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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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February 13, 2019

Inger Jackson  
Senior Hydrogeologist  
Pacific Groundwater Group  
2377 Eastlake Avenue East  
Seattle, Washington 98102

**Re: Notice of Periodic Review Conducted at the following Hazardous Waste Site:**

- **Site Name:** Birds Eye Foods
- **Site Address:** 3303 South 35<sup>th</sup> Street, Tacoma, Pierce County, WA 98409
- **Facility/Site No:** 1328
- **Cleanup Site No:** 5012

Dear Inger Jackson:

Under the Model Toxics Control Act (MTCA), chapter 70.105D Revised Code of Washington (RCW), which governs the cleanup of hazardous waste sites in Washington State, the Department of Ecology (Ecology) must conduct a periodic review of all sites with institutional controls and Environmental Covenants every five years. This letter serves to inform you that a second periodic review has been conducted at the Birds Eye Foods Site.

The periodic review process includes the following steps:

- Confirmation that the Environmental Covenant is still active and recorded with the Title to the property.
- A review of any monitoring data collected since the cleanup was completed or since the last review was conducted.
- A Site visit to confirm the institutional controls and conditions of the Environmental Covenant are being followed.
- A 30-day public comment period on the draft periodic review report.

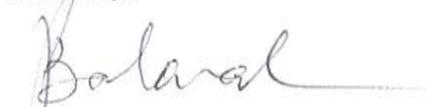
Inger Jackson  
February 13, 2019  
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Based on the information collected during this periodic review, the Birds Eye Foods Site appears to meet the requirements of chapter 173-340 Washington Administrative Code (WAC), and the selected remedy continues to be protective of human health and the environment. The 30-day public comment period on the draft periodic review report was ended on February 3, 2019. We received your comments on the draft report. Ecology accepted all your comments and revised the draft report accordingly. Enclosed is a copy of the final periodic review report for your information.

A periodic review will continue to be required every five years as long as institutional controls and/or an environmental covenant are required to protect human health and the environment. The next periodic review will be due in February 2024.

If you have any questions regarding this letter or if you would like additional information regarding the cleanup of hazardous waste sites, please call me at (360) 407-6335. Thank you for your cooperation.

Sincerely,



Panjini Balaraju, P.E.  
Southwest Regional Office  
Toxics Cleanup Program

Enclosure: Final Periodic Review

By certified mail: 9489 0090 0027 6066 6646 88

cc: Ecology Site Files=



**PERIODIC REVIEW REPORT  
FINAL**

**Birds Eye Foods  
Facility Site ID#: 1328  
Cleanup Site ID#: 5012**

**3303 South 35<sup>th</sup> Street  
Tacoma, Washington 98409**

**Southwest Regional Office  
TOXICS CLEANUP PROGRAM**

**February 2019**

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## 1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup conditions and monitoring data to ensure that human health and the environment are being protected at the Birds Eye Foods Boiler Room Site (Site) located in Tacoma, Washington. Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under the Voluntary Cleanup Program (VCP). The cleanup actions resulted in concentrations of petroleum hydrocarbons remaining at the Site in soil that exceeds MTCA Method A Industrial Land Use cleanup levels. The MTCA Method A Industrial cleanup levels for soil are established under WAC 173-340-745(5). The MTCA Method A cleanup levels for groundwater are established under WAC 173-340-720(3) and MTCA Method C Soil Gas cleanup levels were used at the Site. Concentrations of groundwater and soil gas do not exceed their respective MTCA cleanup levels. WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a Site every five years under the following conditions:

- (a) Whenever the department conducts a cleanup action.
- (b) Whenever the department approves a cleanup action under an order, agreed order or consent decree.
- (c) Or, as resources permit, whenever the department issues a No Further Action (NFA) opinion.
- (d) And one of the following conditions exists:
  - 1. Institutional controls or financial assurance are required as part of the cleanup.
  - 2. Where the cleanup level is based on a practical quantitation limit.
  - 3. Where, in the department's judgment, modifications to the default equations or assumptions using Site-specific information would significantly increase the concentration of hazardous substances remaining at the Site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [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 use.
- (e) Availability and practicability of higher preference technologies.

- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

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## 2.0 SUMMARY OF CONDITIONS

### 2.1 Site History

The Birds Eye Foods Property is located at 3303 South 35<sup>th</sup> Street, Tacoma, Washington in Pierce County. It is a former food processing facility that occupied approximately 22.5 acres in an industrial area of Tacoma. The Birds Eye Foods facility is also known as Nalley's Fine Foods, the original food processing company at this location. The Birds Eye Foods facility is surrounded by commercial/industrial properties and bounded by South Lawrence Street to the east, Center Street to the north, South 35<sup>th</sup> Street to the south and commercial businesses to the west. A vicinity Map and a general previous Site Plan are available as Appendix 6.1 and Appendix 6.2, respectively. The Site Plan does not reflect modifications since the 2011 Remedial Investigation/Feasibility Study including changes to the parcel boundaries, and removal of some aboveground portions of the Potato Warehouse and Boiler Room. Following remedial activities, a Restrictive Covenant was recorded for the property on March 26, 2013. The Site received a No Further Action determination on June 8, 2013.

There is limited information about the property's use prior to development in the early 1940s. The property was largely undeveloped in the early 1900s with the exception of a City Water Works Pumping Station and the existing railroad spur based on Fire Insurance maps. In early 1940s Nalley's Fine Foods (Nalley's) purchased the property. Previous investigations report that a sawmill that had occupied a portion of the property was demolished to construct the Nalley's facility; however, Fire Insurance maps indicate the Westwood Hardwood Company and Nalley's operations were both present in 1950. Development of the Nalley's facility progressed in stages since its inception in the early 1940s. In addition to buildings, underground and aboveground utility lines, fuel lines, and storage tanks have been installed and abandoned during the facility operation. The Nalley's facility and main series of interconnected buildings were generally constructed between 1950 and 1969. The Nalley's facility comprised a pickle plant, cannery, dressing/mayonnaise plant, sweet room, peanut butter plant, potato chip plant, boiler room, power house, cooper shop, forklift repair shop, and various warehouses, tank yards, and offices. A general previous Site Plan is shown on Figure 2 in Appendix 6.2.

Nalley's manufactured pickles, snacks (potato and corn chips), salsa, canned foods, salad dressings, peanut butter and chili throughout its history. Curtice Burns Foods acquired Nalley's in the 1970s and changed names to Agrilink Foods in 1997 and to Birds Eye Foods in 2003.

The former Boiler Room underground storage tank site (Boiler Room Site) occupies approximately 1.75 acres in the southwestern portion of the Birds Eye facility and is located in the main internal vehicle corridor through the facility. The main vehicle corridor was formerly Windom Street, which is likely the reason for the regional underground and aboveground utilities that transect the Boiler Room Site. A railroad spur and overhead power lines divide the vehicle corridor into west and east halves. The Boiler Room Site is largely paved or covered with buildings. Three buildings are located in the vicinity of the Boiler Room Site: the former Potato Warehouse, the Boiler Room Building, and the former Pallet Room Building. Some aboveground portions of the Potato Warehouse and Boiler Room have been moved since the No Further Action was issued. The Boiler Room Site included a 10,000-gallon (Tank B) and

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20,000-gallon (Tank A) underground storage tanks (USTs) and a 2,000-gallon aboveground storage tank (AST). The USTs were removed in 1990. As a result of the facility operational activities and potential releases from the USTs and/or associated piping system, impacts to the Boiler Room Site soils and groundwater were identified during UST removal.

## 2.2 Geology and Hydrogeology of the Site

Several rounds of investigations were conducted at the Birds Eye facility for the Boiler Room Site. Based these investigations, three stratigraphic units were encountered in the vicinity of the former Boiler Room Site:

- Fill
- Upper Sand
- Upper Gravel

A layer of structural fill approximately 4 to 12 feet thick comprising sand and gravel occurs at ground surface at the Boiler Room Site. The fill material is approximately 15 to 19 feet thick where it was used to backfill the former UST excavation. The lateral extent of fill is unknown. The unit is not saturated with groundwater and observed sedimentary texture suggests that the unit may be relatively permeable.

The fill layer is underlain by the naturally occurring Upper Sand layer consisting of uniform fine to medium sand with minor gravel. The unit is approximately 30 to 50 feet thick, and it is saturated below approximately 20 to 30 feet below ground surface where the water table occurs. Based on the on-site slug tests the hydraulic conductivity of this unit was estimated to be in the order of  $1 \times 10^{-2}$  cm/sec.

The Upper Gravel is a layer of approximately 50 to 100 feet of sandy gravel with significant interbeds of sand that range in thickness from 3 to 30 feet. The gravel unit is very permeable and serves as a highly productive aquifer. The City of Tacoma municipal well 2B is completed in the Upper Gravel and is located approximately 300 feet southwest of the Boiler Room building. The Upper Gravel unit is in direct contact with the overlying Upper Sand unit in the Birds Eye facility vicinity.

The saturated portions of the Upper Sand and Upper Gravel units are part of the Shallow Aquifer. In general, the water table is flat. Groundwater flow directions have been northerly and northwesterly during monitoring events per the requirements of the No Further Action letter.

## 2.3 Cleanup Levels

WAC 173-340-704 states that 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.

MTCA Method A industrial cleanup levels for soils, MTCA Method A cleanup levels for groundwater, and MTCA Method C Soil Gas Cleanup Levels for soil gas were used to characterize and cleanup the Site. The table below presents the current MTCA Method A cleanup levels.

**Table-1: MTCA Method A Soil and Groundwater Cleanup Levels**

Chemical	MTCA Method A Industrial Soil Cleanup Level (mg/kg)	MTCA Method A Groundwater Cleanup Level (µg/L)	MTCA Method C Soil Gas Cleanup Level (µg/m <sup>3</sup> )	
			Depth Less Than 15 feet	Depth Greater Than 15 feet
TPH	NA	NA	NA	NA
TPH-Gas	30 (benzene present)/100 (no detectable benzene)	800 (benzene present)/1000 (no detectable benzene)	NA	NA
TPH-Diesel	2,000	500	NA	NA
TPH-Oil	2,000	500	NA	NA
Benzene	0.03	5	107	321
Toluene	7	1,000	167,000	500,000
Ethylbenzene	6	700	33,300	100,000
Xylenes	9	1,000	3,330	10,000
Benzo(a)pyrene	2		NA	NA
Naphthalene	5	160	24.5	73.5
Lead	1,000	15	NA	NA

**Note:** mg/kg: milligrams per kilogram  
 µg/L: micrograms per liter  
 µg/m<sup>3</sup>: micrograms per cubic meter

## 2.4 Removal of Underground Storage Tanks

In October and November 1990, as part of a property-wide program, two USTs [Tank A (South Tank): 20,000-gallons and Tank B (North Tank): 10,000-gallons] were removed immediately west of the Boiler Room during which petroleum-contaminated soils were revealed. Tank A was used to store residual oil/Bunker C oil and Tank B was used to store Bunker C oil (however, some records indicated that diesel fuel was also stored in Tank B). Tank A was observed to be scaled with two small holes (reportedly less than one-quarter inch), and Tank B had no evidence of any rust and areas of rupture. Laboratory analysis of soil samples from Tank A excavation indicated the presence of total petroleum hydrocarbons (TPH) ranging from 15,370 mg/kg to 61,600 mg/kg (EPA Method 418.1), whereas the soil samples from Tank B excavation revealed the presence of TPH ranging from 2,078 mg/kg to 25,698 mg/kg (EPA Method 418.1).

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Approximately 400 cubic yards (48 feet X 15 feet X 19 feet minus the volume of the UST) of petroleum-contaminated soil was removed from the Tank A excavation and approximately 475 cubic yards (22 feet X 43 feet X 15 feet minus the volume of the UST) of contaminated soil was removed from the Tank B excavation. However, excavations surrounding each tank were halted when structural risks to the nearby railroad tracks and the Boiler Room were identified.

Approximate location of USTs excavation areas are available as Appendix 6.3. Previous reports state that up to 600 tons of petroleum-contaminated soil was removed from the Site in June 1992.

## **2.5 Soil and Groundwater Investigations**

### **2.5.1 May 1991 Nowicki & Associates Investigations**

In May 1991, Nowicki & Associates (NA) installed a total of six groundwater monitoring wells (MW-1 through MW-6) surrounding the former Boiler Room UST excavations. Soil samples collected from the boreholes were analyzed for TPH (EPA Method 8015) and benzene, toluene, ethylbenzene and xylenes (BTEX). Additionally, soil samples from MW-5 and MW-6 (located between and within the former USTs) were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). TPH (180 mg/kg to 45,000 mg/kg), ethylbenzene (290 µg/kg to 12,000 µg/kg), and xylenes (1,100 µg/kg to 77,000 µg/kg) were detected in soil samples collected from MW-5 and/or MW-6 soil borings. However, only ethylbenzene and xylenes concentrations of 12,000 µg/kg and 77,000 µg/kg exceeded their MTCA Method A Industrial cleanup levels (CULs) of 6,000 µg/kg and 9,000 µg/kg, respectively in one soil sample. Toluene was also detected at 60.2 µg/kg to 2,100 µg/kg, but these concentrations did not exceed its CUL of 7,000 µg/kg. TPH and BTEX compounds were not detected in soil samples collected from MW-1 or MW-2, MW-3, or MW-4; VOCs and SVOCs were not detected in soil samples collected from MW-5 or MW-6 boreholes, with the exception of 2-methylnaphthalene in MW-5.

In addition, groundwater samples collected from wells between and within the former UST excavations showed concentrations of TPH in monitoring well MW-5 (815 and 880 mg/L) and MW-6 (130 and 1,000 mg/L) relative to the "DOE limit" (1,000 mg/L) identified in the 1991 investigation report. Also benzene (52 µg/l), total xylenes (160 µg/L), 2-methylnaphthalene (330 µg/l), and anthracene (31 µg/l) concentrations in MW-5 and MW-6 samples also exceeded "DOE limits" identified in the 1991 report of 5 µg/l, 20 µg/L, 110 µg/L, and 23 µg/l, respectively. Groundwater samples collected at MW-1, MW-2, MW-3 and MW-4 were analyzed for TPH and VOCs but these compounds not detected. The groundwater monitoring well locations and soil and groundwater sample results are available as Appendix 6.4.

### **2.5.2 Nowicki & Associates and Pacific Groundwater Group Investigations**

In late 1991 and early 1992, two separate soil and groundwater investigations were conducted by NA and Pacific Groundwater Group (PGG) based on a work plan developed jointly by NA and PGG. In addition, PGG conducted a second remedial investigation in spring of 1992 to address comments by Ecology and the Tacoma Pierce County Health Department (TPCHD) on the initial remedial investigation reports. Goals of these two investigations were to further characterize the extent of groundwater contamination, characterize Site hydrogeology, and use a numerical

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groundwater model to calculate estimated travel time from the contaminated area to the nearby City of Tacoma Well 2B.

A total of eighteen soil borings was advanced to depths of 25 feet to 31 feet, six new monitoring wells were installed (MW-7 through MW-11, and MW-4D), and six piezometers were installed. Based on field screening selected soil samples were collected from the soil and monitoring well boreholes for laboratory analysis of TPH (EPA 418.1); hydrocarbon scan for gasoline, diesel, and oil (modified EPA Method 8015); BTEX; polycyclic aromatic hydrocarbons (PAHs, Methods 3430/8310); and total lead (EPA Method 6010). The results indicated detections of TPH (10 mg/kg to 15,000 mg/kg), and in concentrations in excess of 2011 MTCA Method A Industrial cleanup levels of diesel (TPH-D: 3,900 mg/kg to 28,000 mg/kg), benzene (0.04 mg/kg to 1.4 mg/kg), ethylbenzene (11 mg/kg), and xylenes (12 mg/kg to 41 mg/kg). These TPH-D, benzene, ethylbenzene, and xylenes concentrations exceeded the 2011 MTCA Method A cleanup levels of 2,000 mg/kg, 0.03 mg/kg, 6 mg/kg, and 9 mg/kg, respectively. Soil boring locations and soil sample results are available as Appendix 6.5.

