Periodic Review
Western Farm Service Pasco

3482 North Glade Road, Pasco
Facility Site ID: 578, Cleanup Site ID: 2351

Toxics Cleanup Program, Eastern Region

Washington State Department of Ecology
Spokane, Washington

October 2023

Document Information

This document is available on the Department of Ecology's Western Farm Services Pasco cleanup site page.[1]

Related Information

- Facility Site ID: 578
- Cleanup Site ID: 2351

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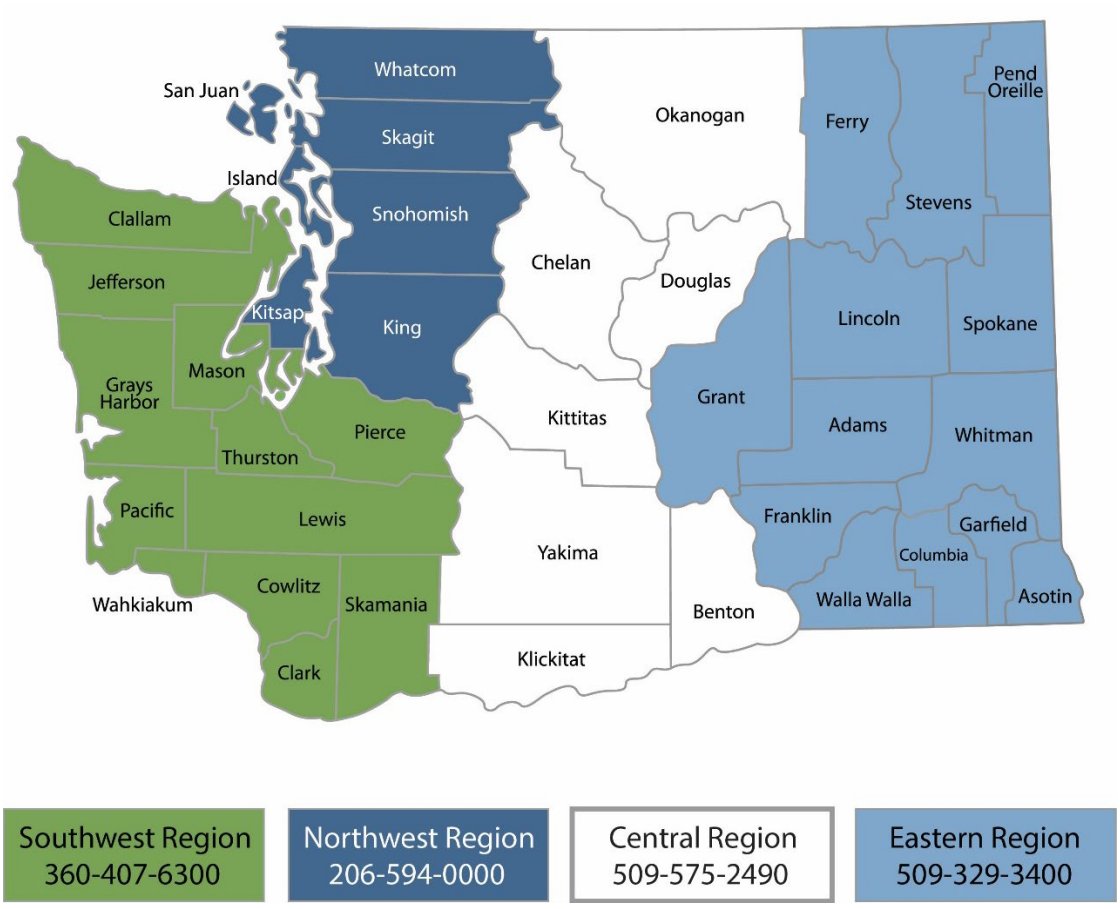
[1] https://apps.ecology.wa.gov/cleanupsearch/site/2351
[2] https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Toxics-Cleanup
[3] https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	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 Department of Ecology (Ecology) reviewed post-cleanup site conditions and monitoring data to ensure human health and the environment are being protected at the Western Farm Services Pasco 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 Agreed Order No. 03TCPER-5649. Residual concentrations of nitrate, pesticides, and herbicides that exceeded MTCA cleanup levels remain on the property. The MTCA cleanup levels for soil and groundwater are established under WAC 173-340-740[4] and WAC 173-340-720,[5] respectively.

