STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

December 19, 2019

Richard Wright
Pac West Energy, LLC
3450 E. Commercial Ct.
Meridian, ID 83642

Re: Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site:

- **Site Name:** Texaco Maple Valley (Jacksons Food Store No. 5017)
- **Site Address:** 21641 Renton Maple Valley Rd. SE, Maple Valley, WA 98038
- **Facility/Site No.:** 23177881
- **Cleanup Site ID:** 8361
- **VCP Project No.:** NW2995

Dear Richard Wright:

The Washington State Department of Ecology (Ecology) received your request for an opinion on the *Remedial Investigation Report* dated September 20, 2019 (*RI Report*) regarding the Texaco Maple Valley 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.

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 releases:

- Total petroleum hydrocarbons as gasoline (TPHg), toluene, and xylenes into the Soil.

- TPHg, total petroleum hydrocarbons as diesel (TPHd), and benzene into the Ground Water.

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

Please note 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 documents listed in **Enclosure B**. Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Record form (https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests) and emailing it to PublicRecordsOfficer@ecy.wa.gov, or contacting the Public Records Officer at 360-407-6040. A number of these documents are accessible in electronic form from the Site web page https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=8361.

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

Analysis and Opinion

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A.**

The following issues pertaining to the site characterization require resolution:

- Determining compliance with the Method A soil and ground water cleanup levels for TPHd and TPHo requires adding concentrations of the two fractions and comparing the result to the cleanup level, per *Implementation Memorandum #4, Determining Compliance with Method A Cleanup Levels for Diesel and Heavy Oil, Publication No. 04-09-086,* June 2004, and *Guidance for Remediation of Petroleum Contaminated Sites, Publication No. 10-09-057,* revised June 2016.

- The sum of the detection limits for TPHd and TPHo in ground water must be less than the Method A cleanup level of 500 µg/L. Historical data for monitoring wells MW-12, MW-14, MW-15, and MW-16 show detection limits greater than the required range. Additional sampling of these wells for TPHd and TPHo, with proper detection limits, is necessary during a future ground water monitoring event, to assess the potential presence of these petroleum fractions.

- Per Ecology guidance, silica gel cleanup of ground water samples prior to TPH-Dx analysis is not allowed, unless documentation of organic matter interference in upgradient ground water is provided.

- Our records indicate that the most recent field collection date of Site data submitted to the Ecology Environmental Information Management (EIM) database was March 16, 2017. Please continue to upload new data as it is generated.

2. Establishment of cleanup standards.

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

Soil

Cleanup Levels: The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. Soil cleanup levels based on protection of ground water are appropriate. MTCA Method A cleanup levels are considered appropriate for soil at the Site and are protective of human health and the environment.

Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the Terrestrial Ecological Evaluation (TEE) exclusion criteria (MTCA WAC 173-340-7491). The results of the TEE Exclusion Form worksheet indicated that the TEE evaluation could be ended and that protective cleanup levels based on TEE factors are not required for this Site.

Point of Compliance: For soil cleanup levels based on the protection of ground water, the point of compliance is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

Ground Water

Cleanup Levels: MTCA Method A cleanup levels are the applicable ground water cleanup levels for this Site.

Point of Compliance: The standard point of compliance for ground water is throughout the Site, from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected.

3. Selection of cleanup action.

A Feasibility Study (FS) meeting MTCA requirements will be needed to select the cleanup action for this Site (see the FS Checklist at https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process/Cleanup-options/Voluntary-cleanup-program/Reporting-requirements). However, an FS will not be required if the Site meets the requirements for a Model Remedy, in accordance with *Model Remedies for Sites with Petroleum Impacts to Groundwater, Ecology Publication No. 16-09-057*, Revised December 2017.

4. Cleanup.

The following interim actions have been completed at the Site:

- Approximately 900 cubic yards of petroleum-contaminated soil were excavated and disposed off-Site in 1992, during removal of nine underground storage tanks (USTs) and associated dispenser islands.

- Oxygen-release compound (ORC) treatment pads were placed in monitoring well MW-14 in August 2019 to treat residual TPHg in ground water.

Additional ground water monitoring is proposed in the *RI Report*, to determine if the interim cleanup actions completed at the Site can be considered as a cleanup action that meets MTCA substantive requirements.

In order to assess the status of contaminant impacts in well MW-14, please prepare a time-series plot of TPHg concentrations from June 2014 through the present.

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 performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. 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).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. 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 by phone at 425-649-7257 or e-mail at michael.warfel@ecy.wa.gov.

