



Explanation of Significant Differences Lakewood - Ponders Corner Superfund Site Lakewood, Washington

I. Introduction

This decision document presents an Explanation of Significant Differences (ESD) for operable unit (OU) 1 of the Lakewood-Ponders Corner Superfund Site (Site), located in the city of Lakewood in Pierce County, Washington. The previous decision documents issued by the United States Environmental Protection Agency (EPA) for the Site include the following:

- Interim Record of Decision (IROD), Initial Remedial Measure Alternative Selection, Ponders Corner, WA. EPA Region 10. June 1, 1984.
- Record of Decision (ROD), Remedial Alternative Selection, Ponders Corner. EPA Region 10. September 30, 1985.
- Record of Decision Amendment (RODA), Remedial Alternative Selection, Ponders Corner, WA. EPA Region 10. November 14, 1986.
- Explanation of Significant Differences, Lakewood\Ponders Corner. EPA Region 10. September 15, 1992.

The Site consists of two OUs. OU1 addresses groundwater and OU2 addresses soil. This ESD addresses only the groundwater OU (OU1). The soil OU (OU2) has been cleaned up to allow for unlimited use and unrestricted exposure (UU/UE) and will not be addressed in this ESD.

This ESD is issued in accordance with Section 117(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9617(c), and Section 300.435(c)(2)(i) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 300.435(c)(2)(i). This ESD is part of the Administrative Record for the Site as prescribed by Section 300.825(a)(2) of the NCP, 40 C.F.R. § 300.825(a)(2), and which has been developed in accordance with Section 113 (k) of CERCLA, 42 U.S.C. § 9613 (k).

The Administrative Record (or Site file) is available at:

<https://www.epa.gov/superfund/lakewood>;

U.S. EPA Region 10, 16th Floor Records Center, 1200 Sixth Avenue Suite 155, Seattle, WA 98101, Monday - Friday, 7:30 a.m. to 4:30 p.m.

and at:

<https://apps.ecology.wa.gov/gsp/CleanupSiteDocuments.aspx?csid=735>

Washington State Department of Ecology Repository

II. Statement of Purpose

The purpose of this ESD is to document a final decision to supplement the groundwater institutional control (IC) of public outreach and education identified in the 1985 ROD, 1986 RODA and 1992 ESD with an IC consisting of local regulatory requirements that are designed to limit the installation of private wells in areas of contaminated groundwater.

EPA is issuing this ESD because it has been determined that the changes to the selected remedy are significant, but do not fundamentally alter the remedy with respect to scope, performance, or cost.

III. Site History and Contamination

Site Background

The Site is located south of Tacoma in the city of Lakewood in Pierce County, Washington (Figure 1). The Site consists of the former Plaza Cleaners property and groundwater contamination resulting from historical operations of the Plaza Cleaners dry cleaning and laundry business. An electrical supply and lighting company and an automobile towing yard now operate at the former dry-cleaning business property, located at 12511 Pacific Highway Southwest. The Site is in a commercial and light industrial area adjacent to Interstate 5 (I-5), a six-lane highway. Multi-family residential areas are located south of I-5 and about one-tenth of a mile north and northwest of the former dry-cleaning property. The city of Lakewood has two active water supply wells located south of I-5 and approximately 800 feet southeast of the contaminant source area at the Site. McChord Air Force Base (part of what is now called Joint Base Lewis/McChord, or JBLM) is located about a quarter mile south and upgradient of the former Plaza Cleaners (Figure 1).

The groundwater underlying the Site is a drinking water source. Residents and businesses in the area rely on water from the Lakewood Water District public water supply, which obtains some of its water from supply wells H1 and H2, located immediately downgradient of the former Plaza Cleaners. The remedy for OU1 included the treatment of water extracted in wells H1 and H2. Wellhead treatment at H1 and H2 continues to remove contamination from groundwater prior to distribution by the Lakewood Water District. There are no known private water wells at the Site which could extract water from the contaminated groundwater plume. Tacoma-Pierce County regulations enacted in 2015 are designed to restrict the installation of wells within a contaminated groundwater plume. Regional groundwater flow is generally to the west-northwest towards Gravelly Lake; however, localized groundwater flow at the Site is influenced by pumping of Lakewood Water District drinking water supply wells H1 and H2.

