



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

July 8, 2013

Mr. Scott Fehseke
Pinnacle Foods
2467 Henry Ladyn Drive
P.O. Box 1427
Fort Madison, IA 52627

Re: No Further Action at the following Site:

- **Site Name:** Birds Eye Foods (Ranked: 2)
- **Site Address:** 3303 S 35th Street, Tacoma, WA 98409-4701
- **Facility/Site No.:** 1328
- **Cleanup Site ID No.:** 5012
- **VCP Project No.:** SW1187

Dear Mr. Fehseke:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Pierce Transit Sprague Ave. facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

No. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

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

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:



- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), and Total Petroleum Hydrocarbons, including gasoline-range, diesel-range, and oil-range (TPH-Gx, TPH-Dx, TPH-O) in the Soil and Groundwater.

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

Basis for the Opinion

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

1. Birds Eye Foods, Tacoma, WA, 2011 Remedial Investigation/Feasibility Study, dated December 16, 2011 by Pacific Groundwater Group (PGG).
2. Birds Eye Foods, Tacoma, WA, Vapor Intrusion Work Plan, VCP Site Number SW1187, dated March 27, 2012 by PGG.
3. Birds Eye Foods, Tacoma, WA, Vapor Intrusion Study, VCP Site Number SW1187, dated October 17, 2012 by PGG.
4. Birds Eye Foods, Tacoma, Monitoring Well Installation and May 2012 Groundwater Quality Report, VCP Site Number SW1187, dated October 18, 2012 by PGG.
5. Birds Eye Foods, VCP Site Number SW1187, Third Quarter 2012 Groundwater Monitoring Event Summary Report, dated February 15, 2013 by PGG.
6. Birds Eye Foods, VCP Site Number SW1187, Fourth Quarter 2012 Groundwater Monitoring Event Summary Report, dated March 8, 2013 by PGG.
7. Birds Eye Foods, Model Restrictive (Environmental) Covenant, filed at Pierce County Auditor's Office 3/16/2013.
8. Birds Eye Foods, VCP Site Number SW1187, First Quarter 2013 Groundwater Monitoring Event Summary Report, dated May 24, 2013 by PGG.

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

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

Analysis of the Cleanup

Ecology has concluded that no **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described below.

The Site is the Birds Eye Foods Facility (formerly Nalley's Fine Foods) located at 3303 S 35th Street, in Tacoma, Pierce County, Washington. It is a former food processing facility that occupies approximately 9 acres. The Site is paved or occupied by buildings with the exception of a gravel truck parking area in the northern portion of the Site. A Site Vicinity Map and Site Plan are included as Figures 1 and 2 in the Enclosures.

Remedial investigations have occurred at the Site since Site discovery in the early 1990s, with major phases occurring in 1991, 1992, and 2011. In 1990, as part of a property-wide program, two underground storage tanks (USTs) were removed from an area west of the boiler room (Figure 3) and petroleum-contaminated soils (PCS) were found. Tank B (North Tank) was a 10,000-gallon bunker C UST and Tank A (South Tank) was a 20,000-gallon residual oil/bunker C UST. Tank removals were overseen by Nowicki & Associates (Nowicki) and representatives from the Tacoma Pierce County Health Department (TPCHD). The excavation surrounding Tank B was approximately 22 feet by 43 feet and about 15 feet deep. The excavation surrounding Tank A was approximately 48 feet by 15 feet and about 19 feet deep. Laboratory analysis of soils, using EPA method 418.1, confirmed the presence of TPH ranging from 2,078 to 25,698 milligrams per kilogram (mg/kg) surrounding Tank B. TPH in soil was detected ranging from 15,370 to 61,600 mg/kg surrounding Tank A. Excavations surrounding each tank were halted when structural risks to the nearby railroad tracks and the Boiler Room were identified.

In May 1991, Nowicki installed monitoring wells MW-1 through MW-6 surrounding the former excavations. Soil and groundwater samples collected during the investigation indicated elevated concentrations of TPH-Dx, TPH-O, xylenes, and select PAHs above their respective cleanup levels in place at the time. In late 1991 and early 1992, two separate remedial investigations of the soil and groundwater were conducted by Nowicki and Pacific Groundwater Group (PGG), respectively. The major findings outlined in these reports included the definition of the lateral and vertical extent of the contamination, and the discovery of free-phase product (mixture of diesel and heavy oil) in two monitoring wells installed near the two former USTs. A second groundwater remedial investigation was performed in spring of 1992, which included the installation of a new groundwater monitoring well, six piezometers to further characterize the Site hydrogeology, and the creation of a numerical groundwater model to calculate estimated travel times from the contaminated area to the nearby City of Tacoma Well 2B. In addition, soil samples were collected and tested for PAHs, TPH-Dx, total lead, and BTEX. Groundwater samples were collected and tested for Hydrocarbon Identification (HCID), BTEX, PAHs, chloride, sodium, total coliform, nitrate, nitrite, and ammonium. The results of this investigation identified a very low hydraulic gradient of 0.0005, under non-pumping (Well 2B) conditions, travel time from the footprint of the contamination to the well was estimated at over 11 months

under continuous pumping at MW-2B, TPH concentrations in groundwater were detected at concentrations up to 80,000 micrograms per liter ($\mu\text{g/L}$), exceeding the MTCA Cleanup Levels in place at the time (1000 $\mu\text{g/L}$), and chloride concentrations were found as high as 1200 milligrams per liter (mg/L), which is greater than the Washington State maximum contaminant level (MCL) of 250 mg/L .

A feasibility study was conducted by RZA Agra (Agra) following the results of the remedial investigations conducted by PGG and Nowicki. The preferred remedy identified was steam injection and product recovery followed by enhanced biodegradation. The proposed remedy was not implemented.

In 2011, PGG returned to the Site to evaluate the current status of the petroleum contamination at the Boiler Room Site. Two phases of drilling and soil sampling were conducted in January and July. Soil samples collected during the investigation were analyzed for TPH-Dx, TPH-Gx, BTEX, PAHs, and volatile organic compounds (VOCs). The lateral limits of contamination found during this investigation were similar to those delineated in 1992. Free-phase product was also encountered in the soils both above and below the water table. Impacted soils, greater than the MTCA Method A Cleanup Levels, were found to a depth of approximately 40 feet below ground surface (bgs). The lateral extent of contamination in soil greater than MTCA Method A Industrial Cleanup Levels is presented on Figure 15 in the Enclosures. This Figure also shows the locations of the cross-sections prepared to display the vertical extent of contamination. Cross-section maps, along line B to B', showing the vertical extent of the contaminants of concern in soil are presented in Figures 16 through 19 in the Enclosures.

Ecology reviewed the 2011 PGG remedial investigation report and requested that the vapor pathway be defined due to the presence of benzene in subsurface soils above the MTCA Method A Industrial Cleanup Levels. PGG prepared a Vapor Intrusion work plan in March 2012, which was subsequently approved by Ecology. The Vapor Intrusion investigation was completed in June 2012 with results being presented in a Vapor Intrusion Study in October 2012. Results of the investigation did not identify any vapor concentrations greater than the draft MTCA Method C Soil Gas Cleanup Levels. A summary of the air sample results are presented on Table 1 included in the Enclosures.

As part of the remedial investigation conducted in 2011, PGG prepared a feasibility study based on their conceptual Site model. Five cleanup alternatives were evaluated including:

- Soil Containment and Natural Source Zone Depletion (NSZD),
- Excavation,
- Soil Containment, NSZD, partial excavation,
- In-Situ Steam Enhanced Extraction with Bioremediation, and
- In-Situ Thermal Desorption.

The five alternatives were evaluated with respect to Threshold Criteria, Permanence, and Reasonable Restoration Timeframe. The Soil Containment and NSZD option and the Soil Containment, NSZD, partial excavation option both met the substantive requirements; however, the Soil Containment and NSZD option was selected as the preferred remedy due to its significantly lower cost and the fact that the partial soil removal did not reduce the risk enough

relative to its cost. Ecology reviewed the feasibility study and agreed that the Soil Containment via an Environmental Covenant and NSZD were appropriate for the Site. Ecology also requested a long-term groundwater monitoring plan that included the installation of additional shallow and deep monitoring wells surrounding the impacted area. These wells were installed in May 2012 and a report outlining the installation and sampling of these wells (including existing wells in the new long-term groundwater monitoring network) was submitted to Ecology in October 2012.

Groundwater monitoring has occurred at the Site since 1991. Groundwater samples have been tested for TPH-Gx, TPH-Dx, TPH-O, BTEX, and PAHs. Petroleum concentrations have decreased over time in all the wells and have not exceeded the MTCA Method A Cleanup Levels for any of the tested constituents since the 2007 annual sampling event. The most recent round of sample results, collected in the first quarter 2013, are summarized on Table 2 included in the Enclosures.

The geology of the Site is described as a fill layer comprised of sand and gravel approximately 4 to 12 feet thick. This is underlain by the Upper Sand layer comprised of fine and medium sands with gravel approximately 30 to 50 feet thick. Beneath the Upper Sand is an Upper Gravel layer comprised of sandy gravel with multiple interbeds of sand. This unit is approximately 50 to 100 feet thick and the interbeds range in thickness from 3 to 30 feet. Shallow groundwater at the Site is present approximately 23 to 28 feet bgs. The City of Tacoma municipal well 2B is located approximately 300 feet southwest of the Boiler Room building. A confining layer, comprised of silt and clay, is present below the upper shallow aquifer and ranges in thickness from 8 to 28 feet thick. The shallow groundwater flow direction is variable depending on the pumping status of the City of Tacoma Well 2B. In general, the water table is flat with an average groundwater gradient of 0.0005 towards the northeast. There is also a downward vertical gradient between the Upper Sand and Upper Gravel units of 0.014. The first quarter 2013 groundwater contour map is included as Figure 1 in the Enclosures.

2. Establishment of cleanup standards.

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

a. Cleanup levels.

MTCA Method A Industrial Cleanup Levels for soil, MTCA Method A Cleanup Levels for groundwater, and MTCA Method C Soil Gas Cleanup Levels for soil gas were used to characterize the Site.

b. Points of compliance.

Standard points of compliance were used for the Site. The point of compliance for protection of groundwater was established in the soils throughout the Site. For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance was

established in the soils throughout the Site from the ground surface to 15 feet bgs. In addition, the point of compliance for the groundwater was established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

Cleanup actions conducted at the Site to date have included the excavation and off-Site disposal of PCS, free-phase product skimming, and groundwater monitoring.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. This determination is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Approximately 875 cubic yards of PCS was excavated and disposed of during the remediation activities. Additionally, an estimated 80 gallons of free-phase product was pumped from well MW-5. The original buildings, utilities, and railroad tracks remain in place and PCS remains at the Site in areas that were inaccessible due to these constraints.

An Environmental Covenant has been prepared and filed on Title. This covenant documents the location of impacted soils greater than the MTCA Method A Industrial Cleanup Levels that were not able to be removed during the cleanup of the Site. In addition, a long-term groundwater monitoring plan has also been appended to the covenant and outlines the sampling interval for the monitoring well network in the area surrounding the remaining PCS, and in particular between the PCS and the City of Tacoma municipal well MW-2B. The testing regime for these events includes TPH-Gx, TPH-Dx, TPH-O, PAHs, and BTEX. Groundwater monitoring will occur quarterly for the first year followed by monitoring on an 18 month schedule.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional control is necessary at the Site:

- Restriction on land and groundwater use.

To implement that control, an Environmental Covenant has been recorded on the following parcel of real property in Pierce County:

- 0320073062.

Ecology approved the recorded Covenant. A copy of the Covenant is included in **Enclosure A**.

2. Performance of confirmational monitoring.

Confirmational monitoring is necessary at the Site to confirm the long-term effectiveness of the cleanup. The monitoring data will be used by Ecology during periodic reviews of post-cleanup conditions. Ecology has approved the monitoring plan you submitted. A copy of the plan is included with the Environmental Covenant in **Enclosure A**.

Periodic Review of Post-Cleanup Conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain protective of human health and the environment. If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

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.

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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).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#SW1187)

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 or the termination of the Agreement, please contact me by phone at 360-407-7263 or e-mail at tmid461@ecy.wa.gov.

Sincerely,



Thomas Middleton L.H.G.
SWRO Toxics Cleanup Program

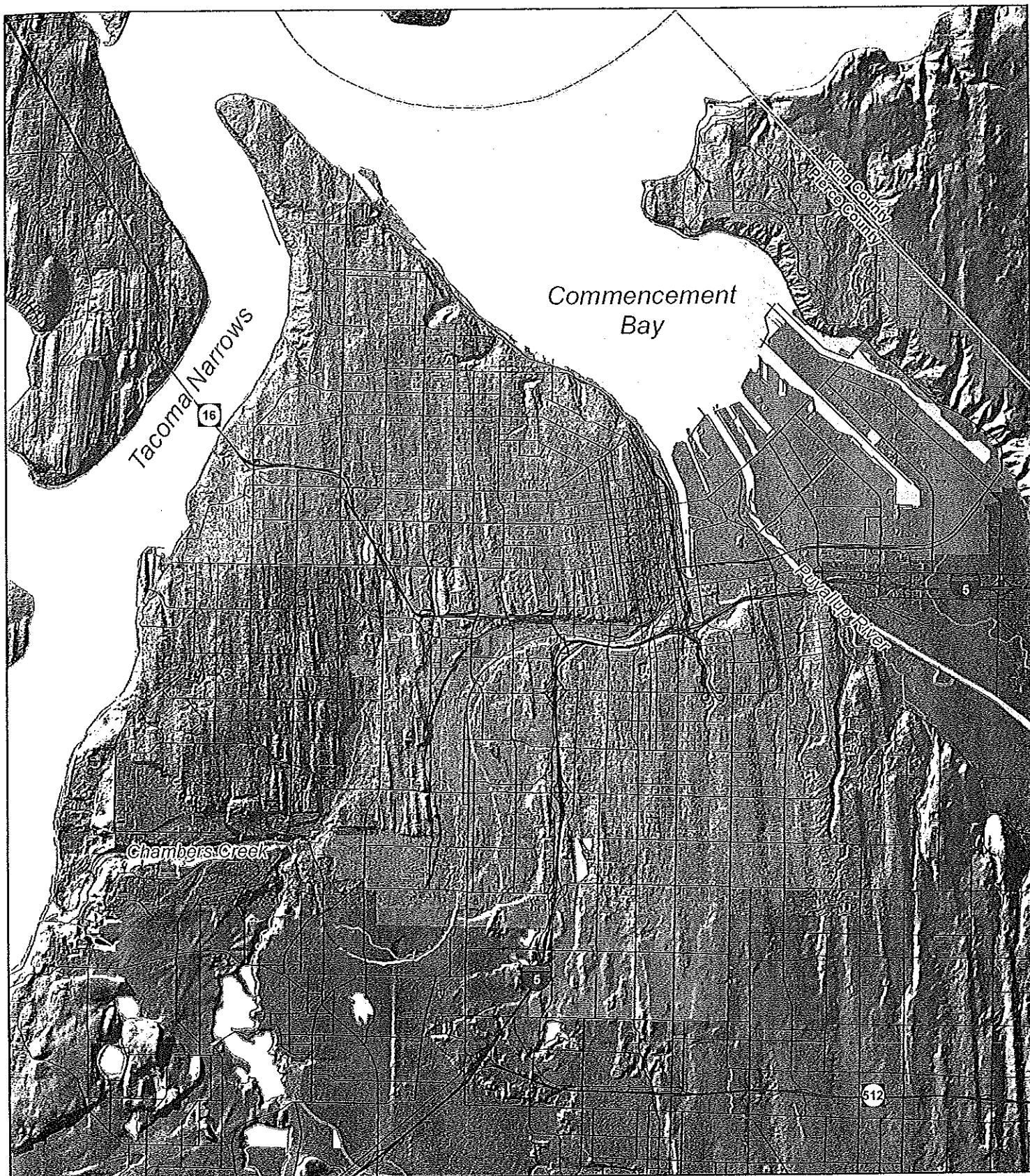
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Enclosures:

