



## **Periodic Review Mountain Oil Inc Isaacs**

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**2285 E Isaacs Ave, Walla Walla, Walla Walla County  
Facility Site ID: 8187465, Cleanup Site ID: 5454**

**Toxics Cleanup Program, Eastern Region**

Washington State Department of Ecology  
Spokane, Washington

December 2023

## Document Information

This document is available on the Department of Ecology's [Mountain Oil Inc Isaacs cleanup site page](#).<sup>1</sup>

### Related Information

- Facility Site ID: 8187465
- Cleanup Site ID: 5454

## Contact Information

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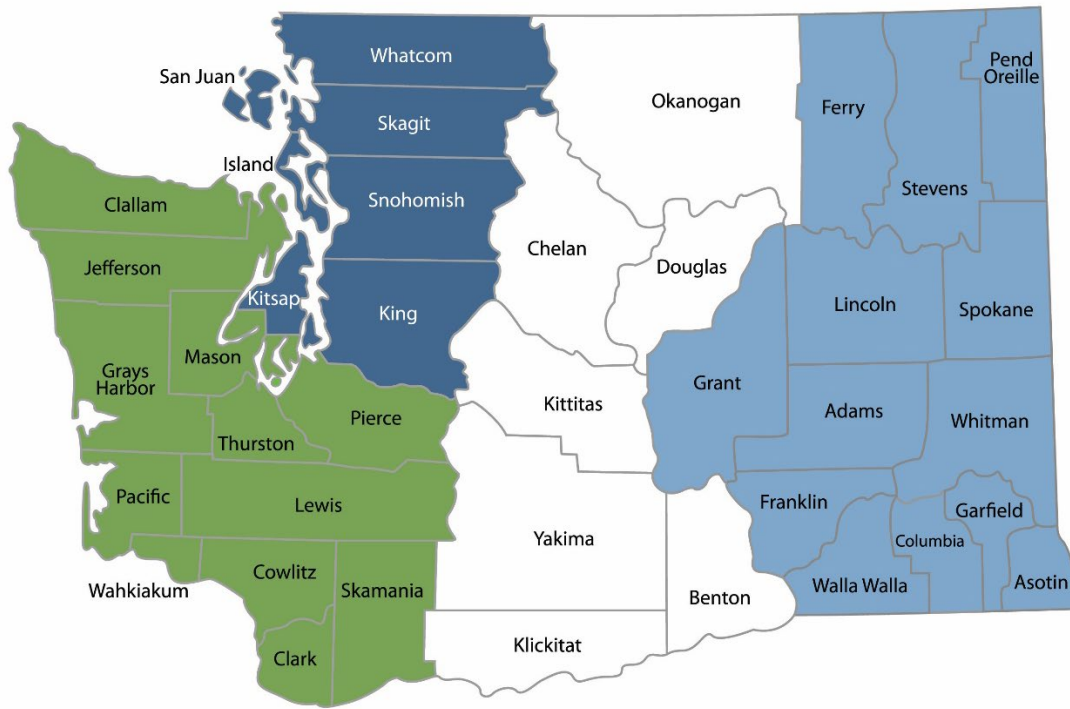
<sup>1</sup> <https://apps.ecology.wa.gov/cleanupsearch/site/5454>

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

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

# Department of Ecology's Regional Offices

## Map of Counties Served



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

Cleanup activities at this Site were completed under Voluntary Cleanup Program (VCP) project ID EA0172. Residual concentrations of gasoline-range petroleum hydrocarbons (GRPH) and volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and toluene (BTEX) that exceeded MTCA cleanup levels remain on the property. The MTCA cleanup levels for soil and groundwater are established under [WAC 173-340-740](https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-740)<sup>4</sup> and [WAC 173-340-720](https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-720),<sup>5</sup> 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\(2\)](https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-420(2))<sup>6</sup> requires Ecology to conduct a periodic review of certain sites every five years. For this Site, a periodic review is required because Ecology issued a no further action (NFA) opinion at the Site and institutional controls were 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.