The District temporarily removed supply wells H1 and H2 from service in August 1981 after EPA identified volatile organic contaminants (VOCs) in the wells. The Washington State Department of Ecology (Ecology) and Plaza Cleaners reached an agreement for remedial action in September 1983. Plaza Cleaners agreed to discontinue its prior solvent disposal practices, install a system for reclaiming cleaning solvents, send stored drummed waste water and contaminated soil to a suitable off-site disposal facility, and cooperate in the immediate cleanup of the sludge disposal areas. Plaza Cleaners successfully fulfilled the terms of the agreement.

On September 8, 1983 the Site was listed on the National Priorities List (NPL) established under Section 105 of CERCLA, 42 U.S.C. § 9605.

Groundwater Response Actions (OUI)

In June 1984, EPA issued the IROD to select groundwater treatment via air stripping at supply wells H1 and H2 as an Interim Remedial Measure (IRM) for the Site. EPA implemented the IRM to address the most immediate threats to public health posed by potential exposure to contaminated groundwater. The primary objectives of the IRM were to:

- Restrict the spread of contamination in the aquifer to reduce ultimate cleanup needs and to protect the quality of other wells' water supply;
- Restore full water service to the area of the Lakewood Water District that is adversely affected by the shutdown of wells H1 and H2; and
- Initiate groundwater treatment as soon as practical.

By November 1984, EPA had implemented the IRM by installing and operating two air strippers to treat pumped groundwater from wells H1 and H2. No ICs were selected in the IROD.

EPA conducted a remedial investigation/feasibility study (RI/FS) between August 1984 and July 1985 to further determine the extent of groundwater contamination at the Site, test the soil at Plaza Cleaners for remaining contaminants, and determine whether other sources besides Plaza Cleaners were contributing to the groundwater contamination. Based on the RI/FS results, EPA selected a final remedy in September 1985.

Site Contamination

The contaminants found in groundwater at the Site include tetrachloroethylene (PCE), trichloroethylene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE). The contaminants of concern at the Site are hazardous substances as defined in Section 104(14) of CERCLA, 42, U.S.C. § 9601(14), and 40 C.F.R. § 302.4. Lakewood water supply wells H1 and H2 are affected by Site contamination and, with assistance from EPA and Ecology, the Lakewood Water District has been treating groundwater from these wells since 1984. Figure 2 provides an aerial view of the Site. Figure 3 identifies the approximate extent of the contaminant plume based on 2016 monitoring results.

IV. Selected Remedy

The ROD was signed and issued by EPA on September 30, 1995. The selected remedy in the ROD was modified by the RODA that was signed and issued by EPA on November 14, 1986, and an ESD that was signed and issued by EPA on September 15, 1992. The remedial action objectives (RAOs) for groundwater, as defined in the 1985 ROD were to:

- Evaluate the potential health risks associated with the no-action alternative, which assumes the status quo of stripping towers operation continued;
- Reduce potential health risks associated with on-site excavation and use of contaminated groundwater below those for the no-action alternative;

- Meet requirements of other environmental regulations; and
- Increase the efficiency of the existing IRM, to reduce energy requirements and thereby reduce costs.

The groundwater remedy selected in the 1985 ROD consisted of:

- Continued operation of the H1 and H2 wellhead treatment system. The aquifer cleanup level was deferred to a later decision.
- Installation of variable-frequency controllers on well pump motors and fan drives on the motors of the treatment system.
- Installation of additional monitoring wells, upgrade of existing wells and continued sampling of the aquifer to monitor progress and provide early warning of potential new contaminants.
- Placement of administrative restrictions on the installation and use of wells to minimize the potential for use of contaminated groundwater.

