



Third Periodic Review Short Stop Fuel

**1154 SW Basin Street, Ephrata, Grant County
Facility Site ID: 94125562, Cleanup Site ID: 6902**

Toxics Cleanup Program, Eastern Region

Washington State Department of Ecology
Spokane, Washington

September 2023

Document Information

This document is available on the Department of Ecology's [Short Stop Fuel cleanup site page](#).¹

Related Information

- Facility Site ID: 94125562
- Cleanup Site ID: 6902
- Underground Storage Tank (UST) ID: 4126
- Leaking Underground Storage Tank (LUST) ID: 2179

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¹ <https://apps.ecology.wa.gov/cleanupsearch/site/6902>

² <https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Toxics-Cleanup>

³ <https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility>

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region
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Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

| Region | Counties served | Mailing Address | Phone |
|---------------------|--|--|--------------|
| Southwest | Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum | PO Box 47775 Olympia, WA 98504 | 360-407-6300 |
| Northwest | Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom | PO Box 330316 Shoreline, WA 98133 | 206-594-0000 |
| Central | Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima | 1250 W Alder St Union Gap, WA 98903 | 509-575-2490 |
| Eastern | Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman | 4601 N Monroe Spokane, WA 99205 | 509-329-3400 |
| Headquarters | Across Washington | PO Box 46700 Olympia, WA 98504 | 360-407-6000 |

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Introduction

The Washington State Department of Ecology (Ecology) reviewed post-cleanup site conditions and monitoring data to ensure human health and the environment are being protected at the Short Stop Fuel cleanup site (Site). Site cleanup was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC). This is the third periodic review conducted for this Site. Ecology completed the first and second periodic reviews in February 2013 and March 2018.

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). Residual concentrations of petroleum hydrocarbons that exceeded MTCA cleanup levels remain on the property. The MTCA cleanup levels for soil and groundwater are established under WAC 173-340-7404 and WAC 173-340-720,5 respectively.

Ecology determined institutional controls in the form of an environmental covenant would be required as part of the cleanup action for the Site. WAC 173-340-420(2)6 requires Ecology to conduct a periodic review of certain sites every five years. For this Site, a periodic review is required because an institutional control is required as part of the cleanup action.

When evaluating whether human health and the environment are being protected, Ecology must consider the following factors (WAC 173-340-420(4)):

- a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the site
- b) New scientific information for individual hazardous substances or mixtures present at the site
- c) New applicable state and federal laws for hazardous substances present at the site
- d) Current and projected site and resource uses
- e) The availability and practicability of more permanent remedies
- f) The availability of improved analytical techniques to evaluate compliance with cleanup levels

Ecology publishes a notice of all periodic reviews in the *Site Register* and provides an opportunity for public comment.

⁴ <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-740>

⁵ <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-720>

⁶ <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420>

Summary of Site Conditions

Site description and history

The Site contains a convenience store, three underground storage tanks (USTs) (one 10,000-gallon gasoline, one 8,000-gallon unleaded gasoline, and one temporarily closed 12,000-gallon unleaded gasoline), and a pump island. The Site is bounded by Basin Street/Highway 28 and a vacant auto repair shop building to the west, 12th Avenue and a thrift store to the south, and a Safeway retail grocery store to the north and east.

Soils encountered at the Site include silty fine sand from 0.5 to 12 feet below ground surface (bgs), underlain by fine sandy silt to a depth of approximately 25 feet. Below the sandy silt is a 4-to-6-foot-thick sandy gravel layer with caliche cement located above sand with interbedded silt to depths of 33 to 43 feet. Groundwater was encountered at depths ranging from 33 to 35 feet bgs. Groundwater flow is to the south-southeast.

A vicinity map is in Appendix A, and a Site plan is in Appendix B.

Site investigations

In September 1990, three USTs were removed from the Site. The tanks consisted of two 10,000-gallon tanks (one leaded and one unleaded gasoline) and a 12,000-gallon premium leaded gasoline tank. Following removal of the USTs and associated piping, discolored soil was observed in the excavation. Nine soil samples were collected from the excavation from depths ranging from 13 to 18 feet bgs. Analytical results indicated two soil samples contained concentrations of TPH as gasoline and diesel up to a maximum concentration of 25,760 milligrams per kilogram (mg/kg). Groundwater was not encountered during excavation activities.

Approximately 260 cubic yards of contaminated soil was removed from the Site and transported to Central Washington Concrete in Ephrata for treatment.