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

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

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

# Summary of Site Conditions

## Site description and history

The Site is on Walla Walla County Tax Parcels 360722210032 and 360722210033. Land use at and surrounding the Site is commercial. The Site was developed into a gas station in 1959 by Phillips 66, who operated the station before selling to an independent owner in 1978. Mobil operated the station from 1982 to 1987 when it was purchased by Mountain Oil and operated as a Pacific Pride station.

In 1987, Mountain Oil removed the original underground storage tanks (USTs) and installed five new tanks:

- 4,000-gallon unleaded gasoline tank
- 3,000-gallon unleaded gasoline tank
- 3,000-gallon regular gasoline tank
- 15,000-gallon diesel tank
- 2,000-gallon diesel tank

A seven-inch-thick concrete slab was installed over the UST network. On August 10, 1993, approximately 1,400 gallons of unleaded gasoline were spilled due to an overfill from a delivery truck. The spill migrated beneath the concrete slab covering the USTs and into the subsurface.

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

## Site investigations

In August 1993, vapor monitoring wells were installed at both ends of each of the five USTs. A trench was excavated to 16 feet below ground surface (bgs) at the north end of the concrete slab. Gasoline odors were detected in the first trench, and a second trench was excavated a few feet north of the first, with no visible or olfactory signs of contamination. Eight feet of the south edge of the concrete slab was removed to allow access to tanks 1–3. Another trench was excavated in the south to 12 feet bgs; petroleum-saturated soils and evidence of previous petroleum spills were observed in the south trench.

Soil samples were collected from the bases of the three excavations and near the exposed ends of the USTs. A soil sample from between tanks 2 and 3 contained GRPH exceeding the MTCA Method A cleanup level with a concentration of 28,100 milligrams per kilogram (mg/kg). BTEX concentrations also exceeded their respective cleanup levels. Results from the other soil samples were below cleanup levels. All excavated soils were disposed offsite.

Three groundwater monitoring wells (MW-1 through MW-3) were installed in October 1993. Approximately five feet of non-aqueous phase liquid (NAPL) petroleum was observed in MW-2. In January 1994, six soil borings (B-4 through B-9) were installed and completed as monitoring

wells MW-4 through MW-9. Soil samples from B-8 exceeded the cleanup levels for GRPH and benzene at 42.5 feet bgs, and groundwater samples from MW-3 through MW-9 exceeded cleanup levels for GRPH and/or BTEX. Approximately 1.55 feet of NAPL were measured in MW-2 in January 1994.

Seven additional groundwater monitoring wells (MW-10 through MW-15 and ASW-1) were installed in March 1994. Wells MW-13 through MW-15 were located on the adjacent property west of the Site. Measurable NAPL (0.1 foot or greater) was observed in MW-2, MW-8, and MW-10. Groundwater samples were collected from MW-5 and MW-13 through MW-15 in April and May 1994, with GRPH and BTEX concentrations exceeding cleanup levels in all wells.

## Cleanup actions

In September 1993, an in-situ bioremediation program was implemented at the Site to treat the petroleum-contaminated soils (PCS) near the USTs. Prior to backfilling the trench excavations, perforated pipes were installed to mobilize the bioremediation compound in the subsurface. The compound consisted of a water solution with microbes and nutrients to enhance natural oxidation of the petroleum hydrocarbons, and a surfactant to facilitate dispersal of the compound. Four in-situ treatment events occurred in September 1993; confirmation soil samples collected in October 1993 continued to exceed the GRPH and BTEX cleanup levels.

In April 1994, passive floating skimmers were installed in MW-2 and MW-8 to recover free NAPL on the water table. NAPL was also removed from MW-10 by hand bailing. A total of 0.2 gallons of free NAPL was removed during April and May 1994. A pneumatic recovery pump-and-treat system was installed in MW-12 in May 1994 and operated until October 1994. Groundwater was pumped into three 4,000-gallon steel tanks with air strippers to volatilize the petroleum hydrocarbons and BTEX. The treated groundwater was transported to the City of Walla Walla wastewater treatment plant, while the effluent was collected and disposed as hazardous waste.

A groundwater pump-and-treat and soil vapor extraction (SVE) remediation system was installed in October 1994, which pumped groundwater from MW-4, MW-6, and MW-12 and pumped vapor from MW-4, MW-5, MW-7, MW-10, MW-12, and MW-14. Pumped groundwater was treated through an air stripper and discharged to the city sewer, while vapors were treated in a catalytic oxidizer. The system was operated until October 1998, when it was shut down due to low recovery rates.