The administrative restrictions/institutional controls (ICs) were described as follows:

- The remedy includes the maintenance of ICs with which to prohibit withdrawals of groundwater from the area of the plume of contamination. (Declaration)
- The administrative restrictions ... would include a limitation of the installation of new drinking water wells in the area. (p. 48, Alternatives Analysis)
- Implement administrative restrictions on wells to restrict uncontrolled use of the contaminated aquifer. (p. 50, Table 16)

The 1986 RODA modified the soil component of the selected remedy but did not change the RAOs or remedy for groundwater. The IC requiring administrative controls restricting the installation of new wells remained in place.

The 1992 ESD:

- Established groundwater cleanup goals for PCE, TCE and cis-1,2-DCE as identified in Table 1; and
- Maintained the administrative groundwater use restrictions identified in the 1985 ROD.

Table 1: Groundwater COC Cleanup Levels

| Contaminants of Concern | Cleanup Goal (micrograms per liter, µg/L) | Basis |
|--|--|-------|
| PCE | 5 | MCL |
| TCE | 5 | MCL |
| cis-1,2-DCE | 70 | MCL |
| MCL: Safe Drinking Water Act Maximum Contaminant Level | | |

V. Description of Significant Differences and Basis for the ESD

ICs must be implemented at the Site because hazardous substances, pollutants, or contaminants remain in groundwater above levels that allow for UU/UE. The ICs will protect against exposure to this contamination.

The 1985 human health risk assessment identified future exposure to contaminants from drinking untreated water as a potential human health concern. However, exposure to contaminated drinking water was not identified as a contemporary concern in 1985 because there were no known private drinking water wells within the contaminated aquifer and the Lakewood Water District was supplying treated water to all residences and businesses at and near the Site.

The 1985 ROD included an IC requirement to place administrative restrictions on the installation and use of new wells within the area of the contamination plume to minimize the potential use of contaminated groundwater. This IC was not changed by the RODA. The 1992 ESD determined that public education and outreach were the administrative ICs that were sufficiently protective of human health such that other ICs, i.e. deed restrictions, were not necessary.

No changes to the groundwater exposure pathways or use of individual wells have been identified in the six Five Year Reviews performed to date. An evaluation conducted in support of this ESD identified nine (9) parcels of property that overlie the contaminant plume, and eight (8) of these parcels are being serviced by the Lakewood Water District public water system. The lone parcel of property, a 13,000 square foot vacant parcel void of structures, that is not connected to the public water system has no known individual groundwater wells (Table 2).

All groundwater contaminated by Site sources is within the area of influence of two public water supply wells, H1 and H2, and thus the groundwater flows towards those wells. These two wells are being managed to limit the extent of the contamination plume. The water extracted from wells H1 and H2 continues to be treated prior to delivery by the Lakewood Water District public water supply system and is required to meet drinking water standards under the Safe Drinking Water Act (SDWA). The Tacoma-Pierce County Health Department (Health Department) requires by regulation (Tacoma-Pierce County Environmental Health Code (Chapter 3, Water Regulations; April 1, 2015) that new wells be subject to approval by the Health Department prior to drilling, and that such approval may be withheld for wells or well sites which are subject to known or potential sources of contamination.

While no new wells have been drilled in the area of concern for at least 35 years and local regulations in-place since 2015 restrict drilling new wells in areas subject to known or potential sources of contamination, in order to further ensure long-term protectiveness, the public will continue to be periodically notified of the presence of the groundwater contamination and advised against the use of contaminated groundwater. At a minimum, such notification will be provided at least once every five years and will be mailed to all property owners whose land overlies the contaminant plume. The Health Department will also be contacted to ascertain whether there has been installation of any individual drinking water wells at the Site or land use changes which potentially impact the use of wells. These activities will be implemented as part of the Operation and Maintenance (O&M) activities for the Site and documented in five-year reviews.

