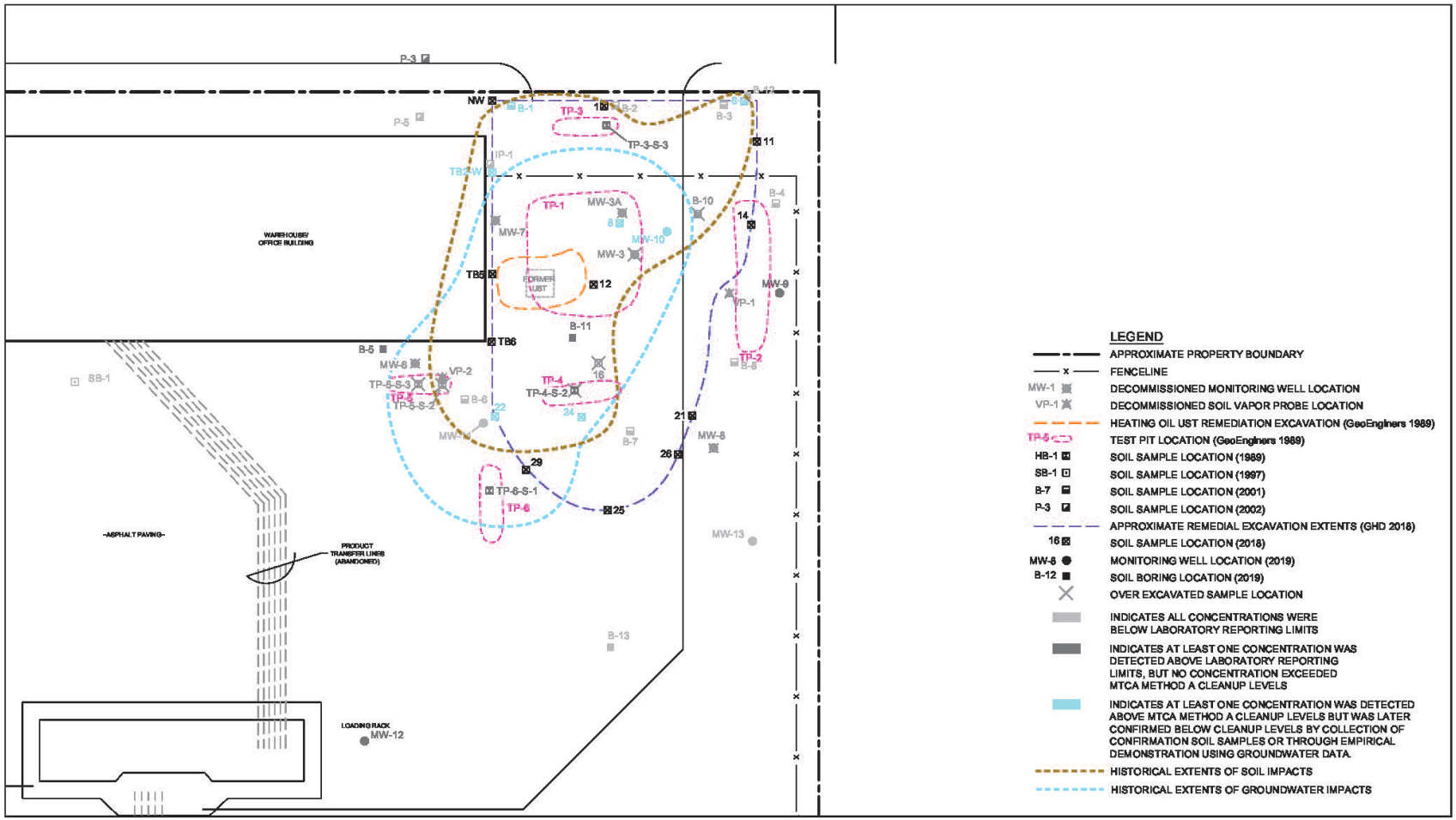
The Site property is zoned as industrial, and surrounding properties are zoned as industrial to the west, commercial to the north, and residential to the east and south. The Site required a simplified Terrestrial Ecological Evaluation (TEE) due to there being more than 1.5 acres of contiguous undeveloped land within 500 feet of the Site. Nearby surface water includes a Sulfur Creek Wasteway drainage ditch.

Site History

The Site operated as a bulk fuel facility which included aboveground storage tanks (ASTs), a heating oil underground storage tank (UST), an oil/water separator UST, and a waste oil AST. Gasoline and diesel were released to the soil and groundwater due to Site operations. The property currently operates as a fertilizer storage facility.