A subsurface soil evaluation was initiated in September 1992 to evaluate potential petroleum hydrocarbon impacts to the Site. Soil borings were installed to depths ranging from 28 to 49.5 feet bgs. Thirty-seven soil samples from the soil borings were submitted for laboratory analyses. Gasoline and/or benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations exceeded MTCA Method A unrestricted land use soil cleanup levels in MW-2, MW-6, and MW-9, with gasoline-range petroleum hydrocarbon (GRPH) concentrations of 7,600; 1,000; and 730 mg/kg, respectively.

Eleven of the borings were converted to monitoring wells (MW-1 through MW-11). Groundwater samples were collected from MW-3 through MW-11 in November 1992. Gasoline and/or BTEX exceeded the cleanup levels in MW-3, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11, with concentrations up to 140,000 micrograms per liter (µg/L) for GRPH and 9,000 µg/L for benzene. Concentrations of diesel and lead were all non-detect or below cleanup levels.

Four off-Site borings (MW-12 through MW-15) were installed to approximately 45 feet bgs in January 1993 to determine the extent of contamination. Eight soil samples were collected from the borings and were analyzed for GRPH and BTEX. All results were non-detect. Groundwater samples were also collected from all existing monitoring wells during this sampling event. GRPH and/or BTEX exceeded cleanup levels in MW-3, MW-5, MW-7, MW-8, MW-9, and MW-11 with GRPH concentrations up to 2,000,000 µg/L.

Cleanup actions

In September 1992, approximately 1.98 feet of free product was observed in MW-2. A sample was collected and analyzed for hydrocarbon identification and lead. Results identified the product as unleaded gasoline. A bailing program was initiated to remove as much of the free product as possible. The well was bailed every other week through November. In November, product thickness was 0.33 feet.

A pump test was conducted on MW-6 in February 1993 to evaluate the feasibility of installing a pump and treat system at the Site. During pumping, approximately 0.08 feet of free product was measured in MW-6. Free product also appeared in MW-5 during the test (0.7 feet). Free product was not measured in MW-6 after the pump test, but remained in MW-2 and MW-5. In May 1993, free product was also observed in MW-7. Free product and groundwater sampling continued as an interim action through March 1994.

A soil and groundwater remediation system was installed in March 1995 and began operating in April 1995. The system consisted of four vacuum-enhanced pumping wells (MW-5, MW-7, MW-9, and MW-11) and one soil vapor extraction (SVE) well (MW-2). Extracted water (and LPH) entered an oil/water separator, and water was treated through an air stripper and discharged to the sanitary sewer. Extracted vapors were directed into a catalytic oxidizer for treatment before discharge to the air. Groundwater was extracted from MW-5, MW-7, MW-9, and MW-11.

Groundwater effluent samples were collected at weekly intervals for the first seven weeks of operation, at bi-weekly intervals for the next six weeks of operation, and at monthly intervals for the duration of remediation. During the first four months of operation, groundwater effluent samples were analyzed for GRPH, BTEX, and oil and grease. After the initial four-month period, effluent samples were analyzed only for GRPH and BTEX.

Groundwater monitoring

Quarterly groundwater monitoring was initiated in April 1995. All fourteen monitoring wells were sampled quarterly in 1995 and 1996. In January 1997, the monitoring program was revised to sample only 10 wells (MW-2 through MW-7, MW-9, MW-11, MW-12, and MW-15). Quarterly groundwater sampling was continued through September 2005. Petroleum hydrocarbons continued to be detected in MW-2, 6, 7, and 9 during various sampling events.

Concentrations were below cleanup levels for the final five monitoring events (July and October 2004, and January, April, and August 2005).

Cleanup standards

Cleanup standards include cleanup levels, the location where these cleanup levels must be met (point of compliance), and any other regulatory requirements that apply to the Site.

[WAC 173-340-704](https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-704)⁷ states MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used. Method B may be used at any site and is the most common method for setting cleanup levels when sites are contaminated with substances not listed under Method A. Method C cleanup levels may be used to set soil and air cleanup levels at industrial sites.

MTCA Method A cleanup levels for unrestricted land use were determined to be appropriate for contaminants at this Site. The cleanup actions conducted at the Site were determined to be routine, few hazardous substances were found at the Site, and numerical standards were available in the MTCA Method A table for each hazardous substance.

The point of compliance is the area where the cleanup levels must be attained. For soil cleanup levels based on the protection of groundwater, as they are for this Site, the point of compliance is established as soils throughout the Site (standard point of compliance).