Three groundwater sampling events were performed between November 1991 and May 1992 to further characterize the extent of groundwater contamination. Groundwater samples were analyzed for PAHs, TPH (gasoline, diesel, and "other" petroleum hydrocarbons by EPA 8015M; and TPH 418.1), and BTEX; select samples were also analyzed for chloride, sodium, total coliform, nitrate+nitrite and/or ammonia). Results of groundwater samples indicated elevated levels of TPH-D (560 µg/L to 82,000 µg/L), gasoline (1,080 µg/L to 2,140 µg/L), benzene (18.2 µg/L to 49.9 µg/L) and chloride (260 mg/L to 1,200 mg/L) which exceeded 2011 MTCA Method A cleanup levels of 500 µg/L, 800 µg/L, 5 µg/L and Washington State maximum contaminant level of 250 mg/L, respectively. In addition, free product (mixture of diesel and heavy oil) was also found in two monitoring wells. Groundwater monitoring well locations and groundwater sample results are presented in Appendix 6.6.

A very low hydraulic gradient of 0.0005 feet/foot was identified with an estimated seepage velocity of 0.02 to 0.3 feet per day. The travel time to Well MW-2B was estimated to be over 11 months under continues pumping conditions at Well MW-2B.

### **2.5.3 RZA Agra Feasibility Study**

In December 1992, RZA Agra (Agra) conducted a feasibility study (FS) following the results of the remedial investigations conducted by PGG and NA. As part of this FS, Agra evaluated steam injection and product recovery followed by enhanced bioremediation technology. Wells for the steam injection and product recovery remedy were installed; however, the evaluated remedy was not implemented because groundwater monitoring data collected subsequent to site discovery indicated that concentrations of petroleum compounds were declining.

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#### **2.5.4 Pacific Groundwater Group Soil Remedial Investigation**

In January/February and July 2011, two rounds of soil investigations were conducted to evaluate the current status of total petroleum hydrocarbons at the Boiler Room Site. All soil samples collected during the drilling were analyzed for TPH-G, TPH-D, TPH-O, BTEX and select soil samples were also analyzed for PAHs and Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons. Results of this investigation revealed the MTCA Method A Industrial cleanup level exceedances of TPH-G (55 mg/kg to 1,900 mg/kg), TPH-D (2,200 mg/kg to 21,000 mg/kg), TPH-O (3,600 mg/kg to 20,000 mg/kg), benzene (0.08 mg/kg to 0.88 mg/kg), benzo(a)pyrene (3 mg/kg), and naphthalene (12 mg/kg). The impacted soils, greater than MTCA Method A cleanup levels, were found to be present from 9 feet to 40 feet below ground level. Free-phase product was also encountered in the soils both above and below the water table. However, the lateral limits of contamination found during this investigation were similar to those delineated in 1992. Figures showing the lateral and vertical extent of soil contamination including cross-sections are available as Appendix 6.7.

As a result of elevated benzene concentrations in the subsurface soils, Ecology requested a vapor pathway investigation at the Site. Ecology approved a Vapor Intrusion work plan in March 2012 and the Vapor Intrusion Study was completed in June 2012. Results of the investigation did not identify any vapor concentrations greater than the draft MTCA Method C Soil Gas Cleanup Levels.

#### **2.5.5 Interim Remedial Action**

During the removal of former Boiler Room USTs, the contaminated soil was excavated to the extent possible. Approximately a total of 875 cubic yards (475 cubic yards in the vicinity of the North Tank and 400 cubic yards in the vicinity of the South Tank) of petroleum-contaminated soil was excavated and disposed of off-site. However, petroleum-contaminated soil was left in-place at the Site because of its inaccessibility in the vicinity of buildings, utilities, and railroad tracks. As part of an interim remedial action, approximately 80 gallons of free-product was pumped from well MW-5. The approximate extent of UST excavation areas are shown on Figure 3 in Appendix 6.3.

#### **2.5.6 Pacific Groundwater Group Feasibility Study**

In 2011, following the remedial investigation, PGG prepared an FS based on their conceptual site model. The following five remedial alternatives were evaluated:

- Soil Containment and Natural Source Zone Depletion (NSZD)
- Excavation
- Soil Containment, NSZD, Partial Excavation
- In-Situ Steam Enhancement Extraction with Bioremediation, and
- In-Situ Thermal Desorption

After a detailed evaluation with respect to Threshold Criteria, Performance, and Reasonable Restoration Timeframe, the Soil Containment and NSZD option was selected as the final preferred alternative for the Site with Ecology's concurrence. As part of the preferred

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alternative, new shallow and deep groundwater monitoring wells were installed surrounding the impacted area and a long-term groundwater monitoring work plan was implemented at the Site.

### **2.5.7 Groundwater Monitoring**

Groundwater monitoring has been occurring at the Site since 1991. Groundwater samples have been tested for TPH-G, TPH-D, TPH-O, BTEX, and PAHs. Petroleum concentrations have decreased over time in all wells and have not exceeded the MTCA Method A cleanup levels for any of the tested constituents since the 2007 annual sampling event.

As per the requirements of the No Further Action (NFA) letter, a long term groundwater monitoring plan was implemented in May 2012. This monitoring included four rounds of quarterly monitoring during the first year and every 18 months thereafter. The monitoring well network at the Boiler Room Site consists of four well pairs (MW-9S and MW-9D, MW-12S and MW-12D, MW-13S and MW-13D, and MW-14S and MW-14D) located outside the lateral extent of soil contamination delineated during the remedial investigation. The shallow monitoring wells are screened in the Upper Sand unit and deep monitoring wells are screened in the Upper Gravel unit (depth comparable to the nearby emergency municipal supply Well 2B). However, Ecology understands that the City of Tacoma has not used Well 2B for their water supply for a long time.

Since 2012, a total of seven rounds (four rounds quarterly and three events at an 18-month interval) of groundwater monitoring has been conducted at the Site in accordance with the preferred remedy. The latest groundwater sampling was conducted in September 2017. All the groundwater samples were analyzed for the same parameters as stated above and contaminant concentrations were all below the laboratory detection limits. Since the contaminated soil is left-in-place at the Site, the groundwater monitoring program will be continued at the Site. The groundwater monitoring well locations and the latest sampling results are included as Appendix 6.8.

### **2.5.8 Restrictive Covenant**

Following remediation activities, a Restrictive Covenant was recorded for the Site in Pierce County on March 26, 2013 and NFA letter was issued on July 8, 2013. The Restrictive Covenant imposes the following limitations:

#### **Section 1:**

1. A portion of the Property contains soil containing TPH-D, TPH-G, benzene, benzo(a)pyrene toxic equivalents of carcinogenic polycyclic aromatic hydrocarbons, and naphthalene. The contaminated soil within the Property extends under the western portion of the Boiler Room and Potato Warehouse buildings (see Exhibit A, Figure A1). Contaminated soil in this area is covered by at least 9 feet of clean fill or native soil and most of the contaminated soil is capped by asphalt, which will be maintained as part of the Remedial Action. The contaminated soil is also covered by the western 12 feet of the Boiler Room Building and Potato Storage Warehouse, which are adjacent to one another (see Exhibit A, Figure A1).

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2. 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 prohibited in the capped areas include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability, piercing the surface with a rod, spike or similar item, bulldozing or earthwork.
  3. The Owner shall not alter, modify, or remove the existing structure(s) in the area of contaminated soil in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.
  4. Monitoring will occur per the Groundwater Monitoring Plan approved by Ecology (see Exhibit B). Monitoring locations are shown in Exhibit B, Figure 3. Groundwater monitoring will be conducted at eight monitoring wells to assess the effectiveness of the Remedial Action. Monitoring will occur every quarter for one year; with the 1<sup>st</sup> Quarter commencing with May 7-8, 2012 monitoring. After four quarters of monitoring with no exceedances of cleanup levels, groundwater monitoring will occur at a frequency of once every 18 months pending a periodic review by Ecology to determine if continued monitoring is required. Additional details on the monitoring are provided in the Groundwater Monitoring Plan. The monitoring wells will be maintained pending Ecology's review of monitoring results and determination of the need for continued monitoring and pending Ecology's approval to decommission or relocate a well.
  5. The Property shall be used only for traditional industrial uses as described in RCW 70.105D.020(14) or such other uses specifically approved by the Department of Ecology for this site and defined in and allowed under the City of Tacoma's zoning regulations (Land Use Regulatory Code) codified as Title 13 of the Tacoma Municipal Code as of this date of this Restrictive Covenant.

**Section 2:** The 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.

**Section 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.

**Section 4:** The Owner of the Property must give 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.

**Section 5:** The Owner must restrict leases to uses and activities of the Property consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

**Section 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 Covenant. Ecology may approve any inconsistent use only after public notice and comment.

**Section 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, to determine compliance with this Covenant, and to inspect records that are related to the Remedial Action.

**Section 8:** The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this 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.

The Restrictive Covenant is available as Appendix 6.9.

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## **3.0 PERIODIC REVIEW**

### **3.1 Effectiveness of Completed Cleanup Actions**

Based upon the Site visit conducted on March 21, 2018, the asphalt pavement continues to provide an adequate barrier to direct exposure pathways (ingestion, direct contact) to the contaminated soils. The asphalt pavement is in satisfactory condition and no repair, maintenance or contingency actions are required at this time. Currently the Site is occupied by empty buildings and open asphalt pavement. A photo log is available as Appendix 6.10.

A Restrictive Covenant for the Site was recorded and is in place. This Restrictive Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Restrictive Covenant serves to assure the long term property use and integrity of the property surface.

### **3.2 New Scientific Information for Individual Hazardous Substances for Mixtures Present at the Site**

Cleanup levels at the Site were based on regulatory standards rather than calculated risk for chemicals and/or media. These standards were sufficient to be protective of Site-specific conditions.

### **3.3 New Applicable State and Federal Laws for Hazardous Substances Present at the Site**

The Model Toxics Control Act cleanup levels have not changed since the No Further Action determination letter was issued for the Site on July 8, 2013.

### **3.4 Current and Projected Site Use**

The Site is currently vacant, consisting of empty buildings and an open parking lot. This use is not likely to have a negative impact on the risk posed by hazardous substances contained at the Site.

### **3.5 Availability and Practicability of Higher Preference Technologies**

The remedy implemented included containment of hazardous substances and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

### **3.6 Availability of Improved Analytical Techniques to Evaluate Compliance with Cleanup Levels**

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

## 4.0 CONCLUSIONS

- The cleanup actions completed at the Site continues to be protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, under WAC 173-340-740(6) (f), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- Since 1991, more than 50 rounds of groundwater monitoring have been conducted at the Site. After the issue of the 2011 RI/FS, a total of seven rounds of groundwater monitoring has been conducted at the Site in accordance with the preferred Soil Containment and NSZD remedy and the results of all the petroleum constituents were below the laboratory detection limits. The current Restrictive Covenant requires continued groundwater monitoring, and Ecology will consider all the available groundwater monitoring results and reevaluate the groundwater monitoring program to make a determination regarding any appropriate changes to the groundwater monitoring network or the frequency.
- The Restrictive Covenant for the property is in place and will be effective in protecting public health from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this review, the Department of Ecology has determined that the requirements of the Restrictive Covenant are being satisfactorily met and no additional remedial actions are needed at this time. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the cap is maintained.

### 4.1 Next Review

The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

## 5.0 REFERENCES

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Pacific Groundwater Group. Former Birds Eye Foods Tacoma, Groundwater Monitoring Summary Reports. November 29, 2013 through June 15, 2015.

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Nowicki & Associates. Nalley's Fine Foods, Remedial Investigation Report. January 15, 1992.

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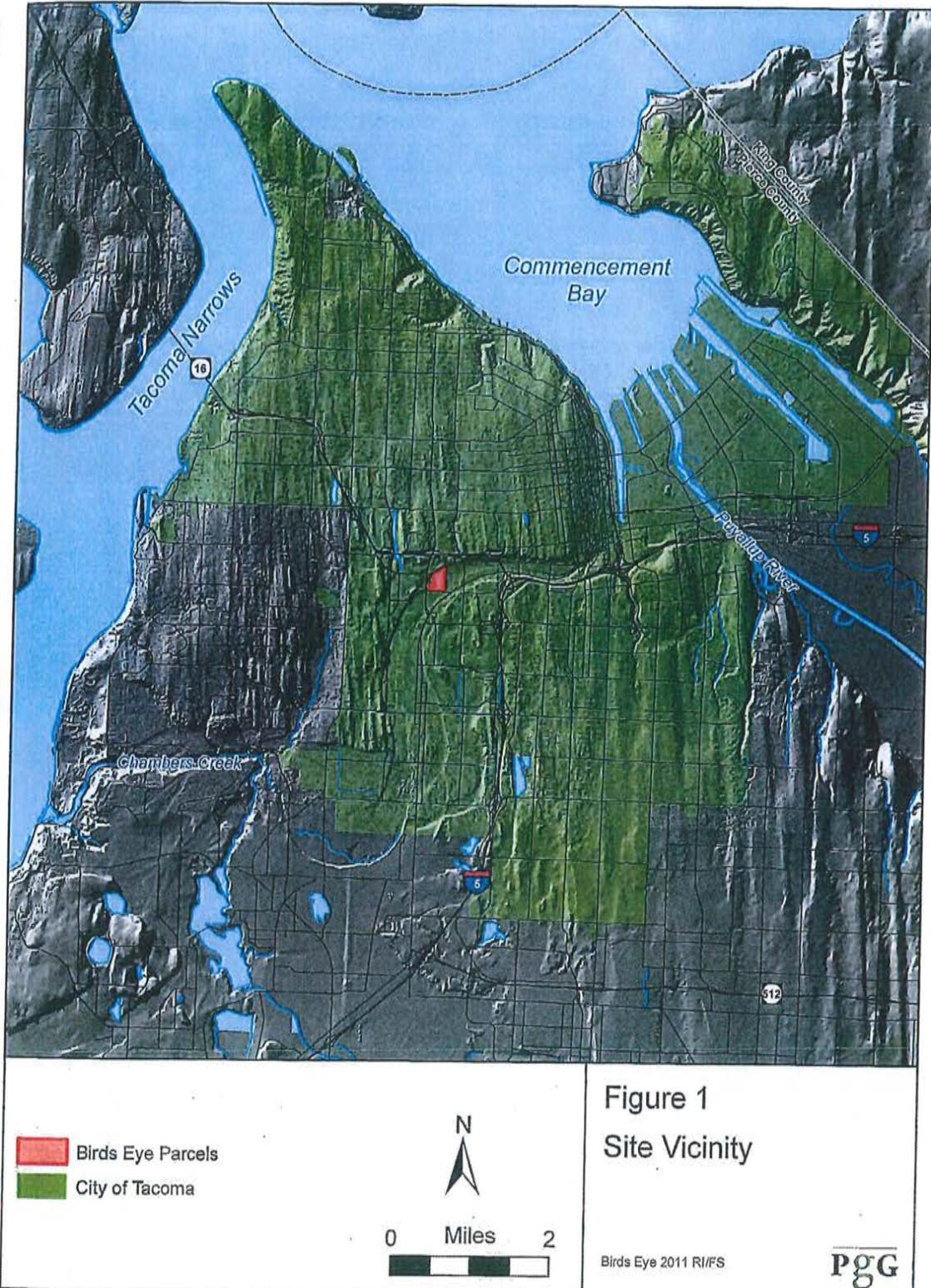
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Department of Ecology. Site Visit. March 21, 2018.