Sincerely,

Michael R. Warfel

Michael R. Warfel, Site Manager
NWRO Toxics Cleanup Program

Enclosures (2): A – Description and Diagrams of the Site
B – Basis for the Opinion: List of Documents

cc: Brian Peters, GHD Services, Inc. (via email)

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined by releases of TPHg, toluene, and xylenes to soil, and TPHg, TPHd, and benzene to ground water. The Site is located on King County tax parcel 581840-0014 that covers 0.44 acres at 21641 Renton Maple Valley Road SE in Maple Valley, Washington (the Property), as shown on **Figure 1**. The release from fuel underground storage tanks (USTs) located on the Property was reported to Ecology in June 1990.

Area and Property Description: The Property is an active Shell-branded wholesale facility and Jacksons Food Store is in the southwest corner of the Renton Maple Valley Road (State Route 169) and State Route 18 (see **Figure 1**). The Site is bounded on the north by a real estate office, on the west by an off-road vehicle assessor store and a coffee kiosk, to the south by a food market, and to the east by State Route 169 and a wooded area with a regional trail.

Site History and Current Use: The Property was first developed as a gasoline service station in 1964, which included installation of four gasoline USTs (two 6,000-gallon and two 8,000 gallon), one 550-gallon waste oil UST, and one 500-gallon heating oil UST. These USTs, along with two 675-gallon and one 1,000-gallon previously unknown USTs, were removed in 1992 and replaced with three 10,000-gallon gasoline USTs, one 10,000-gallon diesel UST, and one 550-gallon heating oil UST (**Figure 2**). The facility is currently comprised of a convenience store building a car wash, four 10,000-gallon USTs (three unleaded gasoline and one diesel), and two dispenser islands under a single canopy.

Sources of Contamination: Soils with petroleum hydrocarbon concentrations above MTCA Method A cleanup levels was discovered at the Site during removal and replacement of original USTs in June 1992 and reported to Ecology. The release was attributed to gasoline USTs, product lines, and dispensers. Subsequent Site investigations and sampling were conducted at the Site in 1993, 2003, 2008, 2014, 2017, 2018, and 2019.

Physiographic Setting: The Site is situated in the Cedar River Valley within the Puget Sound Lowland, on the easternmost edge of the Kent-Maple Valley Plateau. Land surface elevation of the Site is approximately 340 feet above mean sea level (amsl) and slopes to the southwest towards the Cedar River.

Surface/Storm Water System: The Cedar River is located approximately 400 feet southwest of the Site and flows to the northwest towards Renton (see **Figure 1**). Storm water from the Property and adjoining properties flows to the municipal storm drainage system.

Water Supply: Drinking water is supplied by the Cedar River Water and Sewer District, which purchases most of its water from Seattle Public Utilities (Cedar River Watershed).

Ecological Setting: A Terrestrial Ecological Evaluation was performed and included in *the RI Report*. The Site is excluded from further evaluation because all soil contamination is at least 15 feet below ground surface.

Geology: The Site is underlain by non-glacial unconsolidated deposits laid down in the valley of the Cedar River. Subsurface investigations show silt, silty sand, sandy gravel, and cobbles to the maximum explored depth of 35 feet below ground surface (bgs), as shown on **Figure 3**.

Ground Water: Ground water occurs under unconfined conditions in the sand and gravel alluvium beneath the Site, at depths of 12 to 16 feet bgs. The flow direction in this shallow ground water zone is to the west, towards the Cedar River (**Figure 4**).

The Site is situated within two ground water protection areas mapped by King County: a Category 2 Critical Aquifer Recharge Area, and an area Highly Susceptible to Ground Water Contamination. The boundary of the Cedar Valley Sole Source Aquifer, as designated by the U.S. Environmental Protection Agency, is located approximately 400 feet west of the Property boundary. An inventory of water supply wells in the Site vicinity shows no downgradient water wells between the Site and the Cedar River.

Release and Extent of Contamination: The lateral and vertical extent of petroleum-impacted soil and ground water have been evaluated by Site investigations conducted from July 1990 through June 2019. Approximately 900 cubic yards of petroleum-contaminated soil were excavated and disposed off-Site in 1992, during removal of nine underground storage tanks (USTs) and associated dispenser islands.

Subsequent sampling of soil and ground water identified the following petroleum impacts remaining at the Site:

- A TPHg concentration of 1,370 mg/kg was reported in a soil sample from the MW-14 borehole at a depth of 15 feet below ground surface (bgs); see **Figure 2**. The applicable Method A soil cleanup level for TPHg is 100 mg/kg.