- Figure 1 – Site Vicinity (PGG Dec 2011)
- Figure 2 – Site Plan (PGG Dec 2011)
- Figure 15 – Lateral Extent of Soil Contamination and Cross-section locations (PGG Dec 2011)
- Figures 16-19 – Cross-Sections A-A', B-B', C-C', D-D' (PGG Dec 2011)
- Table 1 – Air Sample Results Summary Table (PGG Oct 2012)
- Table 2 – First Quarter 2013 Groundwater Analytical Results (PGG May 2013)
- Figure 1 – Groundwater Contour Map First Quarter 2013 (PGG May 2013)
- A – Restrictive Environmental Covenant and Long Term Groundwater Monitoring Plan

By certified mail: (7011 2970 0000 0555 3920)

cc: Ms. Inger Jackson, Pacific Groundwater Group
Rob Olsen Pierce Co Health Dept 3629 S. D Street Tacoma, WA 98418-6813
Carol Johnston - Ecology
Scott Rose – Ecology
Dolores Mitchell – Ecology (w/o enclosures)



 Birds Eye Parcels
 City of Tacoma

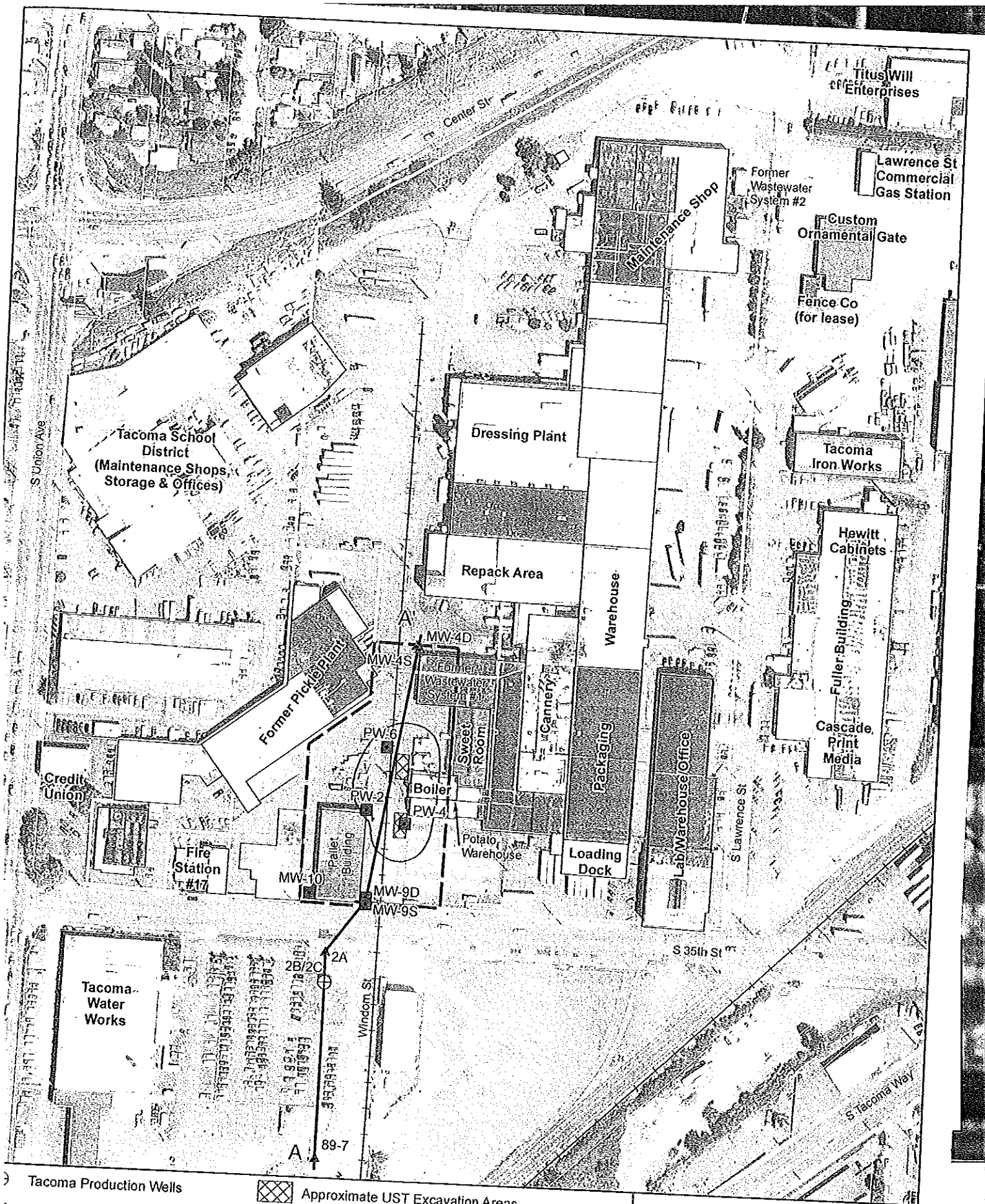


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Figure 1
Site Vicinity

Birds Eye 2011 RI/FS

pgg



- Tacoma Production Wells
- Annual Site Monitoring Wells
- Other Wells in Cross Section A-A'
- Cross Section Alignment
- ▨ Approximate UST Excavation Areas
- Boiler Room Site Vicinity
- 2011 Soil Investigation Area
- ▭ Birds Eye Parcels
- ▭ Building Footprints

0 Feet 200

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Figure 2
Birds Eye Foods Site
and Adjacent Parcels

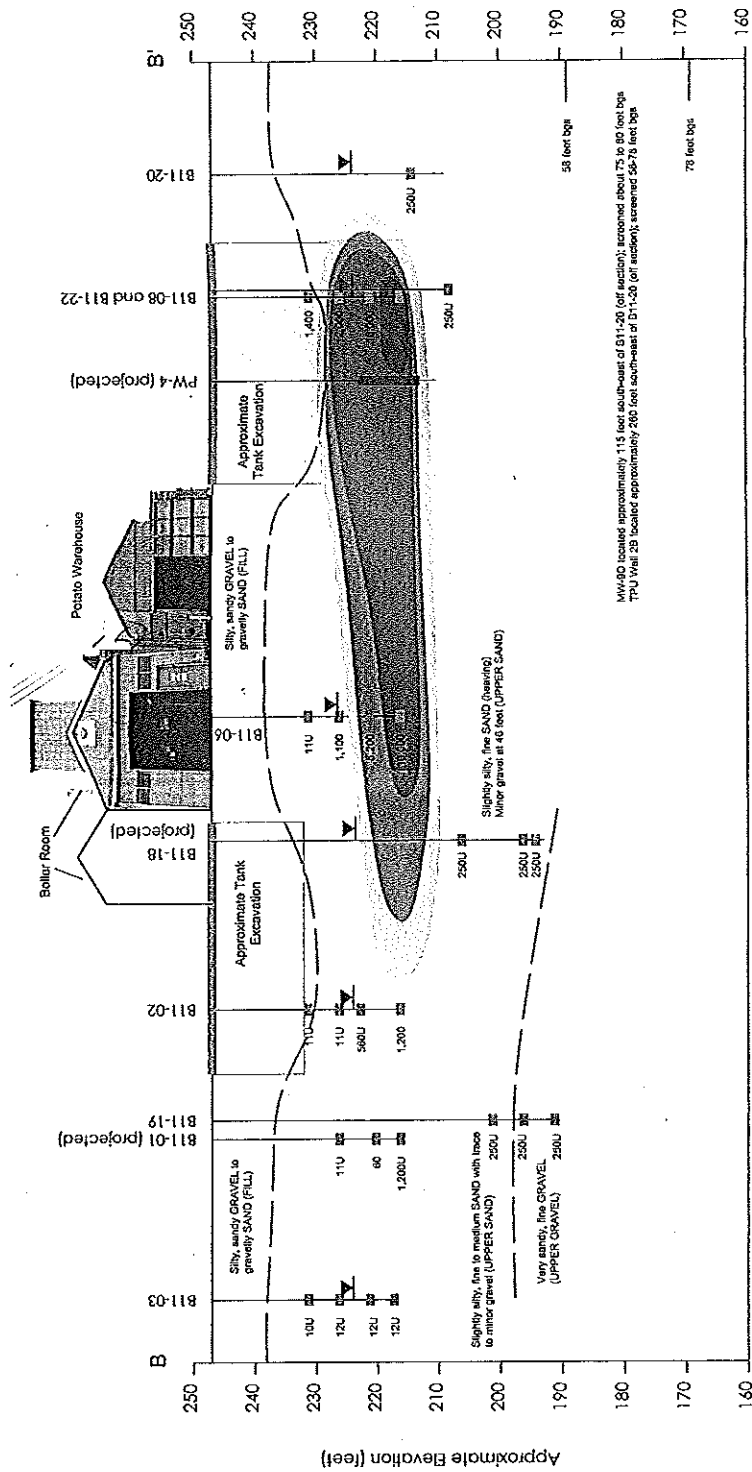
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Figure 15
Lateral Extent of
2011 Soil Results Exceeding
MTCA Method A Industrial
Cleanup Levels
Birds Eye 2011 RI/FS



LEGEND

	Motor/Heavy Oil Range Organic concentrations exceed MTCA Method A Industrial CUL (2,000 mg/kg)
	Motor/Heavy Oil Range Organic concentrations exceed 5,000 mg/kg
	Motor/Heavy Oil Range Organic concentrations exceed 10,000 mg/kg
	Motor/Heavy Oil Range Organic concentrations exceed 20,000 mg/kg

FIGURE 17
Heavy Oil-Range HC Concentrations in 2011 Soil Samples Collected Along Profile B-B'
Birds Eye Foods 2011 Soil Investigation

Birds Eye 2011 RIFS
J11001.001_B-B' (shaded) 11.4.mg

Borehole location showing depths of soil samples collected for lab analyses

B11-02

50U

1,500

Concentrations in mg/kg

Annual Monitoring Well location and screened interval

PW-4

Horizontal Scale: 1 inch = 20 feet

Vertical Scale: 1 inch = 20 feet

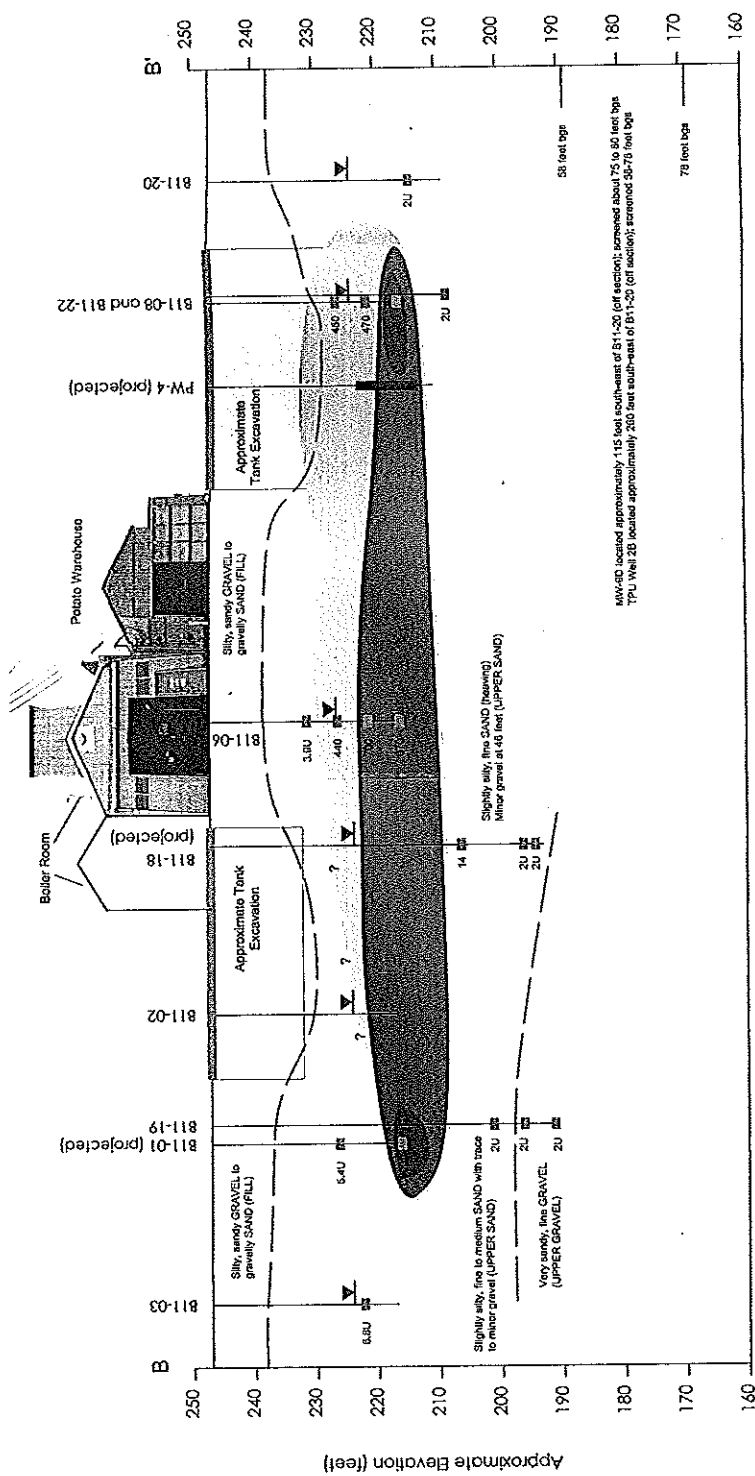
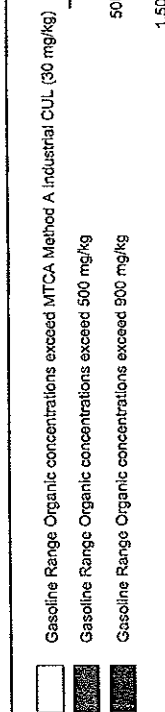
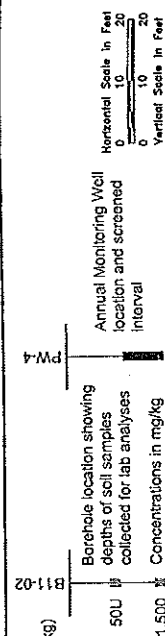


