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City of Longview
Mint Farm Regional Water
Treatment Plant
Preliminary Design Report

Part 2B
Water Quality and
Environmental Risk
Assessment

March 2010

Prepared for
City of Longview
1525 Broadway Street
Longview, WA 98632

K/J Project No. 0997003*00

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List of Acronyms

Abbreviation	Definition
µg/L	micrograms per liter
bgs	below ground surface
BHSD	Beacon Hill Sewer District
CAS	Columbia Analytical Services
City	City of Longview
DOH	State of Washington Department of Health
Ecology	Washington State Department of Ecology
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
HCID	hydrocarbon identification
HHRA	Human Health Risk Assessment
Kennedy/Jenks	Kennedy/Jenks Consultants
Mint Farm	Mint Farm Industrial Park
MCL	maximum contaminant levels
MTCA	Model Toxics Control Act
PCBs	polychlorinated biphenyls
PDR Part 2	Part 2 of the Preliminary Design Report
PUD	Public Utilities District No. 1 of Cowlitz County
PVC	polyvinyl chloride
RECs	recognized environmental conditions
SVOCs	Semi-volatile organic compounds
UST	underground storage tank
VOC	Volatile organic compound

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Section 1: Introduction

The City of Longview (City), Public Utilities District No. 1 of Cowlitz County (PUD), and the Beacon Hill Sewer District (BHSD) intend to construct facilities necessary to develop a new groundwater source and water treatment plant at the Mint Farm Industrial Park (Mint Farm) site. This report is Part 2 of the Preliminary Design Report (PDR Part 2) for the Mint Farm Regional Water Treatment Plant and Well Field and covers the Water Quality and Environmental Risk Assessment.

The hydrogeologic characterization of the Mint Farm area, including the deep groundwater aquifer, is provided in *Hydrogeologic Characterization* (Kennedy/Jenks 2010) of PDR Part 2. To facilitate aquifer characterization of the Mint Farm area, sentinel wells were installed in shallow and deep groundwater. To characterize the deep groundwater system, a deep test production well was also installed at the site of the proposed wellfield for municipal supply. Information on the installation of these wells is provided in *Hydrogeologic Characterization* (Kennedy/Jenks 2010). The water quality results for these wells are included in this report.

An Environmental Risk Assessment was performed to characterize the water quality of the deep groundwater aquifer and to evaluate the potential health risks associated with use of the groundwater aquifer as a drinking water source. The Environmental Risk Assessment consists of three components: (1) an Environmental Site Assessment (ESA) to identify potential contaminants in shallow soil and groundwater at the location of the planned production wells; (2) a Water Quality Assessment of the deep groundwater aquifer; and (3) a Human Health Risk Assessment (HHRA) to evaluate potential health risks associated with use of the production wells as a drinking water source. Each of these components is discussed further in the following sections.

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Section 2: Environmental Site Assessment

The ESA was previously completed for the Mint Farm property in two phases. The purpose of the ESA was to identify potential impacts to soil and groundwater within the Mint Farm property that could affect well field development. The Phase I ESA identified potential soil and groundwater conditions that could impact site redevelopment based on a historical review, site visit, and review of regulatory databases. The Phase II ESA involved an investigation of soil and groundwater within the northern and southern portion of the Mint Farm property. A supplemental Phase II ESA involved an investigation of soil and groundwater within the southern portion of the Mint Farm property.

The ESA was documented in the *Phase I and Phase II Environmental Site Assessment* (Kennedy/Jenks 2010) and in the addendum letter dated 7 December 2009 to address relocation of the proposed well field. The results of the Phase I, Phase II, and supplemental Phase II ESA are summarized in the following subsections.