The Site has a conditional point of compliance for groundwater, which was established at the property boundary.

Environmental Covenant

Ecology determined that institutional controls would be required as part of the cleanup action to document the remaining contamination, protect the cleanup action, and protect human health and the environment. On October 12, 2007, institutional controls in the form of an [environmental covenant](#)⁸ (Covenant) were recorded for the Site.

The Covenant recorded for the Site imposes the following limitations:

1. Any activity on the Property that may result in the release or exposure to the environment of the contaminated soil that was contained as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology. Some examples of activities that are so prohibited in the capped areas include: drilling, digging, placement of any objects or use of any equipment which

⁷ <https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-704>

⁸ <https://apps.ecology.wa.gov/cleanupsearch/document/72764>

deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.

2. Any activity on the Property that may interfere with the integrity of the Remedial Action and continued protection of human health and the environment is prohibited.
3. Any activity on the Property that may result in the release or exposure to the environment of a hazardous substance that remains on the Property as part of the Remedial Action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
4. The Owner of the property must give thirty (30) days advance written notice to Ecology of the Owner's intent to convey any interest in the Property. No conveyance of title, easement, lease, or other interest in the Property shall be consummated by the Owner without adequate and complete provision for continued monitoring, operation, and maintenance of the Remedial Action.
5. The Owner must restrict leases to uses and activities consistent with the Environmental Covenant and notify all lessees of the restrictions on the use of the Property.
6. The Owner must notify and obtain approval from Ecology prior to any use of the Property that is inconsistent with the terms of this Environmental Covenant. Ecology may approve any inconsistent use only after public notice and comment.
7. The Owner shall allow authorized representatives of Ecology the right to enter the Property at reasonable times for the purpose of evaluating the Remedial Action to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the Remedial Action.
8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this Environmental Covenant shall no longer limit use of the Property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

Periodic Review

Effectiveness of completed cleanup actions

During the Site visit Ecology conducted on June 14, 2023, the Site continues to be occupied by the Short Stop Fuel retail facility. The Site remains accessible to public foot traffic and vehicle traffic. The asphalt surface is in acceptable condition. Some cracking is evident that may allow infiltration of surface water through contaminated soils; however, an impermeable surface is not a requirement for the remedy at the Site. No repair, maintenance, or contingency actions have been required. A photo log is in Appendix C.

Direct contact

The cleanup actions were intended to eliminate exposure to contaminated soil and groundwater at the Site. Exposure pathways to contaminated soils by ingestion and direct contact were reduced by the asphalt surface cover. The method appears to be in satisfactory condition, and no repair or contingency actions are required at this time.

Protection of groundwater

Soils with petroleum at concentrations exceeding MTCA Method A cleanup levels remain at the Site; however, most of the contaminated soil source material has been removed. Groundwater samples collected from the Site contained GRPH contamination. A combination of groundwater treatment technologies was implemented to reduce free product and dissolved-phase contamination. By 2005, none of the groundwater monitoring wells at the Site contained petroleum hydrocarbon concentrations exceeding MTCA Method A cleanup levels for at least four consecutive quarters. Groundwater beneath the Site does not appear to contain contaminants at concentrations that pose a threat to human health or the environment.

Institutional controls

Institutional controls in the form of a Covenant were implemented at the Site in 2007. The Covenant remains active and discoverable through the Grant County Recorder's Office. Ecology found no evidence a new instrument has been recorded that limits the effectiveness or applicability of the Covenant. This Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup action and prohibits any use of the property that is inconsistent with the Covenant, unless approved by Ecology in advance. This Covenant ensures the long-term integrity of the cleanup action will be protected.

New scientific information for individual hazardous substances or mixtures present at the Site

There is no new relevant scientific information for the hazardous substances remaining at the Site.

New applicable state and federal laws for hazardous substances present at the Site

There are no new applicable or relevant state or federal laws for hazardous substances remaining at the Site.

Current and projected Site and resource uses

The Site is used for commercial purposes. There have been no changes in current or projected future Site or resource uses. The current Site use is not likely to have a negative impact on the protectiveness of the cleanup action.

Availability and practicability of more permanent remedies

The remedy implemented included containing hazardous substances, and it continues to be protective of human health and the environment. While more permanent remedies may be available, they are still not practicable at this Site.

Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the cleanup action were capable of detection below the selected MTCA cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

Conclusions

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, the cleanup action is determined to comply with cleanup standards under WAC 173-340-740(6)(f), since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- Groundwater compliance monitoring at the Site indicates all contaminants of concern are below MTCA cleanup levels.
- The Covenant for the property is in place and is effective in protecting human health and the environment from exposure to hazardous substances and the integrity of the cleanup action.