FIGURE 18
Gasoline-Range HC Concentrations in 2011 Soil
Samples Collected Along Profile B-8*
Birds Eye Foods 2011 Soil Investigation



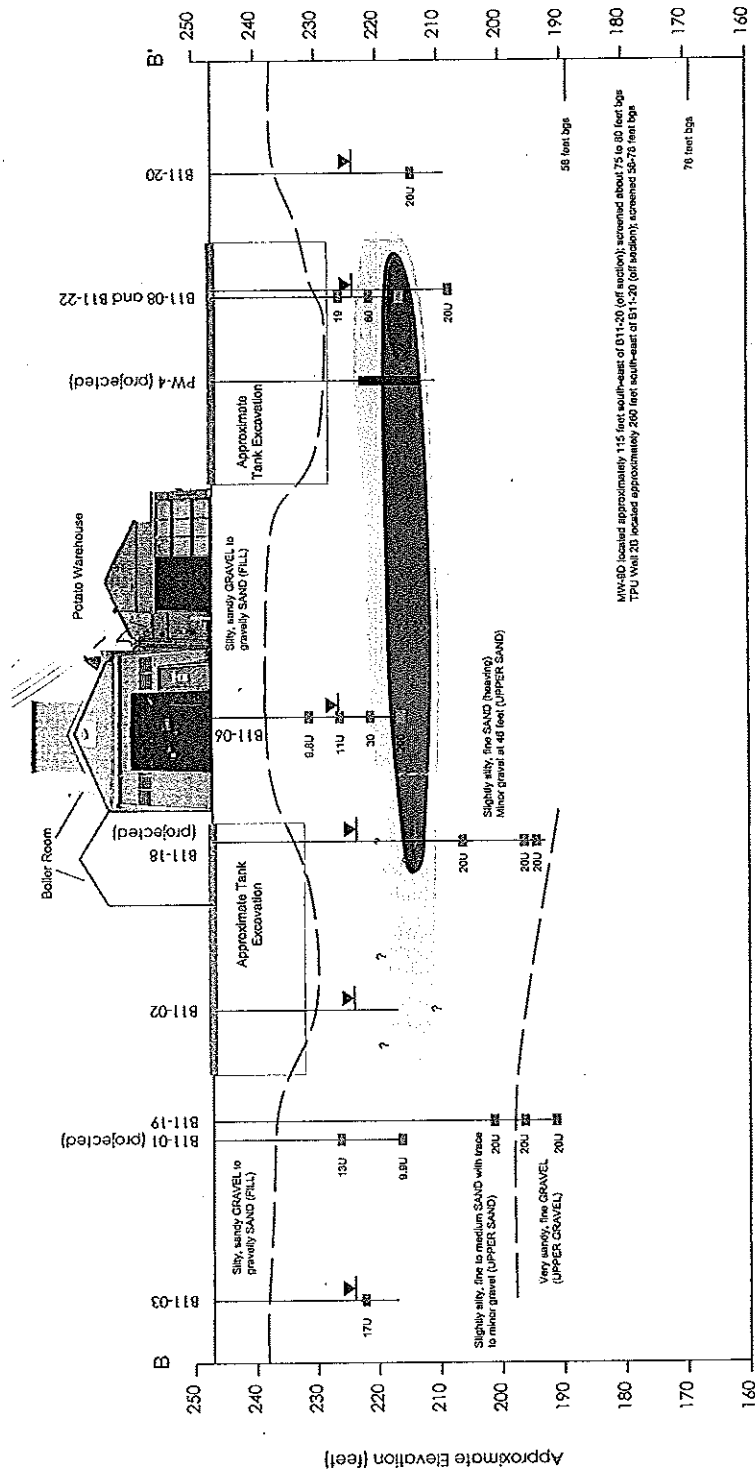


FIGURE 19
Benzene Concentrations in 2011 Soil Samples
Collected Along Profile B-B'
Birds Eye Foods 2011 Soil Investigation

LEGEND

- Benzene concentrations exceed MTCA Method A Industrial CUL (30 ug/kg)
- Benzene concentrations exceed 100 ug/kg
- Benzene concentrations exceed 500 ug/kg

PGG

Birds Eye 2011 RIFS
JANUARY 2012

Horizontal Scale in Feet
0 10 20

Vertical Scale in Feet
0 10 20

Annual Monitoring Well location and screened interval

Borehole location showing depths of soil samples collected for lab analyses

Concentrations in ug/kg

500 1,500

Table 1. Summary of Soil Gas Sampling Results, Birds Eye Foods Vapor Intrusion Investigation

Parameter	Units	MITCA Method C Soil Gas				
		Screening Levels (ug/m ³)		SG-22 duplicate at		
		Depth Less Than 15 feet	Depth Greater Than 15 feet	SG-10 (Depth: 15-15.5 ft)	SG-20 (Depth: 8.5-9 ft)	SG-30 (Depth: 12-12.5 ft) SG-40 (Depth: 12-12.5 ft)
Vacuum Measurements						
Final Field Vacuum	in Hg	NA	NA	-5	-5	-5
Lab Receipt Vacuum	in Hg	NA	NA	-5.5	-2.5	-5.5
Gas Measurements						
Percent Oxygen	%	NA	NA	1.5	17	15
Percent Helium	%	NA	NA	0.082 U	0.096 U	0.094 U
BTEX Compounds						
Benzene	ug/m ³	32	320	10 U	13	12
Ethylbenzene	ug/m ³	10,000	100,000	14 U	5.6	3.2
Toluene	ug/m ³	49,000	490,000	19	35	12
m,p-Xylene	ug/m ³	1,000	10,000	14 U	9.9	5.4
o-Xylene	ug/m ³	1,000	10,000	14 U	4.6	3.2 U

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

Note: SG-22 duplicate sample collected immediately after SG-20

Note: Vadose zone oxygen content 4-percent or higher indicate conditions favorable to aerobic degradation of readily biodegradable petroleum components: benzene, toluene, ethylbenzene, and xylenes (Ecology, Draft Vapor Guidance)

Table 2: Summary of Groundwater Quality Data, Birds Eye Foods, 2013 Q1

CONSTITUENT	UNITS	Site Cleanup Levels*									
		MW-9S	MW-9D	MW-12S	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D		
Field Parameters											
Depth to Water	feet	16.4	16.71	17.47	17.58	16.42	16.64	18.55	18.69		
pH, Field	std. units	6.82	6.8	7.2	7.25	6.51	7.2	6.64	6.87		
Specific Conductance, Field	umhos/cm	235	445	688	896	212	484	566	497		
Turbidity, Field	NTU	2.13	0.83	16.7	2.43	3.9	2.55	4.61	1.1		
NWTPH Analytes											
Diesel Range Organics	mg/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		
Gasoline Range Organics	mg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U		
Oil Range Organics	mg/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		
BTEX (EPA 8021)											
Benzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
Ethylbenzene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
Toluene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
o-Xylene	ug/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U		
Xylene Isomers, m+p	ug/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 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, 2013 Q1

CONSTITUENT	UNITS	Site Cleanup Levels*	MW-9S	MW-9D	MW-12S	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D
Carcinogenic PAHs										
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
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
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
Dibenzo(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
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
Non-Carcinogenic PAHs										
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
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
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
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
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
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
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
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
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

*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

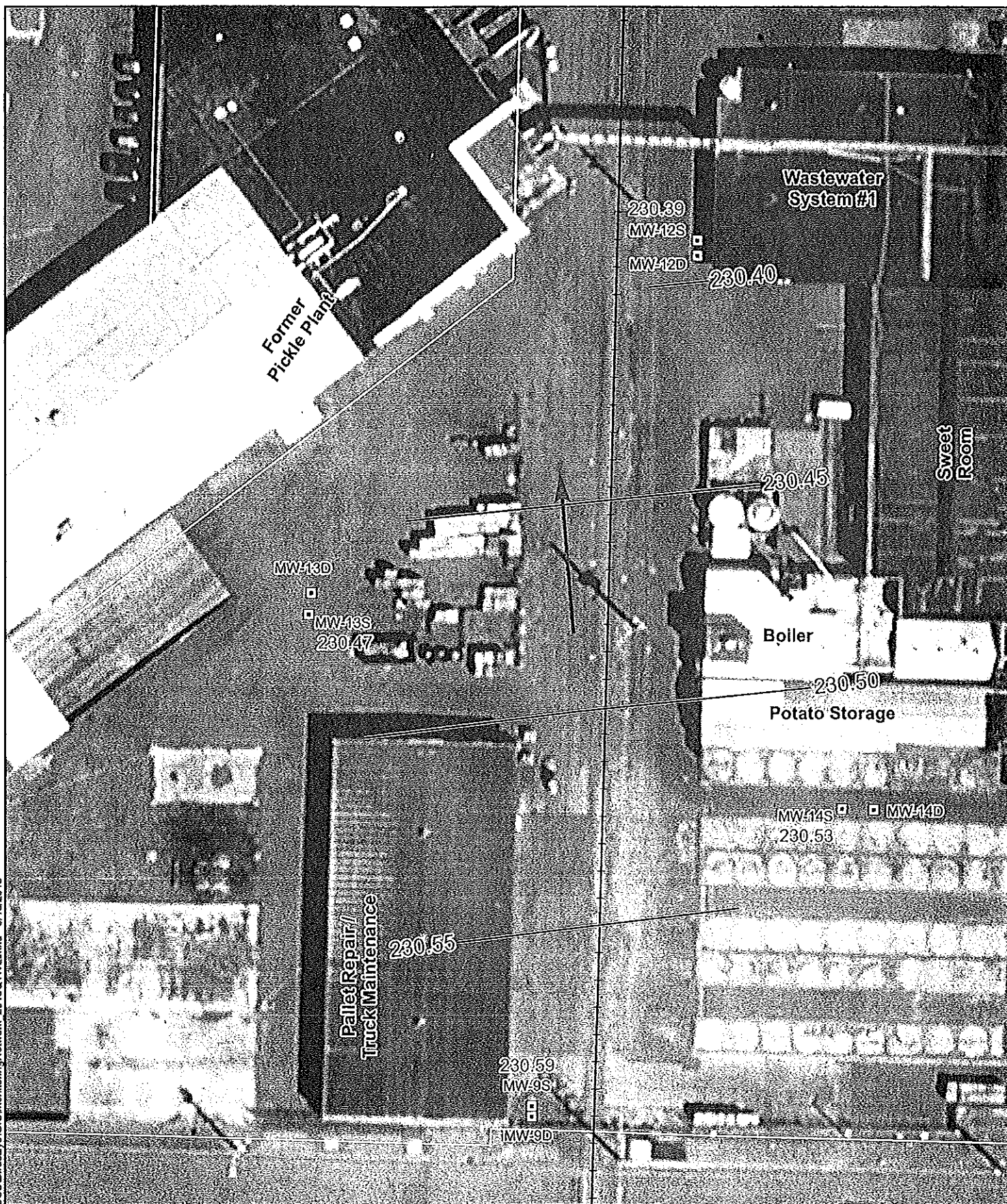


Figure 1
VCP Long-Term Monitoring
Well Network & 2013 Q1
Water Table Contours

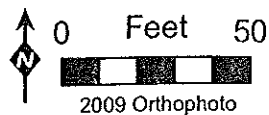
Birds Eye Well Install and
 2013 Q1 Monitoring Report

pgg

□ Long-Term Monitoring Well Network with Water Table Elevation in Feet

— Water Table Elevation Contours in Feet

➔ Groundwater Flow Direction



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)

SE 1/4 of the SE 1/4 of Section 7, Township 20 N, Range 3 E

Complete Legal Description on Page 6-7 of Document

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

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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 polycyclic aromatic 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 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).

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.

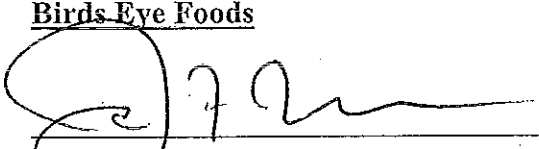
Section 5. The Owner must restrict leases to uses and activities of the Property consistent with the Covenant and notify all lessees of the restrictions on the use of the Property.

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.

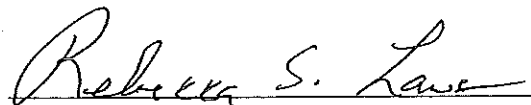
Birds Eye Foods



John Krøeger
Deputy General Counsel

Dated: 2-22-13

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY



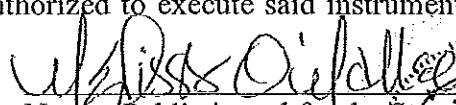
Rebecca S. Lawson, P.E. LHG,
Section Manager, Toxics Cleanup Program
Southwest Regional Office

Dated: 3/18/2013

STATE OF NEW JERSEY
COUNTY OF MORRIS

[CORPORATE ACKNOWLEDGMENT]

On this 22ND day of FEBRUARY, 2013, I certify that JOHN KROEGER personally appeared before me, acknowledged that he 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 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

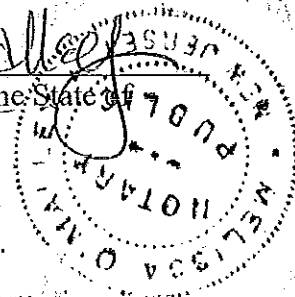


Exhibit A

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;

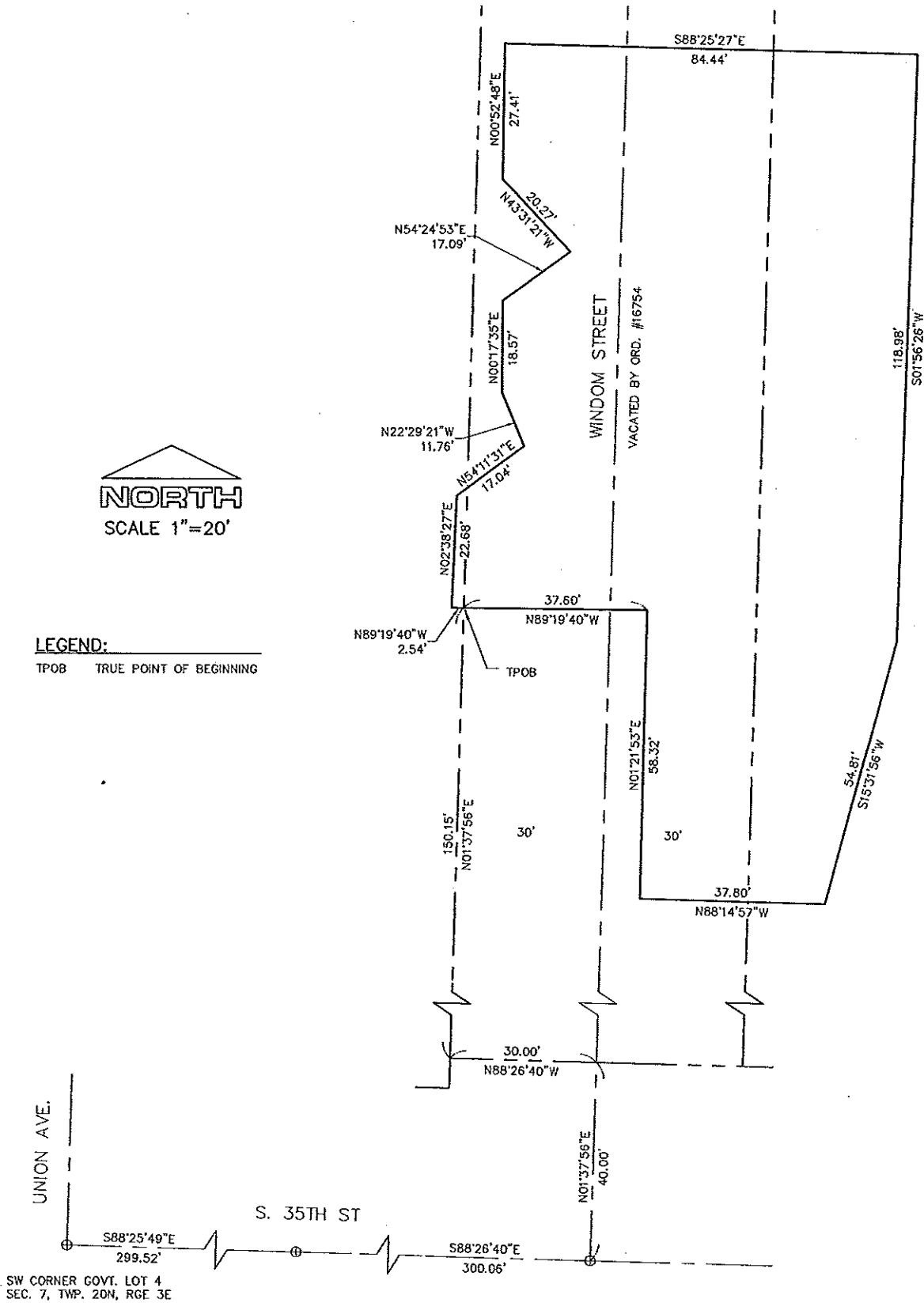
Thence North 89 degrees, 19 minutes and 40 seconds West, a distance of 37.60 feet to the
TRUE POINT OF BEGINNING.