The absence of private drinking water wells within the area of concern and the continued treatment of water extracted from wells H1 and H2 serve to limit the potential exposure to contaminated groundwater. The local regulations adopted after the ROD was signed in 1985 in conjunction with a public outreach and education program will ensure there are no human exposure pathways to the contaminated groundwater at the Site.

The combination of ICs is protective of human health and the environment. Therefore, for the purpose of having ICs which minimize the risk of exposure to contaminated groundwater, the government controls identified in this ESD supplement the administrative controls identified in the ROD and 1992 ESD.

Table 3: Summary of Institutional Controls (ICs)

| Media, engineered controls, and areas that do not support UU/UE based on current conditions | IC Currently Needed | Decision Document | Impacted Parcel(s) | IC Objective | Title of IC Instrument Implemented and Date (or planned) |
|--|----------------------------|--------------------------|--|--|--|
| Groundwater | Yes | 2019 ESD | Parcels that overlie groundwater contamination | Restrict exposure to untreated drinking water | Tacoma-Pierce County Health Department Environmental Health Code Chapter 3, Water Regulations, April 1, 2015; Periodic notice to public |
| Groundwater | Yes | 1992 ESD | Parcels that overlie groundwater contamination | Educate public of risks from drinking contaminated groundwater | Outreach described in 2019 ESD |

VI. Support Agency Comments

EPA consulted with Ecology and provided Ecology the opportunity to comment on this ESD in accordance with Section 300.435(c)(2) of the NCP, 40 C.F.R. § 300.435(c)(2), and Section 121(f) of CERCLA 42 U.S.C. § 9621(f). Ecology did not provide any comments.

VII. Statutory Determinations

EPA has determined that the significant changes to the remedy identified in this ESD together with the unaltered portions of the remedial action for the Site comply with the statutory requirements of Sections 104 and 121 of CERCLA , 42 U.S.C. §§ 9604 & 9621, are protective of human health and the environment, comply with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, are cost-effective, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

Because the remedy will continue to result in hazardous substances, pollutants, or contaminants remaining on Site above levels that allow for UU/UE until groundwater cleanup levels have been achieved through treatment, a statutory review will continue to be conducted no less often than

Because the remedy will continue to result in hazardous substances, pollutants, or contaminants remaining on Site above levels that allow for UU/UE until groundwater cleanup levels have been achieved through treatment, a statutory review will continue to be conducted no less often than each five years after the initiation of the remedial action to ensure that the remedy is, and will continue to be protective of human health and the environment.

VIII. Public Participation

The public participation requirements set out in Section 300.435(c)(2) of the NCP, 40 C.F.R. § 300.435(c)(2), have been met by publishing this ESD, making it available to the public in the Site File, and publishing a notice summarizing the ESD in a major local newspaper. The public notice and this ESD are available at the repository listed in Section 1.0. Ecology and the Lakewood Water District have been notified of this ESD.

IX. Authorizing Signature

I have determined the remedy for the Site, as modified by this ESD, is protective of human health and the environment, and will remain so provided the actions presented in this ESD are implemented as described above.

This ESD documents the significant changes related to the remedy for the Site. EPA selected these changes after providing Ecology with the opportunity to comment.

U.S. Environmental Protection Agency
Region 10

By: 

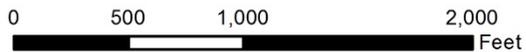
Date: 9/3/19

David Allnutt
Acting Director
Superfund and Emergency Management Division

Attachments

Figures 1 – 3
Table 2
References

Figure 1: Site Vicinity Map



Sources: Final Lakewood/Ponders Corner Superfund Site Well Installation Trip Report 2016, Esri, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo and the GIS User Community.

