



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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CERTIFIED MAIL

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March 18, 2009

Ms. Amy Essig Desai
Farallon Consulting
975 5th Avenue Northwest
Issaquah, WA 98027

Re: Opinion on Proposed Cleanup of the following Site:

- **Site Name:** BNSF - Former Cummings Oil Lease Site
- **Site Address:** 908 Northwest Kerron Avenue, Winlock, Washington
- **Facility/Site No.:** 3151688
- **VCP Project No.:** SW0775

Dear Ms. Desai:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the BNSF – Former Cummings Oil Lease facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

YES. Ecology has determined that, upon completion of your proposed cleanup, further remedial action will likely be necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively “substantive requirements of MTCA”). The analysis is provided below.



Description of the Site

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:

- Petroleum hydrocarbons into the Soil and Ground Water.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note that a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Cleanup Action Work Plan, Former Cummings Oil Lease Site, 908 Northwest Kerron Avenue, Winlock, WA, dated December 18, 2008 by Farallon Consulting LLC.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

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

Analysis of the Cleanup

Ecology has concluded that, upon completion of your proposed cleanup, **further remedial action** will likely be necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A.**

1. The full extent of contamination in the groundwater will need to be determined per WAC 173-340-350(7)(c)(iii)(B) and (C). In addition to the two proposed monitoring wells to the west of the site, Ecology suggests additional wells along NW Kerron Avenue west to northwest of MW-1 and west to southwest of MW-3.
2. The storm drain along the western edge of the property should also be investigated as it is likely to preferentially divert groundwater. It is recommended that water samples from within the drain be collected and evaluated for impacts.
3. All samples collected during the proposed investigation should also be tested for the Table 830-1 constituents including naphthalene, Methyl *tert*-butyl ether (MTBE), 1-methyl-naphthalene, 2-methyl-naphthalene, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (EDC). Please ensure the laboratory detection limits are below MTCA cleanup levels. The cleanup level for EDB in groundwater is 0.01 micrograms per liter (ug/L). Ecology recommends using EPA Method 8011 to obtain this low detection limit.
4. In accordance with WAC 173-340-7490, a Terrestrial Ecological Evaluation (TEE) needs to be completed for the Site. If the Site qualifies for an exclusion, please fill out the TEE Exclusion form and submit it to Ecology. The form can be found on our website at <http://www.ecy.wa.gov/biblio/ecy090300.html>.
5. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 40 (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website <http://www.ecy.wa.gov/eim>. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during

on-site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination.** Be advised that Ecology requires up to two weeks to process the data once it is received.

2. Establishment of cleanup standards.

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

a. Cleanup levels.

MTCA Method A cleanup levels for unrestricted land use for soil and groundwater.

b. Points of compliance.

Standard points of compliance throughout the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you proposed for the Site does not meet the substantive requirements of MTCA.

1. The selection of source removal (soil excavation and confirmational sample collection) will likely address Ecology's concerns in the areas previously noted as requiring additional investigation. Please ensure that all samples are tested for the constituents noted in Table 830-1.
2. The selection of monitored natural attenuation for the groundwater is premature since additional delineation of the groundwater impacts is required prior to selection of a remedial action. Once the full extent of contamination has been defined, it will be necessary to develop a feasibility study based on the information obtained in the characterization effort. This feasibility study should include all practicable methods of treatment in addressing the site cleanup. Please be advised that monitored natural attenuation is a cleanup alternative that must be approved by Ecology before it can be implemented.

Limitations of the Opinion

1. 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 70.105D.040(4).

2. 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 whether the action you proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

4. 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 70.105D.030(1)(i).

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Contact Information

Thank you for choosing to clean up your Property under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may resubmit your proposal for our review. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me at 360-407-7263.

Sincerely,



Thomas Middleton
SWRO Toxics Cleanup Program

TMM/ksc:BNSF Winlock Proposed Site Cleanup Likely FA

Enclosures: A – Description of the Site
 Figure 2 – Site Plan
 Figure 4 – Site Plan with Soil Analytical Results
 Figure 5 – Site Plan with Groundwater Analytical Results

cc: Bruce Sheppard, BNSF
 Steve Garrett - Lewis Co Public Health
 Scott Rose - Ecology
 Paul Turner - Ecology
 Dolores Mitchell – VCP Financial Manager (without enclosures)

Enclosure A

Description of the Site

The Site is located at 908 Northwest Kerron Avenue, Winlock, Lewis County, Washington and is currently unoccupied. Structures that include an abandoned warehouse, overhead fuel racks, and four 20,000 to 30,000-gallon capacity aboveground storage tanks (ASTs) were removed in March 2008. Two underground storage tanks (USTs) of unknown capacity remain at the site.