2.1 Phase I

The scope of the Phase I ESA included a historical review, site visit, and review of regulatory agency site listings. Based on the results of the Phase I ESA, Kennedy/Jenks Consultants (Kennedy/Jenks) found the following recognized environmental conditions (RECs) on the Mint Farm property:

- An approximately 1,000-gallon steel underground storage tank (UST) was removed from tax lot 101930300 (the former Mint Farm barn) in May 1989. Based on observations made by the UST contractor, visual evidence of hydrocarbon-impacted soil was present at the time of removal; laboratory analysis of soil samples collected from the UST excavation confirmed a release. Approximately 120 cubic yards of impacted soil was excavated from the UST location. Soil samples collected from the excavation did not contain detectable concentrations of petroleum hydrocarbon constituents. The excavated impacted soil was treated onsite using vapor extraction and bioremediation methods until no detectable petroleum hydrocarbon constituents were present.
- A lot for storing scrap machinery parts and vehicles (i.e., a junkyard) was operated on tax lot 101930300. It is not known when operation of the junk yard began. However, in 1992, the operator of the junk yard was cited for operating without a license and “unsanitary conditions” because of abandoned vehicles and machinery parts. No evidence of the junkyard was observed during the site visit conducted for this report.
- Historical agricultural operations, including mint and grass farming, took place throughout the Mint Farm property until approximately 1975. It is not known when farming activities began. However, a 1939 aerial photograph shows farming activities occurring at that time. Records for pesticide application are not available, but it is assumed that pesticides were used during the agricultural operations.

In addition to the RECs, one de minimis condition was identified. Information about distribution of waste solids from the adjacent Weyerhaeuser property on the southern portion of the Mint

Farm property was obtained from the Washington State archive files. The application of waste solids on the Mint Farm property is considered a de minimis condition.

2.2 Phase II

Soil and reconnaissance groundwater samples were collected during the Phase II investigation. Eleven soil borings were advanced, using direct-push drilling equipment, to collect soil and groundwater samples to identify potential impacts in the shallow subsurface and to further assess the lithology of the northern portion of the Mint Farm property. The locations of the borings were selected based on the original proposed location of the production well field and the results of the Phase I ESA described above.

At each location, a surface soil sample [0 to 6 inches below ground surface (bgs)] and a soil sample located just above the saturated zone were collected. Where recent fill material was observed near the surface, the surface soil sample was collected from the first encountered native material. In addition, reconnaissance groundwater samples were collected using temporary polyvinyl chloride (PVC) casing and a peristaltic pump.

The following analyses were conducted by Columbia Analytical Services (CAS) on the soil and groundwater samples:

- Hydrocarbon Identification (HCID) following NW-HCID method, with follow-up gasoline/diesel/heavy range analysis as appropriate (borings B-1 through B-3)
- Volatile Organic Compounds (VOCs) using Environmental Protection Agency (EPA) Method 8260B (groundwater samples only)
- Semi-volatile organic compounds (SVOCs) using EPA Method 8270C
- Organochlorine pesticides using EPA Method 8081A (borings B-4 through B-11)
- Carbamates using EPA Method 8321 (borings B-4 through B-11)
- Organophosphate pesticides using the CAS Standard Operating Procedure (borings B-4 through B-11)
- Polychlorinated biphenyls (PCBs) using EPA Method 8082
- Total metals: antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, nickel, mercury, selenium, silver, thallium, and zinc using EPA 6000/7000 series (borings B-2 through B-11)
- Fluoride using EPA Method 300.0 (borings B-9, B-10, and B-11)
- Total cyanide using EPA Method 335.4 (borings B-9, B-10, and B-11).

During the drilling of the sentinel wells the target aquifer was not encountered in the northeast portion of the Mint Farm property. Therefore, the proposed well field was relocated to the southern portion of the Mint Farm property. The Phase II investigation was expanded to collect soil and reconnaissance groundwater samples within the proposed relocated wellfield.

Nine additional soil borings were advanced, using direct-push drilling equipment, to collect soil and groundwater samples to identify potential impacts in the shallow subsurface and to further assess the lithology of the southern portion of the Mint Farm property. The locations of the borings were selected based on the new proposed location of the production well field and the results of the Phase I ESA described above. At each location, a surface soil sample (0 to

6 inches bgs) and a soil sample located just above the saturated zone were collected. In addition, reconnaissance groundwater samples were collected using temporary PVC casing and a peristaltic pump.