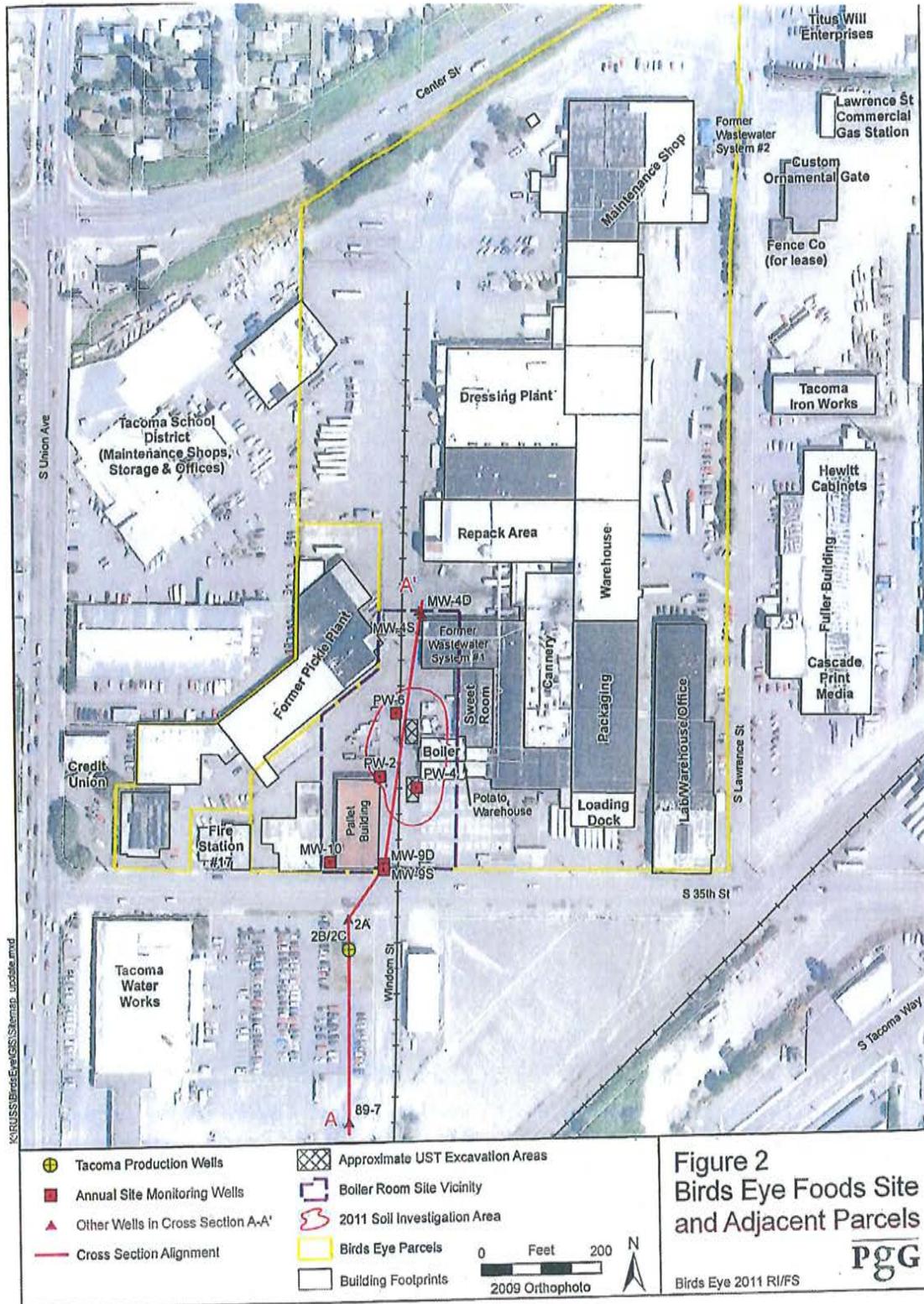
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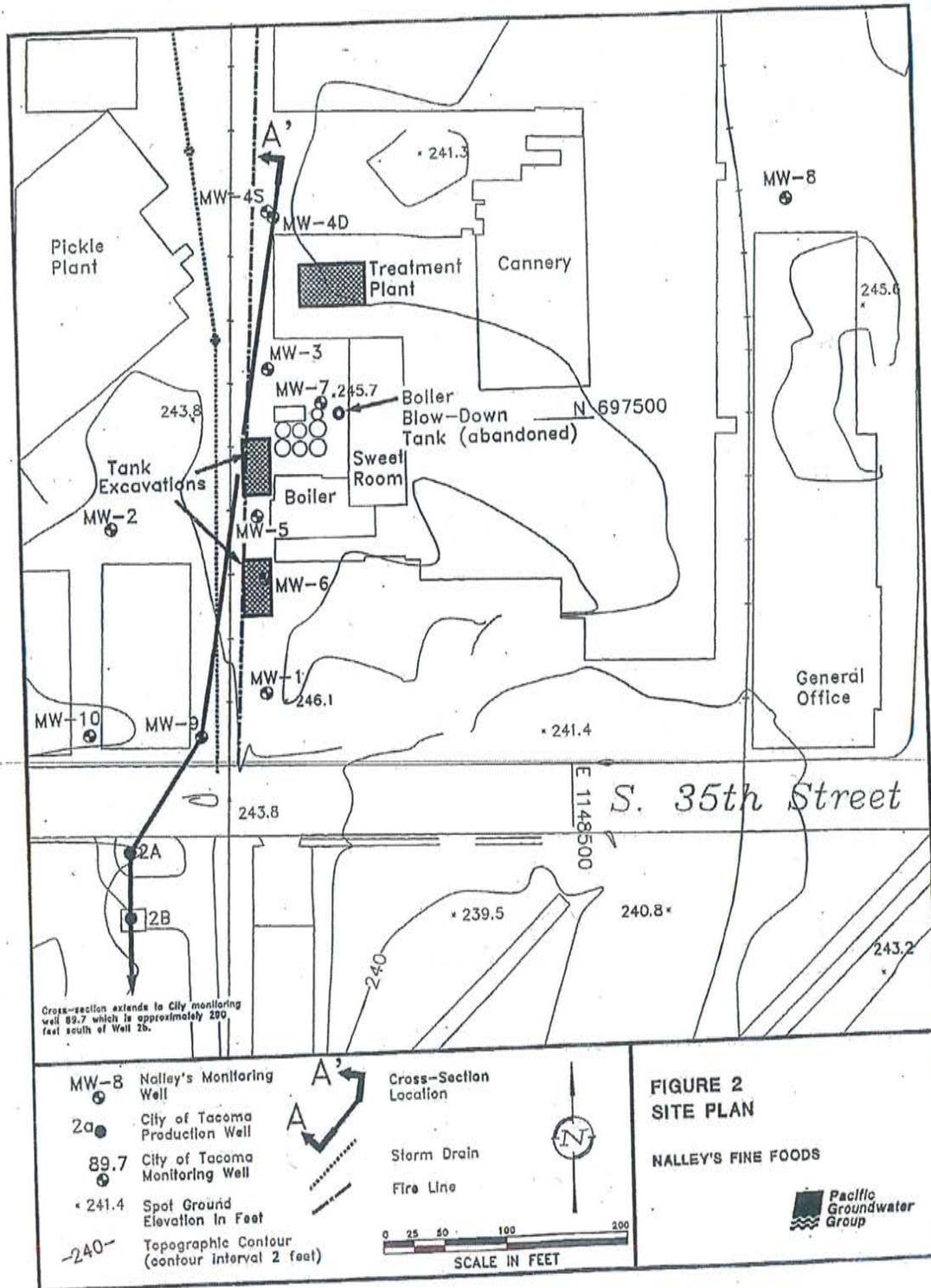
## 6.0 APPENDICES

## 6.1 Vicinity Map

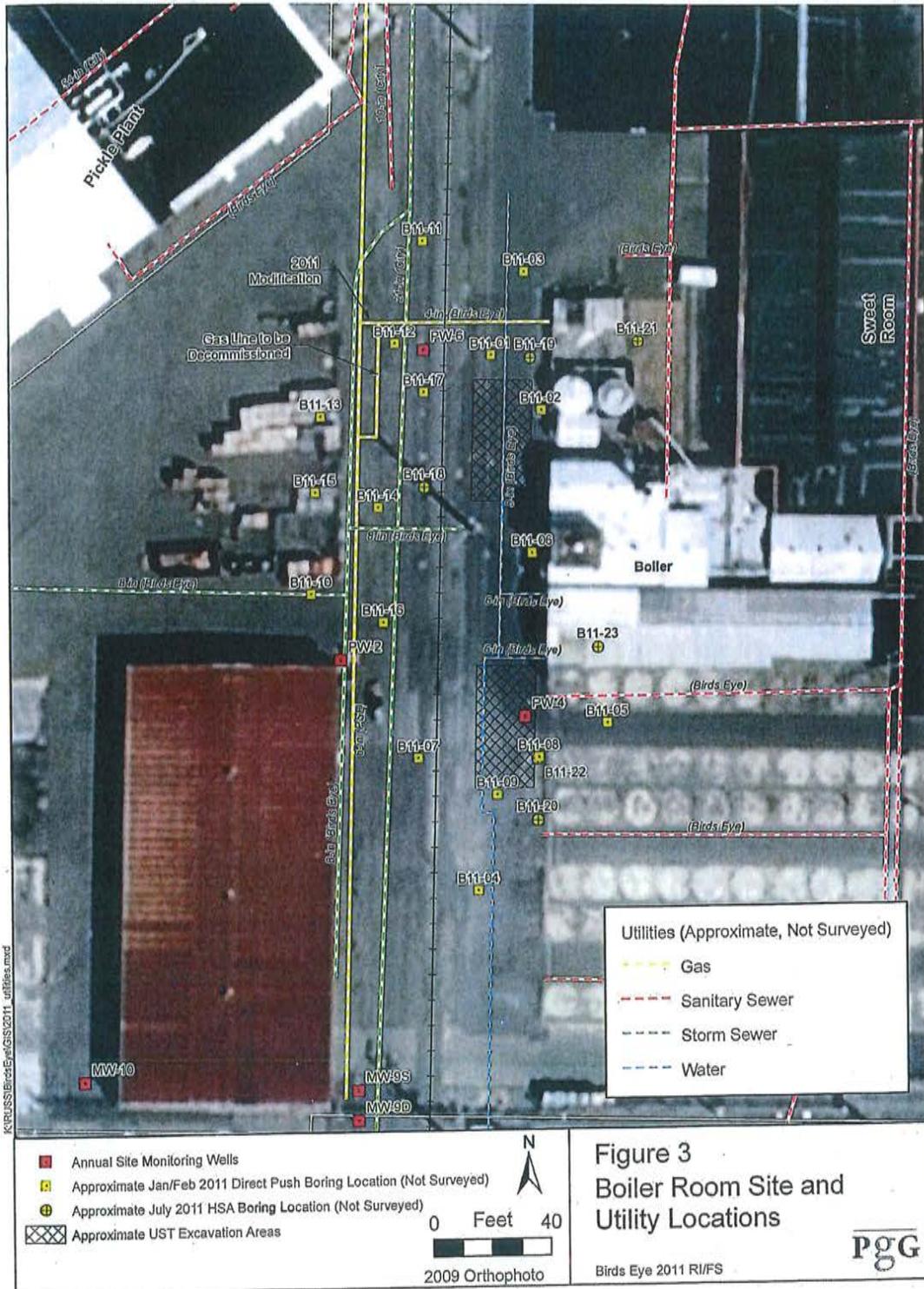


## 6.2 Site Plan





### 6.3 Approximate Extent of Underground Storage Tanks Excavation Areas



### 6.4 May 1991 Investigation: Locations of Groundwater Monitoring Wells and Soil and Groundwater Sample Results

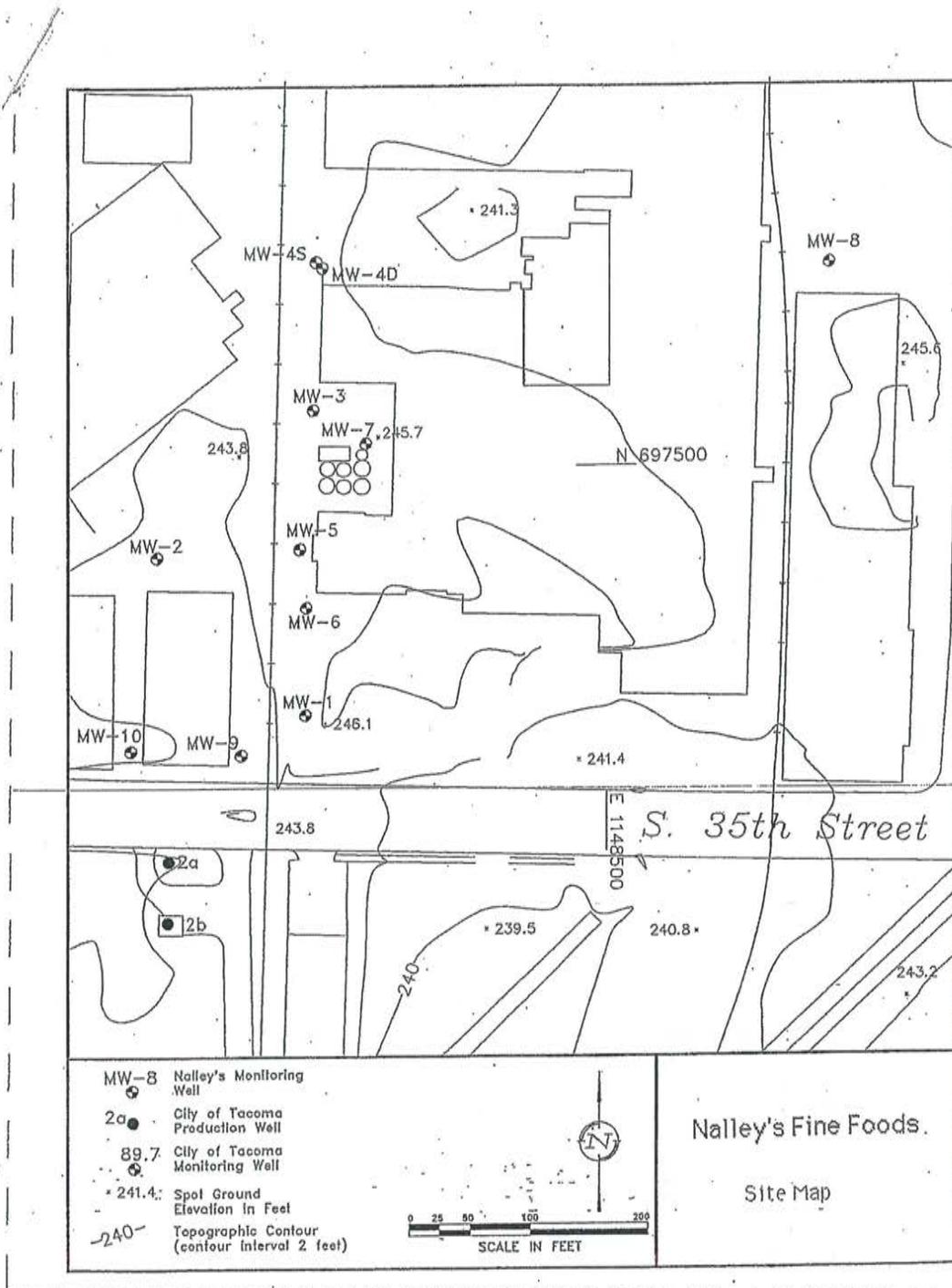


Table A1-1. Petroleum Concentrations in Soil Samples Collected for Previous Remedial Investigations, Former Nalley's Fine Foods Site