The site has been used as a bulk fuel storage plant from approximately 1925 through 1976. Shell Oil Company (Shell) leased the site from BNSF for use as a bulk fuel storage facility in 1925, when the site was first developed. In 1970, Cummings Oil Company operated the bulk fuel storage facility until approximately 1976.

The study area consists of unconsolidated glacial and interglacial deposits that underlie central Pierce County. The uppermost aquifer that underlies the site is commonly called the Vashon Drift aquifer. It includes a thick layer of low permeability glacial till overlain by coarse-grained glacial outwash deposits. Groundwater at the site flows west-southwest with an average hydraulic gradient of 0.03 foot per foot. Site investigations encountered silt with woody debris and other organic matter underlying the surface soil to depths ranging from 5 to 8 feet below ground surface (bgs). Poorly sorted gravel with varying amounts of silt and sand was encountered beneath the silt and ranged in thickness from 2 to 5 feet. Groundwater was encountered in the gravel at a depth of approximately 7 feet bgs with groundwater levels rising to 0.5 to 2.5 feet bgs in the installed monitoring wells. Beneath the gravel, dense sand was encountered at a depth of approximately 9 to 11 feet bgs. This dense sand is not saturated and appears to be acting as a confining layer beneath the water-bearing zone. All soil borings and monitoring wells completed during the subsurface investigation were completed within the sand.

The western part of the site contains an underground stormwater line composed of 12-inch concrete or tile pipe located 18 inches bgs. A ditch conveys surface water discharged from a catch basin located next to the railroad tracks to a catch basin along the northwestern corner of the site. The ditch is approximately 3 feet deep, and is uncontained until it flows into an underground pipe and drains to the catch basin. On the site, surface water is captured by two catch basins on the western side, and by a drainage ditch to the north.

A previous subsurface investigation conducted at the site included collecting soil samples from six test pits located in areas on the site where either staining was observed and/or historical operations that had the potential to release chemicals of potential concern (COPCs) to soil and groundwater were conducted. Analytical results from previous investigations detected concentrations of diesel-range organics (DRO) below the applicable MTCA Method A cleanup levels in three soil samples. Concentrations of gasoline-range organics (GRO) and oil-range organics (ORO) were not detected above the laboratory reporting limits in the soil samples analyzed. Shallow groundwater was observed in one of the test pits at a depth of approximately 9 feet bgs; however, no groundwater sample was collected.

The second phase of the investigation included drilling five hollow-stem auger borings and installing monitoring wells in four (MW-1 through MW-4) of the five borings.