The following analyses were conducted by CAS on the soil and groundwater samples:

- VOCs using EPA Method 8260B (groundwater samples only)
- SVOCs using EPA Method 8270C
- Organochlorine pesticides using EPA Method 8081A
- Carbamates using EPA Method 8321
- Organophosphate pesticides using the CAS Standard Operating Procedure
- Total metals: antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, nickel, mercury, selenium, silver, thallium, and zinc using EPA 6000/7000 series
- Fluoride using EPA Method 300.0
- Total cyanide using EPA Method 335.4.

The analytical results are summarized in Appendix S. As a protective approach, detected concentrations in soil were compared with the Washington State Department of Ecology's (Ecology's) Model Toxics Control Act (MTCA) Method B cleanup levels, which are based on unrestricted land use, for both direct contact and leaching to groundwater. Dieldrin was detected in one shallow soil sample at a concentration above the cleanup level for direct contact and was detected at a concentration below the cleanup level in the deeper sample at the same location. Arsenic and chromium were the only other chemicals detected at concentrations above the MTCA Method B cleanup levels; however, the detected concentrations were below the statewide background concentrations for these naturally occurring metals.

Even though shallow groundwater is not used as a drinking water source, detected concentrations in groundwater were compared with either State or federal maximum contaminant levels (MCLs) or MTCA Method B cleanup levels, which are regulatory criteria established for the protection of human health from constituents in drinking water. Detected concentrations of diesel and residual-range petroleum hydrocarbons, aldrin, dieldrin, arsenic, lead, and manganese in some reconnaissance groundwater samples exceeded the comparison levels for drinking water. The presence of these compounds in the reconnaissance groundwater samples may be the result of elevated turbidity observed during sampling.

The analytical soil and groundwater data results of the supplemental Phase II investigation indicate that organic and inorganic constituents are present in soils and shallow groundwater within the Mint Farm property at concentrations that are either below the respective comparison levels or background concentrations, with only a few exceptions. The soil data contained no exceedances of comparison levels for the leaching-to-groundwater pathway. The exceedances of the comparison values in the reconnaissance groundwater data may be due to suspended particulate matter in the sample collected from the temporary borings. The metals concentrations in soil samples collected in the new well field location were generally lower than the metals concentrations in the soil samples collected in the original well field location. In addition, fewer analytes were detected in the reconnaissance groundwater samples collected in the new well field location than in the original well field location. Groundwater data collected

from developed wells are a better indicator of groundwater quality and were evaluated as part of the Water Quality Assessment.

Section 3: Water Quality Assessment

Water quality samples were collected to support the Environmental Risk Assessment. Four different types of water quality samples were collected: Phase II ESA groundwater samples, groundwater sentinel well samples, potential raw water source samples, and the test production well (PW-1) samples. The Phase II ESA groundwater samples are discussed in the preceding section. The groundwater sentinel well, potential raw water source, and PW-1 water quality samples are discussed in the following subsections.

In order to thoroughly address public health risk and affirm due diligence investigation for the City, PUD, BHSD, and other water customers, analytes were identified based on drinking water regulations, historical activities in the area, and unregulated contaminants of emerging concern and local industrial activity. The water quality analyses were organized in three tiers to meet the objectives of the different sample types. The three tiers are as follows:

- Tier 1 – Analytes potentially to be found due to historical activities at the former Mint Farm based on the results of the Phase I ESA. The Phase II ESA samples were analyzed for the Tier 1 analytes.
- Tier 2 – Analytes regulated by the State of Washington Department of Health (DOH) Office of Drinking Water, as well as other contaminants that may be found in shallow and/or deep groundwater samples due to historical activities in the area. The groundwater sentinel well and potential raw water source samples were analyzed for the Tier 2 analytes.
- Tier 3 - Unregulated contaminants that may be present in drinking water sources in general, but are not specifically related to historical or current activities in the Mint Farm area. The potential raw water source and PW-1 samples were analyzed for the Tier 3 contaminants.

The Tier 1, 2, and 3 analytes and associated samples are listed in Tables 3.1, 3.2, and 3.3, respectively.

3.1 Groundwater Sentinel Wells

Shallow and deep groundwater sentinel wells were installed at specific locations in and around the Mint Farm area. Eight shallow sentinel wells and nine deep sentinel wells were installed, as discussed in *Hydrogeologic Characterization* (Kennedy/Jenks 2010). The locations of the shallow and deep sentinel wells are shown on Figure 3.1.