- TPHg concentrations in monitoring well MW-14 in March and June 2019 were 1,910 µg/L and 1,790 µg/L, respectively, which are above the Method A ground water cleanup level of 1,000 µg/L (**Figure 5**).

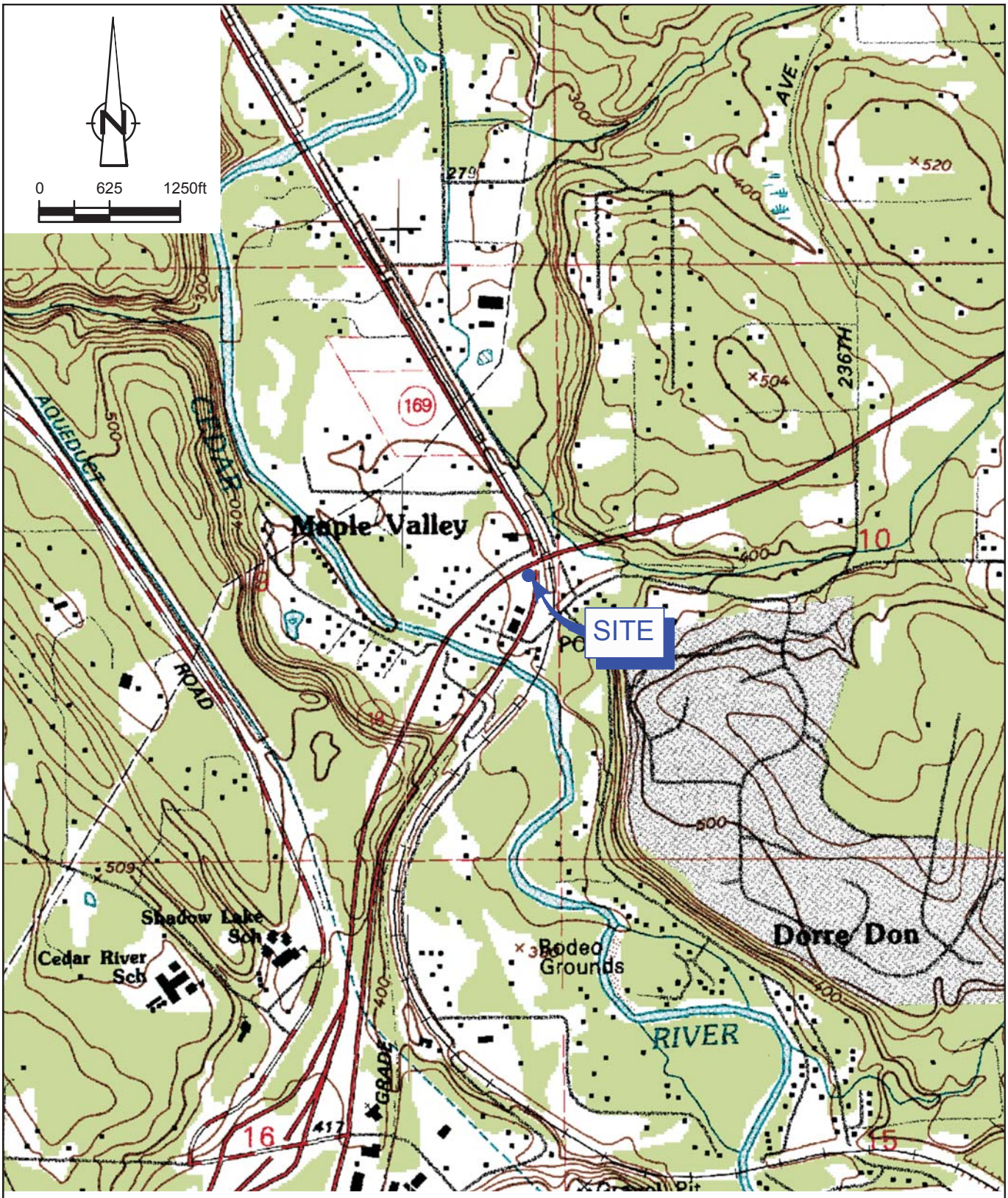
- The potential presence of TPHd + TPHo in Site monitoring wells showing indications of petroleum impacts has not been assessed, due to prior laboratory detection limits that were too high to assess compliance with the combined cleanup level of 500 µg/L.

Oxygen-release compound (ORC) treatment pads were placed in monitoring well MW-14 in August 2019 to treat residual TPHg in ground water.

Concentrations of TPHg, TPHd, and TPHo in monitoring wells MW-16 (located downgradient of MW-14 on the adjacent property parcel to the west) have been below Method A cleanup levels.