Ecology determined institutional controls in the form of a 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.

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 for cleanups we supervise or conduct 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 has been an active retail agricultural facility since 1973. The sole remaining potentially liable person (PLP) at the Site, Nutrien (formerly Crop Production Services), has owned and operated the site since 1995. Crop Production Services, PureGro Company, and Western Farm Service were the PLPs for the Site during the remedial investigation and feasibility study (RI/FS).

The Site includes an area of soil contamination and a groundwater contaminant plume. The Site is approximately 20 acres in area and is approximately five miles north of Pasco. The Site is bounded by Selph Landing Road and vacant land to the north, Glade Road North to the west, the BNSF Railroad tracks to the east, and Two Rivers Terminal (a manufacturer and distributor of agricultural fertilizer and other chemicals) to the south.

The Site is used for mixing and distribution of bulk liquid and dry fertilizers, liquid pesticides, and pre-packaged fertilizers and pesticides. A vicinity map is in Appendix A, and a Site plan is in Appendix B.

Site investigations

RI activities were conducted at the Site between 1997 and 2001. The investigations included installing and sampling groundwater monitoring wells, and sampling soil and surface water. The RI determined that pesticide and herbicide contaminants were present at concentrations exceeding cleanup levels for direct human contact and for the protection of groundwater. Groundwater samples contained concentrations of nitrate and the pesticide dinoseb above cleanup levels for protection of drinking water. Chlorinated herbicides have not been detected in surface waters of Esquatzel Coulee, the nearest surface water body.

Contaminants of concern (COCs) for the Site were established for soil and groundwater, the two impacted media at the Site. The pesticides and herbicides dinoseb, toxaphene, dieldrin, 2,4-D, and heptachlor were identified as indicator hazardous substances for soil. Of these, only dinoseb was detected in groundwater above cleanup levels. Nitrate was also chosen as an indicator hazardous substance for groundwater, though upgradient sampling has indicated that elevated nitrate in groundwater is an area-wide issue. However, sampling indicates nitrate also impacts groundwater due to Site activities.

Cleanup actions

In 2003, the PLPs and Ecology entered into Agreed Order No. 03TCPER-5649 to implement the cleanup action. The Cleanup Action Plan included engineering controls, institutional controls, and a site-specific cleanup level for nitrate in groundwater. In 2004, the areas where dinoseb-impacted soil was in contact with groundwater were excavated. Other impacted soils were

capped with asphalt to prevent direct contact by humans or animals and to restrict infiltration of rainwater through contaminated soils.

Groundwater monitoring

Sampling groundwater regularly is required to monitor the cleanup action. Dinoseb was removed as a COC at the Site in 2011 because concentrations in groundwater had been below the MTCA Method B cleanup level in all compliance groundwater monitoring wells for four consecutive quarters. Groundwater was sampled on a quarterly basis until 2011, a semiannual basis from 2011 through 2014, and an annual basis from 2015 through 2021. In 2021, Ecology approved a groundwater sampling schedule of once every five years, to be completed in advance of each of Ecology's periodic reviews. The next groundwater sampling event will occur in 2026.

Nitrate remains the sole COC in groundwater and continues to exceed the Site cleanup level at point of compliance wells MW-4R, MW-14R, and MW-15R.

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[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 B cleanup levels were determined to be appropriate for contaminants at this Site. Soil cleanup levels were established to be protective of direct human contact and of groundwater. Groundwater cleanup levels were established to be protective of drinking water uses. The cleanup level for nitrate was adjusted upward to account for background levels of nitrate detected in upgradient and area groundwater due to general agricultural activities.

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

Table 1. Site cleanup levels

Media	Indicator Substance	Units	Cleanup Level
Soil	Dinoseb	mg/kg	0.13
	Toxaphene	mg/kg	0.9
	Dieldrin	mg/kg	0.06
	Heptachlor	mg/kg	0.22
	2,4-D	mg/kg	1.1
Groundwater	Nitrate	mg/L	17.7
	Dinoseb	µg/L	7

Notes:
mg/kg = milligrams per kilogram
µg/L = micrograms per liter

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 also has a standard point of compliance for groundwater, and is monitored in well MW-4R, MW-14R, and MW-15R.