Soil Sample	Data Source	Sample Date	2011 MTCA Method A Industrial Cleanup Levels:												
			TPH (418.5) mg/kg	Gas (8015) mg/kg	TPH (8015) mg/kg	Diesel (8015) mg/kg	Other-Hydraulic Oil (8015) mg/kg	Benzene mg/kg	Toluene ug/kg	Ethylbenzene ug/kg	Xylenes ug/kg				
(MW-1) W1-32.5	Nowicki, 1991	May-91		NA	30	2,000	2,000	30	7,000	6,000	9,000				
(MW-2) W2-27.5	Nowicki, 1991	May-91				10 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-3) W3-32.5	Nowicki, 1991	May-91				10 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-4) W4-32.5	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-7.5	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-10	Nowicki, 1991	May-91				45,000		50 U	2100	12000	77000				
(MW-5) W5-11.5	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-12.5	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-14	Nowicki, 1991	May-91				1,600		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-15.0	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-17.5	Nowicki, 1991	May-91				10.0 U		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-22.5	Nowicki, 1991	May-91				13,000		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-27.5	Nowicki, 1991	May-91				11,000		50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
(MW-5) W5-32.5	Nowicki, 1991	May-91				2,800		50 U	320	1700	8300				
(MW-6) W6-27.5	Nowicki, 1991	May-91				180		50 U	70	290	1100				
(MW-6) W6-32.5	Nowicki, 1991	May-91				180		50 U	70	290	1100				

Table A1-5. Summary of Groundwater Quality Results, May 1991 Pre-Remedial Investigation

	MW-1		MW-2		MW-3		MW-4		MW-5		MW-6		1991 Ecology Limit Identified in Well Report	2011 MTCA Method A (Unrestricted) Cleanup Level
	1.0 U													
<b>Total Petroleum Hydrocarbons (TPH)</b>														
TPH by Method 418.1	mg/L												1000	NA
TPH by Method EPA 8015	mg/L												1000	NA
<b>VOCs by Method 8240</b>														
Chloromethane	ug/L	10 U	Not Identified	NA										
Bromomethane	ug/L	10 U	Not Identified	NA (Method B: 11)										
Vinyl Chloride	ug/L	10 U	Not Identified	0.2										
Chloroethane	ug/L	10 U	Not Identified	NA										
Methylene Chloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
Acetone	ug/L	100 U	Not Identified	NA (Method B: 7,200)										
Carbon Disulfide	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 820)
1,1-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 400)
1,1-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 1,600)
1,2-Dichloroethane (Total)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
Chloroform	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 81)
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
2-Butanone	ug/L	100 U	Not Identified	NA										
1,1,1-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	200
Carbon Tetrachloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.63)
Vinyl Acetate	ug/L	50 U	Not Identified	NA (Method B: 8,000)										
Bromodichloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.71)
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA
Cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.44)
Trichloroethene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.52)
1,1,2-Trichloroethene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.77)
Benzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
Trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.44)
Bromoform	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5.5
4-Methyl-2-Pentanone	ug/L	50 U	Not Identified	NA										
2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA
Tetrachloroethene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	5
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 0.22)
Toluene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	1,000
Chlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 160)
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	700
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	NA (Method B: 1,600)
Total Xylenes	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	Not Identified	1,000

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Table A1-5. Summary of Groundwater Quality Results, May 1991 Pre-Remedial Investigation

SVOCs by Method 8270	1991 Ecology Limit Identified in Well						Report	2011 MICA Method A (Unrestricted) Cleanup Level
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6		
Phenol	---	---	---	---	---	23 U	Not Identified	NA (Method B: 2,400)
bis(2-Chloroethyl)ether	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 0.04)
2-Chlorophenol	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 40)
1,3-Dichlorobenzene	---	---	---	---	110 U	23 U	Not Identified	NA
1,4-Dichlorobenzene	---	---	---	---	110 U	23 U	Not Identified	NA
Benzyl Alcohol	---	---	---	---	220 U	45 U	Not Identified	NA (Method B: 800)
1,2-Dichlorobenzene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 720)
2-Methylphenol	---	---	---	---	110 U	23 U	Not Identified	NA
bis(2-Chloroisopropyl)ether	---	---	---	---	110 U	23 U	Not Identified	NA
4-Methylphenol	---	---	---	---	110 U	23 U	Not Identified	NA
N-Nitroso-Di-N-propylamine	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 3.1)
Hexachloroethane	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 16)
Nitrobenzene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 46)
Isophorone	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 160)
2-Nitrophenol	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 64,000)
2,4-Dimethylphenol	---	---	---	---	540 U	110 U	Not Identified	NA (Method B: 24)
Benzoic Acid	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 1.5)
Bis(2-Chloroethoxy)methane	---	---	---	---	110 U	23 U	Not Identified	160
2,4-Dichlorophenol	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 0.22)
1,2,4-Trichlorobenzene	---	---	---	---	220 U	45 U	Not Identified	NA (Method B: 0.56)
Naphthalene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 48)
4-Chloroaniline	---	---	---	---	220 U	45 U	Not Identified	NA (Method B: 4)
Hexachlorobutadiene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 800)
4-Chloro-3-methylphenol	---	---	---	---	220 U	45 U	Not Identified	NA (Method B: 160)
2-Methylnaphthalene	---	---	---	---	220 U	45 U	Not Identified	NA
Hexachlorocyclopentadiene	---	---	---	---	330	23	Not Identified	NA
2,4,6-Trichlorophenol	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 960)
2,4,5-Trichlorophenol	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 32)
2-Chloronaphthalene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 16)
2-Nitroaniline	---	---	---	---	110 U	23 U	Not Identified	NA
Dimethyl phthalate	---	---	---	---	110 U	23 U	Not Identified	NA
Acenaphthylene	---	---	---	---	540 U	110 U	Not Identified	NA
3-Nitroaniline	---	---	---	---	110 U	23 U	Not Identified	NA
PAH Acenaphthene	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 960)
2,4-Dinitrophenol	---	---	---	---	540 U	110 U	Not Identified	NA (Method B: 32)
4-Nitrophenol	---	---	---	---	540 U	110 U	Not Identified	NA (Method B: 16)
Dibenzofuran	---	---	---	---	110 U	23 U	Not Identified	NA (Method B: 16)

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Table A1-5. Summary of Groundwater Quality Results, May 1991 Pre-Remedial Investigation

	1991 Ecology Limit <sup>10</sup>						2011 MICA Method A (Unrestricted) Cleanup Level	
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Report	Level
2,4-Dinitrotoluene	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 32)
2,6-Dinitrotoluene	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 16)
Diethylphthalate	—	—	—	—	110 U	23 U	Not Identified	
4-Chlorophenyl phenyl ether	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 640)
Fluorene	—	—	—	—	110 U	23 U	Not Identified	
4-Nitroaniline	—	—	—	—	110 U	23 U	Not Identified	NA
4,6-Dinitro-2-methylphenol	—	—	—	—	540 U	110 U	Not Identified	
N-Nitrosodiphenylamine	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 0.055)
4-Bromophenyl phenyl ether	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 0.22)
Hexachlorobenzene	—	—	—	—	540 U	110 U	Not Identified	NA
Pentachlorophenol	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 4,800)
Phenanthrene	—	—	—	—	110 U	23 U	Not Identified	
Anthracene	—	—	—	—	110 U	23 U	Not Identified	
Di-n-butylphthalate	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 640)
Fluoranthene	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 480)
Pyrene	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 46)
Butyl benzyl phthalate	—	—	—	—	110 U	23 U	Not Identified	NA (Method B: 0.19)
3,3'-Dichlorobenzidine	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Benzo(a)anthracene	—	—	—	—	110 U	23 U	Not Identified	
bis(2-ethylhexyl)phthalate	—	—	—	—	110 U	23 U	Not Identified	
Chrysene	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Di-n-octyl phthalate	—	—	—	—	110 U	23 U	Not Identified	
Benzo(b)fluoranthene	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Benzo(k)fluoranthene	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Benzo(a)pyrene	—	—	—	—	110 U	23 U	Not Identified	0.1
Indeno(1,2,3-cd)pyrene	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Dibenz(a,h)anthracene	—	—	—	—	110 U	23 U	Not Identified	Sum TEF cPAH < 0.1
Benzo(g,h,i)perylene	—	—	—	—	110 U	23 U	Not Identified	NA

10 U - compound not detected; associated number is lab reporting limit  
 Data Source: July 11, 1991 Monitoring Well Installation Report, Nowicki & Associates  
 23 Parameter detected above lab reporting limit; does not reflect comparison to 1991 or 2011 Screening Levels

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### 6.5 Nowicki & Associates 1991/1992 Soil Boring Locations and Soil Sample Results

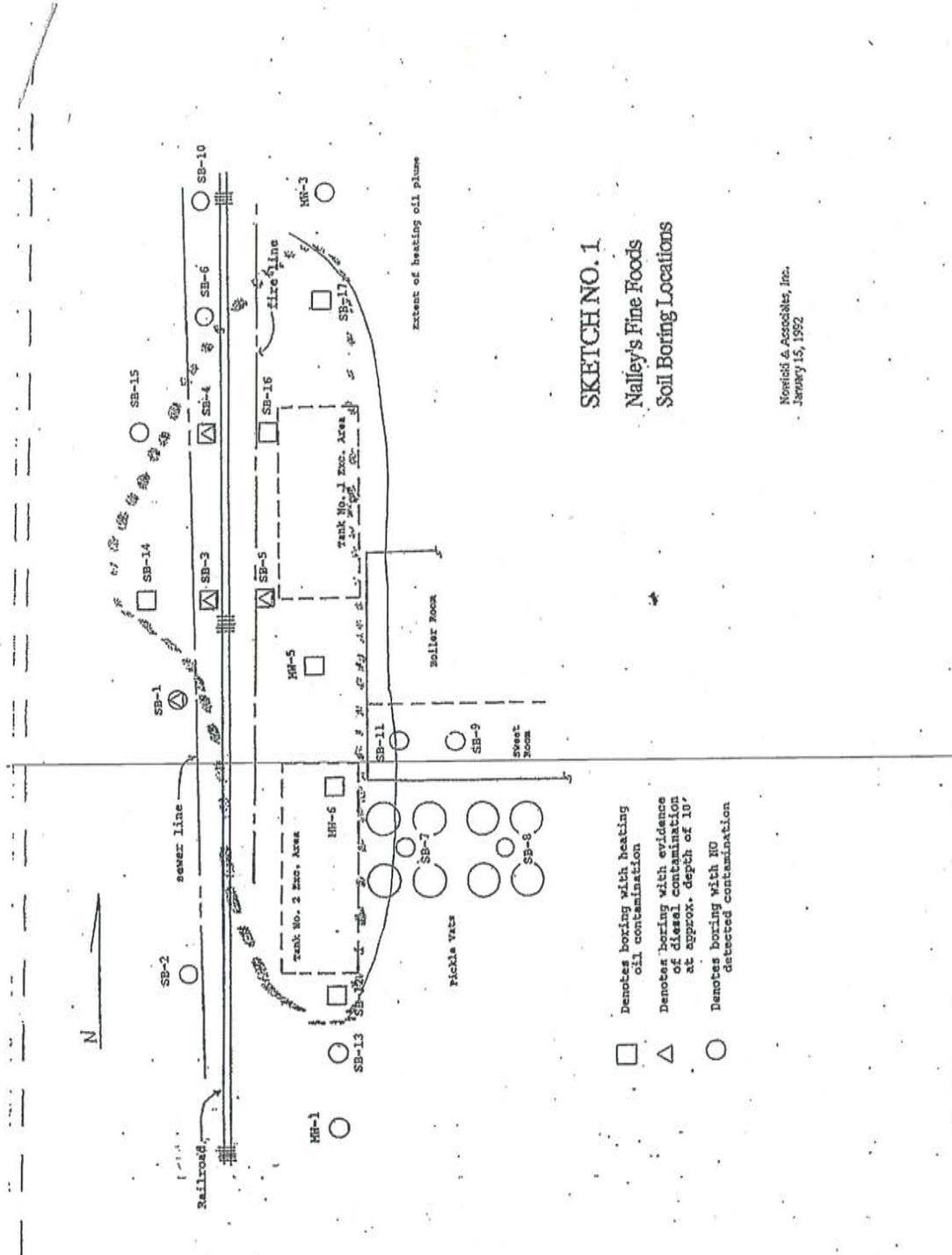




Table A1-1. Petroleum Concentrations in Soil Samples Collected for Previous Remedial Investigations, Former Nalley's Fine Foods Site

Soil Sample	Data Source	Sample Date	2011 MTCA Method A Industrial Cleanup Levels:							
			TPH (418-1) mg/kg	Gas (8015) mg/kg	TPH (8015) mg/kg	Diesel (8015) mg/kg	Other-Hydraulic Oil (8015) mg/kg	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg
SB8-5-14'	Nowicki, 1992	Oct-91	10 U	NA	30	2,000	2,000	7,000	6,000	9,000
SB8-9-24'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB8-12-31'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB11-3-16'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB11-6-24'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB11-9-31'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB12-4-11'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB12-6-16'6"	Nowicki, 1992	Oct-91	5,700	---	---	---	---	20 U	20 U	70 U
SB12-10-26'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	210
SB13-5-16'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB13-9-24'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB13-12-31'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB14-5-16'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB14-9-24'	Nowicki, 1992	Oct-91	450	---	---	---	---	20 U	20 U	70 U
SB14-12-31'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB15-5-16'6"	Nowicki, 1992	Oct-91	42	---	---	---	---	20 U	20 U	70 U
SB15-9-24'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB15-12-31'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB16-5-16'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB16-8-21'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB16-11-29'	Nowicki, 1992	Oct-91	15,000	---	---	---	---	20 U	20 U	70 U
SB17-5-16'6"	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	11,000	41,000
SB17-9-24'	Nowicki, 1992	Oct-91	10 U	---	---	---	---	20 U	20 U	70 U
SB17-12-31'6"	Nowicki, 1992	Oct-91	34	---	---	---	---	20 U	20 U	70 U
SB18-8(1)	PGG, 1992b	Apr-92	10 U	---	---	---	---	20 U	20 U	70 U
SB18-8(2)	PGG, 1992b	Apr-92	10 U	---	---	---	---	20 U	20 U	70 U

10 U - compound not detected; associated number is lab reporting limit  
 Bold - result exceeds 2011 MTCA Method A Industrial Cleanup Level

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**Table A1-2. VOC and SVOC Concentrations in Soil Samples Collected for  
 May 1991 Pre-Remedial Investigations**