A vapor intrusion assessment presented in the RI Report was completed in accordance with Ecology guidance and confirmed the absence of a vapor exposure pathway at the Site.

Site Diagrams



SOURCE: USGS □UADRANGLE MAP: MAPLE VALLEY, WA.

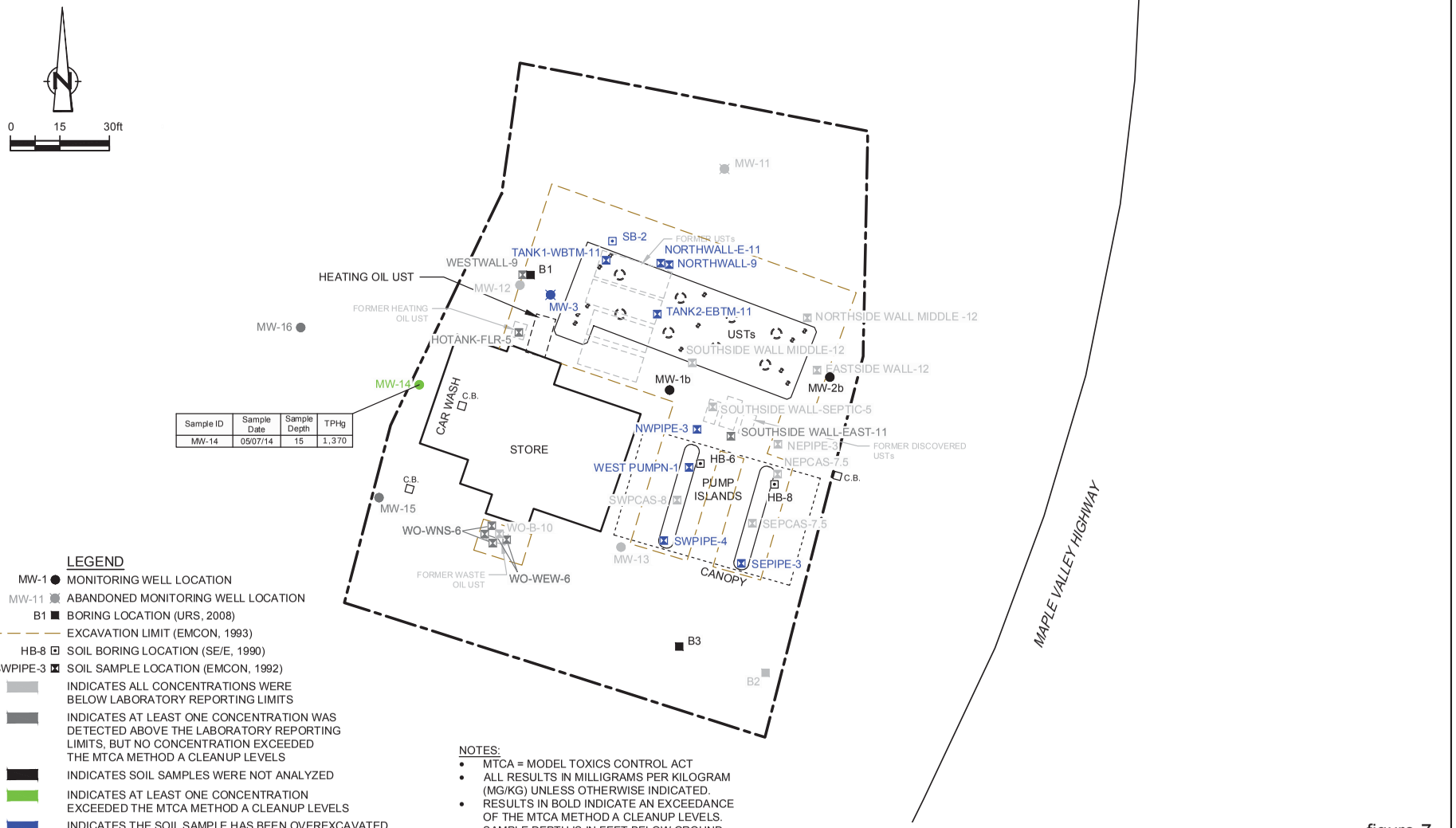
figure 1

VICINITY MAP
JACKSON'S FOOD STORE NO. 5017
21641 RENTON-MAPLE VALLEY ROAD
Maple Valley, Washington