Environmental Covenant

Ecology determined 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. During this periodic review, we determined institutional controls in the form of a restrictive covenant had not been recorded for the Site. The restrictive covenants for the property owned by Nutrien and the portion of the property that is leased from BNSF Railroad by Nutrien are in the process of being recorded with Franklin County.

The covenants recorded for the Site will impose the following limitations:

1. No activity is allowed on the property that would interfere or impact the remedial action or the operation, maintenance, inspection, or monitoring of the remedial action without Ecology approval,

2. No activity is allowed on the property that would threaten human health or the environment,

3. Nutrien must ensure that the operation, maintenance, and monitoring of the remedial action is continued if they sell or lease the property,

4. Nutrien must maintain the caps and cannot undertake any activity that would expose contaminated soil,

5. Groundwater at the property cannot be extracted for any purpose except construction dewatering, investigation, monitoring, or remediation,

6. Groundwater wells for water supply is strictly prohibited, and
7. Monitoring wells must be maintained in good condition and protected from damage.

Periodic Review

Effectiveness of completed cleanup actions

During the Site visit conducted on October 3, 2023, Ecology inspected the asphalt and concrete caps, fencing and Site security measures, and groundwater monitoring wells. The Site is operating as an active retail agricultural chemical sales and distribution facility. A photo log is in Appendix D.

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 capping impacted soils with asphalt and concrete. The asphalt caps are inspected on annual intervals, repaired on 5-year intervals, and re-sealed on 15-year intervals. One of the caps is the concrete foundation of a warehouse and is not subject to the 5-year repairs or resealing since it is under cover and below machinery. All caps appear to be in good condition. The asphalt caps were replaced in 2020 and resealed in 2021, and no repair, maintenance, or contingency actions are required at this time.

Protection of groundwater

Soils with pesticides and herbicides at concentrations exceeding MTCA Method A cleanup levels remain at the Site; however, most of the soil contaminated with dinoseb has been removed. Dinoseb was the only COC that exceeded cleanup levels in soil that was also detected above cleanup levels in groundwater. The asphalt caps restrict infiltration of rainwater or stormwater through contaminated soils to groundwater. The groundwater monitoring wells are in good condition.

Nitrate concentrations in groundwater continue to exceed the Site cleanup level at the compliance groundwater monitoring wells MW-4R, MW-14R, and MW-15R.

Institutional controls

Institutional controls in the form of a Covenant were a required part of the cleanup. Ecology found no evidence that the Covenant had been recorded with Franklin County.

The Covenant will prohibit activities that will result in the release of contaminants contained as part of the cleanup action and any use of the property that is inconsistent with the Covenant, unless approved by Ecology in advance. This Covenant will ensure 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 zoned and used for rural industrial 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 if the caps are maintained in good condition.

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 the decisions or recommendations made for the Site.

Conclusions

- Although cleanup has not yet been achieved, the cleanup actions completed at the Site are 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, except nitrate. Nitrate concentrations continue to be

elevated in groundwater upgradient and downgradient of the Site, indicating an area-wide nitrate issue exists in addition to the impacts from historical Site activities. Other methods of reducing nitrate impacts in groundwater have not been found to be practicable.

- The Covenants for the property will be effective in protecting human health and the environment from exposure to hazardous substances and the integrity of the cleanup action. However, it is important these covenants be recorded with Franklin County as soon as possible to ensure the remedy is protected.

Besides recording the applicable Covenants, 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 caps and to complete groundwater monitoring at 5-year intervals.

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.