Site investigations commenced in 1989 as part of a potential property transfer and the heating oil UST was removed. Limited over-excavation occurred at this time resulting in removal of 90 cubic yards of impacted soil. LNAPL removal activities occurred between 1990 and 2011 and included hand bailing, passive skimming, absorbent socks, and vacuum truck fluid recovery events. The volume of LNAPL removed is unknown. Excavation of the top 15 feet of contaminated soil occurred in 2018 removing 901 tons of contaminated soil. These activities required dewatering which yielded 8,138 gallons of contaminated groundwater. PetroFix^{TM} was injected to treat remaining soil and groundwater contamination in 2020. Groundwater was monitored until May 2021, when current wells completed four consecutive clean quarters of sampling.

Site Diagrams



Source: ARCADIS, FIGURE 2, SITE PLAN.

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PHILLIPS 66 AOC 5888
511 E LINCOLN AVENUE
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May 17, 2021

CURRENT SOIL CONDITIONS MAP

FIGURE 10

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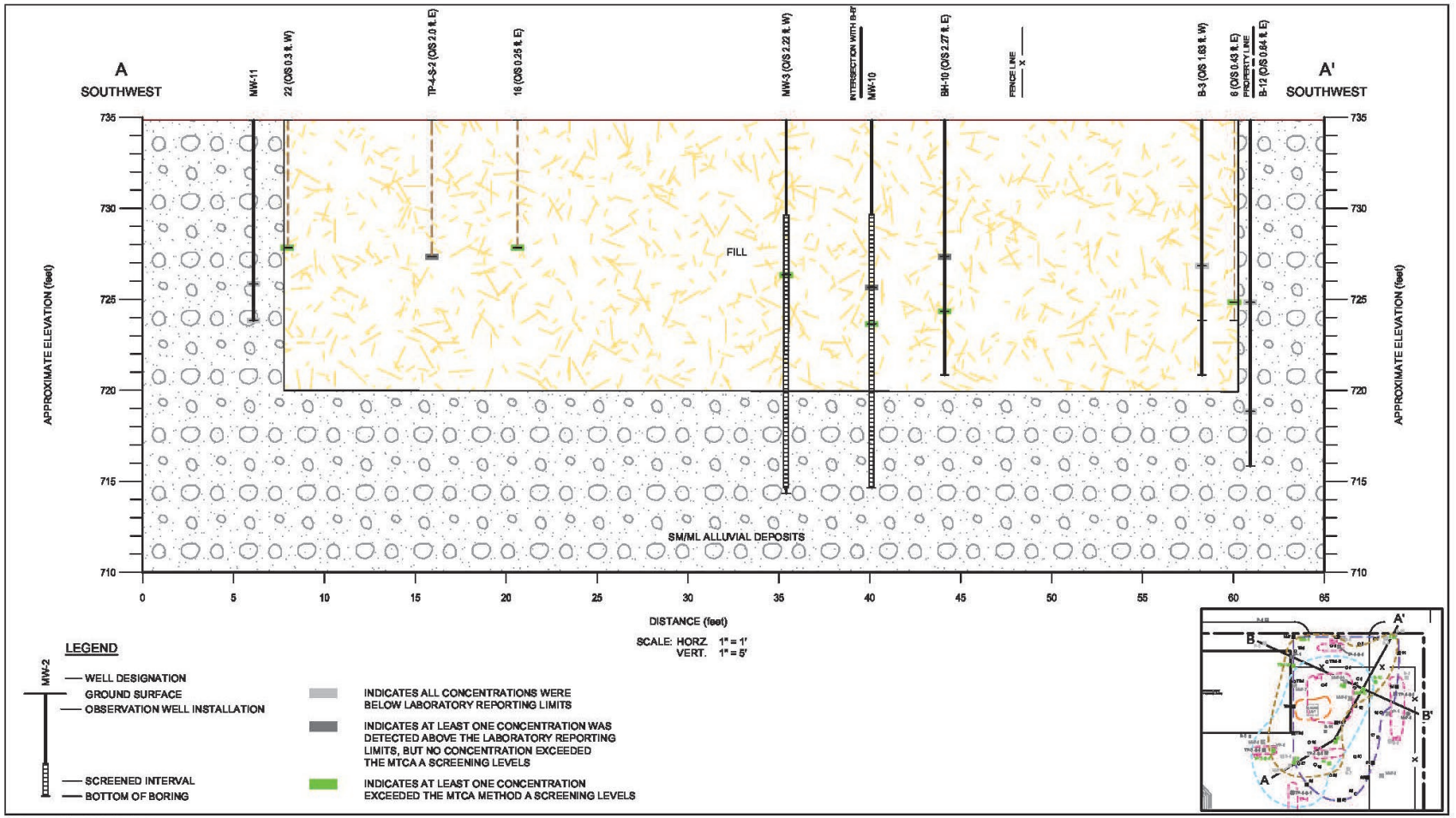

Source: ARCADIS, FIGURE 2, SITE PLAN.