Total GRPH recovery was estimated between 1,200 and 1,500 gallons, based on PCS excavation, groundwater treatment, SVE, and NAPL recovery. Residual PCS remained in the area of the former UST system. Ecology determined since the area is capped with asphalt and concrete to prevent direct contact, and groundwater monitoring demonstrated residual soil contamination is not impacting groundwater, institutional controls could be implemented to protect the cleanup action and address the residual contamination. Ecology issued an NFA determination for the Site on September 1, 2015.

## Groundwater monitoring

Three groundwater monitoring wells (MW-1 through MW-3) were installed in October 1993, six additional wells (MW-4 through MW-9) were installed in January 1994, and seven additional wells (MW-10 through MW-15 and ASW-1) were installed in March 1994. In addition to groundwater sampling events during well installation in 1993 and 1994, groundwater monitoring was conducted concurrently with vapor sampling from October 1994 through December 1997 to evaluate the effectiveness of the groundwater treatment and SVE system. In October 1998, well MW-16 was installed to replace MW-3 due to an insufficient screening interval, and MW-17 was installed downgradient of MW-15.

Groundwater monitoring continued on an annual basis from 1998 through 2012, and quarterly beginning in September 2013. As of June 2014, all contaminants of concern were reported below the applicable groundwater cleanup levels.

## 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)<sup>7</sup> 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

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

health and the environment. On August 19, 2015, institutional controls in the form of an [environmental covenant](#)<sup>8</sup> (Covenant) were recorded for the Site.

The Covenant recorded for the Site imposes the following limitations:

1. Interference with Remedial Action. The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.
2. Protection of Human Health and the Environment. The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.
3. Continued Compliance Required. Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.
4. Leases. Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.
5. Amendment to the Covenant. Grantor must notify and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. Before approving any proposal, Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal. If Ecology approves the proposal, the Covenant will be amended to reflect the change.
6. Containment of Soil/Waste Materials. The remedial action for the Property is based on containing contaminated soil under a cap consisting of concrete and asphaltic concrete pavement, each at least 2 inches thick, and located as illustrated in Exhibit C. The primary purpose of this cap is to minimize leaching of contaminants to groundwater and prevent runoff from contacting contaminated soil. As such, the following restrictions shall apply within the area illustrated in Exhibit C. Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any

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<sup>8</sup> <https://apps.ecology.wa.gov/cleanupsearch/document/83105>

damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

## Periodic Review

### Effectiveness of completed cleanup actions

During the Site visit Ecology conducted on August 9, 2023, Ecology observed that the Site use was protective of the cleanup actions and consistent with the limitations of the Covenant. The Site is operating as a gas station and convenience store. A photo log is in Appendix C.

### Direct contact

The cleanup actions were intended to eliminate exposure to contaminated soil at the Site. Exposure pathways to contaminated soils by ingestion and direct contact were reduced by an engineered asphalt and concrete cap covering the residual contaminated soil near the former UST excavation. The cap appears to be in satisfactory condition, and no repair, maintenance, or contingency actions are required at this time.

### Protection of groundwater

Soils with GRPH and BTEX at concentrations exceeding MTCA Method A cleanup levels remain at the Site; however, most of the contaminated soil source material has been removed. Groundwater was treated to below cleanup levels, and residual soil concentrations were determined to be protective of groundwater based on monitoring data. No further groundwater monitoring is required.

### Institutional controls

Institutional controls in the form of a Covenant were implemented at the Site in 2015. The Covenant remains active and discoverable through the Walla Walla County Auditor'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.
- 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, including the surface 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

Ecology. Site Visit. August 9, 2023.

Ecology. "No Further Action Determination." September 1, 2015.