Containing 0.3 acres.



LEGEND:

TPOB TRUE POINT OF BEGINNING



PLS, Inc.
Professional Land Surveyors
355 NW Gilman Boulevard, #201
Issaquah, Washington 98027
(425) 313-9378 (fax) 313-9379

PACIFIC GROUNDWATER GROUP
LEGAL DESCRIPTION EXHIBIT

JOB NO.
12023
SHEET
1 of 1

Exhibit B
Birds Eye Foods, Tacoma Boiler Room Site
Long-Term Groundwater Monitoring Plan
VCP Site Number SW1187

PACIFIC groundwater GROUP

BIRDS EYE FOODS, TACOMA BOILER ROOM SITE LONG-TERM GROUNDWATER MONITORING PLAN VCP SITE NUMBER SW1187

October 23, 2012

**BIRDS EYE FOODS, TACOMA BOILER ROOM SITE
LONG-TERM GROUNDWATER MONITORING PLAN
VCP SITE NUMBER SW1187**

Prepared for:

**Pinnacle Foods Group LLC
399 Jefferson Road
Parsippany, NJ 07054**

Prepared by:

**Pacific Groundwater Group
2377 Eastlake Avenue East, Suite 200
Seattle, Washington 98102
206.329.0141
www.pgwg.com**

October 23, 2012

J11001.04

ExhibitB-Text-102312.docx

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1.0 INTRODUCTION

This Long-term Groundwater Monitoring Plan (Monitoring Plan) identifies and describes groundwater monitoring tasks to be conducted at the Boiler Room Site located on the Birds Eye Foods facility in Tacoma, Washington (Figure 1). Monitoring will be performed under the Washington State Department of Ecology (Ecology) Voluntary Cleanup Program (VCP) and in compliance with the Birds Eye Facility Restrictive Environmental Covenant. The Boiler Room Site entered the VCP in 2011 and was assigned site number SW1187.

This Monitoring Plan has been developed for compliance with requirements of the preferred remedial alternative, *Alternative 1: Soil Containment and Natural Source Zone Depletion Remedy*, identified in the independent Birds Eye Foods Tacoma, WA 2011 Remedial Investigation/Feasibility Study (2011 RI/FS; Pacific Groundwater Group, 2011). The 2011 RI/FS was developed under the Washington State Model Toxics Control Act (MTCA; Washington Administrative Code [WAC] Chapter 173-340) framework.

1.1 OBJECTIVES AND DATA NEEDS

This Monitoring Plan describes groundwater monitoring tasks that will take place during a review period of 5 years, in preparation for Ecology's 5-Year Site Review¹. The objective of the Monitoring Plan is to collect data to confirm that the preferred containment remedy for petroleum-contaminated soil at the Boiler Room Site is protective of groundwater quality.

2.0 SITE DESCRIPTION AND BACKGROUND

The Birds Eye Foods property is a former food processing facility located approximately 3 miles southwest of downtown Tacoma and the southernmost tip of Commencement Bay (Figure 1). Locally, the facility is also known as Nalley's Fine Foods, the original food processing company at this location.

The subject of the 2011 RI/FS and this Monitoring Plan is a portion of the Birds Eye facility, referred to as the "Former Boiler Room UST Site" or "Boiler Room Site" (Figure 2). The Boiler Room Site is located in the south-western portion of the Birds Eye facility.

As presented in Figures 2 and 3, the Boiler Room Site is located in the main internal vehicle corridor through the facility. A railroad spur, overhead power lines, and underground utilities transect the Site as described in the 2011 RI/FS. Three buildings are located in the vicinity of the Boiler Room Site: the Potato Warehouse (currently vacant), the Boiler Room Building, and the former Pallet Room Building (currently vacant).

The Boiler Room Site is largely paved or covered with buildings. Crushed rock and gravel lies between the rails in the southern 350 feet of track and to approximately 2.5 feet on

¹ The 2011 RI/FS preferred remedy identifies a 10-year monitoring schedule, which is described in Section 3.4 of this Monitoring Plan.

either side of the rails. There is also a gravel covered area approximately 1,200 square feet along the southern 100 feet of track.

Two underground storage tanks (USTs) were removed from the Boiler Room Site in 1990 (Figure 2). Soil at the Site is impacted with petroleum compounds from former UST releases of diesel and Bunker C fuels (Figure 3). The 2011 RI/FS assessed the nature and extent of soil contamination at the Boiler Room Site and concluded that non-aqueous phase liquid (NAPL) is present in soil and that dissolution of the contaminant mass to groundwater is no longer occurring. Information on the nature and extent of Site contamination is presented in the 2011 RI/FS. This is a mature Site and not the result of a recent or new release of hazardous materials to the subsurface.

2.1 SITE HYDROGEOLOGIC UNITS

The following discussion of Site hydrogeology is based on information presented in the 2011 RI/FS. Please refer to the 2011 RI/FS for more detail.

During previous Boiler Room Site investigations three stratigraphic units were encountered:

- Fill
- Upper Sand
- Upper Gravel

Fill

A layer of structural fill, approximately 4 to 12 feet thick and consisting of sand and gravel occurs at ground surface at the Boiler Room Site. The fill is approximately 15 to 19 feet thick where it was used to backfill the former UST excavations. The lateral extent of fill is unknown. The unit is generally not saturated with groundwater and field observations of the texture suggest this unit is relatively permeable.

Upper Sand

The Upper Sand is the shallowest naturally occurring unit at the Site. It is a 30 to 50 foot thick layer of fine to medium sand with minor gravel. At the Boiler Room Site the water table occurs in the Upper Sand.

Upper Gravel

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 Upper Gravel may represent the Vashon advance outwash, a unit of interbedded coarse sand and gravel. The Upper Gravel is in direct contact with the overlying Upper Sand in the Birds Eye vicinity.

Shallow Aquifer

The saturated portions of the Upper Sand and Upper Gravel units are part of the Shallow Aquifer. Depth to groundwater in Boiler Room Site wells is typically 17 to 28 feet below ground.

The Shallow Aquifer is highly productive and has been developed by a number of City production wells. In particular, emergency municipal supply Well 2B, which is located approximately 300 feet south-west of the Boiler Room Building (Figure 2), is completed in this aquifer between 58 and 78 feet below ground.

2.2 GROUNDWATER FLOW

Groundwater recharge originates as precipitation in the Tacoma upland with shallow groundwater flow east toward the Puyallup River and west toward Puget Sound. As described in the 2011 RI/FS, previous studies have mapped a natural groundwater divide in the Shallow Aquifer in the vicinity of the South Tacoma Channel and the Birds Eye facility. The axis of the divide is generally oriented north-south and groundwater flows away from the divide both east toward the Puyallup River and west toward Puget Sound. The axis of the divide can shift to the east or west under the influence of production well pumping. Therefore, groundwater flow directions in the vicinity of the axis can vary by nearly 180-degrees.

Groundwater level monitoring at the Boiler Room Site between 1991 and 1999 indicate the transient nature of local groundwater flow directions in the Shallow Aquifer. Groundwater flow directions rotate from west to north to southeast or east. The water table at the Birds Eye facility is relatively flat. With very low horizontal gradients across the Site, a minor change in groundwater level could suggest a shift in groundwater flow direction. The local groundwater flow system is very dynamic and responds to local stresses like pumping.

Historic groundwater level monitoring at the Birds Eye facility and at other sites in the South Tacoma Channel have revealed a downwards vertical component of groundwater flow within the Shallow Aquifer.

3.0 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring well network, contaminants-of-concern and analytical methods, cleanup levels, sampling protocols, and schedule are described in the following sections.

3.1 GROUNDWATER MONITORING WELL NETWORK

As described above, groundwater flow directions at the Boiler Room Site can vary by over 180 degrees. Therefore, for the purposes of groundwater monitoring, there is not one consistently downgradient direction from the contaminant mass in soil at the Boiler

Room Site. In addition, groundwater gradients in the vicinity of the Boiler Room Site include a downward component of vertical flow.

The long-term groundwater monitoring well network at the Boiler Room Site consists of 4 well pairs located outside the lateral extent of soil contamination delineated for the 2011 RI/FS. Ecology was consulted regarding the locations of three well pairs installed in April 2012. The fourth well pair (MW-9S and MW-9D) was installed in the 1990s. Well locations are on the Birds Eye property and are presented in Figure 3.

The shallow monitoring wells are completed in the Upper Sand unit and screened at depths comparable to shallow wells installed during remedial investigations in 1990. The deep monitoring wells are screened in the Upper Gravel unit at depths comparable to nearby emergency municipal supply Well 2B. Monitoring well construction details are summarized in Table 1 and well logs are included in Appendix A.

The well network described in this Monitoring Plan will be maintained to the extent possible. However, over time wells may require replacement if they are damaged, if they are found to not meet the goals of the long-term monitoring program, or as the property is re-developed. Consistent with the Restrictive Environmental Covenant, Ecology will be consulted in these events. Ecology will be consulted and well replacement work plans will be submitted for agency review. Damaged or discontinued monitoring wells will be decommissioned in accordance with WAC 173-160-460 and replacement wells will be installed in accordance with WAC 173-160.

3.2 CONTAMINANTS OF CONCERN

The contaminants of concern (COCs) and analytical methods for the Monitoring Plan are:

- Northwest Total Petroleum Hydrocarbons – Gasoline, Diesel and Heavy Oil Range Organics (NWTPH-G and NWTPH-Dx)
- BTEX - Benzene, Toluene, Ethylbenzene, Xylenes (EPA Method 8021)
- Polynuclear Aromatic Hydrocarbons (EPA Method 8270 with selected ion monitoring modification to achieve required reporting limits)

To be consistent with groundwater samples collected at the Boiler Room Site previously, the NWTPH-Dx analyses will be performed with silica gel cleanup.

3.3 CLEANUP LEVELS

Standard MTCA Method A Unrestricted Land Use groundwater screening concentrations are applicable to the Boiler Room Site to evaluate the relative chemical effects from the site on groundwater quality. MTCA Method A meets the criteria of WAC 173-340-704(1) because there are few hazardous substances at the Site and numerical Method A standards have been established. Groundwater cleanup levels are summarized in Table 2 and are consistent with the 2011 RI/FS groundwater cleanup levels.

3.4 MONITORING PROGRAM SCHEDULE

The preferred remedial alternative identified in the 2011 RI/FS includes long-term groundwater quality monitoring in 8 wells at the following frequency:

- 4 quarters of monitoring in Year 1
- 1 event every 18 months in Years 2 – 10

This schedule is subject to change following Ecology 5-Year Reviews. The first quarterly sampling event was completed in May 2012 (PGG, 2012).

3.5 WELL INSPECTION AND SAMPLING PROTOCOLS

All completed monitoring wells are protected by secure, flush-mount monuments that are bolted in place. Expanding well caps provide a water-tight seal with the 2-inch well casing. An inspection of the condition of each in-service monitoring well will be completed during each sampling event. Field personnel will take note of the condition of the monument, well cap, and well casing, and identify required maintenance activities.

Water quality meters shall be used in the field to measure pH, specific conductance, temperature, and turbidity. The meters shall be calibrated at least daily, prior to sample collection, for pH, specific conductance, and turbidity.

To minimize turbidity, low-flow purging and sampling methods will be employed. A peristaltic pump is preferred; however, portable, submersible pumps may be used when groundwater levels are too deep for peristaltic pumps to lift water from. When submersible pumps are required, they should be capable of variable flow rates.

The general low-flow purging procedures are:

- At each monitoring station, the well name, sample ID, date, weather, and wellhead condition shall be recorded in the field notes, along with the name of the person collecting the samples.
- The static water level in the well shall be measured to the nearest hundredth of a foot and recorded in the field notes. Measuring points are black marks on the north side of each 2-inch well casing.
- A maximum purge volume of three casing volumes shall be calculated and recorded in the field notes. The formula for calculating three casing volumes is:

$$\text{Volume (gallons)} = 3\pi r^2(\text{Height of Water Column})(7.48 \frac{\text{gallons}}{\text{foot}})$$

- Pumps with new or dedicated polyethylene discharge tubing shall be installed in the wells making efforts to position the pump intake within the well screen interval. The type of pump used at each station shall be recorded in the field notes. For peristaltic pumps, new silicon tubing will be mounted in the pump head at each well.

- During purging, water levels will be measured to monitor drawdown and flow rates will be measured using a calibrated container (e.g. graduated cylinder or measuring cup). Typical flow rates should be less than 1 L/minute; however, the flow rates will be determined in the field by monitoring water levels and maintaining no more than 1 foot of drawdown in the well. Water levels and flow rates shall be recorded in the field notes.
- During purging, pH, specific conductance, temperature, and turbidity will be monitored for stabilization and recorded in field notes at least three times, or every 5 minutes, or every one-gallon purged. Stabilization is defined as three consecutive readings that do not indicate a trend (continuously increase or decrease between readings) and measurements between readings are within 0.1 pH units, within 10-percent for temperature and specific conductance, and within 10-percent for turbidity or below 10 NTU.
- Purge water shall be drummed and temporarily stored at the Birds Eye facility (Section 3.6).