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CROSS-SECTION A - A'

FIGURE 6

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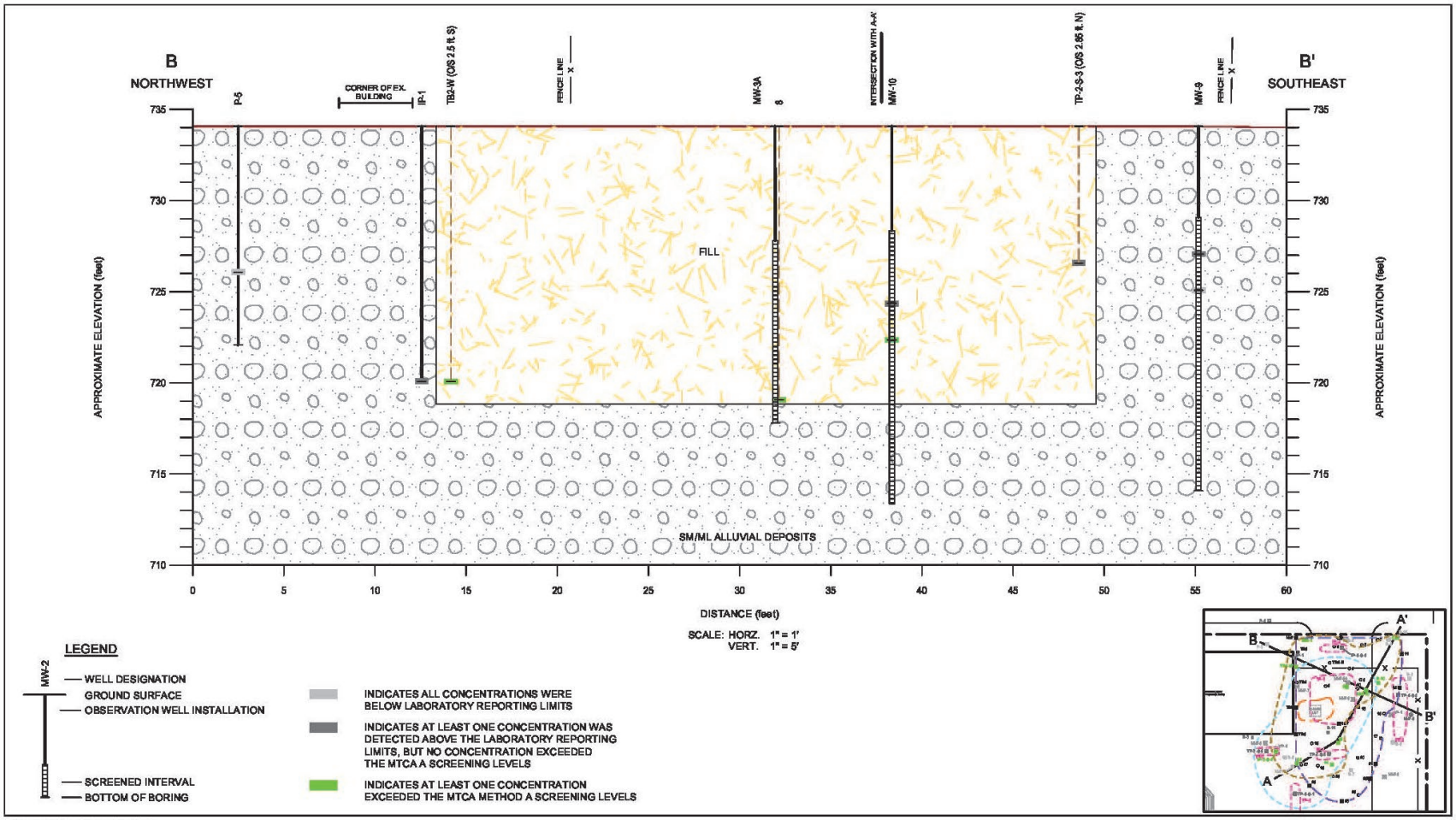

Source: ARCADIS, FIGURE 2, SITE PLAN.

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CROSS-SECTION B - B'

FIGURE 7

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