3.1.1 Sample Collection

Samples were collected from seven shallow sentinel wells and eight deep sentinel wells in June 2009. In August 2009, samples were collected from the number nine shallow and deep sentinel wells (SW-9 and DW-9). At the conclusion of the pump test of the production well in November 2009, samples were collected from three shallow and deep sentinel wells (SW-1, SW-7, SW-9,

DW-1, DW-7, and DW-9). Additional information on the sampling of the sentinel wells is provided in *Hydrogeologic Characterization* (Kennedy/Jenks 2010).

3.1.2 Sample Analysis

Kennedy/Jenks delivered the water quality samples to CAS for analysis. CAS conducted all analyses, with the exception of analyses for radionuclides and asbestos, which CAS sent to a subcontracting laboratory. The shallow and deep groundwater sentinel well samples were analyzed for the Tier 2 analytes. In addition, the samples collected in August 2009 from SW-9 and DW-9 and samples collected in November 2009 from DW-1, DW-7, and DW-9 were analyzed for the Tier 3 analytes.

3.1.3 Water Quality Results

Water quality data for the sentinel well samples are presented in Appendix T. Water quality data are included for both the shallow and deep groundwater.

3.2 Potential Raw Source Water

Three potential water sources are available to the City: Columbia River surface water, Cowlitz River surface water (the current raw water source) and deep aquifer groundwater. Water quality samples were collected from each potential raw water source. The assessment of the potential raw water sources considered only water quality and not other factors, such as water rights, permitting, or treatment.

3.2.1 Sample Collection

Kennedy/Jenks collected samples from each potential raw water source. The Columbia River water sample was collected at the Weyerhaeuser intake. The Cowlitz River water sample was collected at the Regional Water Treatment Plant. Deep aquifer water samples were collected at the Puget Sound Energy Industrial Well #1 and Chinook Ventures Production Well #8, both of which are screened in the deep groundwater at similar depths as, and in proximity to, the proposed production wells. Additional information on the sampling of the potential raw water sources is provided in *Hydrogeologic Characterization* (Kennedy/Jenks 2010).

3.2.2 Sample Analysis

Kennedy/Jenks delivered the water quality samples to CAS for analysis. CAS conducted all analyses, with the exception of analyses for radionuclides and asbestos, which CAS sent to a subcontracting laboratory. The potential raw source water samples were analyzed for the Tier 2 and Tier 3 analytes.

3.2.3 Water Quality Results

The water quality data for the raw source water samples are presented in Appendix U. Water quality data are included for both the deep groundwater and the surface water samples.

3.3 Production Well 1

The first of the planned production wells was installed as a test production well in the deep groundwater aquifer within the Mint Farm property, as described in *Hydrogeologic Characterization* (Kennedy/Jenks 2010). Samples from the production well were collected and analyzed to supplement the water quality data for the deep groundwater aquifer and to assess the water quality of the production well.

3.3.1 Sample Collection

A baseline sample was collected from the new test production well, PW-1, in October 2009 after completion of the production well and prior to beginning the pump test. Weekly samples were collected from PW-1 during the pump test. A sample was also collected from PW-1, 30 days after the start of the pump test. A final sample was collected from PW-1 upon conclusion of the pump test in November 2009, approximately one week after the 30-day sample collection. Additional information on the sampling of PW-1 is provided in *Hydrogeologic Characterization* (Kennedy/Jenks 2010).

3.3.2 Sample Analysis

Kennedy/Jenks delivered the water quality samples to CAS for analysis. CAS conducted all analyses, with the exception of analyses for radionuclides and asbestos, which CAS sent to a subcontracting laboratory. The baseline PW-1 sample, 30-day pump test sample, and sample collected upon conclusion of the pump test were analyzed for the Tier 2 analytes. Samples collected during the pump test were analyzed for select inorganic analytes.

3.3.3 Water Quality Results

Water quality data for the production well samples are presented in Appendix V. Water quality data are included for the baseline and 30-day pump test and post pump test samples, as well as the weekly samples collected during the pump test. In general, the water quality for PW-1 did not change significantly during the pump test. In some cases, such as for iron and manganese, concentrations decreased during the pump test and water quality improved slightly.