Groundwater samples² will be collected in the following manner after field parameters have stabilized or after a minimum of three casing volumes have been purged.

- Groundwater samples will be collected from the pump discharge tubing directly into laboratory-provided containers preserved in compliance with the analytical method. During sample collection, field personnel shall wear clean, disposable gloves that will be changed when dirty and between samples.
- Vials for collection of volatile compounds (BTEX and gasoline-range hydrocarbons) shall be filled so that there is a meniscus at the top of the vial and no bubbles or head-space should be present in the vial after it is capped. After the cap is securely tightened, the vial should be inverted and tapped on the palm of one hand to see if any undetected bubbles are dislodged. If a bubble or bubbles are present, the vial should be topped off using a minimal amount of sample to re-establish the meniscus.
- Sample identification (name), date, time, and sampler's initials shall be recorded on each sample container and in the field notes.

Following collection, groundwater samples will be handled in the manner described below. A summary of analytical holding times is presented in Table 2.

- Samples shall be placed in clean, insulated ice chests containing frozen gel or ice to maintain temperature near, but not at or below, freezing. Sufficient cooling materials shall be used to maintain temperature near freezing during the time of transport to the lab.
- Maintain custody of samples from the time of sampling to receipt at the laboratory. Custody means that samples remain in direct possession of a person who is recorded on the chain-of-custody form, or locked in secure vehicles or offices.
- Complete the appropriate chain-of-custody forms and any other pertinent sampling/shipping documentation to accompany the samples.

² See Quality Assurance Project Plan for quality control samples to be collected in the field.

- Samples will be transferred to the analytical lab, accompanied by one set of chain-of-custody forms per lab shipment. All laboratory services shall be provided by labs accredited by Ecology.

Peristaltic pumps and new or dedicated discharge tubing do not require decontamination because they do not present a risk of cross contamination. Peristaltic pumps do not come in direct contact with purge water or groundwater samples and new or dedicated discharge tubing are not used in multiple wells. However, well sounders and submersible pumps shall be decontaminated before use in each monitoring well and at the end of the sampling event.

- Well sounders shall be decontaminated by scrubbing the length of the sounder that was submerged in the well with liquinox or similar environmental soap diluted in distilled water. The same length of sounder shall then be rinsed in distilled water.
- Submersible pumps shall be decontaminated by scrubbing the outside of the pump and the length of the electrical line that was submerged in the well with liquinox or similar environmental soap diluted in distilled water and pumping the liquinox solution through the pump. Distilled water shall then be rinsed over the outside of the pump and electrical line and pumped through the submersible pump.
- If an in-line flow regulator is used, it shall be scrubbed with liquinox or similar environmental soap diluted in distilled water and rinsed in distilled water.

3.6 MANAGEMENT OF INVESTIGATION-DERIVED WASTE

Purge water will be drummed and temporarily stored at the Birds Eye facility. Within one month of receipt of the groundwater quality analytical data, the purge water will be disposed of appropriately.

3.7 REPORTING

Groundwater monitoring results will be documented in a summary report. The reports will include:

- Tables summarizing the analytical results and groundwater elevations
- Summary of findings relative to applicable cleanup levels
- Discussion of data outliers that could indicate the need for follow up action prior to the next scheduled sampling event and recommendations
- Quality Assurance/Quality Control review
- Laboratory data sheets

Reports will be submitted to Ecology, Tacoma Pierce County Health Department, and Tacoma Public Utilities Water Department.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PLAN

Quality Assurance will be achieved following sampling protocols described above, collecting additional sample volume in the field, and following analytical protocols established by the methods and lab standard operating procedures. Quality Control will be achieved by evaluating the analytical data relative to tolerance limits established by the lab in accordance with their standard operating procedures (e.g. statistical limits), established by the analytical method, or established by the CLP Guidelines.

4.1 FIELD QA/QC

During each sampling event, one blind field duplicate sample will be collected and analyzed for the monitoring program COCs. Field duplicate samples indicate both field and lab precision. Therefore, the results may have more variability than laboratory replicates, which measure only lab performance. The tolerance limit for relative percent differences between the field duplicates will be ± 35 percent.

During sampling events when submersible pumps are used, one rinsate blank will be collected and analyzed for the monitoring program constituents of concern. The objective of the rinsate blank is to assess possible sources of contamination that may be related to equipment decontamination and sample handling procedures. Following decontamination of the submersible pump, a rinsate blank shall be collected by:

- Placing the pump intake in a new jug of distilled water and attaching a clean piece of discharge line to the pump that is sufficient in length to fill sample bottles. If an inline flow regulator is used during sample collection, it should also be used during rinsate blank collection.
- Use the pump assembly to fill laboratory-provided containers with distilled water directly from the discharge line. Containers will be preserved in compliance with the analytical method. During sample collection, field personnel shall wear clean, disposable gloves that will be changed when dirty and between samples.

4.2 LABORATORY QA/QC

The analytical lab will follow quality control protocols consistent with analytical methods and may include method blanks, trip blanks, surrogate spikes, lab duplicates, and laboratory control samples (LCS).

Method and trip blanks should have no detectable contaminants. If contamination is detected in the blank samples, the nature of the interference and the effect on the analysis of each sample in the batch will be evaluated. The source of contamination will be investigated and measures shall be taken to minimize or eliminate the problem. Affected samples may be reprocessed or qualified following the analytical lab's standard operating procedure and/or the USEPA Contract Laboratory Program National Functional Guidelines (CLP Guidelines).

Accuracy is commonly assessed using percent recoveries of spike samples, including surrogate spikes and LCS. Surrogate spikes are relatively pure organic compounds that are added to field samples and QC samples prior to preparation and analysis. The spike compound should have analytical properties similar to the target compounds. Surrogate spike recoveries assess overall performance on a sample-specific basis. Spikes simulate matrix effects found in the actual samples and the calculated percent recovery of the spike is a measure of the accuracy of the total analytical method. The lab shall calculate and report the surrogate spike recoveries. Tolerance limits applied to this project for acceptable percent recovery will be established by the lab in accordance with their standard operating procedures (e.g. statistical limits), established by the analytical method, or established by the CLP Guidelines.

LCS are prepared in the laboratory and contain analytes that are representative of the analytes of interest in project groundwater samples. Known concentrations of analytes are added to either pure water and are processed in the same manner as the project samples. The results of the LCS are used to demonstrate that the laboratory is in control of the processes involved in the preparation and analysis of specific tests. Tolerance limits applied to this project for acceptable percent recovery will be established by the lab in accordance with their standard operating procedures (e.g. statistical limits), established by the analytical method, or established by the CLP Guidelines.

Lab duplicates are aliquots of the same sample and treated the same throughout the analytical method. The relative percent difference between the values of the lab duplicates is taken as a measure of the precision of the analytical method. Lab duplicates shall be analyzed in compliance with the analytical method. Tolerance limits applied to this project for acceptable percent recovery will be established by the lab in accordance with their standard operating procedures (e.g. statistical limits), established by the analytical method, or established by the CLP Guidelines.

4.3 DATA MANAGEMENT AND VALIDATION

The groundwater quality data shall be managed in a project database and uploaded to Ecology's Environmental Information Management (EIM) database. Field and laboratory quality control will be validated in accordance with EPA National Functional Guidelines for organic and inorganic analyses (EPA 1999 and 2004, respectively), and laboratory-defined QC limits, with regard to the following, as appropriate to the particular analysis: sample documentation/custody, holding times, reporting limits, blank/rinse samples, and surrogate percent recoveries, laboratory duplicates, field duplicates, comparability, and completeness.

5.0 REFERENCES

- Pacific Groundwater Group, 2011. Birds Eye Foods Tacoma, WA 2011 Remedial Investigation/Feasibility Study. Consultant's report prepared for Pinnacle Foods Group, LLC. December 16, 2011.
- Pacific Groundwater Group, 2012. Birds Eye Foods, Tacoma Monitoring Well Installation and May 2012 Groundwater Quality Report. Consultant's report prepared for Pinnacle Foods Group, LLC. September 7, 2012.

US Environmental Protection Agency Office of Emergency and Remedial Response. October 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review.

US Environmental Protection Agency Office of Superfund Remediation and Technology Innovation. October 2004. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review Final.

Washington State Department of Ecology, 2012. Cleanup Levels and Risk Calculations (CLARC) tool. Online database accessed July 6, 2012.

Washington State Department of Ecology, 2007. Model Toxics Control Act Statute and Regulation. WAC 173-340. Publication No. 94-06. Revised November 2007.

Table 1. Long-Term Monitoring Well Network Construction Details, Birds Eye Boiler Room Site

Units, Datum		MW-9S	MW-9D	MW-12S	MW-12D	MW-13S	MW-13D	MW-14S	MW-14D
Unique Well ID (UWID)									
Location Information									
Township/Range-Section									
Northing	feet, NAD 83/91 W/A South	697261.9	697257.9	697590.9	697585.0	697449.3	697457.4	697375.4	697375.0
Easting	feet, NAD 83/91 W/A South	1148195.0	1148194.9	1148259.2	1148259.1	1148109.1	1148110.2	1148314.6	1148326.9
Ground Surface Elevation	feet, NAVD 88	247.67	247.64	248.24	248.19	247.23	247.24	249.45	249.43
Measuring Point Elevation	feet, NAVD 88	246.99	247.14	247.86	247.90	246.89	246.98	249.08	249.10
Construction Information									
Date Completed		10/22/1991	8/24/1992	4/23/2012	4/23/2012	4/24/2012	4/24/2012	4/26/2012	4/25/2012
Diameter	inches	2	2	2	2	2	2	2	2
Depth Drilled	feet bgs	37	82	35	75	35	75	35	75
Top of Screen	feet bgs	22	77	20	63	20	63	20	63
Bottom of Screen	feet bgs	37	82	35	73	35	73	35	73
Depth Completed	feet bgs	37	82	35	73	35	73	35	73
Monument Type		Sherwood High Traffic Flush Monument							
Water Level Information									
Water Level Date		5/8/2012	5/8/2012	4/26/2012	4/26/2012	4/26/2012	4/26/2012	5/7/2012	5/7/2012
Depth to Water	feet bmp	16.74	17.14	17.81	18.03	16.76	17.25	19.03	19.16
Water Level Elevation	feet NAVD 88	230.25	230.00	230.05	229.87	230.13	229.73	230.05	229.94

Vertical and Horizontal Datums use the Washington State Reference Network
 bgs = below ground surface
 bmp = below measuring point

Table 2. Summary of Analytical Methods and Site Cleanup Levels

Analysis	Analytical Method	Holding Time	Site Cleanup Level MTCA Method A - Unrestricted	Comment
Northwest Total Petroleum Hydrocarbons				
Gasoline Range Organics	NWTPH-G	14 days (7 days unpreserved)	0.8 mg/L	Cleanup level is 1 mg/L if no detectable benzene
Diesel Range Organics	NWTPH-Dx with Silica Gel Cleanup	7 days	0.5 mg/L	
Heavy Oil Range Organics			0.5 mg/L	
BTEX Compounds				
Benzene			5 ug/L	
Toluene		14 days (7 days unpreserved)	1,000 ug/L	
Ethylbenzene	EPA 8021		700 ug/L	
Xylenes			1,000 ug/L	
Polynuclear Aromatic Hydrocarbons (PAHs)				
Acenaphthene				
Anthracene				
Benzo(a)anthracene			TEF Method Applies	carcinogenic, TEF = 0.1
Benzo(a)pyrene			0.1 ug/L	carcinogenic, TEF = 1
Benzo(b)fluoranthene			TEF Method Applies	carcinogenic, TEF = 0.1
Benzo(k)fluoranthene			TEF Method Applies	carcinogenic, TEF = 0.1
Chrysene		7 days	TEF Method Applies	carcinogenic, TEF = 0.01
Dibenzo(a,h)anthracene	EPA 8270		TEF Method Applies	carcinogenic, TEF = 0.1
Fluoranthene			TEF Method Applies	carcinogenic, TEF = 0.1
Fluorene				
Indeno(1,2,3-cd)pyrene			TEF Method Applies	carcinogenic, TEF = 0.1
Naphthalene			160 ug/L	
Pyrene				

TEF = Toxicity Equivalency Factors, reference WAC 173-340-900 Table 708-2
TEF Method = if other carcinogenic PAHs are suspected of being present at the site, test for them and use the cleanup level for benzo(a)pyrene as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8)