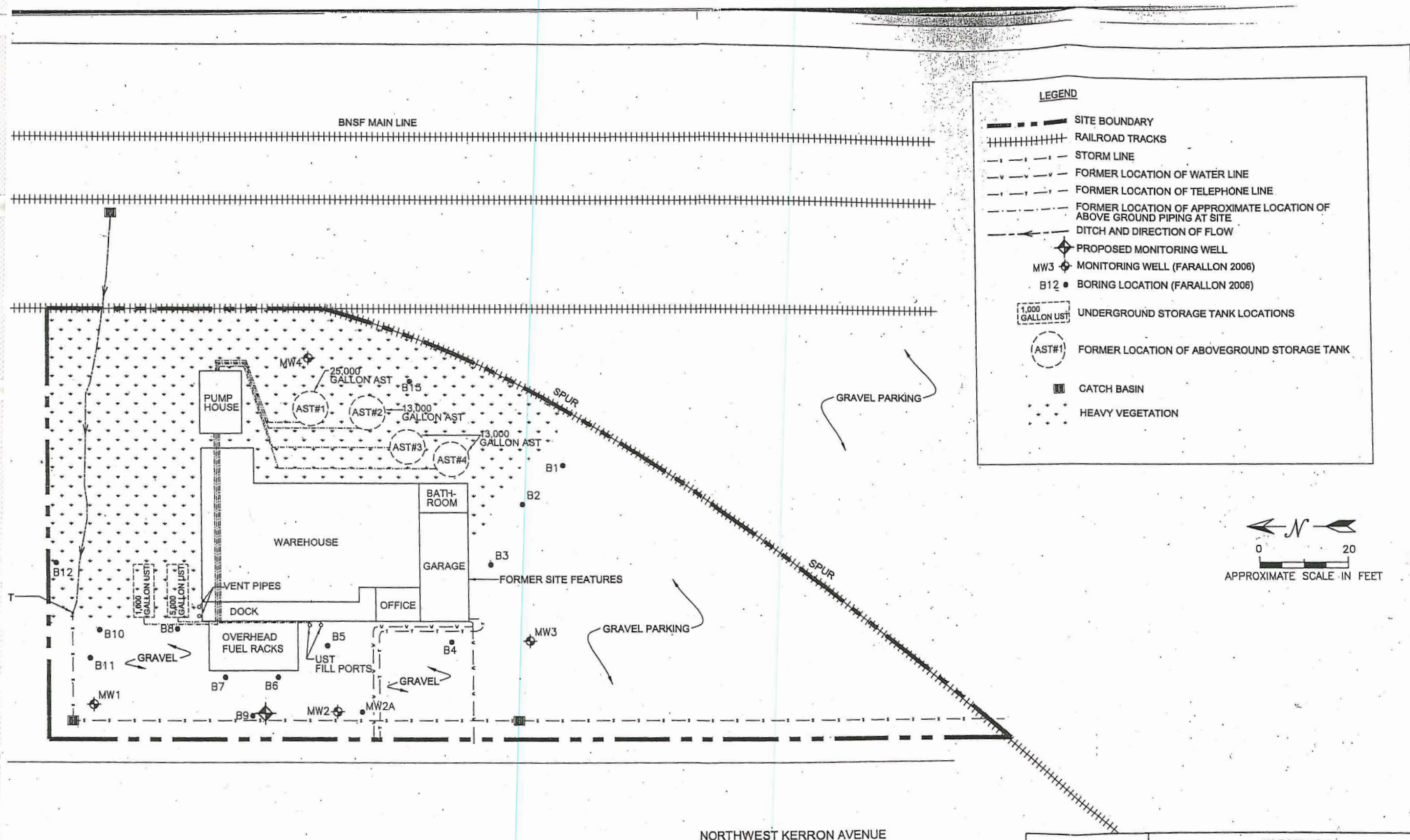
The distribution of GRO, DRO, ORO, benzene, ethylbenzene, and xylenes above groundwater cleanup levels are predominantly within the western area of the site, with the exception of a DRO detection in boring B3 located on the southern side of the warehouse. DRO and ORO exceeding groundwater cleanup levels were detected between the northern site boundary and the central portion of the warehouse on the western side of the site.

The concentrations of ORO, benzene, ethylbenzene, and xylenes exceeding groundwater cleanup levels were detected in borings near the overhead fuel racks (borings B6 and B9) and monitoring well MW-2, which is located near the western site boundary.

The groundwater flow direction at the site was observed to the west-southwest. The direction of groundwater flow and the concentrations of ORO, DRO, and benzene, toluene, ethylbenzene, and xylenes (BTEX) detected above the MTCA Method A cleanup levels in boring B9 and monitoring well MW-2 indicate that contaminated groundwater may have migrated off the site to the west.

Ecology prepared an opinion letter in July 2006 in response to the supplemental subsurface investigation conducted by Farallon Consulting, LLC, (Farallon) in June 2006. The opinion letter recommended additional soil and groundwater investigation in the area between the pump house and the warehouse, and in the area between the USTs and the warehouse. In addition, Ecology requested additional monitoring wells in the area west of the site along NW Kerron Avenue. It was also requested that the Table 830-1 constituents be added to the list of analytes for all samples submitted for laboratory analysis.

Farallon submitted a cleanup action work plan on December 23, 2008 that detailed proposed cleanup work at the Site. The work plan selected source removal and monitored natural attenuation as the remedy of choice at the Site. The soil source removal activities would address Ecology's concerns in the areas adjacent to the warehouse. Farallon also proposed two additional groundwater monitoring wells along NW Kerron Avenue to supplement the groundwater data offsite to the west.