GHD

062308-2017(004)GN-SO001 APR 19, 2018

Enclosure A, Figure 1



Sample ID	Sample Date	Sample Depth	TPHg
MW-14	05/07/14	15	1,370

LEGEND

- MW-1 ● MONITORING WELL LOCATION
- MW-11 ● ABANDONED MONITORING WELL LOCATION
- B1 ■ BORING LOCATION (URS, 2008)
- EXCAVATION LIMIT (EMCON, 1993)
- HB-8 ⊡ SOIL BORING LOCATION (SE/E, 1990)
- SWPIPE-3 ⊠ SOIL SAMPLE LOCATION (EMCON, 1992)
- INDICATES ALL CONCENTRATIONS WERE BELOW LABORATORY REPORTING LIMITS
- INDICATES AT LEAST ONE CONCENTRATION WAS DETECTED ABOVE THE LABORATORY REPORTING LIMITS, BUT NO CONCENTRATION EXCEEDED THE MTCA METHOD A CLEANUP LEVELS
- INDICATES SOIL SAMPLES WERE NOT ANALYZED
- INDICATES AT LEAST ONE CONCENTRATION EXCEEDED THE MTCA METHOD A CLEANUP LEVELS
- INDICATES THE SOIL SAMPLE HAS BEEN OVEREXCAVATED

NOTES:

- MTCA = MODEL TOXICS CONTROL ACT
- ALL RESULTS IN MILLIGRAMS PER KILOGRAM (MG/KG) UNLESS OTHERWISE INDICATED.
- RESULTS IN BOLD INDICATE AN EXCEEDANCE OF THE MTCA METHOD A CLEANUP LEVELS.
- SAMPLE DEPTH IS IN FEET BELOW GROUND SURFACE
- TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
- T = TOLUENE, X = XYLENES

SOURCE:
DELTA CONSULTANTS, FIGURE 2, GROUNDWATER ELEVATION CONTOUR MAP, DATED 5/2/07;
STATEWIDE LAND SURVEYING INC. DATED 5/19/14.

NOTE:
WASHINGTON STATE PLANE COORDINATE SYSTEM NAD 83/CORS 96,
NORTH ZONE 4601, IN U.S. SURVEY FEET.

figure 7

POST-CLEANUP SOIL INVESTIGATION DATA MAP
JACKSON'S FOOD STORE NO. 5017
21641 RENTON-MAPLE VALLEY ROAD
Maple Valley, Washington

I:\Sonoma.Publi□CAD\dra□ings 062000s\062300s-JFS-Ja□son Food Stores\062308-JFS-21641 Maple Valley H□y, Maple Valley, WA\062308-REPORTS\062308-2017(004)GN\062308-2017(004)GN-SO005.DWG Plot Date: SEP 13, 2019