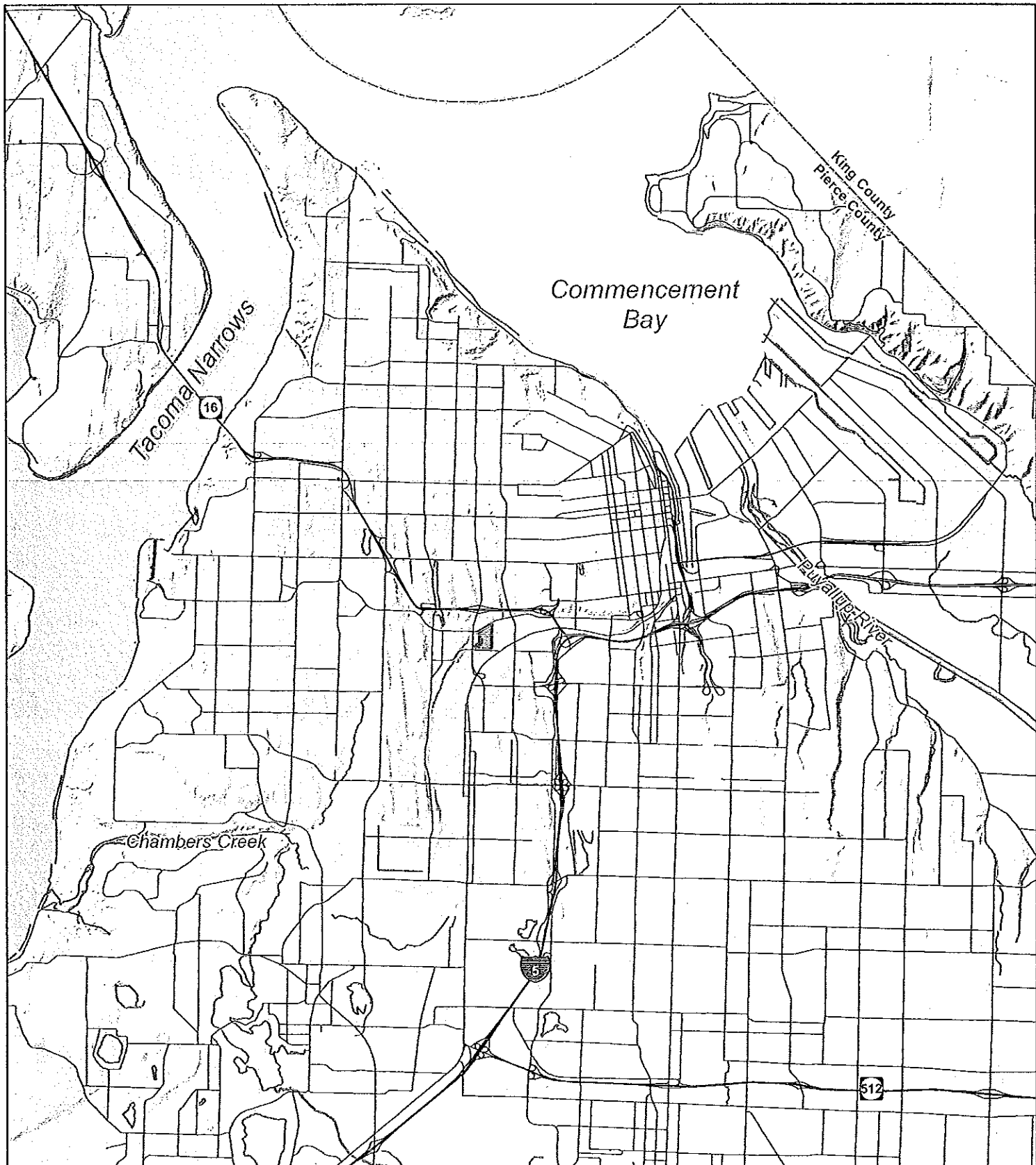
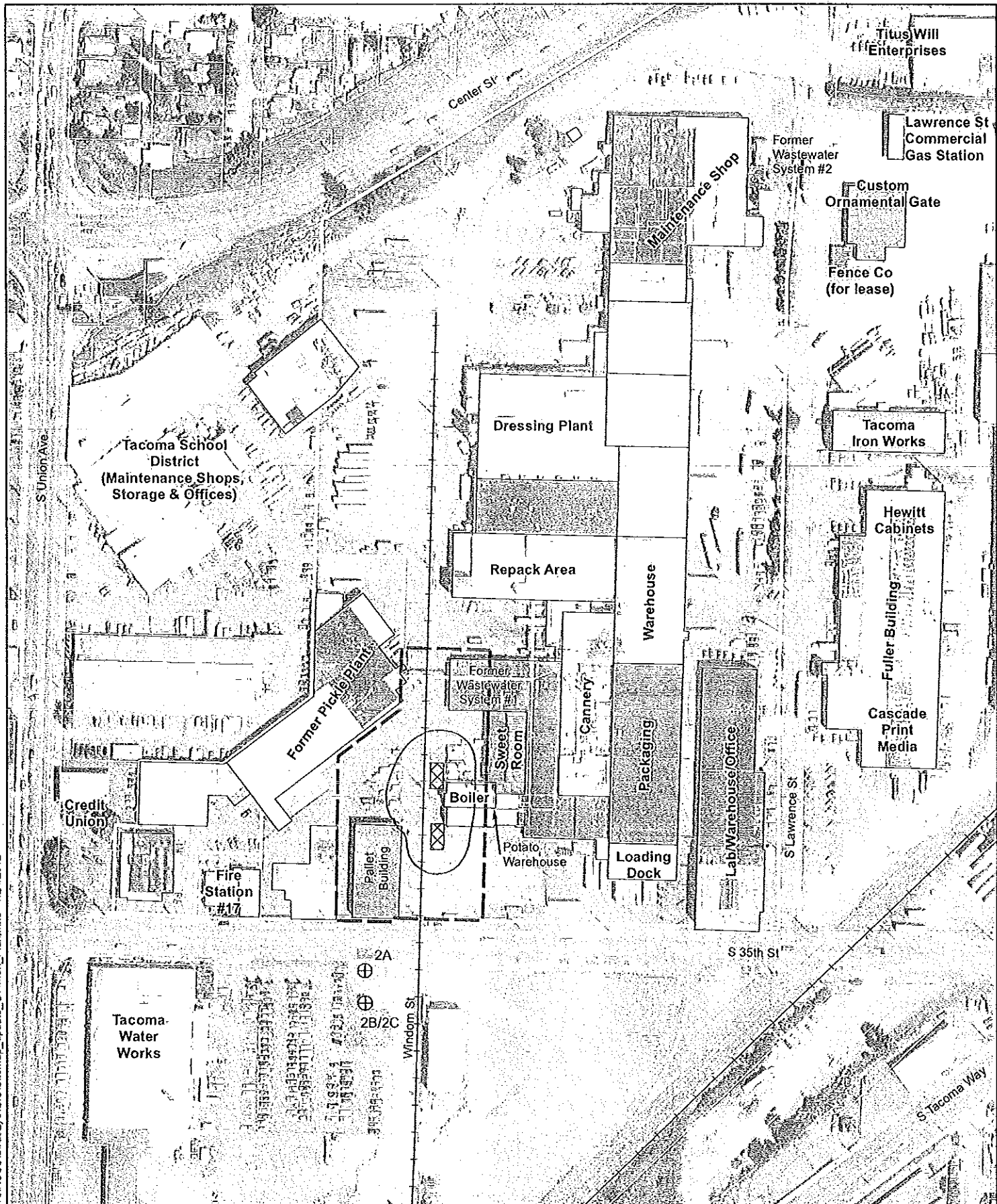


Figure 1
Site Vicinity

Birds Eye

PGG



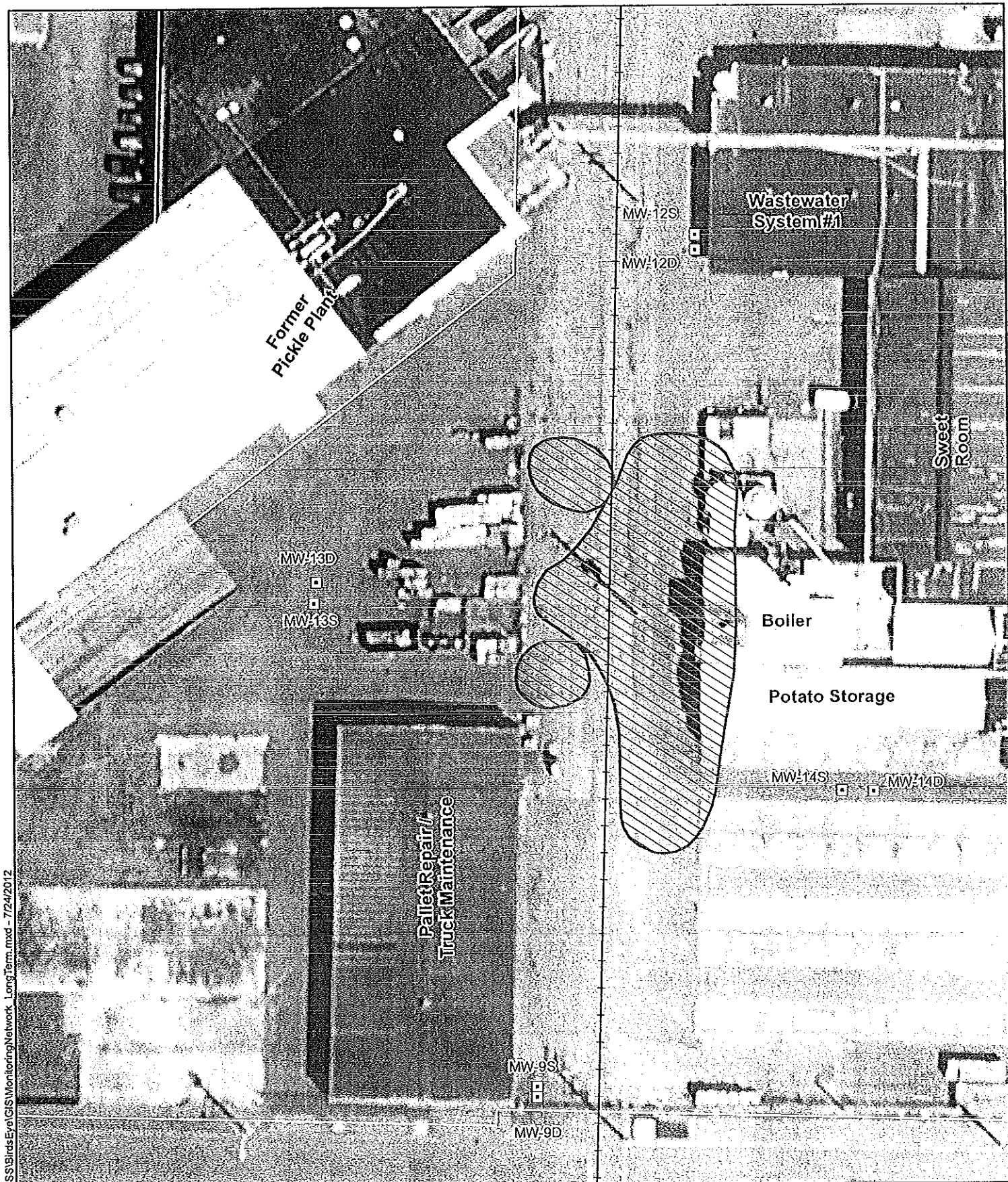
- ⊕ Tacoma Production Wells
- ⊗ Approximate UST Excavation Areas
- Boiler Room Site Vicinity
- ⊞ 2011 Soil Investigation Area
- ▭ Birds Eye Parcels
- ▭ Building Footprints

0 Feet 200
2009 Orthophoto

Figure 2
Birds Eye Foods Facility
& Boiler Room Site

Birds Eye
Groundwater Monitoring Plan

pgg



K:\RUSS\BirdsEye\GIS\MonitoringNetwork_LongTerm.mxd - 7/24/2012

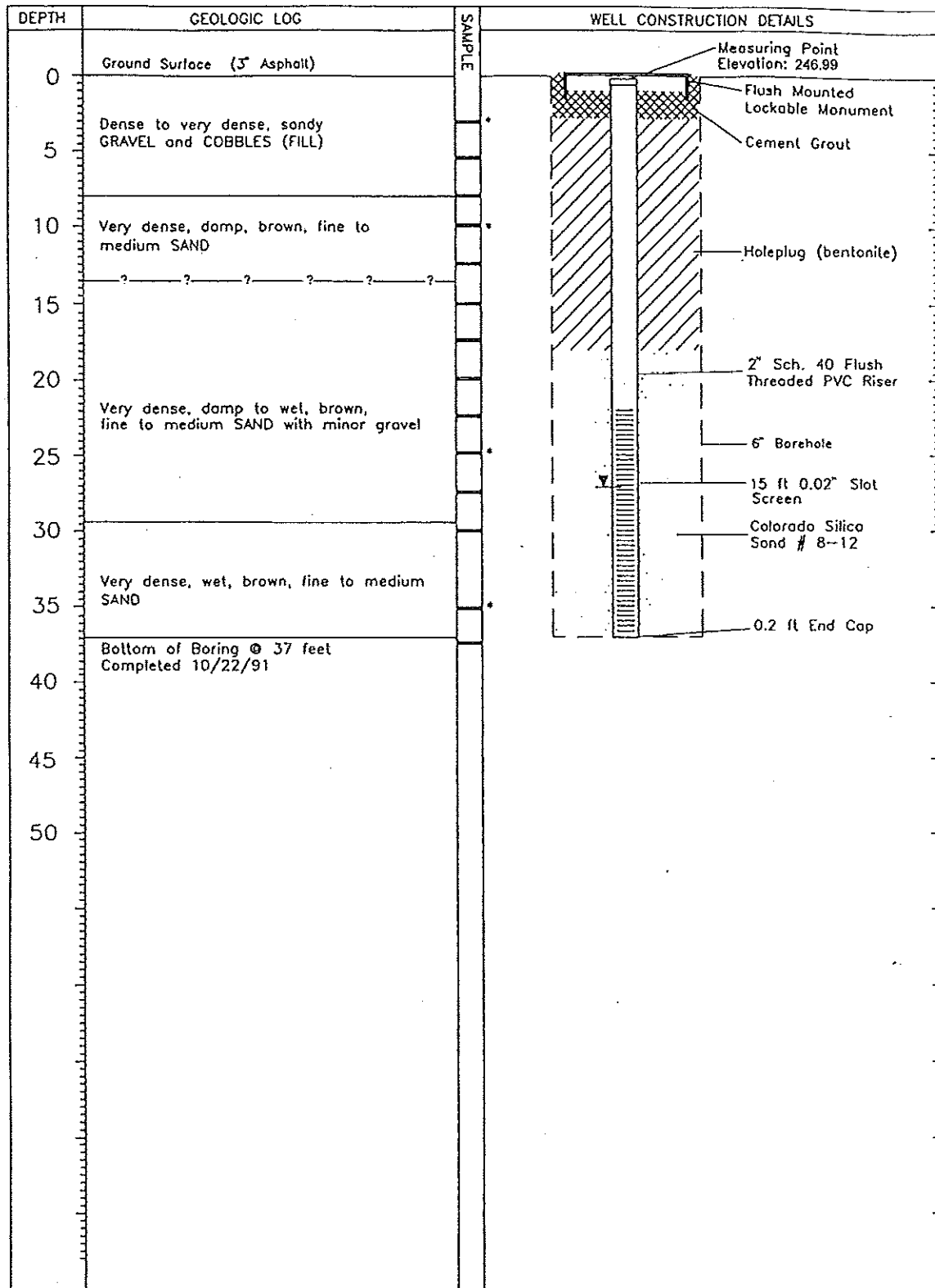
RI/FS Preferred Alternative

- Long-Term Monitoring Well Network
- ▨ 2011 Delineated Petroleum Contaminated Soil Areas