NORTHWEST KERRON AVENUE

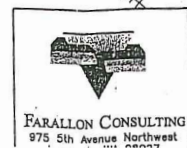
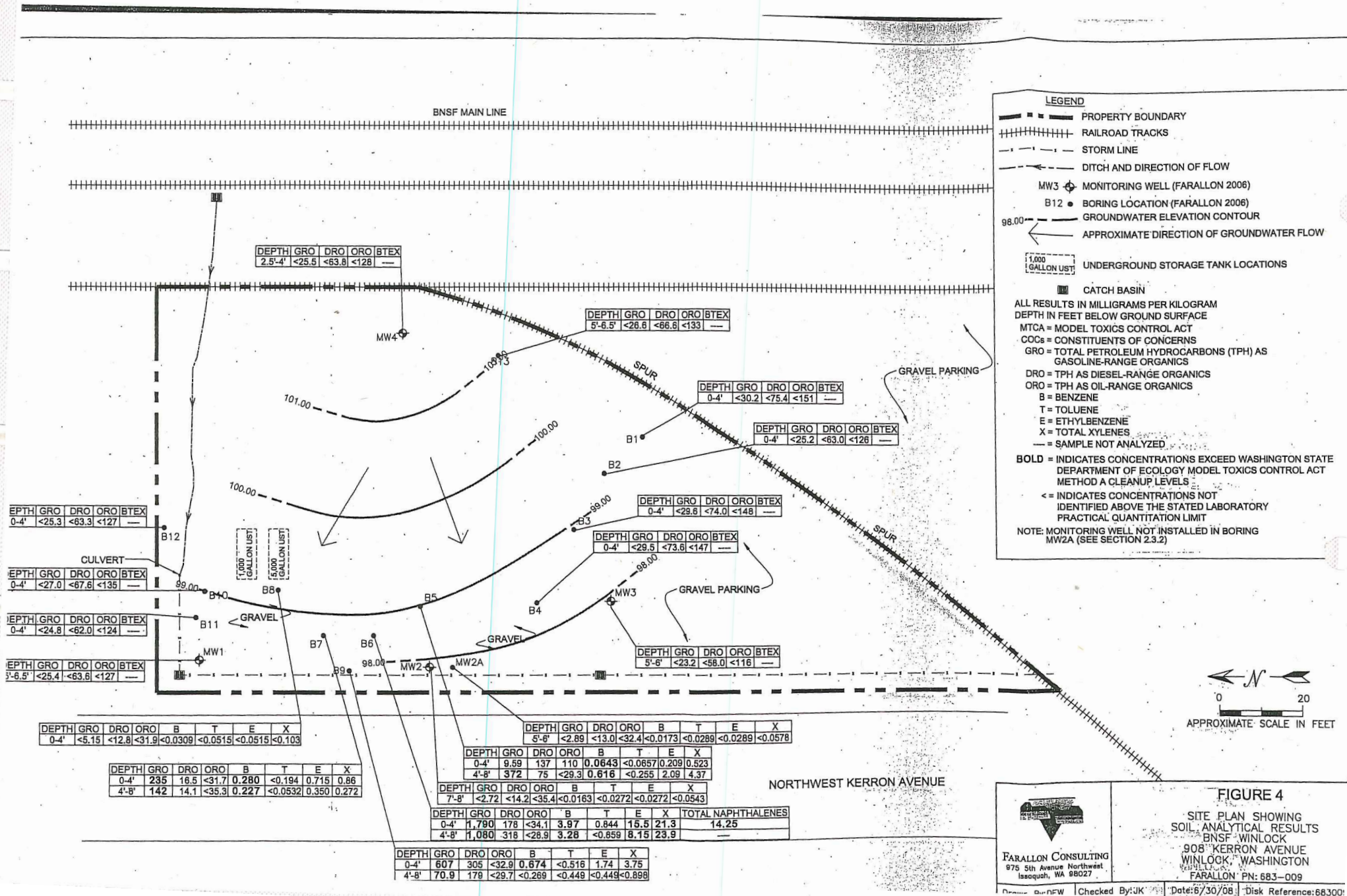
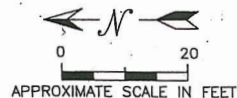
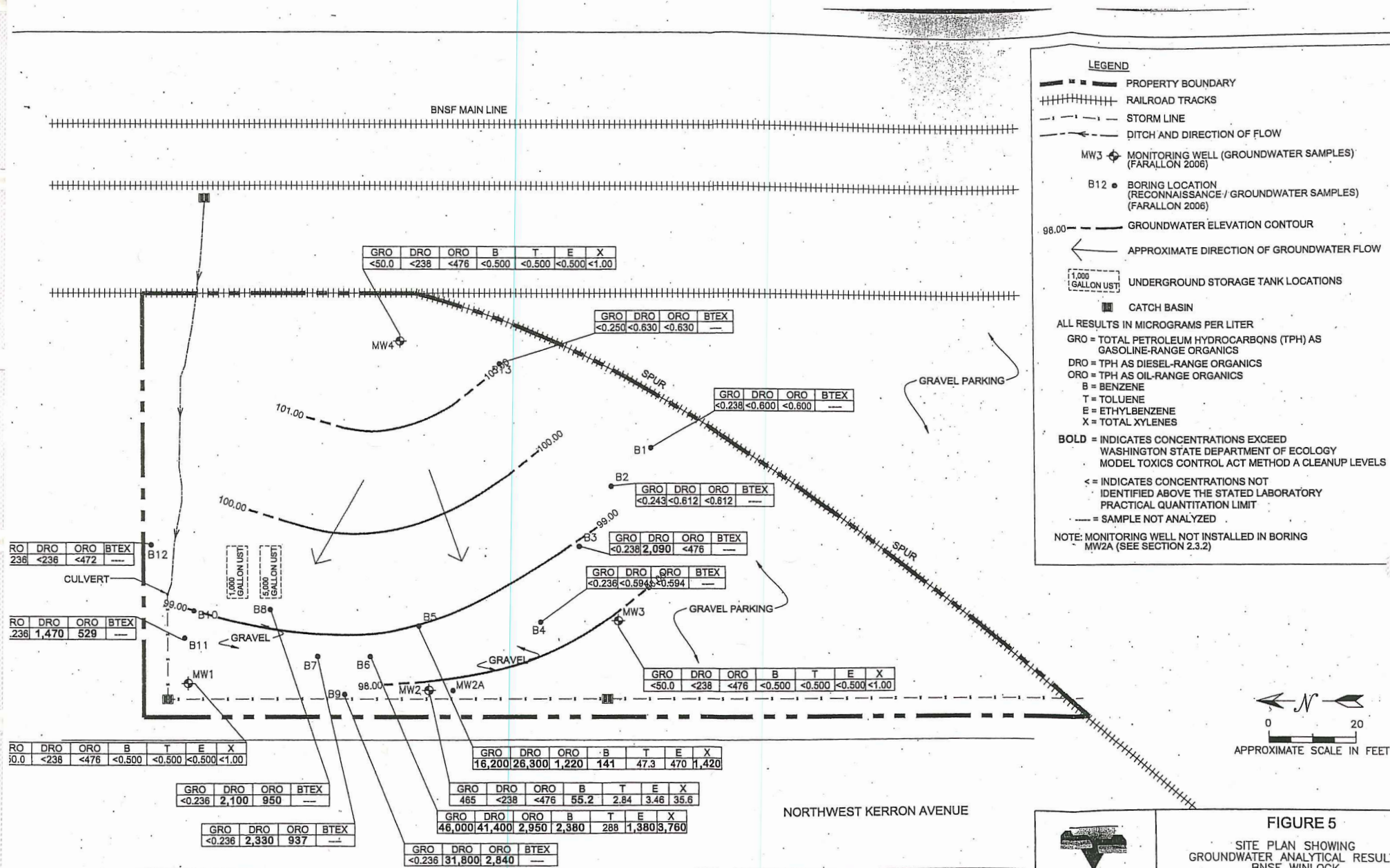


FIGURE 2

SITE PLAN
BNSF WINLOCK
908 NORTHWEST KERRON AVENUE
WINLOCK, WASHINGTON







FARALLON CONSULTING
975 5th Avenue Northwest
Issaquah, WA 98027

FIGURE 5

SITE PLAN SHOWING
GROUNDWATER ANALYTICAL RESULTS
BNSF WINLOCK
908 KERRON AVENUE
WINLOCK, WASHINGTON
FARALLON PN: 683-009