		MW-5 W5-32.5	MW-6 W6-32.5
Nitrobenzene	ug/kg	1,000 U	1,000 U
Isophorone	ug/kg	1,000 U	1,000 U
2-Nitrophenol	ug/kg	1,000 U	1,000 U
2,4-Dimethylphenol	ug/kg	1,000 U	1,000 U
Benzoic Acid	ug/kg	5,000 U	5,000 U
bis(2-Chloroethoxy)methane	ug/kg	1,000 U	1,000 U
2,4-Dichlorophenol	ug/kg	1,000 U	1,000 U
1,2,4-Trichlorobenzene	ug/kg	1,000 U	1,000 U
Naphthalene	ug/kg	1,000 U	1,000 U
4-Chloroaniline	ug/kg	2,000 U	2,000 U
Hexachlorobutadiene	ug/kg	1,000 U	1,000 U
4-Chloro-3-methylphenol	ug/kg	2,000 U	2,000 U
2-Methylnaphthalene	ug/kg	1,000	1,000 U
Hexachlorocyclopentadiene	ug/kg	1,000 U	1,000 U
2,4,6-Trichlorophenol	ug/kg	1,000 U	1,000 U
2,4,5-Trichlorophenol	ug/kg	1,000 U	1,000 U
2-Chloronaphthalene	ug/kg	1,000 U	1,000 U
2-Nitroaniline	ug/kg	5,000 U	5,000 U
Dimethyl phthalate	ug/kg	1,000 U	1,000 U
Acenaphthylene	ug/kg	1,000 U	1,000 U
3-Nitroaniline	ug/kg	5,000 U	5,000 U
Acenaphthene	ug/kg	1,000 U	1,000 U
2,4-Dinitrophenol	ug/kg	5,000 U	5,000 U
4-Nitrophenol	ug/kg	5,000 U	5,000 U
Dibenzofuran	ug/kg	1,000 U	1,000 U
2,4-Dinitrotoluene	ug/kg	1,000 U	1,000 U
2,6-Dinitrotoluene	ug/kg	1,000 U	1,000 U
Diethylphthalate	ug/kg	1,000 U	1,000 U
4-Chlorophenyl phenyl ether	ug/kg	1,000 U	1,000 U
Fluorene	ug/kg	1,000 U	1,000 U
4-Nitroaniline	ug/kg	1,000 U	1,000 U
4,6-Dinitro-2-methylphenol	ug/kg	5,000 U	5,000 U
N-Nitrosodiphenylamine	ug/kg	5,000 U	5,000 U
4-Bromophenyl phenyl ether	ug/kg	1,000 U	1,000 U
Hexachlorobenzene	ug/kg	1,000 U	1,000 U
Pentachlorophenol	ug/kg	5,000 U	5,000 U
Phenanthrene	ug/kg	1,000 U	1,000 U
Anthracene	ug/kg	1,000 U	1,000 U
Di-n-butylphthalate	ug/kg	1,000 U	1,000 U

10 U - compound not detected; associated number is lab reporting limit  
 Data Source: July 11, 1991 Monitoring Well Installation Report, Nowicki & Associates  
 MTCA Method A Industrial Cleanup Level for soil not established for 2-methylnaphthalene;  
 Method B cleanup level is 320,000 ug/kg

**Table A1-2. VOC and SVOC Concentrations in Soil Samples Collected for May 1991 Pre-Remedial Investigations**

		MW:5 W5-32.5	MW:6 W6-32.5
VOCs by Method 8240			
Chloromethane	ug/kg	400 U	400 U
Bromomethane	ug/kg	400 U	400 U
Vinyl Chloride	ug/kg	400 U	400 U
Chloroethane	ug/kg	400 U	400 U
Methylene Chloride	ug/kg	200 U	200 U
Acetone	ug/kg	4,000 U	4,000 U
Carbon Disulfide	ug/kg	200 U	200 U
1,1-Dichloroethene	ug/kg	200 U	200 U
1,1-Dichloroethane	ug/kg	200 U	200 U
1,2-Dichloroethene (Total)	ug/kg	200 U	200 U
Chloroform	ug/kg	200 U	200 U
1,2-Dichloroethane	ug/kg	200 U	200 U
2-Butanone	ug/kg	4,000 U	4,000 U
1,1,1-Trichloroethane	ug/kg	200 U	200 U
Carbon Tetrachloride	ug/kg	200 U	200 U
Vinyl Acetate	ug/kg	2,000 U	2,000 U
Bromodichloromethane	ug/kg	200 U	200 U
1,2-Dichloropropane	ug/kg	200 U	200 U
Cis-1,3-Dichloropropene	ug/kg	200 U	200 U
Trichloroethene	ug/kg	200 U	200 U
Dibromochloromethane	ug/kg	200 U	200 U
1,1,2-Trichloroethane	ug/kg	200 U	200 U
Benzene	ug/kg	200 U	200 U
Trans-1,3-Dichloropropene	ug/kg	200 U	200 U
Bromoform	ug/kg	200 U	200 U
4-Methyl-2-Pentanone	ug/kg	2,000 U	2,000 U
2-Hexanone	ug/kg	200 U	200 U
Tetrachloroethene	ug/kg	200 U	200 U
1,1,2,2-Tetrachloroethane	ug/kg	200 U	200 U
Toluene	ug/kg	200 U	200 U
Chlorobenzene	ug/kg	200 U	200 U
Ethylbenzene	ug/kg	200 U	200 U
Styrene	ug/kg	200 U	200 U
Total Xylenes	ug/kg	200 U	200 U

### 6.6 Pacific Groundwater Group 1991/1992 Groundwater Investigation: Monitoring Well Locations and Groundwater Sample Results

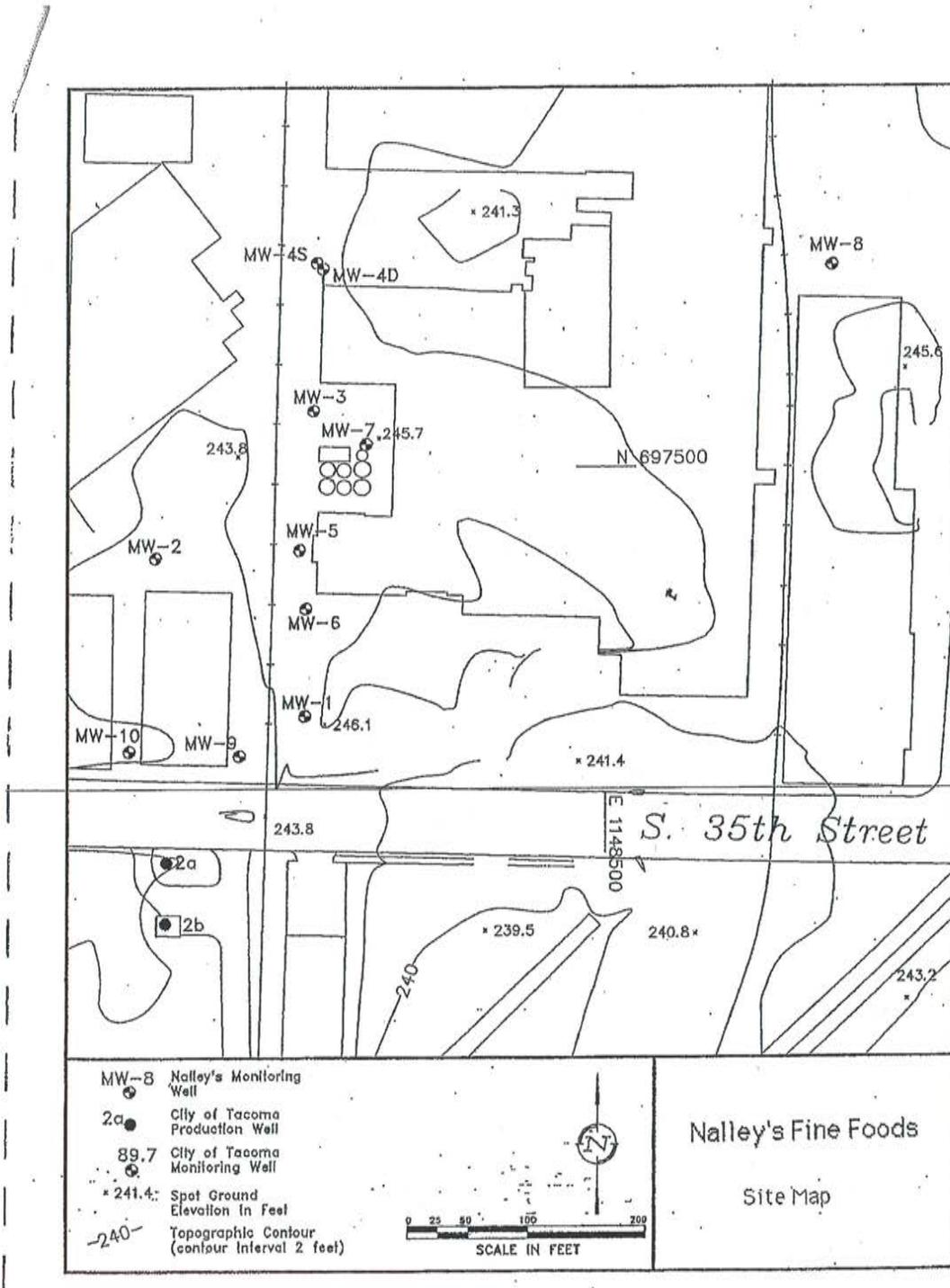


Table A1-8. Remedial Investigation Groundwater Samples, Collected May 1992

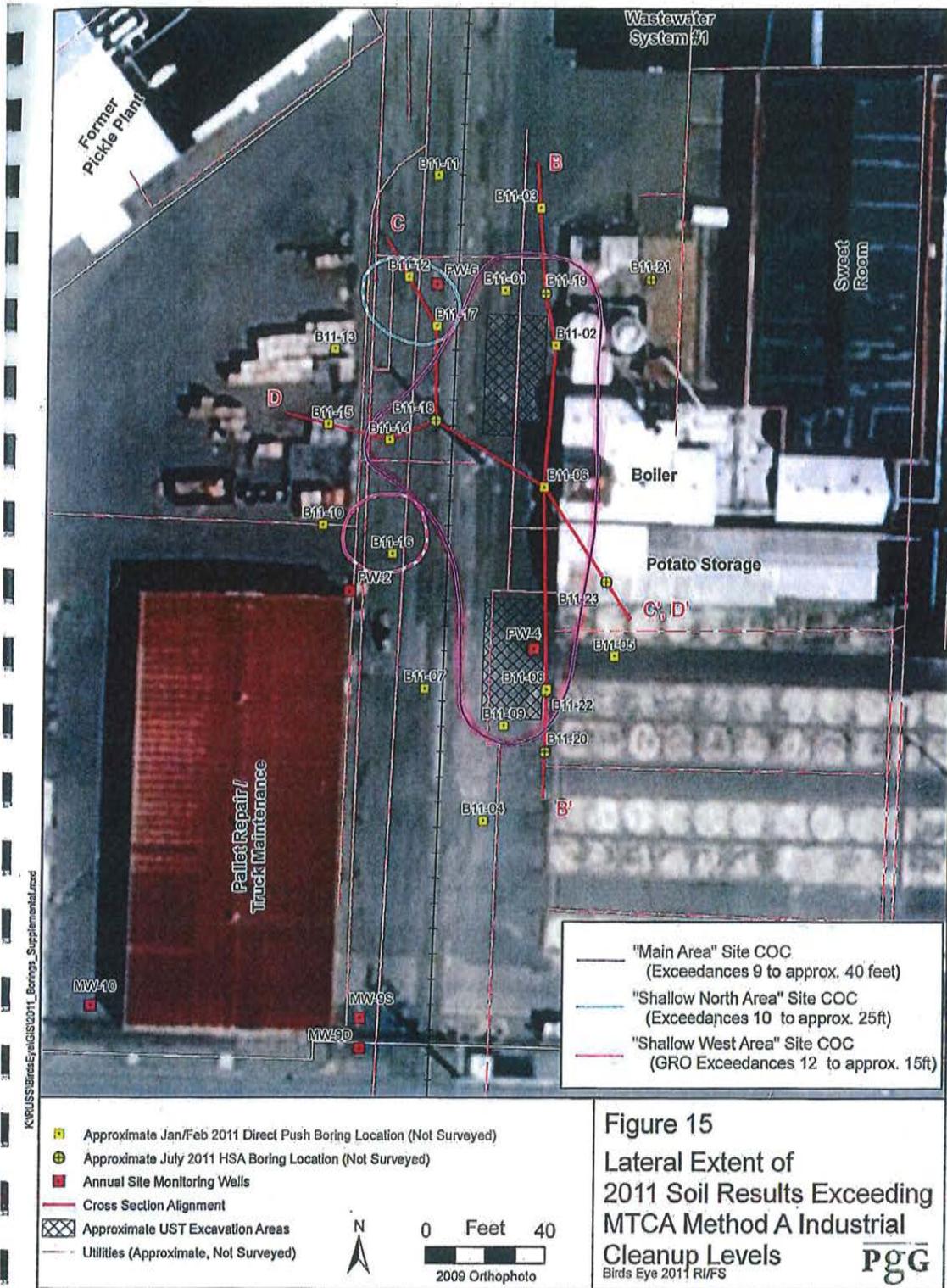
Constituent	Method	Units	MW-1	MW-2	MW-3	MW-4S	MW-5D	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	Well 2B
Gasoline	EPA 8015M	ug/L	50 U	50 U	50 U	50 U	50 U	2,140	560	50 U					
Diesel	EPA 8015M	ug/L	50 U	50 U	376	50 U	50 U	49,000	52,000	112	50 U				
Oil	EPA 8015M	ug/L	200 U	200 U	70	830	200 U	20,000	21,000	570	350	200 U	200 U	770	200 U
TPH	EPA 418.1	mg/L	0.5 U	0.5 U	0.5 U	0.5 U	1.1	49.9	55.3	0.6	0.5 U	0.5 U	0.5 U	1	0.5 U
Benzene	EPA 8020	ug/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	49.9	2.8	0.5 U					
Toluene	EPA 8020	ug/L	1 U	1 U	1 U	1 U	1 U	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	EPA 8020	ug/L	1 U	1 U	1 U	1 U	1 U	31	5	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes	EPA 8020	ug/L	1 U	1 U	1 U	1 U	1 U	117	3	1 U	1 U	1 U	1 U	1 U	1 U
Chloride	EPA 300	mg/L	670	190	310	420	84	470	950	320	99	1,200	750	3.7	290
Sodium	EPA 6010	mg/L	459	111	353	363	62	279	679	320	87.6	792	428	13.9	101
Tot. Coliform		MPN/100 mL	4	920	> 2400	130	8	> 2400	> 2400	> 2400	2	21	4	> 2400	2 U
Fecal Coliform		MPN/100 mL	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
NO2-N/O3		mg/L	2.2	9.5	0.2 U	1.9	4.1	0.2 U	0.2 U	0.2 U	9.6	3.9	2.8	0.2	2.1
Ammonia		mg/L	0.05 U	0.05 U	2.42	0.05 U	1.1	0.54	0.54	3.47	0.05 U	0.05 U	0.05 U	0.05	0.05 U
Napthalene	EPA 8310	ug/L	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U
Acenaphthene	EPA 8310	ug/L	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U
Acenaphthylene	EPA 8310	ug/L	1 U	1 U	1 U	1 U	1 U	10 U	10 U	1 U	1 U	1 U	1 U	1 U	1 U
Fluorene	EPA 8310	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Phenanthrene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	EPA 8310	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	EPA 8310	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(a)anthracene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(k)fluoranthene	EPA 8310	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(e)pyrene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenz(a,h)anthracene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h)perylene	EPA 8310	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	EPA 8310	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	2 U	2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