Figure 3
Long-Term
Monitoring Well Network

APPENDIX A
LONG-TERM MONITORING WELL NETWORK WELL LOGS

FIGURE A1 MW-9S GEOLOGIC LOG AND AS-BUILT

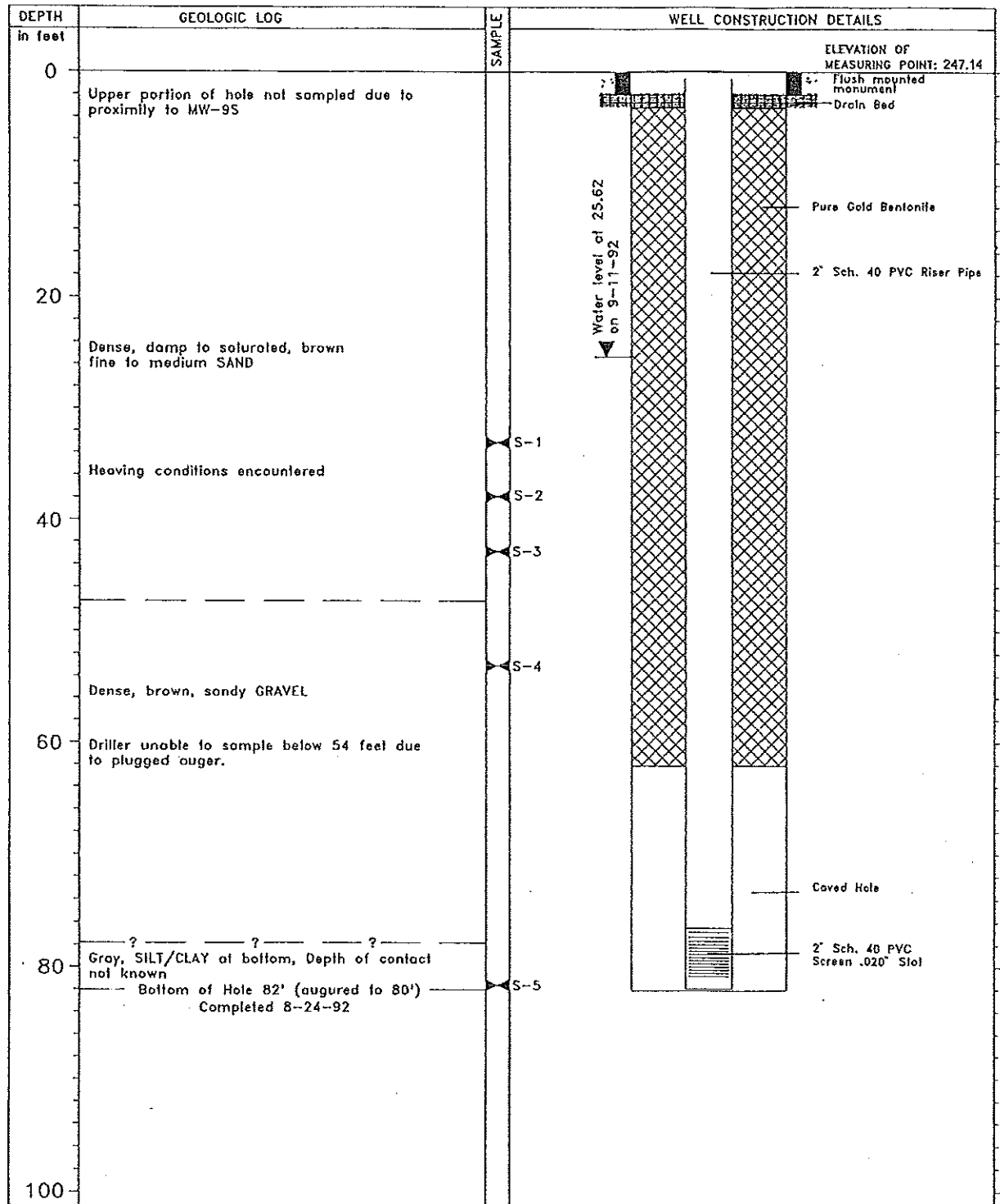


* Laboratory Chemical Analysis Performed on Sample

PROJECT NAME: Nalleys Fine Foods
WELL IDENTIFICATION NUMBER: MW-9S
DRILLING METHOD: Hollow Stem Auger
DRILLER: Virgil Atkins
FIRM: Geoboring & Development, Inc.
CONSULTING FIRM: Pacific Groundwater Group
REPRESENTATIVE: Peter Schwartzman

LOCATION: SE 1/4, SE 1/4, Sec. 7, T 20 N, R 3 E
DATUM: NGVD
WATER LEVEL ELEVATION: 216.76 on 11/5/91
INSTALLED: October 1991
DEVELOPED: November 1991

FIGURE A2 MW-9D GEOLOGIC LOG AND AS-BUILT



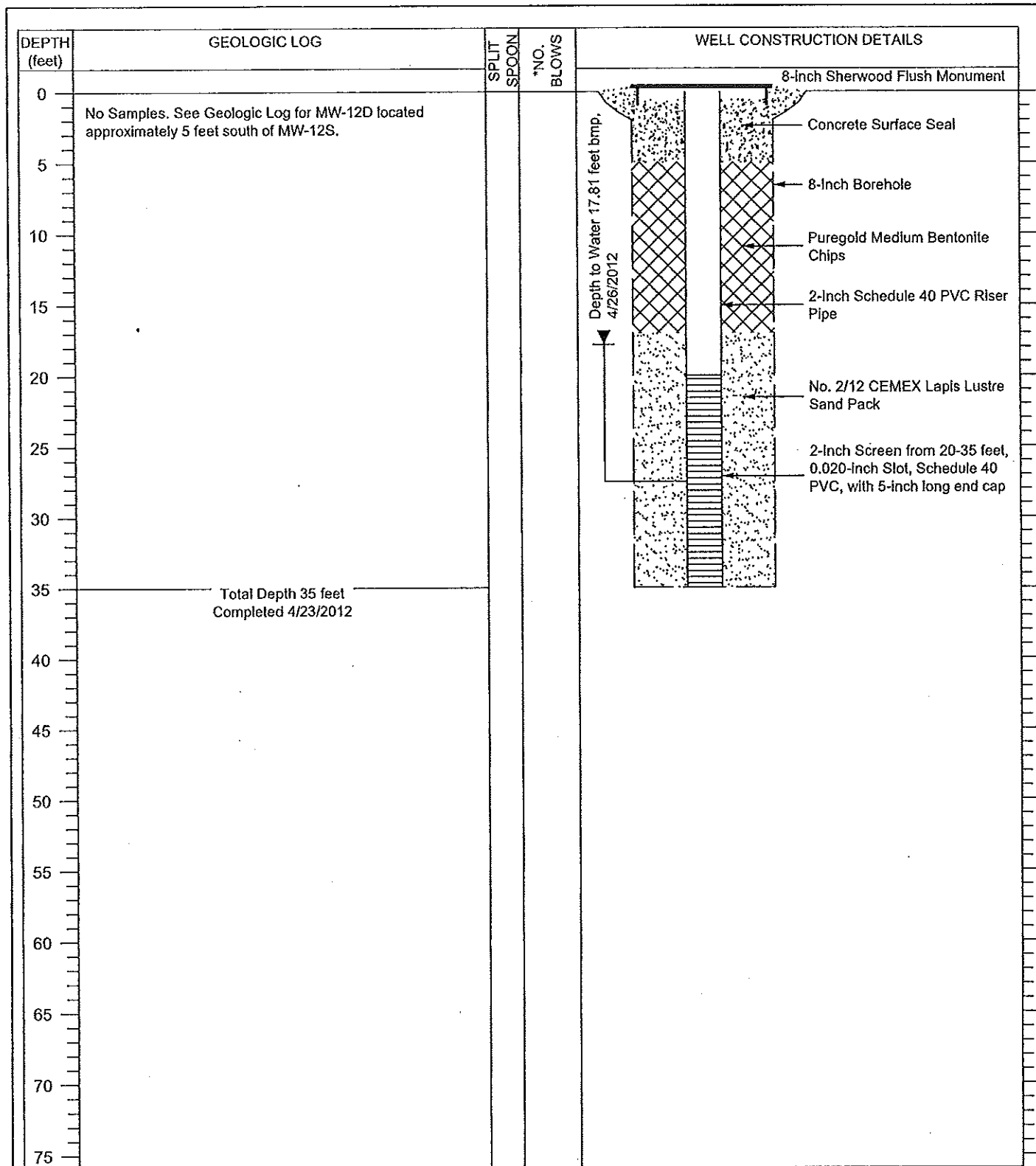
* Sample Submitted for Chemical Analysis

FIGURE A2

PROJECT NAME: Nalley's Fine Foods
WELL IDENTIFICATION NUMBER: MW-9D
DRILLING METHOD: Hollow Stem Auger
DRILLER: Dale
FIRM: GeoBoring and Development
CONSULTING FIRM: Nowicki & Assoc. / PGG
REPRESENTATIVE: Ron Nowicki / Chad Bring

LOCATION: SE 1/4 SW 1/4 Sec. 7, R3E, T21N
DATUM: NGVD
WATER LEVEL ELEVATION:
INSTALLED: 8-24-92
DEVELOPED: 9-9-92

 Pacific
Groundwater
Group



WELL IDENTIFICATION: MW-12S
 UWID: BHL 104
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/23/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group

Split Spoon Sample Drive, hatching represents recovery

LOCATION: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-inch Casing
 ELEVATION: 247.86 feet NAVD 88 (WRSN)
 NORTHING: 697590.9 NAD 83/91 WA South
 EASTING: 1148259.2 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

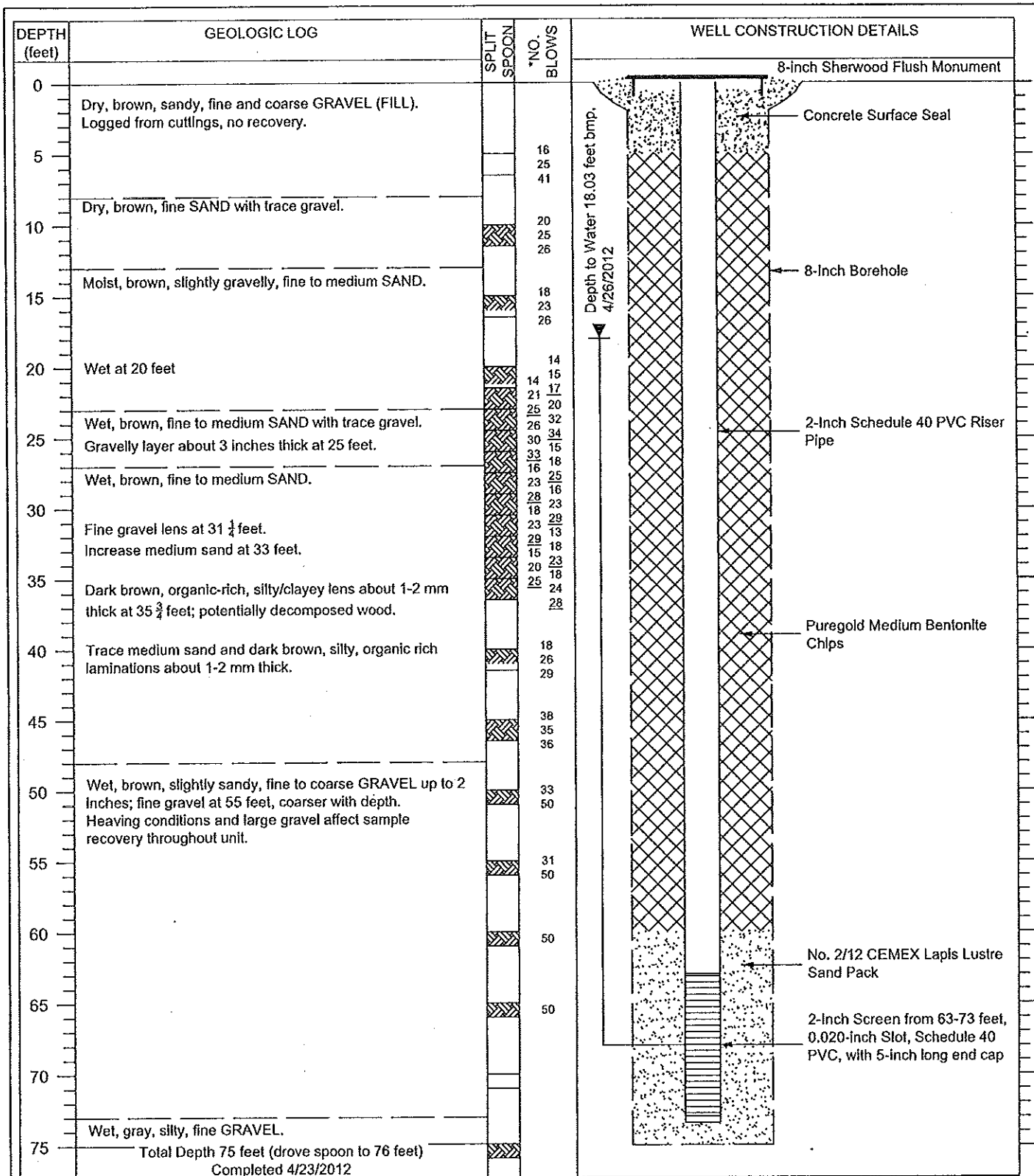
FIGURE A3
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-12S

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tacoma

pgg

J11001.04, MW12S.DWG, 08/2012

*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed



WELL IDENTIFICATION: MW-12D
 UWID: BHL 103
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/23/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group

Split Spoon Sample Drive, hatching represents recovery

LOCATION: SE 1/4 SW 1/4 Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-Inch Casing
 ELEVATION: 247.90 feet NAVD 88 (WRSN)
 NORTHING: 697585.0 NAD 83/91 WA South
 EASTING: 1148259.1 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

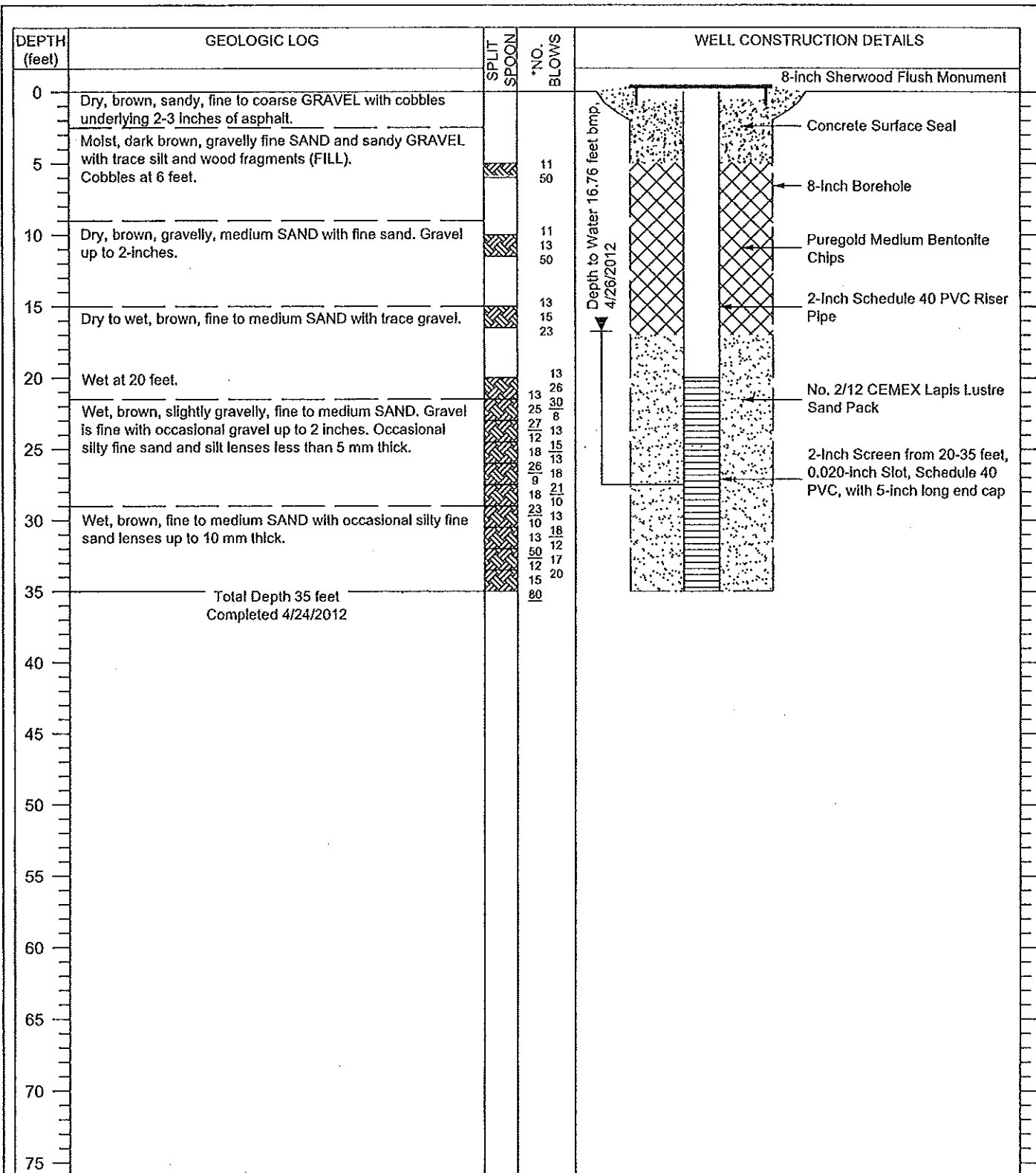
*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed