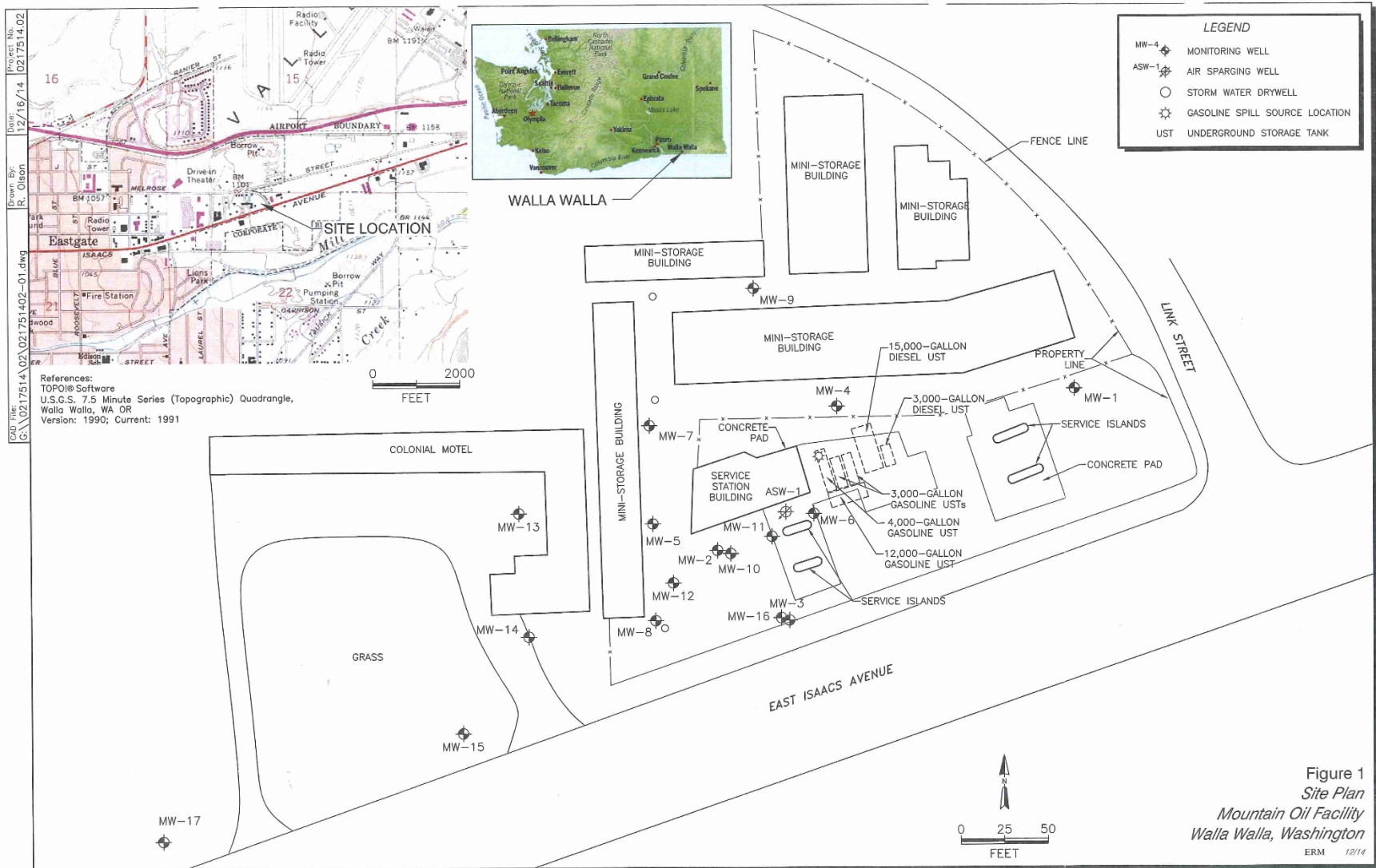
Ecology. Environmental Covenant 2015-07261. August 19, 2015.

ERM. *2013-2014 Groundwater Monitoring and Groundwater Compliance Confirmation Report, Mountain Oil Facility*. December 17, 2014.