Enclosure A, Figure 2

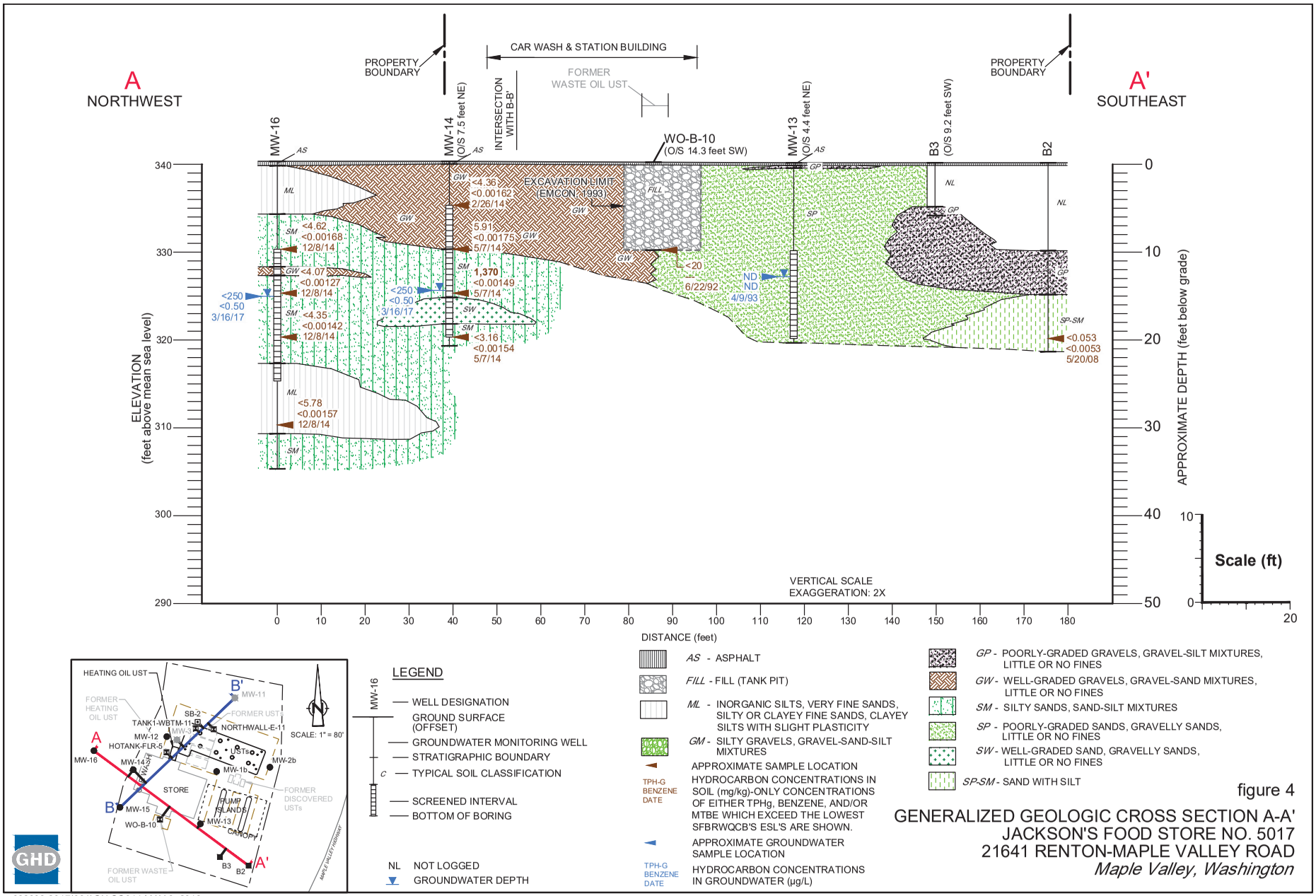


figure 4

GENERALIZED GEOLOGIC CROSS SECTION A-A'
JACKSON'S FOOD STORE NO. 5017
21641 RENTON-MAPLE VALLEY ROAD
Maple Valley, Washington