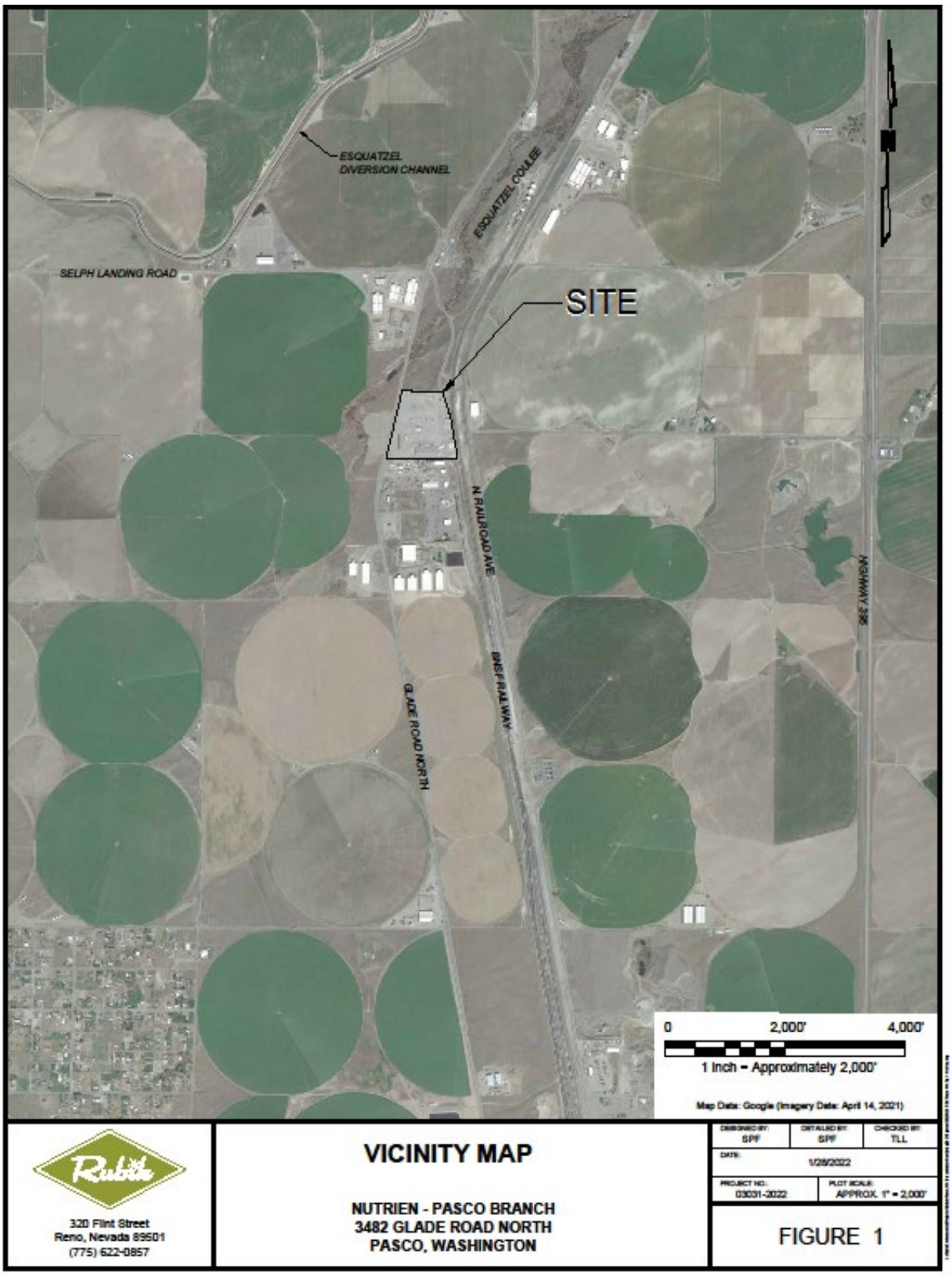
References

Ecology. Western Farm Service Pasco Facility (Glade Road Site), Draft Cleanup Action Plan. July 2003.

Rubik. Well Replacement and 2021 Groundwater Monitoring and Sampling Report. May 13, 2022.