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Section 4: Human Health Risk Assessment

Kennedy/Jenks conducted a HHRA to evaluate the potential health risks associated with the use of the deep aquifer groundwater below the Mint Farm as a raw drinking water source. The HHRA was documented in a technical memorandum, which is included as Appendix W. This section summarizes the results of the HHRA.

The HHRA involved a screening-level evaluation of the available water quality data for the deep groundwater aquifer, as well as the other potential raw water source samples (i.e., the Columbia and Cowlitz river samples). In the screening level evaluation, detected concentrations were compared directly against health-based screening levels, as presented in Table 4.1. The presence of an analyte at concentrations below its screening level can generally be assumed not to pose a significant, long-term (chronic) or short-term (acute) threat to human health. Concentrations above the screening level do not necessarily indicate an unacceptable risk to human health, but rather the need for further evaluation. Because the deep aquifer groundwater is intended for use as a municipal water supply, screening levels for protection of health from drinking water were used in the HHRA.

Of the more than 300 analytes evaluated in the HHRA, no analytes were found above their screening levels in the potential raw water source samples. Iron and manganese were detected at levels that are not of health concern in the deep groundwater samples; however, these metals can cause objectionable color and odor, and staining of plumbing fixtures. Although the EPA does not regulate these metals, the DOH regulates them in drinking water due to their aesthetic problems. Treatment will be provided to prevent such aesthetic problems by removing iron and manganese from the water to levels lower than the state criteria.

Based on the existing water quality data and analysis in the HHRA, the raw water sources with appropriate treatment will meet all State and Federal water quality regulations as safe sources of drinking water supply.

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Section 5: Conclusions

As part of the Environmental Risk Assessment, shallow soil, shallow groundwater, deep groundwater, potential raw water sources, and production well samples were collected and analyzed for constituents that were identified based on drinking water regulations, historical activities in the area, unregulated contaminants of emerging concern, and local industrial activity. More than 300 analytes were evaluated during the Environmental Risk Assessment.

The Longview MODFLOW Model described in *Hydrogeologic Characterization* (Kennedy/Jenks 2010) did not identify any complete pathways between potentially contaminating activities in the Mint Farm area and the deep groundwater aquifer. None of the more than 300 analytes, which includes analytes associated with local industrial activities in the Mint Farm area, was detected at a concentration above its screening level in the deep groundwater.

The Environmental Risk Assessment results confirm that, with appropriate treatment, the deep groundwater aquifer meets all State and Federal water quality regulations as a safe source of drinking water supply. However, the removal of iron and manganese (naturally occurring groundwater constituents) is required to prevent discoloration of the water supply that customers may find objectionable. Based on the Longview MODFLOW Model described in *Hydrogeologic Characterization* (Kennedy/Jenks 2010), the water quality of the deep groundwater is not anticipated to change significantly from that evaluated in the Environmental Risk Assessment.

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References

Kennedy/Jenks Consultants. 2010. *Phase I and Phase II Environmental Site Assessment, Mint Farm Well Field, Longview, Washington*. Prepared for the City of Longview.

Kennedy/Jenks Consultants. 2010. *Hydrogeologic Characterization, Mint Farm RWTP Part 2A, Preliminary Design Report, Longview, Washington*.