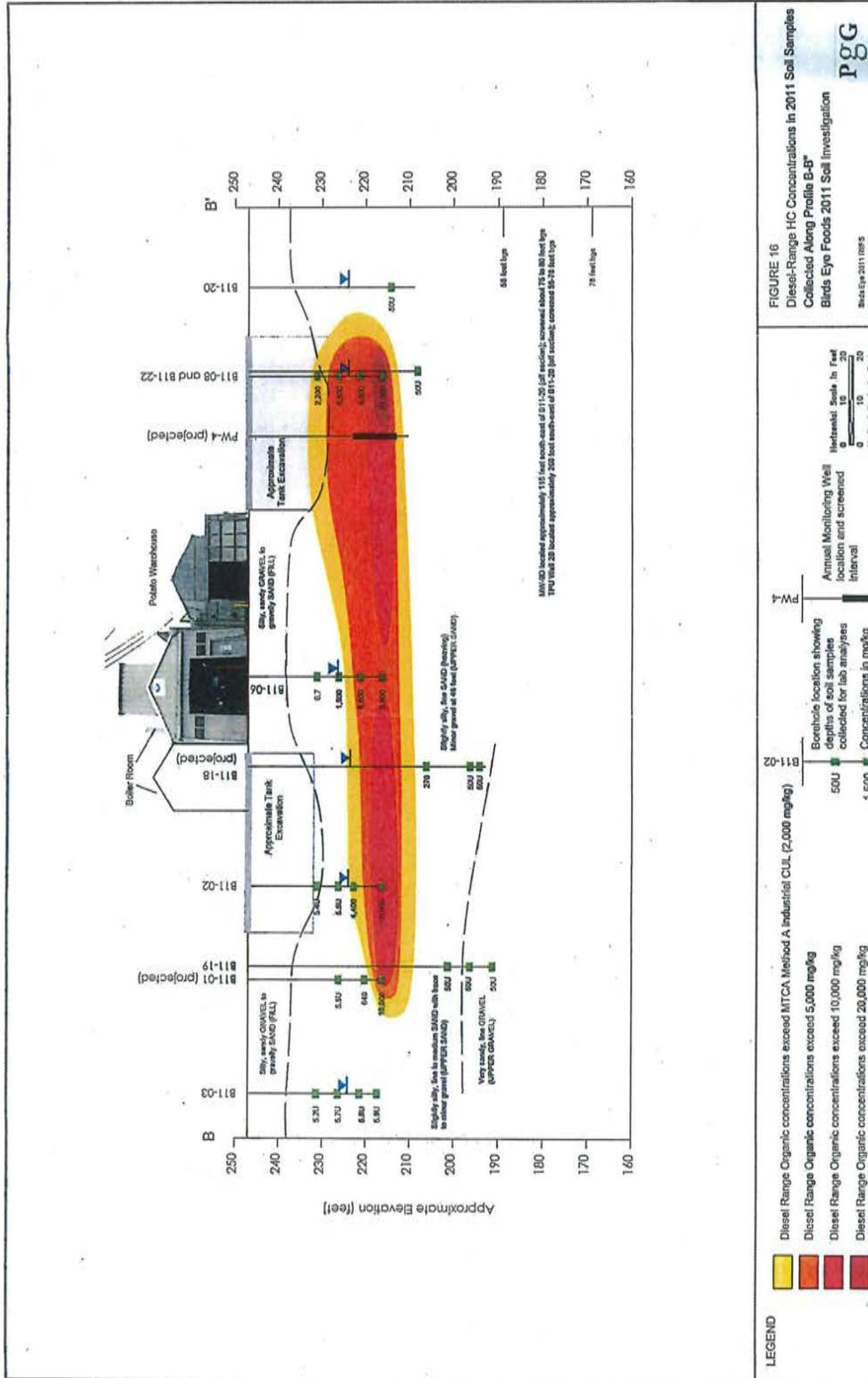
Note, total coliform result for duplicate sample collected at MW-11 was 540 MPN/100ml  
 Source 1992 RI/FS

PGG

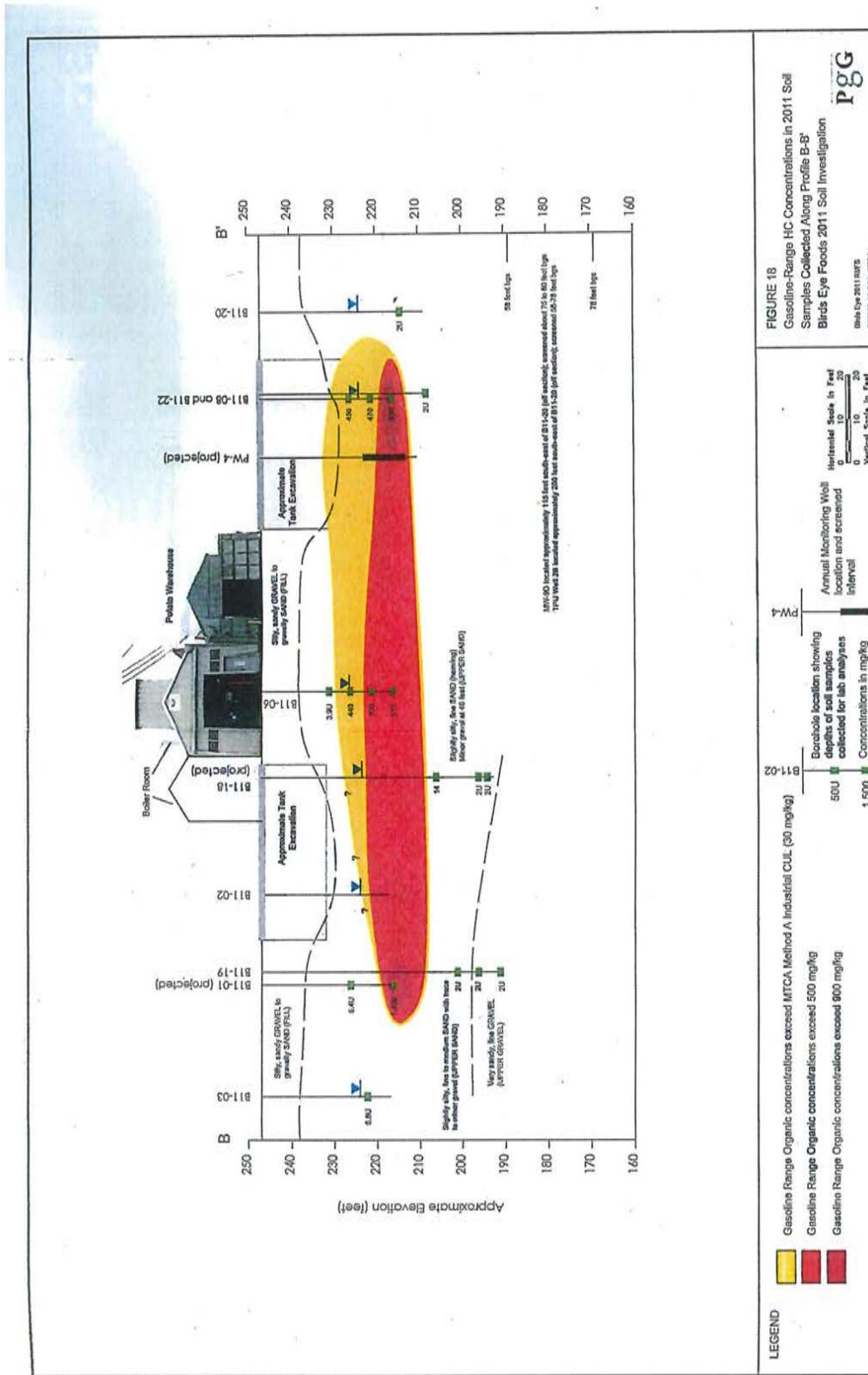
Page 1/1

### 6.7 Lateral and Vertical Extent of Soil Contamination Left-in-Place on the Site

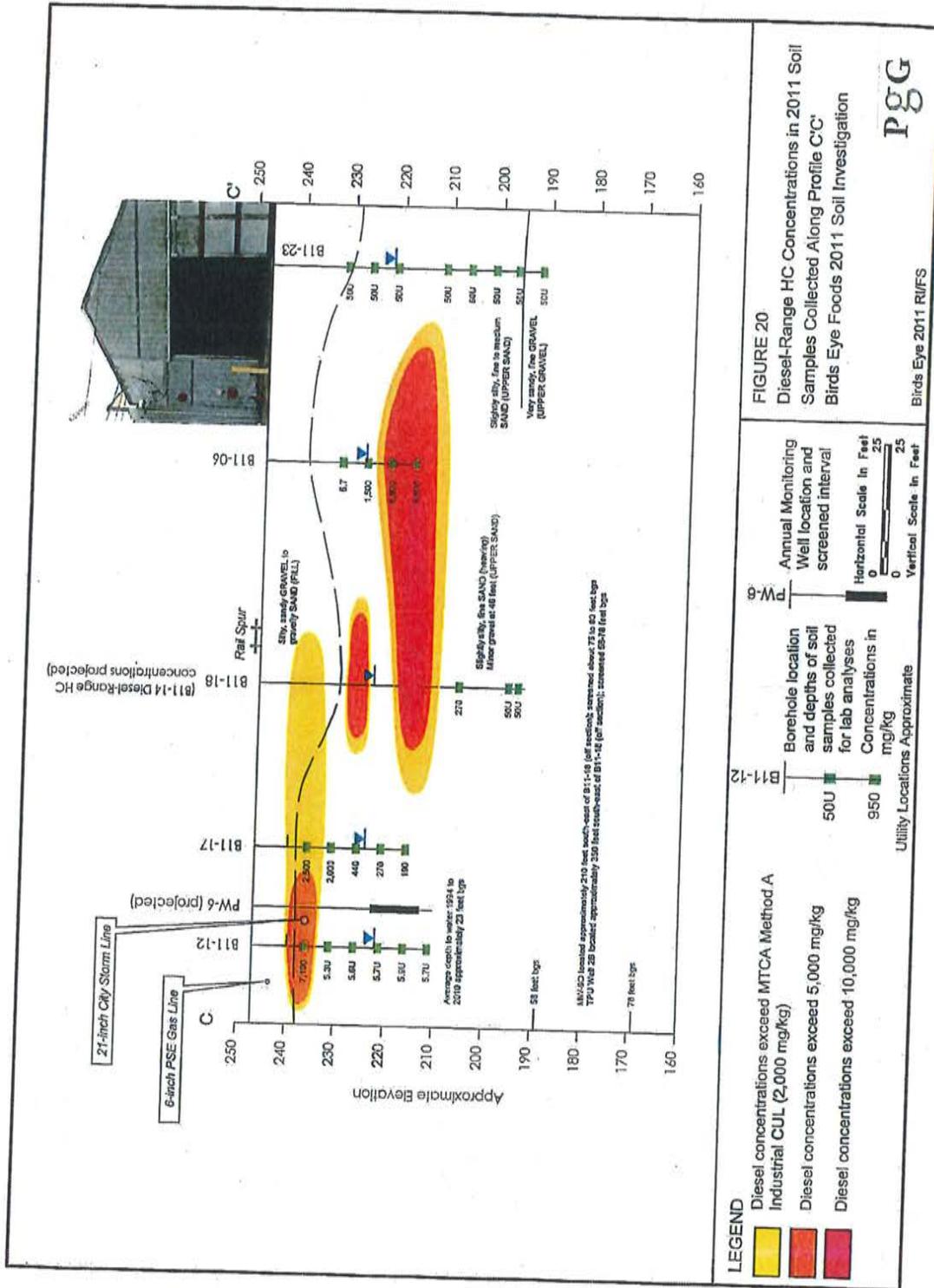




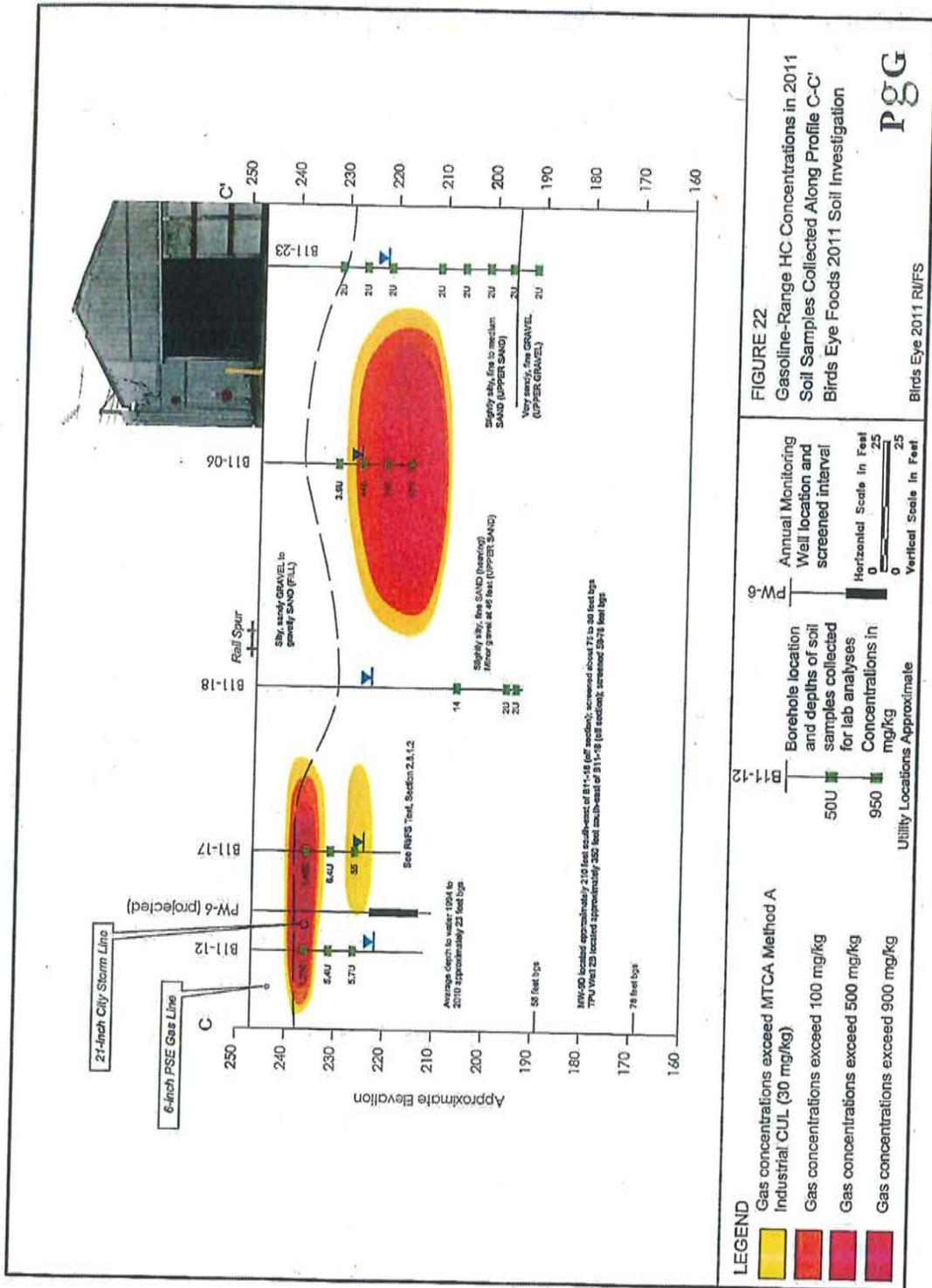












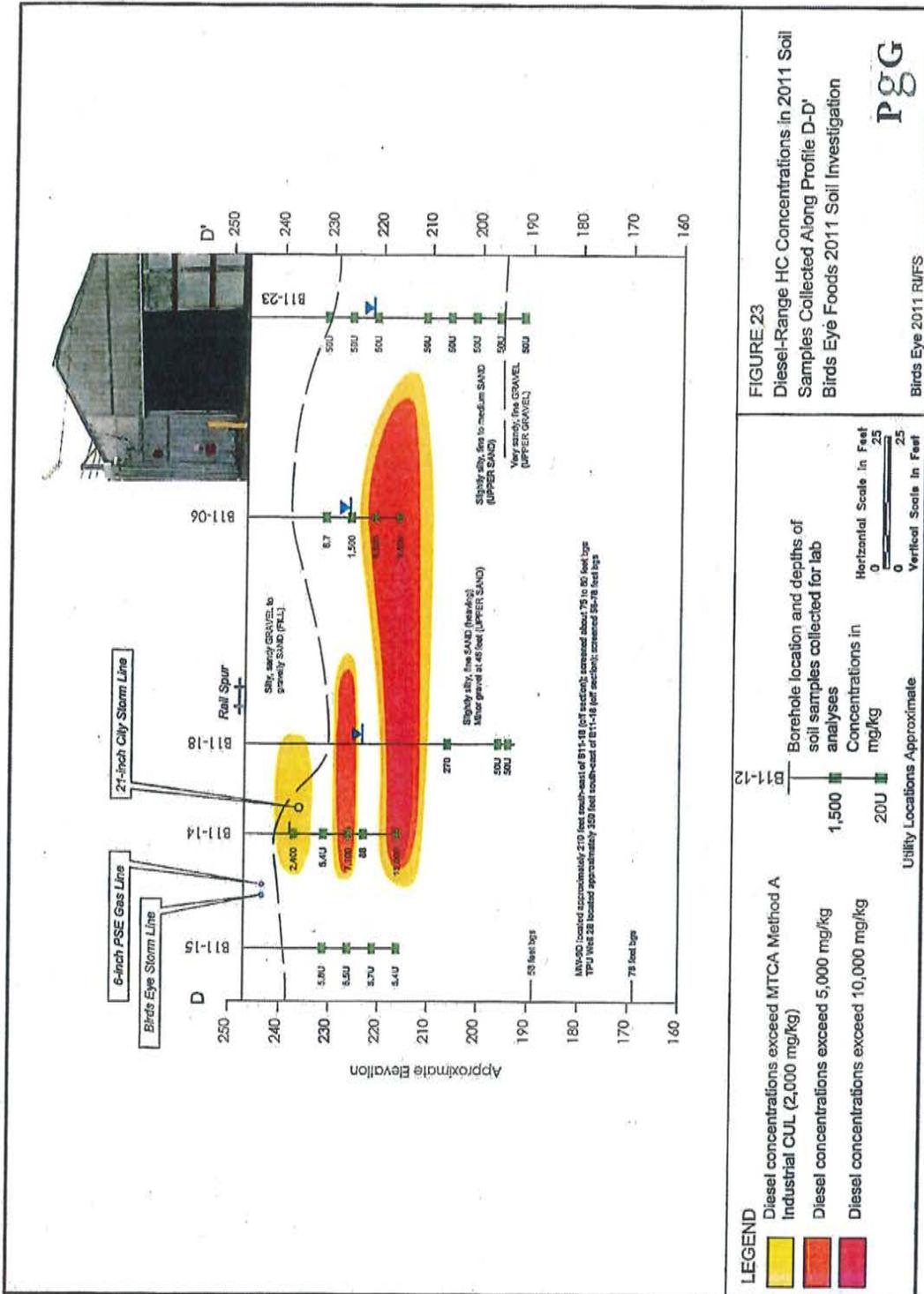


Table 7. Summary of 2011 Total Petroleum Hydrocarbon Soil Results, Birds Eye Boiler Room Site