Legend

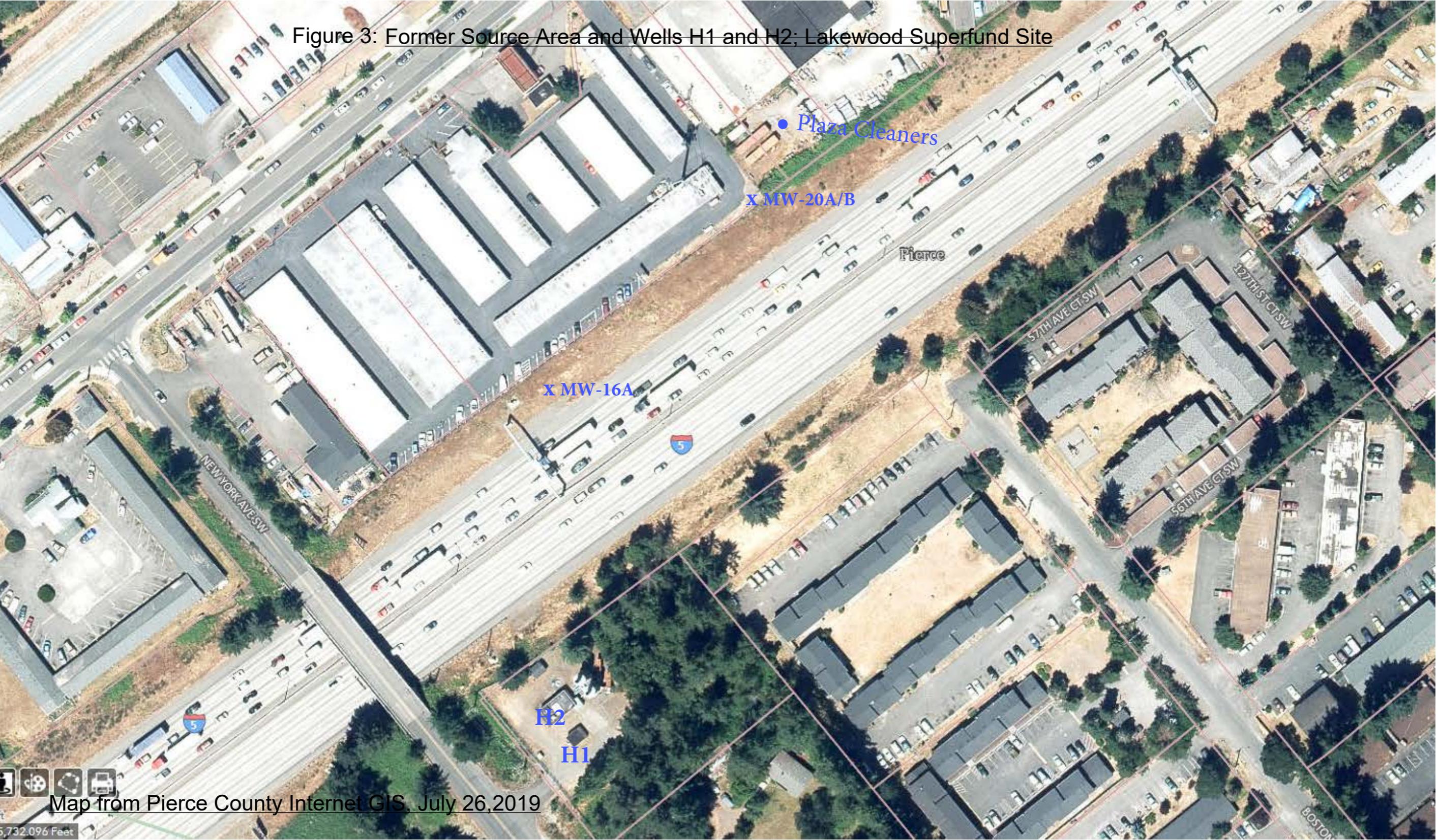
- Lakewood Water District Water Supply Well



Lakewood-Ponders Corner Superfund Site
City of Lakewood, Pierce County, Washington

Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site.