Tables

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Soil	SW6010	Iron		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6010	Manganese		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6010	Zinc												x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Antimony		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Arsenic		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Beryllium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Cadmium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Chromium, Total		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Copper		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Lead		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Nickel		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Selenium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Silver		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Thallium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW6020	Zinc		x	x	x	x	x	x	x	x	x	x										
Soil	SW7471	Mercury		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Aldrin				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Alpha-BHC				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Alpha-Chlordane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Alpha-Endosulfan				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Beta Endosulfan				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Beta-BHC				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Beta-Chlordane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Chlorinated Camphene				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	DDT				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Delta-Hexachlorocyclohexane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Dichlorodiphenyldichloroethane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Dieldrin				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Endosulfan Sulfate				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Endrin				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Endrin Aldehyde				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Endrin Ketone				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Heptachlor				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Heptachlor Epoxide				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Lindane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	Methoxychlor				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8081	P,P'-DDE				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1,2,4-Trichlorobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1,2-Dichlorobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1,3-Dichlorobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1,4-Dichlorobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1-Amino-3-Nitrobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	1-Chloro-4-Phenoxybenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,2'-Dichlorodiethylether	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4,5-Trichlorophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4,6-Trichlorophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4-Dichlorophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4-Dimethylphenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4-Dinitrophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,4-Dinitrotoluene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2,6-Dinitrotoluene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Soil	SW8270	2-Chloronaphthalene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2-Chlorophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2-Methylnaphthalene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2-Nitroaniline	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	2-Nitrophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	3,3'-Dichlorobenzidine	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4,6-Dinitro-2-Methylphenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4-Bromophenyl Phenyl Ether	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4-Chloro-3-Methylphenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4-Chloroaniline	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4-Nitroaniline	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	4-Nitrophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Acenaphthene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Acenaphthylene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Anthracene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzo(K)Fluoranthene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzo(A)Anthracene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzo(A)Pyrene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzo(B)Fluoranthene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzo(G,H,I)Perylene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzoic Acid	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Benzyl Alcohol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Bis(2-Chloroethoxy) Methane	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Bis(2-Chloroisopropyl) Ether	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Bis(2-Ethylhexyl) Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Butyl Benzyl Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Chrysene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Demeton-O				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Demeton-S				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Dibenz(A,H)Anthracene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Dibenzofuran	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Dichlorovos				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Diethyl Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Dimethyl Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Di-N-Butyl Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Di-N-Octyl Phthalate	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	EPN (O-Ethyl Phenyl (P-Nitrophenyl) Thiophosphonate)				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Fluoranthene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Fluorene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Hexachlorobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Hexachlorobutadiene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Hexachlorocyclopentadiene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Hexachloroethane	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Indeno(1,2,3-C,D)Pyrene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Isophorone	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Naphthalene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Nitrobenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	N-Nitrosodiphenylamine	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	N-Nitrosodipropylamine	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	O-Cresol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Parathion, Methyl				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Soil	SW8270	P-Cresol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Pentachlorophenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Phenanthrene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Phenol	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Phorate				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Pyrene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	S,S,S-Tributyl Phosphorotrithioate				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Stirophos				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Soil	SW8270	Sulfotep				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	E300	Fluoride									x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E335.4	Cyanide									x	x	x	x	x	x	x	x	x	x			
Groundwater	E531.1	3-Hydroxycarbofuran				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Aldicarb				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Aldicarb Sulfone				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Aldicarb Sulfoxide				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Carbaryl				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Carbofuran				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Methiocarb				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Methyl N',N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	Propoxur				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	NWTPH-D	Residual Range Organics		x																			
Groundwater	NWTPH-D	TPH As Diesel Fuel		x																			
Groundwater	NWTPH-G	Gasoline Range Organics-NWTPH		x																			
Groundwater	SW6010	Iron		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6010	Manganese		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Antimony		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Arsenic		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Beryllium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Cadmium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Chromium, Total		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Copper		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Lead		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Nickel		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Selenium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Silver		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Thallium		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW6020	Zinc		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW7470	Mercury		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Groundwater	SW8081	Aldrin				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Alpha-BHC				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Alpha-Chlordane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Alpha-Endosulfan				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Beta Endosulfan				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Beta-BHC				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Beta-Chlordane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Chlorinated Camphene				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	DDT				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Delta-Hexachlorocyclohexane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Dichlorodiphenyldichloroethane				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
Groundwater	SW8081	Dieldrin				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Groundwater	SW8081	Endosulfan Sulfate				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Endrin				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Endrin Aldehyde				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Endrin Ketone				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Heptachlor				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Heptachlor Epoxide				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Lindane				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	Methoxychlor				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8081	P,P'-DDE				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Groundwater	SW8260	1,1,1,2-Tetrachloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1,1-Trichloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1,2,2-Tetrachloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1,2-Trichloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1-Dichloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1-Dichloroethene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,1-Dichloropropene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2,3-Trichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2,3-Trichloropropane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2,4-Trichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2,4-Trimethylbenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2-Dibromo-3-Chloropropane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2-Dibromoethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2-Dichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2-Dichloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,2-Dichloropropane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,3,5-Trimethylbenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,3-Dichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,3-Dichloropropane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	1,4-Dichlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	2,2-Dichloropropane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	2-Chlorotoluene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	2-Hexanone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	4-Chlorotoluene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Acetone	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Benzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Bromoform	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Butyl Benzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Carbon Disulfide	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Carbon Tetrachloride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chlorobromomethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chlorodibromomethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chloroethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chloroform	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Chloromethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Cis-1,2-Dichloroethene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Cis-1,3-Dichloropropene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Cymene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Dibromomethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Dichlorobromomethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Groundwater	SW8260	Dichlorodifluoromethane	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Groundwater	SW8260	Ethylbenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Hexachlorobutadiene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Isopropylbenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Methyl Bromide	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Methyl Ethyl Ketone	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Methyl Isobutyl Ketone	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Methylene Chloride	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Mono Bromo Benzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Naphthalene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	N-Propylbenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Sec-Butylbenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Styrene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Tert-Butylbenzene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Tetrachloroethene (PCE)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Toluene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Trans-1,2-Dichloroethene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Trans-1,3-Dichloropropene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Trichloroethene	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Trichlorofluoromethane	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Vinyl Chloride	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Xylene, M,P-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8260	Xylene, O-	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	1,2,4-Trichlorobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	1,2-Dichlorobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	1,3-Dichlorobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	1,4-Dichlorobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	1-Amino-3-Nitrobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	1-Chloro-4-Phenoxybenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,2'-Dichlorodiethylether	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4,5-Trichlorophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4,6-Trichlorophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4-Dichlorophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4-Dimethylphenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4-Dinitrophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,4-Dinitrotoluene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2,6-Dinitrotoluene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2-Chloronaphthalene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2-Chlorophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2-Methylnaphthalene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2-Nitroaniline	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	2-Nitrophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	3,3'-Dichlorobenzidine	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4,6-Dinitro-2-Methylphenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4-Bromophenyl Phenyl Ether	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4-Chloro-3-Methylphenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4-Chloroaniline	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4-Nitroaniline	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	4-Nitrophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	Acenaphthene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	Acenaphthylene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
Groundwater	SW8270	Anthracene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x