Investigation	Sample ID (borehole ID- sample depth in feet bgs)	Units	Gasoline Range	Diesel Range	Heavy Oil Range
			Organics	Organics	Organics
			MTCA Method A Industrial Land Use Cleanup Levels:		
			30 mg/kg	2,000 mg/kg (Note 1)	2,000 mg/kg (Note 1)
Jan-11	B11-01-20	mg/kg	5.4 U	5.5 U	11 U
Jan-11	B11-01-26	mg/kg		640	60
Jan-11	B11-01-30	mg/kg	1,900	10,000	1200 U
Jan-11	B11-02-15	mg/kg		5.4 U	11 U
Jan-11	B11-02-20	mg/kg		5.5 U	11 U
Jan-11	B11-02-23.5	mg/kg		4,400	560 U
Jan-11	B11-02-30	mg/kg		10,000	1,200
Jan-11	B11-03-15	mg/kg		5.2 U	10 U
Jan-11	B11-03-20	mg/kg		5.7 U	12 U
Jan-11	B11-03-24	mg/kg	6.8 U		
Jan-11	B11-03-25	mg/kg		5.8 U	12 U
Jan-11	B11-03-29	mg/kg		5.9 U	12 U
Jan-11	B11-04-15	mg/kg		5.4 U	11 U
Jan-11	B11-04-20	mg/kg		5.7 U	11 U
Jan-11	B11-04-25	mg/kg		5.6 U	11 U
Jan-11	B11-05-15	mg/kg		5.3 U	11 U
Jan-11	B11-05-20	mg/kg		5.2 U	10 U
Jan-11	B11-05-25	mg/kg		5.9 U	12 U
Jan-11	B11-05-30	mg/kg		5.8 U	12 U
Jan-11	B11-06-15	mg/kg	3.9 U	6.7	11 U
Jan-11	B11-06-20	mg/kg	440	1,500	1,100
Jan-11	B11-06-25	mg/kg	700	6,600	5,200
Jan-11	B11-06-30	mg/kg	670	9,800	10,000
Jan-11	B11-07-15	mg/kg		5.4 U	11 U
Jan-11	B11-07-20	mg/kg		5.2 U	10 U
Jan-11	B11-07-25	mg/kg		5.5 U	11 U
Jan-11	B11-08-15	mg/kg		2,200	1,400
Jan-11	B11-08-20	mg/kg	450	5,500	12,000
Jan-11	B11-08-25	mg/kg	470	5,500	16,000
Jan-11	B11-08-30	mg/kg	930	21,000	20,000
Jan-11	B11-09-14	mg/kg		3,900	6,700
Jan-11	B11-09-19	mg/kg		4,500	7,700
Jan-11	B11-09-23.5	mg/kg	82	2,200	3,600
Jan-11	B11-10-15	mg/kg		5.2 U	10 U
Jan-11	B11-10-20	mg/kg		5.2 U	10 U
Jan-11	B11-10-25	mg/kg		6.2 U	12 U
Jan-11	B11-10-30	mg/kg		5.4 U	11 U
Jan-11	B11-11-10	mg/kg	6.4 U	5.8 U	12 U

Table 7. Summary of 2011 Total Petroleum Hydrocarbon Soil Results, Birds Eye Boiler Room Site

Investigation	Sample ID (borehole ID- sample depth in feet bgs)	Units	Gasoline Range	Diesel Range	Heavy Oil Range
			Organics	Organics	Organics
			MTCA Method A Industrial Land Use Cleanup Levels:		
			30 mg/kg	2,000 mg/kg (Note 1)	2,000 mg/kg (Note 1)
Jan-11	B11-12-10	mg/kg	1,200	7,100	610 U
Jan-11	B11-12-15	mg/kg	5.4 U	5.3 U	11 U
Jan-11	B11-12-20	mg/kg	5.7 U	5.6 U	11 U
Jan-11	B11-12-25	mg/kg		5.7 U	12 U
Jan-11	B11-12-30	mg/kg		5.9 U	12 U
Jan-11	B11-12-35	mg/kg		5.7 U	11 U
Jan-11	B11-13-15	mg/kg		5.4 U	11 U
Jan-11	B11-13-20	mg/kg		5.5 U	11 U
Jan-11	B11-13-23	mg/kg		5.7 U	11 U
Jan-11	B11-13-30	mg/kg		5.9 U	12 U
Jan-11	B11-14-09	mg/kg	5.5 U	2,400	270 U
Jan-11	B11-14-15	mg/kg		5.4 U	11 U
Jan-11	B11-14-20	mg/kg		7,100	1,100
Jan-11	B11-14-23	mg/kg		88	12 U
Jan-11	B11-14-30	mg/kg		15,000	1,700
Jan-11	B11-15-15	mg/kg		5.8 U	12 U
Jan-11	B11-15-20	mg/kg		5.5 U	11 U
Jan-11	B11-15-25	mg/kg		5.7 U	11 U
Jan-11	B11-15-30	mg/kg		5.4 U	11 U
Jan-11	B11-16-12	mg/kg	1,200		
Jan-11	B11-16-15	mg/kg		5.5 U	11 U
Jan-11	B11-16-20	mg/kg		5.7 U	11 U
Jan-11	B11-16-25	mg/kg		5.6 U	11 U
Jan-11	B11-16-30	mg/kg		5 U	10 U
Jan-11	B11-17-10	mg/kg	1,400	2,500	120
Jan-11	B11-17-15	mg/kg	6.4 U	2,000	260 U
Jan-11	B11-17-20	mg/kg	55	440	53 U
Jan-11	B11-17-25	mg/kg		270	57 U
Jan-11	B11-17-30	mg/kg	See Appendix E	190	13
Jul-11	B11-18-40	mg/kg	14	270	250 U
Jul-11	B11-18-51	mg/kg	2 U	50 U	250 U
Jul-11	B11-18-52	mg/kg	2 U	50 U	250 U
Jul-11	B11-19-45	mg/kg	2 U	50 U	250 U
Jul-11	B11-19-50	mg/kg	2 U	50 U	250 U
Jul-11	B11-19-55	mg/kg	2 U	50 U	250 U
Jul-11	B11-20-32	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-16	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-21	mg/kg	2 U	50 U	250 U

**Table 7. Summary of 2011 Total Petroleum Hydrocarbon Soil Results, Birds Eye Boiler Room Site**

Investigation	Sample ID (borehole ID- sample depth in feet bgs)	Units	Gasoline Range	Diesel Range	Heavy Oil Range
			Organics	Organics	Organics
			MTCA Method A Industrial Land Use Cleanup Levels:		
			30 mg/kg	2,000 mg/kg (Note 1)	2,000 mg/kg (Note 1)
Jul-11	B11-21-25	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-30	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-35	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-50	mg/kg	2 U	50 U	250 U
Jul-11	B11-21-55	mg/kg	2 U	50 U	250 U
Jul-11	B11-22-38	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-15	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-20	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-25	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-35	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-40	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-45	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-50	mg/kg	2 U	50 U	250 U
Jul-11	B11-23-55	mg/kg	2 U	50 U	250 U

CUL: Cleanup Level, MTCA Method A Unrestricted Land Use

Note 1: Cleanup level for diesel+heavy oil range organics is 2000 mg/kg unless there is clear evidence in chromatogram that petroleum at the site consists of a mixture of two products

U: compound not detected, number associated is the lab reporting limit

**Red:** concentration exceeds MTCA Method A Cleanup Level

Positive detection in gasoline-range organics that does not match an identifiable gasoline pattern

## 6.8 Long Term Groundwater Monitoring Well Locations and Groundwater Sample Results



Table 2: Summary of Groundwater Quality Data, Birds Eye Foods, 2017 Q3

CONSTITUENT	UNITS	Site Cleanup Levels*	MW-9S	MW-9D	MW-12S	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D
<b>Field Parameters</b>										
Depth to Water	feet		16.22	16.57	17.16	17.26	16.27	16.54	18.36	18.43
pH, Field	std. units		6.83	7.12	7.0	7.61	6.77	7.32	6.65	7.16
Specific Conductance, Field	umhos/cm		300	366.2	1371	597.9	193.1	484.4	389	450.7
Temperature (C)	C		15.4	16.8	16.3	17.3	14.4	16	13.9	15.6
Turbidity, Field	NTU		1.92	3.56	3.59	3.02	7.46	0.58	34.48	1.7
<b>NWTPH Analytes</b>										
Diesel Range Organics	mg/L	0.5	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Gasoline Range Organics	mg/L	0.8	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Oil Range Organics	mg/L	0.5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
<b>BTEX (EPA 8260)</b>										
Benzene	ug/L	5	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Ethylbenzene	ug/L	700	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Toluene	ug/L	1000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
o-Xylene	ug/L		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Xylene Isomers, m+p	ug/L		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U

\*Cleanup Levels based on MTCA Method A.

MTCA Cleanup Levels: Gasoline Range Organics 0.8 mg/L if benzene present, 1.0 mg/L if benzene not present; Xylenes 1000 ug/L (individual cleanup levels for m+p xylenes and o-xylenes not established); Benzo(a)pyrene 0.1 ug/L, this represents the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency method in WAC 173-340-708(8) - see Table 3 if carcinogenic PAHs detected in groundwater samples for this annual event.

NWTPH-Dx analysis with silica gel cleanup, consistent with historical site analyses

Lower case qualifiers assigned by PGG QA/QC data reviewer.

Upper case qualifiers assigned by lab.

**Bold text indicates constituent detected at or above method reporting limit.**

U - Compound not detected  
 J - Concentration estimated  
 B - Compound detected in blank

Table 3: Summary of Polynuclear Aromatic Hydrocarbon (PAH, SW8270D) Data, Birds Eye Foods, 2017 Q3

CONSTITUENT	UNITS	Site Cleanup Levels*									
		MW-95	MW-9D	MW-125	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D		
<b>Carcinogenic PAHs</b>											
Benzo(a)anthracene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(a)pyrene	ug/L	0.1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Chrysene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Dibenzof(a,h)anthracene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Indeno(1,2,3-cd)pyrene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
<b>Non-Carcinogenic PAHs</b>											
Acenaphthene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Acenaphthylene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Anthracene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(g,h,i)perylene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluoranthene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Fluorene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Naphthalene	ug/L	160	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Phenanthrene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Pyrene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

\*Cleanup Levels based on MTCA Method A.

MTCA Cleanup Levels: Gasoline Range Organics 0.8 mg/L if benzene present, 1.0 mg/L if benzene not present; Xylenes 1000 ug/L (individual cleanup levels for m+p xylenes and o-xylenes not established); Benzo(a)pyrene 0.1 ug/L, this represents the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency method in WAC 173-340-708(8) - see Table 3 if carcinogenic PAHs detected in groundwater samples for this annual event.

NWTPH-Dx analysis with silica gel cleanup, consistent with historical site analyses

Lower case qualifiers assigned by FGG QA/QC data reviewer.

Upper case qualifiers assigned by lab.

**Bold text indicates constituent detected at or above method reporting limit.**

U - Compound not detected  
 J - Concentration estimated  
 B - Compound detected in blank

## 6.9 Restrictive Covenant

CONFORMED COPY

201303260733 LPATTER 40 PGS  
03/26/2013 12:34:40 \$111.00  
AUDITOR, Pierce County, WASHINGTON

Name & Return Address:

Tom Middleton

Department of Ecology Southwest Regional Office

PO Box 47775 Olympia WA 98504-7775

AUDITOR'S NOTE

LEGIBILITY FOR RECORDING AND COPYING UN-  
SATISFACTORY IN A PORTION OF THIS INSTRU-  
MENT WHEN RECEIVED

Please print legibly or type information.

Document Title(s)	Model Restrictive (Environmental) Covenant
Grantor(s)	Birds Eye Foods LLC 1 Additional Names on Page 1 of Document
Grantee(s)	State of Washington, Department of Ecology 1 Additional Names on Page 1 of Document
Legal Description (Abbreviated: i.e., lot, block & subdivision name or number OR section/township/range and quarter/quarter section) Complete Legal Description on Page 6-7 of Document	SE 1/4 of the SE 1/4 of Section 7, Township 20 N, Range 3 E
Auditor's Reference Number(s)	
Assessor's Property Tax Parcel/Account Number(s)	0320073062
The Auditor/Recorder will rely on the information provided on this cover sheet. The Staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.  I am requesting an emergency nonstandard recording for an additional fee as provided in RCW 36.18.010. I understand that the recording processing requirements may cover up or otherwise obscure some part of the text of the original document.	
Signature of Requesting Party (Required for non-standard recordings only) Gpcovst.doc rev 4/02	

RECEIVED

MAR 05 2013

WA State Department  
of Ecology (SWRO)

### Model Restrictive (Environmental) Covenant

After Recording Return to:  
Tom Middleton  
Department of Ecology -- Southwest Regional Office  
PO Box 47775  
Olympia, WA 98504-7775

#### Environmental Covenant

Grantor: Birds Eye Foods LLC  
Grantee: State of Washington; Department of Ecology  
Legal: Legal Description of Property presented in Exhibit A; Property in portion of  
Southeast ¼ of the Southeast ¼ of Section 7, Township 20 North, Range 3 East, W. M., Pierce  
County, Washington  
Tax Parcel Nos.: 0320073062  
Cross Reference: NA

Grantor, Birds Eye Foods LLC, hereby binds Grantor, its successors and assigns to the land use restrictions identified herein and grants such other rights under this environmental covenant ( hereafter "Covenant" ) made this 26 day of March, 2013 in favor of the State of Washington Department of Ecology (Ecology). Ecology shall have full right of enforcement of the rights conveyed under this Covenant pursuant to the Model Toxics Control Act, RCW 70.105D.030(1)(g), and the Uniform Environmental Covenants Act, 2007 Wash. Laws ch. 104, sec. 12.