Figure 3: Former Source Area and Wells H1 and H2; Lakewood Superfund Site



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Table 2: Parcels Above the 2016 PCE Plume; Lakewood - Ponders Corner Superfund Site

| ID | Parcel | Current Use | Water | Size (acres) | Zoning (2019) | Address | Location Relative to 2016 PCE Plume & Source Area | Location relative to Extraction Wells |
|--|------------|----------------|-----------|--------------|---------------|--------------------------|--|---------------------------------------|
| 1 | 0219113007 | Retail | Installed | 0.51 | Commercial | 12621 Pacific Highway SW | Adjacent to area of concern | N of wells; across I-5 |
| 2 | 0219113055 | Public Storage | Installed | 0.71 | Commercial | 12611 Pacific Highway SW | SE corner w/in area of likely concern | N of wells; across I-5 |
| 3 | 0219114172 | Public Storage | Installed | 2.25 | Commercial | 12611 Pacific Highway SW | Source area in SE corner | N of wells; across I-5 |
| 4 | 0219114217 | Commercial | Installed | 0.49 | Commercial | 12521 Pacific Highway SW | South third @ level of concern; adjacent to source | N of wells; across I-5 |
| 5 | 0219114218 | Commercial | Installed | 1.18 | Commercial | 12521 Pacific Highway SW | Adjacent to area of concern | N of wells; across I-5 |
| 6 | 0219114116 | Water District | Available | 1.15 | Multi-Family | 5612 New York Ave SW | Location of extraction wells | Location of wells |
| 7 | 0219114018 | Vacant | No | 0.3* | Multi-Family | xxx I-5 Highway N | West half w/in area of likely concern | Adjacent; East of wells |
| 8 | 0219141004 | Residence | Installed | 1.16 | Multi-Family | 5721 McChord Drive SW | Adjacent to area of concern | Adjacent; South of wells |
| 9 | 0219114158 | Apartments | Installed | 1.82 | Multi-Family | 5628 Boston Ave SW | Northwest corner w/in area of likely concern | Adjacent; East of wells |
| Source: Pierce County Assessor-Treasurer electronic Information Profil; https://epip.co.pierce.wa.us/CFApps/atr/ePIP/search.cfm ; July 26, 2019. | | | | | | | | |
| *0.3 acre = 13,067 sq ft | | | | | | | | |

References

Record of Decision, Initial Remedial Measure Alternative Selection, Ponders Corner, WA. EPA Region 10, June 1, 1984.

Record of Decision, Ponders Corner, WA, EPA Region 10. September 30, 1985.

Amended Record of Decision, Remedial Alternative Selection, Ponders Corner, WA, EPA Region 10, November 14, 1986.

Explanation of Significant Differences for the Lakewood Superfund Site, EPA Region 10, September 15, 1992.

Technical Memorandum, Review of current groundwater data from the Lakewood/Ponders Corner Superfund Site to determine if EPA needs to perform a mini-investigation to explain the increases in PCE from MW-16A; From Bernie Zavala, EPA Office of Environmental Review and Assessment, to Chris Cora, Office of Environmental Cleanup. August 3, 2010.

Tacoma-Pierce County Health Department, Environmental Health Code Chapter 3, Water Regulations. April 1, 2015

Technical Memorandum, Groundwater Sampling and Hydraulic Monitoring at Lakewood/Ponders Corner Superfund Site, April – November 2016; From Bernie Zavala, EPA Office of Environmental Review and Assessment, to Tracy Chellis, Office of Environmental Cleanup. July 20, 2017

Sixth Five-Year Review Report for Lakewood/Ponders Corner Superfund Site, Pierce County, Washington, EPA Region 10. September 6, 2017.