062308-2017(004)GN-SO011 MAY 9, 2018

Enclosure A, Figure 3

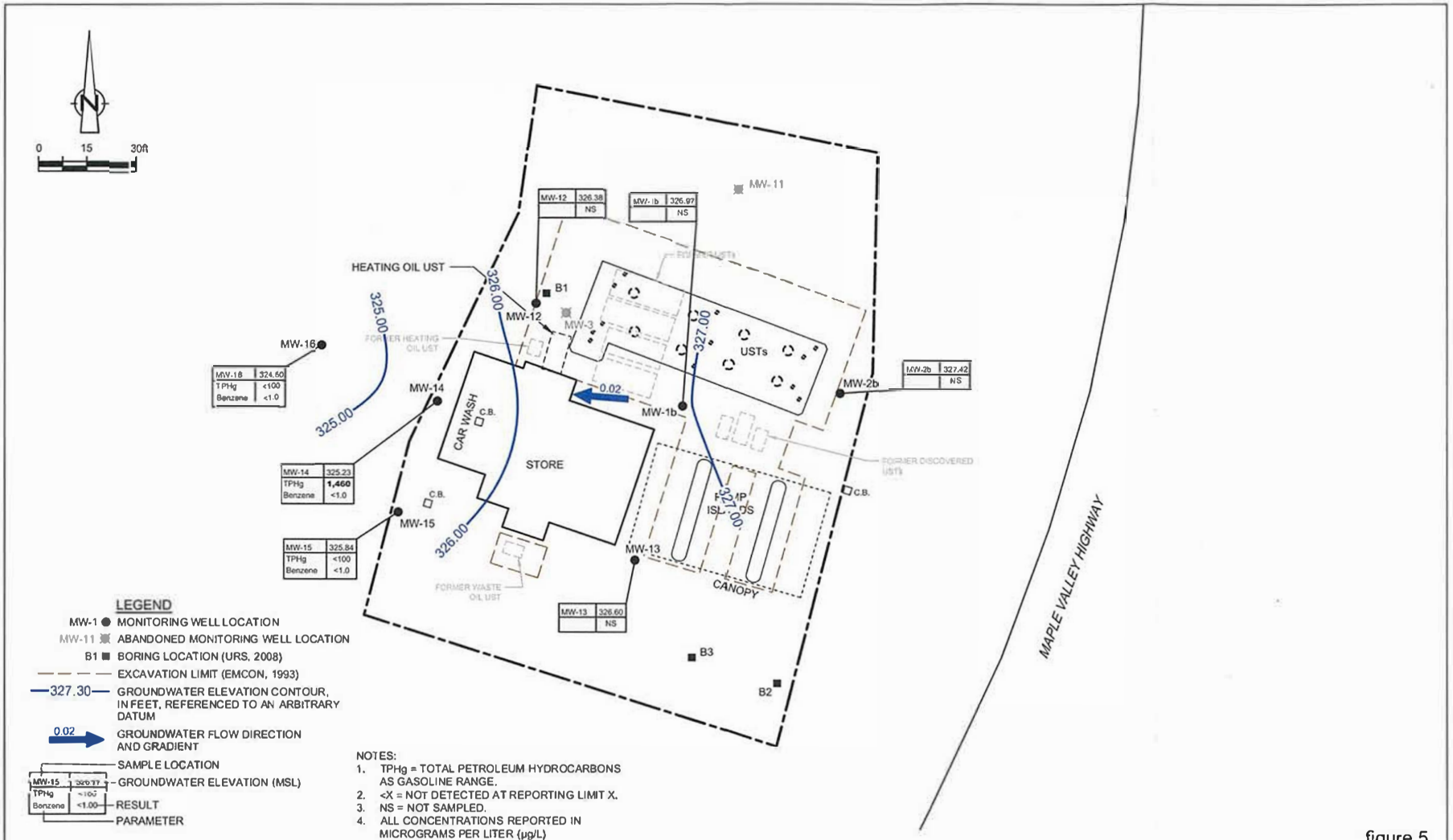


figure 5

GROUNDWATER CONTOUR AND CHEMICAL CONCENTRATION MAP - DECEMBER 6, 2016
JACKSON'S FOOD STORE NO. 5017
21641 MAPLE VALLEY HIGHWAY
Maple Valley, Washington

SOURCE:
DELTA CONSULTANTS, FIGURE 2, GROUNDWATER ELEVATION CONTOUR MAP, DATED 5/2/07;
STATEWIDE LAND SURVEYING INC. DATED 5/19/14.

NOTE:
WASHINGTON STATE PLANE COORDINATE SYSTEM NAD 83/CORS 96,
NORTH ZONE 4601, IN U.S. SURVEY FEET.