This Declaration of Covenant is made pursuant to RCW 70.105D.030(1)(f) and (g) and WAC 173-340-440 by Birds Eye Foods, its successors and assigns, and the State of Washington Department of Ecology, its successors and assigns (hereafter "Ecology").

A remedial action (hereafter "Remedial Action") occurred at the property that is the subject of this Covenant. The Remedial Action conducted at the property is described in the following document:

Pacific Groundwater Group, 2011. Birds Eye Foods Tacoma, WA 2011 Remedial Investigation/Feasibility Study. Consultant's report prepared for Pinnacle Foods Group, December 16, 2011.

These documents are on file at Ecology's Southwest Regional Office.

This Covenant is required because the Remedial Action resulted in residual concentrations of Total Petroleum Hydrocarbon (TPH) Diesel extended (TPH-Dx), TPH-Gasoline range organics (TPH-G), benzene, benzo(a)pyrene toxic equivalents of carcinogenic polyaromatic hydrocarbons, and naphthalene that exceed the Model Toxics Control Act Method A Industrial Land Use Cleanup Level(s) for soil established under WAC 173-340-745 (3).

The undersigned, Birds Eye Foods, is the fee owner of real property (hereafter "Property") in the County of Pierce, State of Washington, that is subject to this Covenant. The Property is legally described in Exhibit A of this Covenant and made a part hereof by reference.

Birds Eye Foods makes the following declaration as to limitations, restrictions, and uses to which the Property may be put and specifies that such declarations shall constitute covenants to run with the land, as provided by law and shall be binding on all parties and all persons claiming under them, including all current and future owners of any portion of or interest in the Property (hereafter "Owner").

#### Section 1.

1. A portion of the Property contains soil containing TPH-Dx, TPH-G, benzene, benzo(a)pyrene toxic equivalents of carcinogenic polyaromatic hydrocarbons, and naphthalene. The contaminated soil within the Property extends under the western portion of the Boiler Room and Potato Warehouse buildings (see Exhibit A, Figure A1). Contaminated soil in this area is covered by at least 9 feet of clean fill or native soil and most of the contaminated soil is capped by asphalt, which will be maintained as part of the Remedial Action. The contaminated soil is also covered by the western 12 feet of the Boiler Room Building and Potato Storage Warehouse, which are adjacent to one another (see Exhibit A, Figure A1).

2. 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 prohibited in the capped areas include: drilling, digging, placement of any objects or use of any equipment which deforms or stresses the surface

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

3. The Owner shall not alter, modify, or remove the existing structure[s] in the area of contaminated soil in any manner that may result in the release or exposure to the environment of that contaminated soil or create a new exposure pathway without prior written approval from Ecology.

4. Monitoring will occur per the Groundwater Monitoring Plan approved by Ecology (see Exhibit B). Monitoring locations are shown in Exhibit B, Figure 3. Groundwater monitoring will be conducted at eight monitoring wells to assess the effectiveness of the Remedial Action. Monitoring will occur every quarter for one year; with the 1st Quarter commencing with May 7-8, 2012 monitoring. After four quarters of monitoring with no exceedances of cleanup levels, groundwater monitoring will occur at a frequency of once every 18 months pending a periodic review by Ecology to determine if continued monitoring is required. Additional details on the monitoring are provided in the Groundwater Monitoring Plan. The monitoring wells will be maintained pending Ecology's review of monitoring results and determination of the need for continued monitoring and pending Ecology's approval to decommission or relocate a well.

5. The Property shall be used only for traditional industrial uses as described in RCW 70.105D.020(14) or such other uses specifically approved by the Department of Ecology for this site and defined in and allowed under the City of Tacoma's zoning regulations (Land Use Regulatory Code) codified as Title 13 of the Tacoma Municipal Code as of the date of this Restrictive Covenant.

Section 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.

Section 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.

Section 4. The Owner of the Property must give 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.

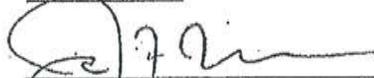
Section 5. The Owner must restrict leases to uses and activities of the Property consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

Section 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 Covenant. Ecology may approve any inconsistent use only after public notice and comment.

Section 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, to determine compliance with this Covenant, and to inspect records that are related to the Remedial Action.

Section 8. The Owner of the Property reserves the right under WAC 173-340-440 to record an instrument that provides that this 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.

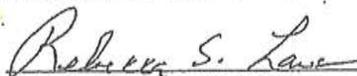
Birds Eye Foods



John Kroeger  
Deputy General Counsel

Dated: 2/22/13

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY



Rebecca S. Lawson, P.E., LHG,  
Section Manager, Toxics Cleanup Program  
Southwest Regional Office

Dated: 3/18/2013

[CORPORATE ACKNOWLEDGMENT]

STATE OF NEW JERSEY  
COUNTY OF MORRIS

On this 22<sup>ND</sup> day of FEBRUARY, 2013, I certify that JOHN KROEGER personally appeared before me, acknowledged that he/she is the VICE PRESIDENT of the corporation that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument for said corporation.

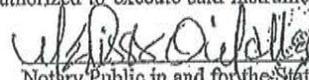
  
Notary Public in and for the State of  
New Jersey, residing at  
SPARTA, NJ.  
My appointment  
expires 4-27-15.  
**MELISSA O'MALLEY**  
Notary Public of New Jersey  
My Commission Expires April 27, 2015



Exhibit A

That portion of Government Lot 4, being the Southwest quarter of the Southwest quarter of Section 7, Township 20 North, Range 3 East Willamette Meridian, in Pierce County, Washington, described as follows:

Commencing at the Southwest corner of said Government Lot 4;

Thence South 88 degrees, 25 minutes and 49 seconds East, along the South line of said Government Lot 4 and the centerline of South 35th Street, a distance of 299.52 feet, to an existing monument;

Thence continuing, along the centerline of South 35th Street, South 88 degrees, 26 minutes and 40 seconds East, a distance of 300.06 feet to the intersection with the centerline of South Windom Street;

Thence North 01 degrees, 37 minutes and 56 seconds East, along the centerline of South Windom Street, a distance of 40 feet to the Northerly margin of South 35th Street;

Thence North 88 degrees, 26 minutes and 40 seconds West, along said Northerly margin, a distance of 30 feet to the Westerly margin of South Windom Street, vacated by Ordinance No. 16754 of the City of Tacoma, as recorded March 15, 1966 under Pierce County Recording Number 1919333;

Thence North 01 degrees, 37 minutes and 56 seconds East, along said Westerly margin, a distance of 150.15 feet to the TRUE POINT OF BEGINNING;

Thence North 89 degrees, 19 minutes and 40 seconds West, a distance of 2.54 feet;

Thence North 02 degrees, 38 minutes and 27 seconds East, a distance of 22.68 feet;

Thence North 54 degrees, 11 minutes and 31 seconds East, a distance of 17.04 feet;

Thence North 22 degrees, 29 minutes and 21 seconds West, a distance of 11.76 feet;

Thence North 00 degrees, 17 minutes and 35 seconds East, a distance of 18.57 feet;

Thence North 54 degrees, 24 minutes and 53 seconds East, a distance of 17.09 feet;

Thence North 43 degrees, 31 minutes and 21 seconds West, a distance of 20.27 feet;

Thence North 00 degrees, 52 minutes and 48 seconds East, a distance of 27.41 feet;

Thence South 88 degrees, 25 minutes and 27 seconds East, a distance of 84.44 feet;

Thence South 01 degrees, 56 minutes and 26 seconds West, a distance of 118.98 feet;

Thence South 15 degrees, 31 minutes and 56 seconds West, a distance of 54.81 feet;

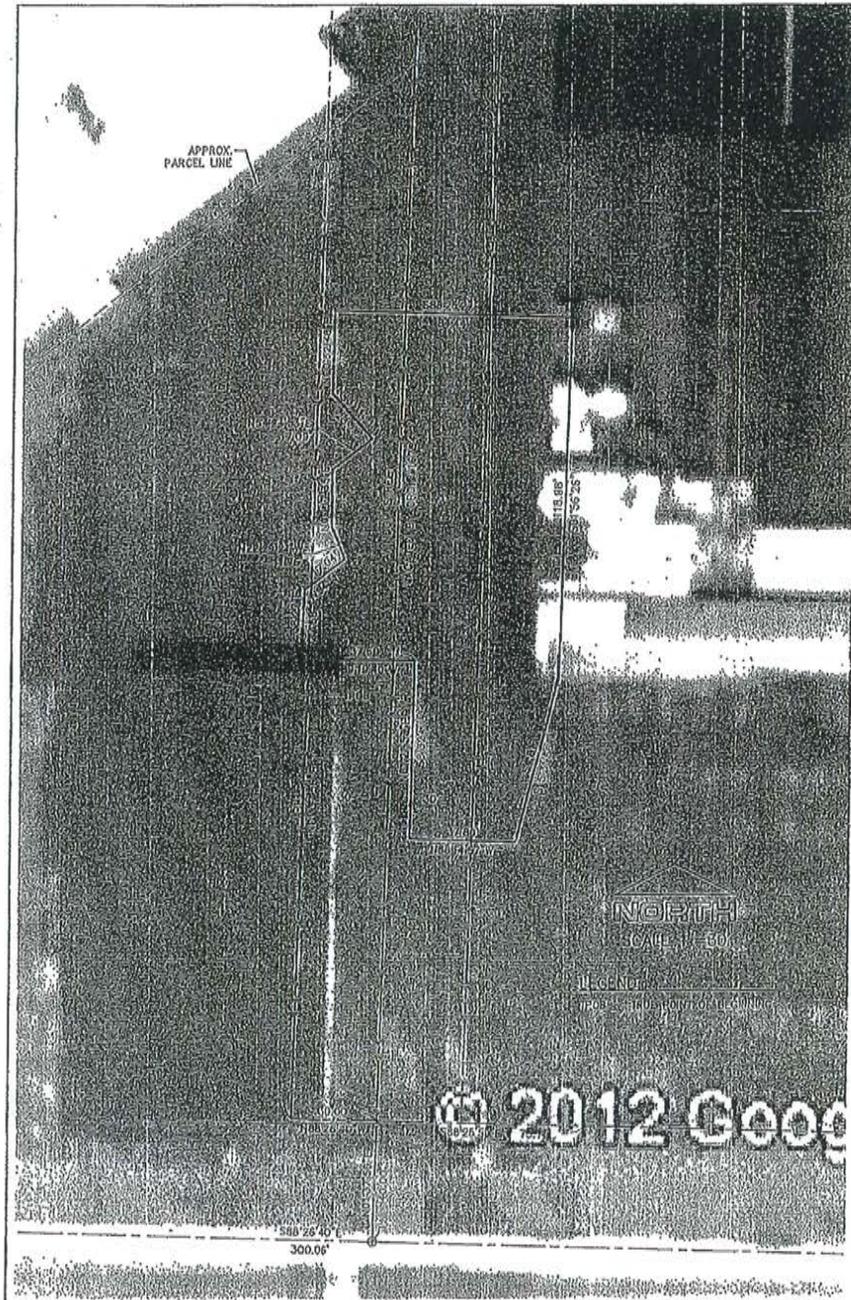
Thence North 88 degrees, 14 minutes and 57 seconds West, a distance of 37.80 feet;

Thence North 01 degrees, 21 minutes and 53 seconds East, a distance of 58.32 feet;

Thence North 89 degrees, 19 minutes and 40 seconds West, a distance of 37.60 feet to the  
TRUE POINT OF BEGINNING.

Containing 0.3 acres.





 <b>PLS, Inc.</b> Professional Land Surveyors 385 NW Gilman Boulevard, #201 Issaquah, Washington 98027 (425) 313-9378 (fax) 313-9370	FIGURE A1.	JOB NO.
	BIRDS EYE FOODS ENVIRONMENTAL CONVENANT RESTRICTED AREA AND NO FURTHER ACTION AREA	12023
		SHEET
		1 of 1

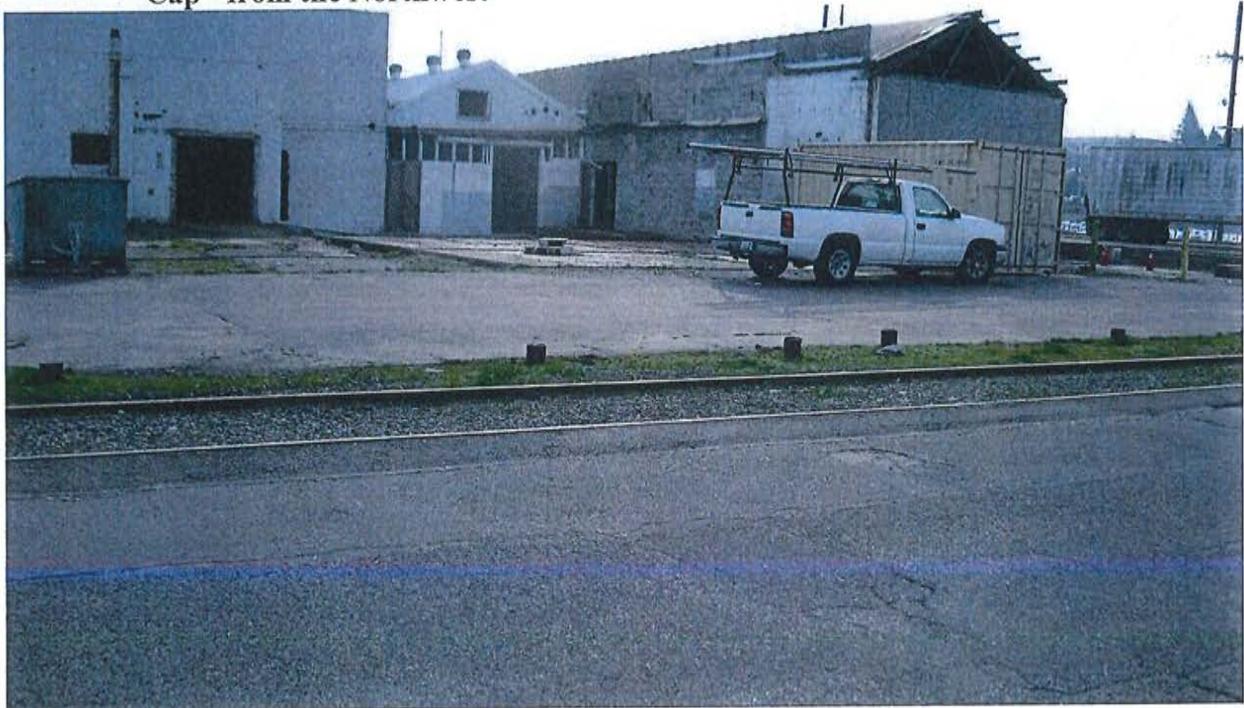
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## 6.10 Photo Log

**Photo 1: Pervious Underground Storage Tanks Location and Boiler Building  
- from the West**



**Photo 2: Boiler and Potato Warehouse Buildings Area of Soil Contamination and Asphalt  
Cap - from the Northwest**



**Photo 3: Area of Soil Contamination and Asphalt Cap – from the Northwest**



**Photo 4: Previous Soil Cleanup/Soil Contamination Area and Asphalt Cap/Boiler Room - from the West**



**Photo 5: Area of Residual Contaminated Soil, Railroad Tracks, Boiler and Potato Warehouse Buildings and Asphalt Cap – from the Northwest**



**Photo 6: Area of Soil Contamination and Asphalt Cap – from the Southwest**



**Photo 7: Asphalt Capped Area – from the South**



**Photo 8: Groundwater Monitoring Well Pair MW-9S and MW-9D**