Based on this periodic review, Ecology has determined the requirements of the Covenant are being followed. No additional cleanup actions are required by the property owner at this time. The property owner is responsible for continuing to inspect the Site to ensure the integrity of the cleanup action is maintained such as the surface cover/cap.

Next review

Ecology will schedule the next review for the Site five years from the date of this periodic review. If additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years after those activities are completed.

References

RZA Agra, Inc. *Remedial Investigation/Feasibility Study*. October 1993.

GeoEngineers. *Ground Water Monitoring Report*. December 15, 1997.

Ecology. *Environmental Covenant*. October 12, 2007.

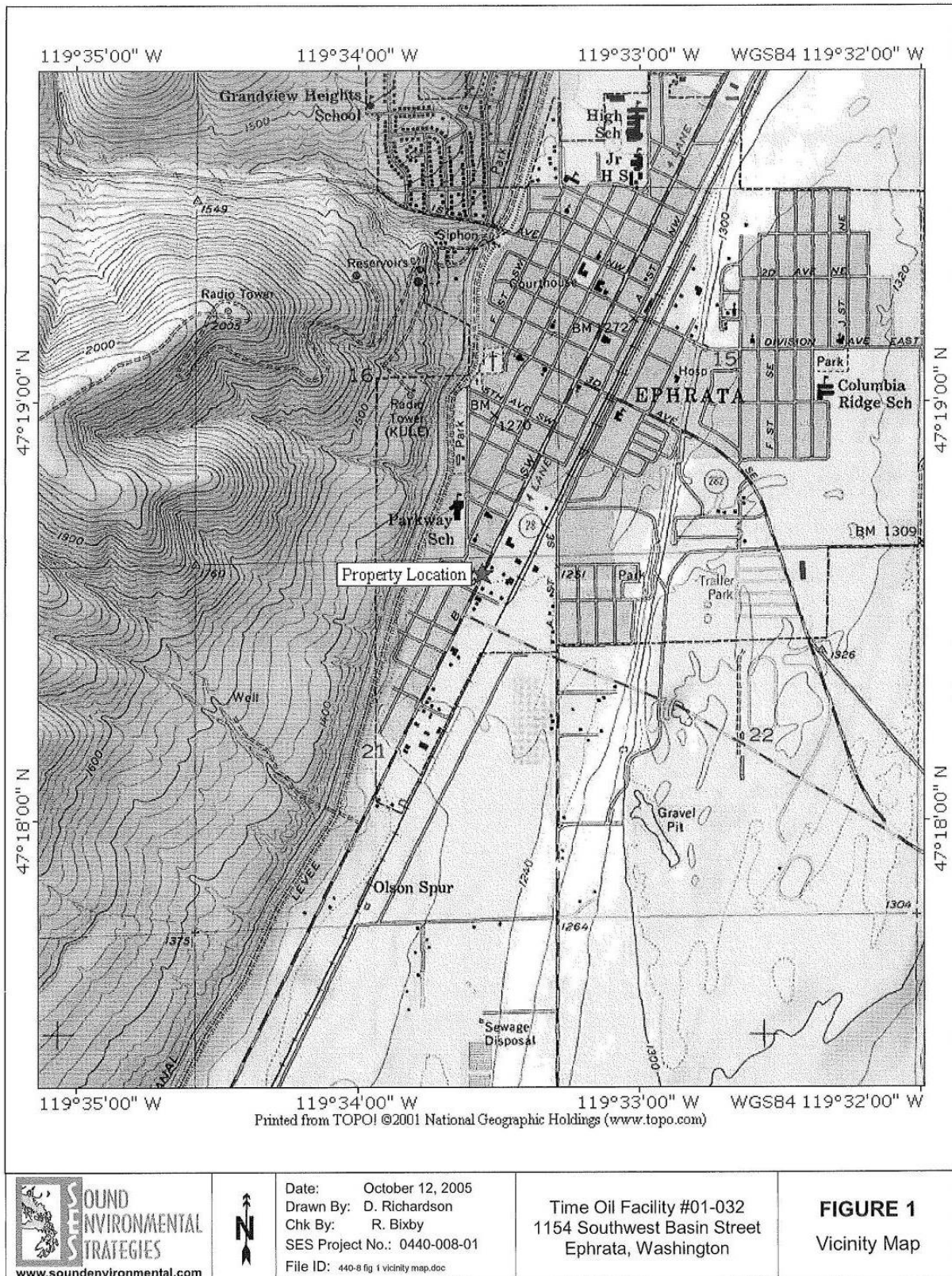
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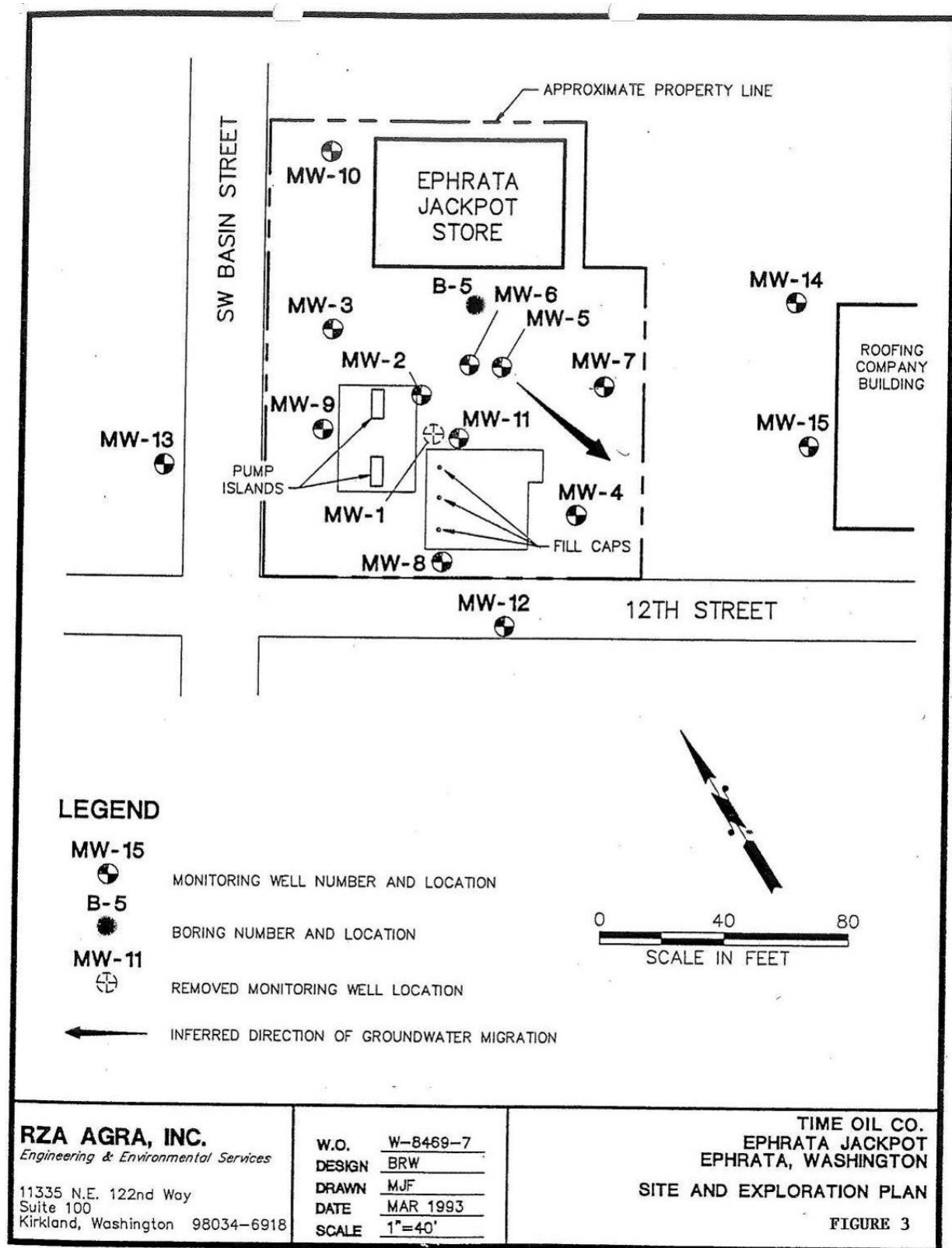
Ecology. *Second Periodic Review*. March 2018.

Ecology. Site visit. June 14, 2023.

Appendix A. Vicinity Map



Appendix B. Site Plan



Appendix C. Photo Log

Photo 1: Short Stop fuel station dispenser island – from the north



Photo 2: UST location and former remediation system trench – from the east



Photo 3: Former remediation system enclosure – from the west



Photo 4: South side of the site – from the southeast