062308-2016(002)GN-SO005 FEB 8, 2017

Enclosure A, Figure 4

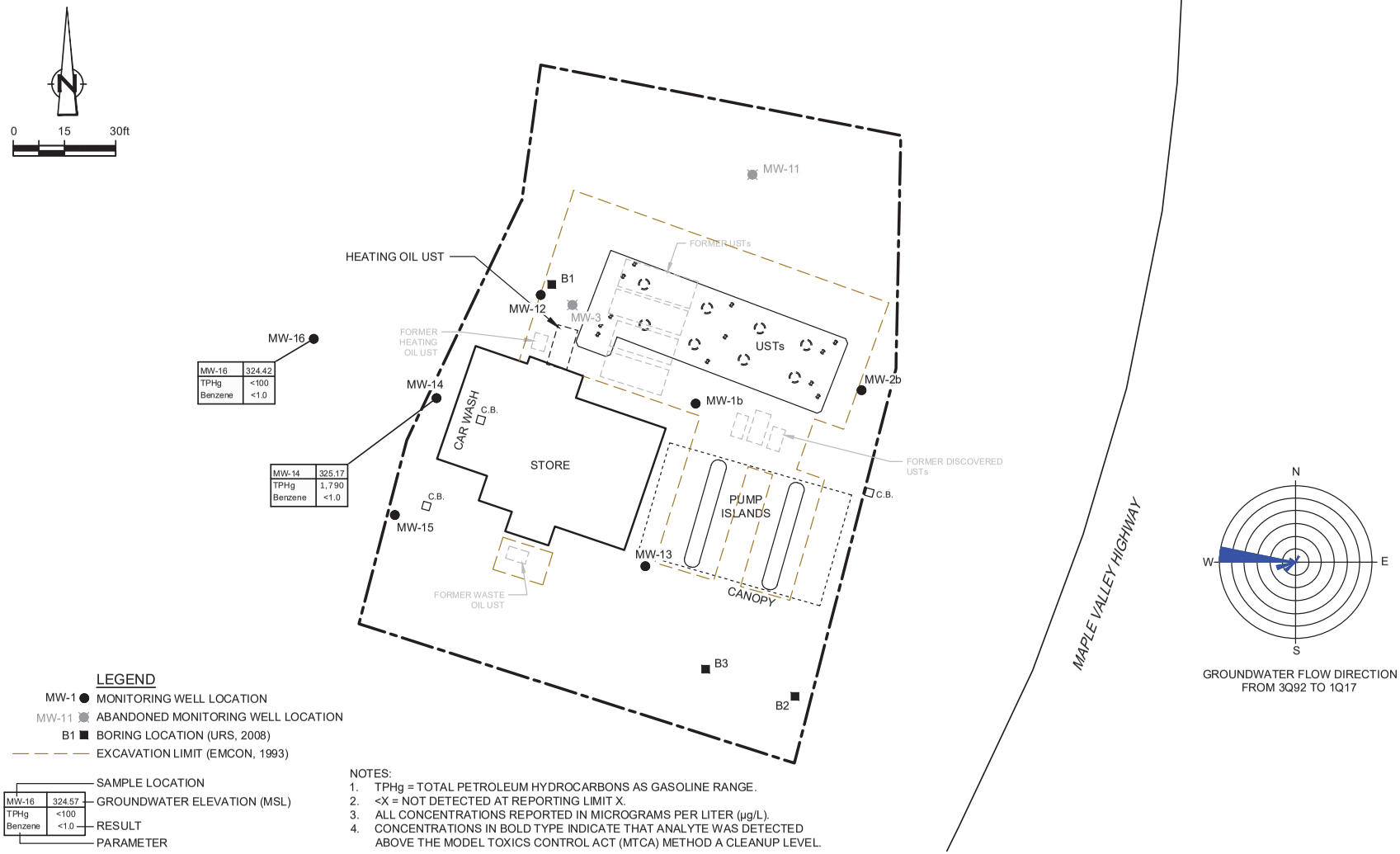


figure 9

GROUNDWATER ELEVATION AND CHEMICAL CONCENTRATION MAP - JUNE 7, 2019
JACKSON'S FOOD STORE NO. 5017
21641 RENTON-MAPLE VALLEY ROAD
Maple Valley, Washington

SOURCE:
DELTA CONSULTANTS, FIGURE 2, GROUNDWATER ELEVATION CONTOUR MAP, DATED 5/2/07;
STATEWIDE LAND SURVEYING INC. DATED 5/19/14.

NOTE:
WASHINGTON STATE PLANE COORDINATE SYSTEM NAD 83/CORS 96,
NORTH ZONE 4601, IN U.S. SURVEY FEET.

Filename: I:\Sonoma.Public\CAD\drawings\062000s\062300s-JFS-Jackson Food Stores\062308-JFS-21641 Maple Valley Hwy, Maple Valley, WA\062308-REPORTS\062308-2017(004)GN\062308-2017(004)GN-SO013.DWG

Enclosure A, Figure 5

Enclosure B

Basis for the Opinion:
List of Documents

1. Sweet-Edwards EMCON, Inc., Groundwater Monitoring May 1991; August 6, 1991.

2. EMCON, Underground Storage Tank Closure Report; February 12, 1993.

3. KHM Environmental Management (KHM), Groundwater Sampling, December 2002; April 1, 2003.

4. KHM, Site Assessment Report; April 1, 2003.

5. KHM, May 2003 Groundwater Monitoring; June 5, 2003.

6. Delta Environmental Consultants (Delta), Groundwater Monitoring Assessment Program (GRASP) Report; September 16, 2003.

7. Delta, GRASP Report; January 30, 2004.

8. Delta, GRASP Monitoring May 2004; June 15, 2004.

9. Delta, Groundwater Status November 2004; January 5, 2005.

10. Delta, GRASP Groundwater Status May 2005; July 11, 2005.

11. Delta, GRASP October 2005; December 12, 2005.

12. Delta, Groundwater Status April 2006; July 25, 2006.

13. Delta, Groundwater Status April 2007; September 4, 2007.

14. URS Corporation (URS), Site Assessment Phase 2, May 2008; July 11, 2008.

15. Delta, Groundwater Status May 2008; October 21, 2008.

16. Delta, Groundwater Status February 2009; March 25, 2009.

17. Conestoga-Rovers & Associates, Subsurface Investigation Report; January 23, 2015.

18. GHD Services, Inc. (GHD), 2015 Annual Groundwater Monitoring Report; March 24, 2016.

19. GHD, 2016 Annual Groundwater Monitoring Report; February 22, 2017.

20. GHD, 2017 Groundwater Monitoring Report; March 16, 2018.

21. GHD, 2018 Annual Groundwater Monitoring Report; March 27, 2019.

22. GHD, Remedial Investigation Report; September 20, 2019.