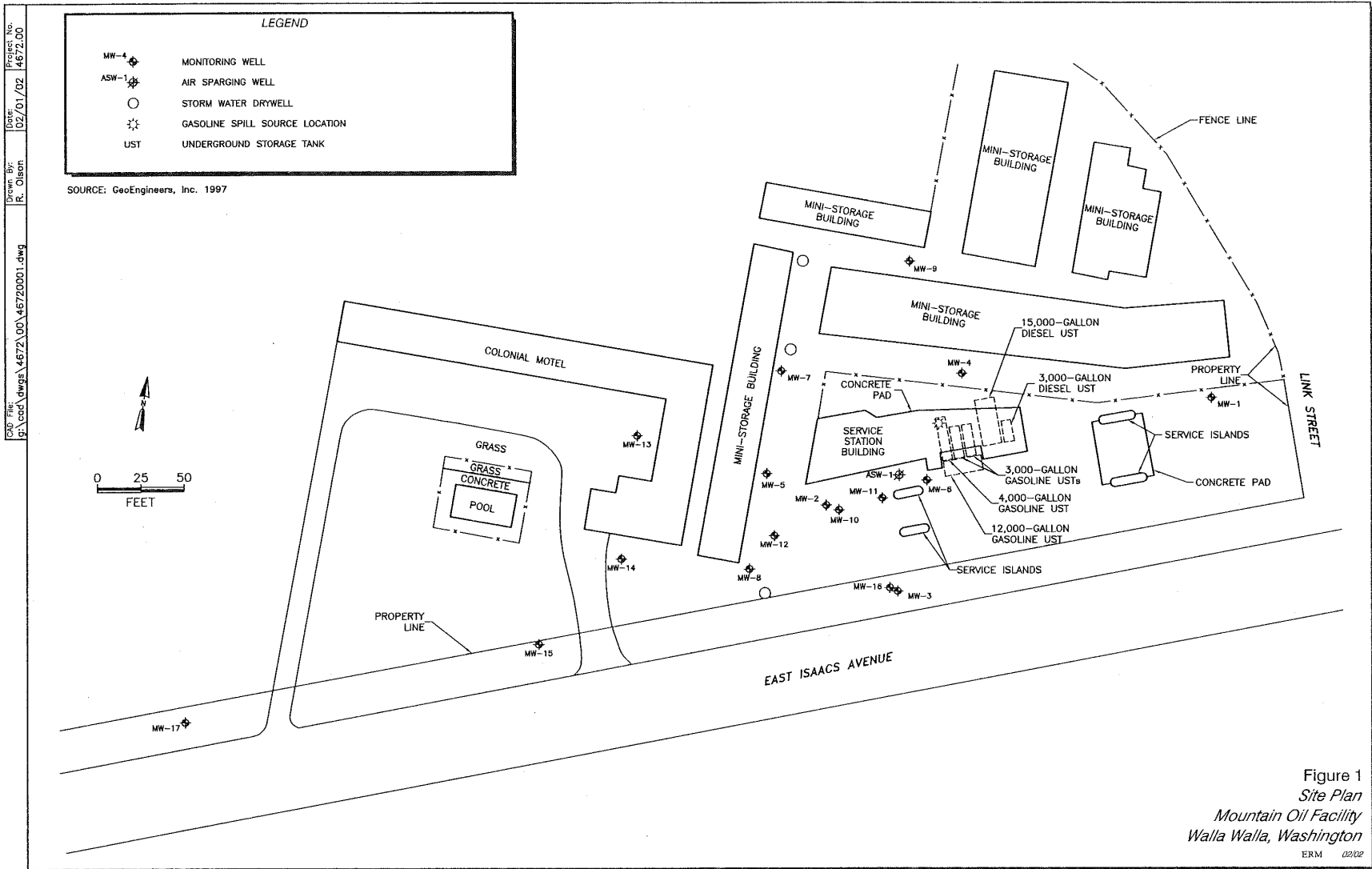
ERM. *October and November 1998 Groundwater Monitoring and Site Characterization Activities, Mountain Oil Facility*. January 19, 1999.

ERM. *July 1998 Groundwater Remediation Activities, Mountain Oil Facility*. August 14, 1998.

# Appendix A. Vicinity Map



# Appendix B. Site Plan



# Appendix C. Photo Log

Photo 1: Street view of Site—from the south



Photo 2: Fuel pump canopy—from the west



**Photo 3: Eastern section of Site—from the west**



**Photo 4: Fuel pump canopy and convenience store—from the east**



Photo 5: UST ports—**from the south**