FIGURE A4
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-12D

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tacoma

pgg

JH001.04, MW12D.DWG, 06/2012



WELL IDENTIFICATION: MW-13S
 UWID: BHL 106
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/24/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group
 Split Spoon Sample Drive, hatching represents recovery

LOCATION: SE 1/4 SW 1/4 Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-Inch Casing
 ELEVATION: 246.89 feet NAVD 88 (WRSN)
 NORTHING: 697449.3 NAD 83/91 WA South
 EASTING: 1148109.1 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

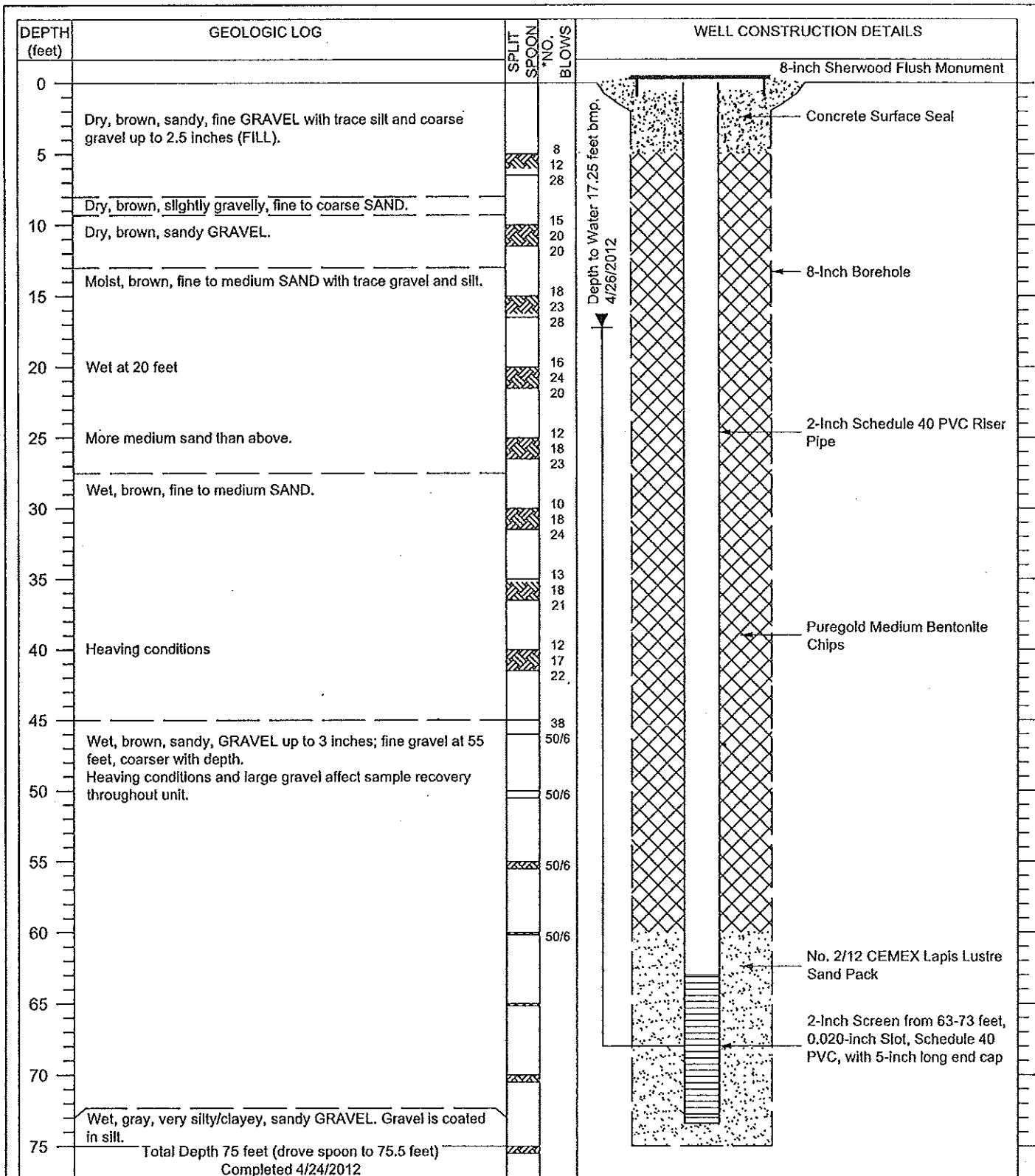
FIGURE A5
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-13S

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tacoma

pgg

J11001.04, MW13S.DWG, 05/2012

*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed



WELL IDENTIFICATION: MW-13D
 UWID: BHL 105
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/24/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group
 Split Spoon Sample Drive, hatching represents recovery

LOCATION: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-inch Casing
 ELEVATION: 246.98 feet NAVD 88 (WRSN)
 NORTHING: 697457.4 NAD 83/91 WA South
 EASTING: 1148110.2 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

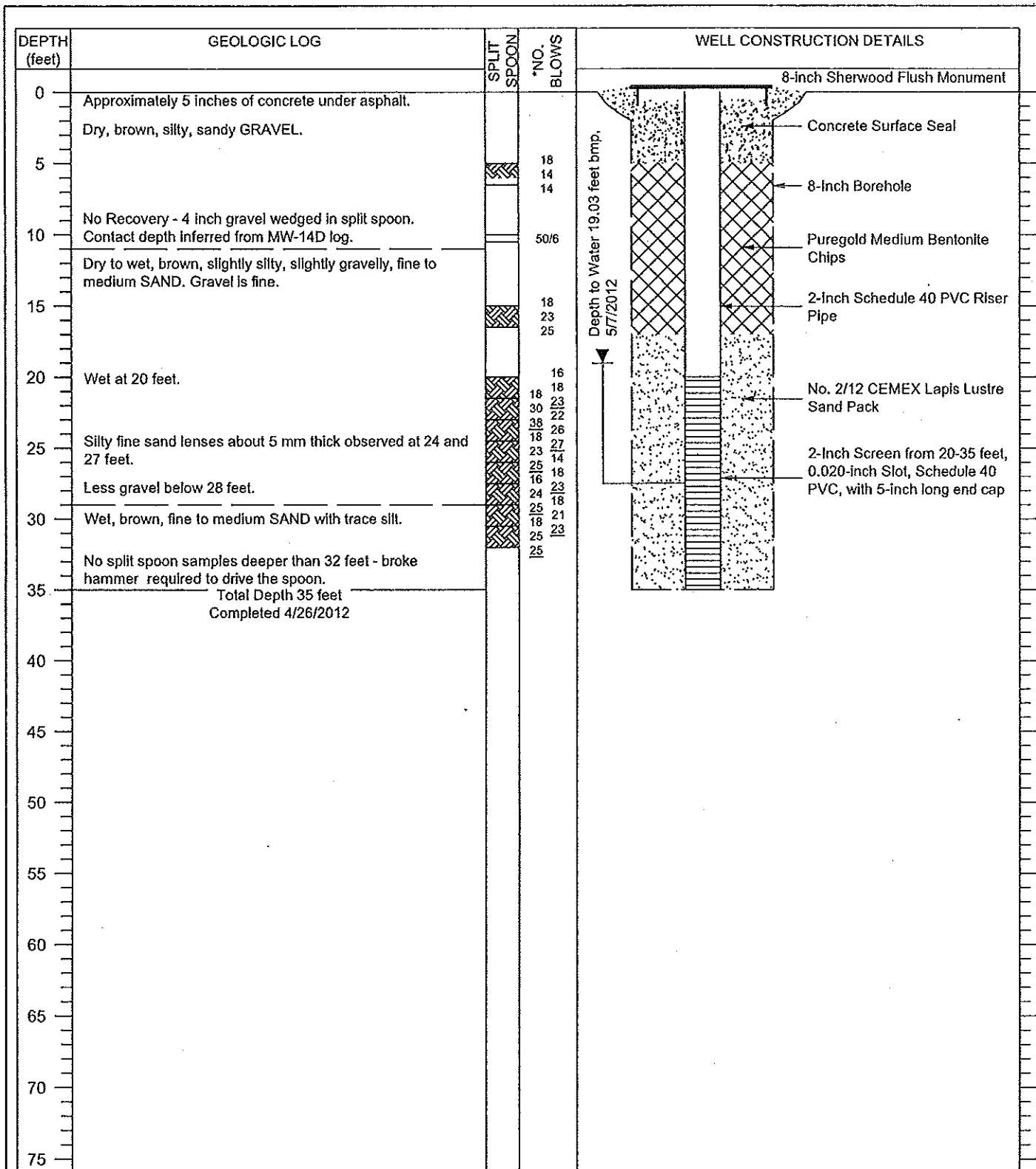
FIGURE A6
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-13D

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tacoma

PGG

J1001.04, MW13D.DWG, 06/2012

*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed



WELL IDENTIFICATION: MW-14S
 UWID: BHL 108
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/26/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group

Split Spoon Sample Drive, hatching represents recovery

LOCATION: SE 1/4 SW 1/4 Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-Inch Casing
 ELEVATION: 249.08 feet NAVD 88 (WRSN)
 NORTHING: 697375.4 NAD 83/91 WA South
 EASTING: 1148314.6 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

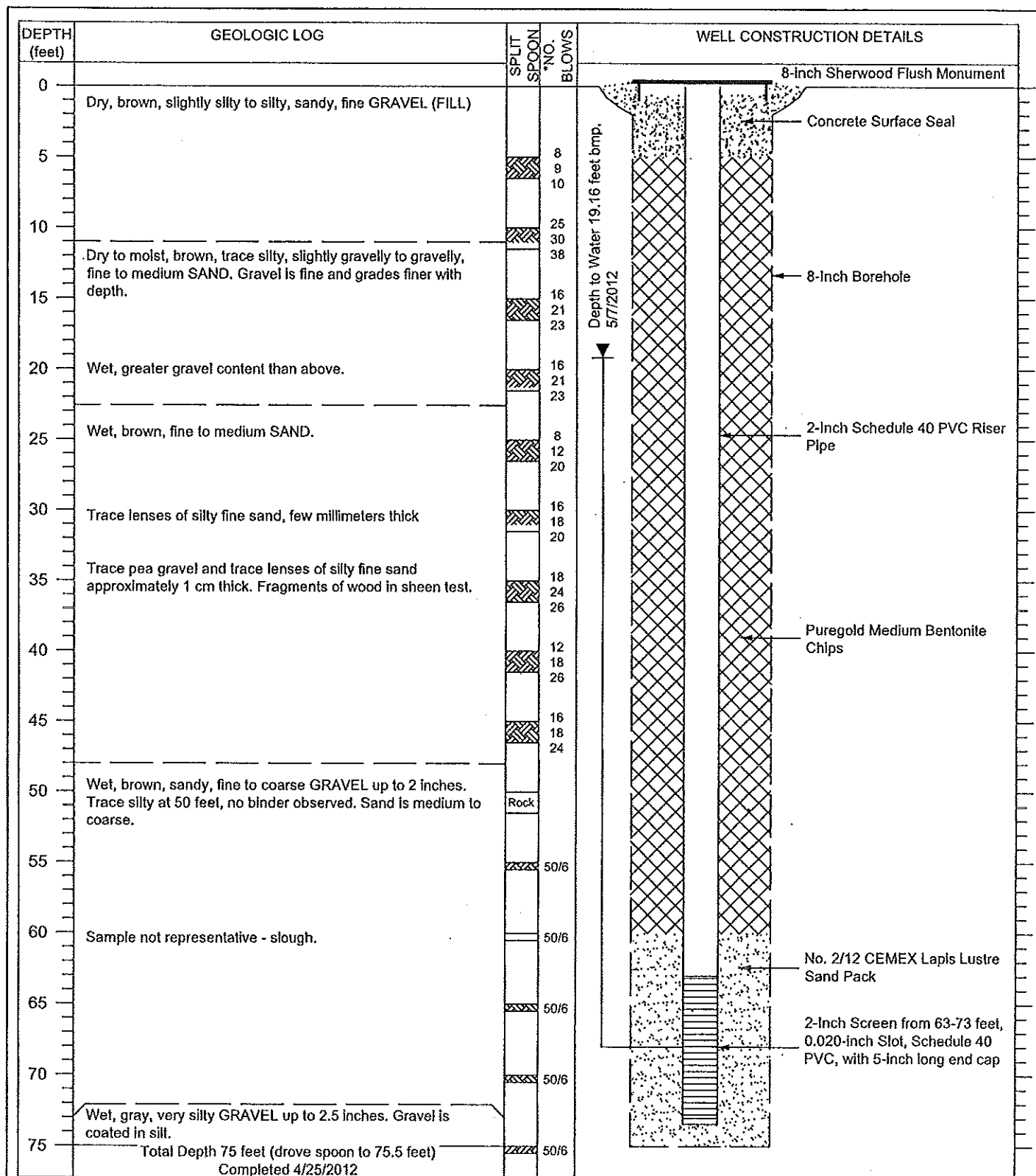
FIGURE A7
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-14S

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tecoma

Pgg

J11001.04, MW14S.DWG, 06/2012

*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed



WELL IDENTIFICATION: MW-14D
 UWID: BHL 107
 DRILLING METHOD: Hollow Stem Auger
 DRILLER: Scott Krueger
 DRILLING FIRM: Cascade Drilling, L.P.
 INSTALLED: 4/25/2012
 DEVELOPED: 4/26/2012
 CONSULTANT: Inger Jackson
 CONSULTING FIRM: Pacific Groundwater Group

Split Spoon Sample Drive, hatching represents recovery

*No. Blows: Provided for relative purposes only, Standard Penetration Test not performed

LOCATION: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 7, R3E., T21N
 MEASURING POINT:
 DESCRIPTION: Mark on 2-inch Casing
 ELEVATION: 249.10 feet NAVD 88 (WRSN)
 NORTHING: 697375.0 NAD 83/91 WA South
 EASTING: 1148326.9 NAD 83/91 WA South
 SURVEY FIRM: PLS, Inc
 SURVEY DATE: 5/21/2012

FIGURE A8
 WELL LOG AND AS-BUILT FOR
 BIRDS EYE MW-14D

Birds Eye Groundwater Monitoring Network
 Birds Eye Foods Boiler Room Site, Tacoma

pgg

J1001.04, MW14D.DWG, 06/2012