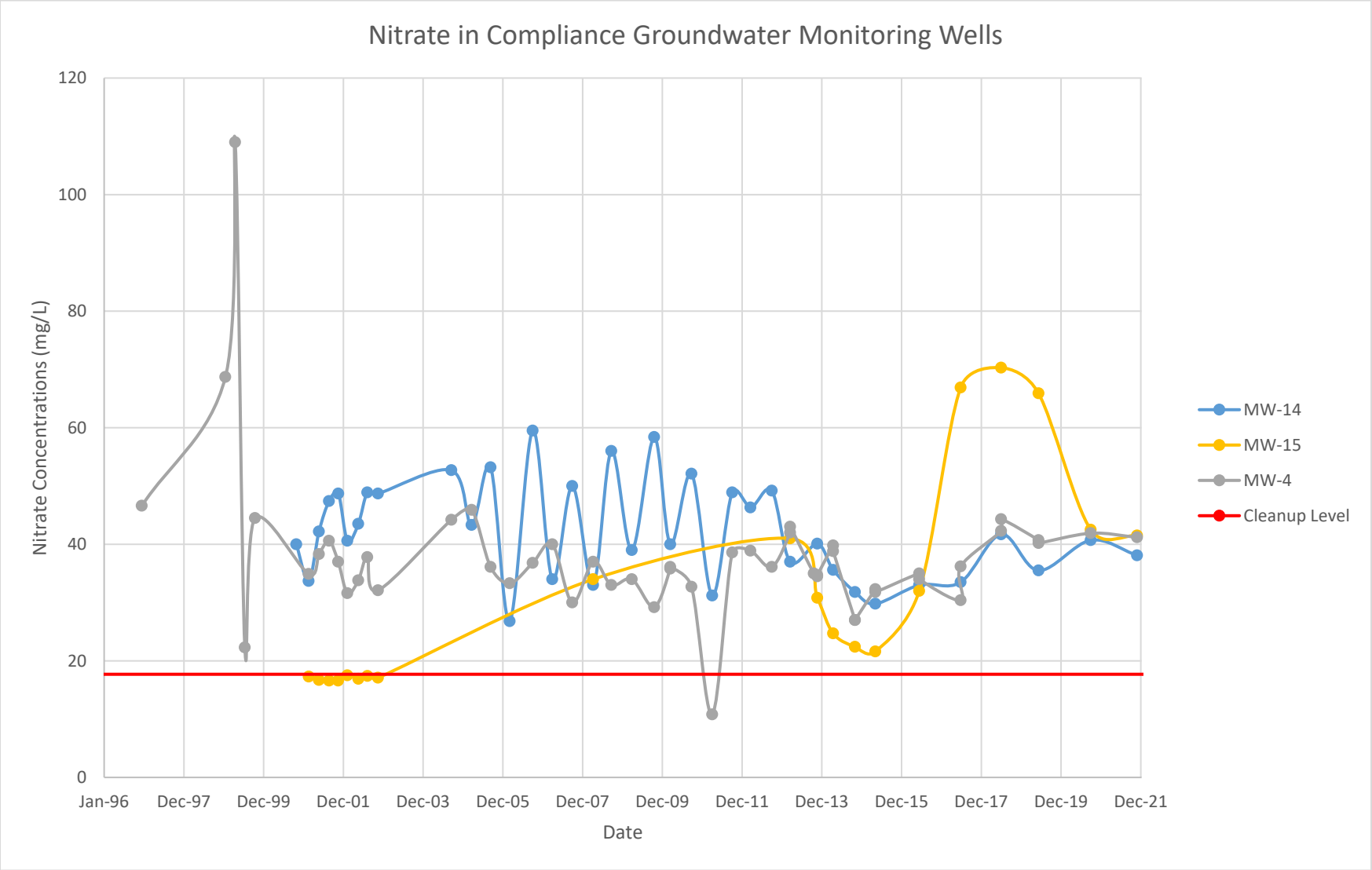
Ecology. Site visit. October 3, 2023.

Appendix A. Vicinity Map



Appendix B. Site Plan

Appendix C. Time Series Graph



Appendix D. Photo Log

Photo 1: Downgradient compliance well (facing south)

Photo 2: Gate restricting public access to the Site

Photo 3: Asphalt caps 1 & 2 (facing northwest)

Photo 4: Asphalt cap 3 (facing north)

Photo 5: Asphalt cap 4 (facing northeast)

Photo 6: Asphalt cap 5 (facing southeast)

Photo 7: Asphalt cap 6 (facing north)

Photo 8: Asphalt cap 7 (facing northeast)

Photo 9: Concrete cap inside the fertilizer warehouse

Photo 10: Southern fertilizer warehouse and representative photo of site conditions (facing south)