Table 3.1: Tier 1 Analytical Methods and Analytes

Matrix	Method	Analyte	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13	B-14	B-15	B-16	B-17	B-18	B-19	B-20	B-21
Groundwater	SW8270	Benzo(K)Fluoranthene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzo(A)Anthracene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzo(A)Pyrene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzo(B)Fluoranthene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzo(G,H,I)Perylene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzoic Acid	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Benzyl Alcohol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Bis(2-Chloroethoxy) Methane	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Bis(2-Chloroisopropyl) Ether	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Bis(2-Ethylhexyl) Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Butyl Benzyl Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Chrysene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Demeton-O				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Demeton-S				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Dibenz(A,H)Anthracene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Dibenzofuran	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Dichlorovos				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Diethyl Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Dimethyl Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Di-N-Butyl Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Di-N-Octyl Phthalate	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphate)				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Fluoranthene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Fluorene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Hexachlorobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Hexachlorobutadiene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Hexachlorocyclopentadiene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Hexachloroethane	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Indeno(1,2,3-C,D)Pyrene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Isophorone	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Naphthalene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Nitrobenzene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	N-Nitrosodiphenylamine	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	N-Nitrosodipropylamine	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	O-Cresol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Parathion, Methyl				x	x	x	x	x	x	x	x	x	x				x	x			
Groundwater	SW8270	P-Cresol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Pentachlorophenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Phenanthrene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Phenol	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	Phorate				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Pyrene	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Groundwater	SW8270	S,S,S-Tributyl Phosphorotrithioate				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Stirophos				x	x	x	x	x	x	x	x	x	x	x			x	x			
Groundwater	SW8270	Sulfotep				x	x	x	x	x	x	x	x	x	x	x			x	x			

Table 3.2: Tier 2 Analytical Methods and Analytes

		Sentinel Wells - Shallow Groundwater							
Method	Analyte	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
A2120B	Color, Apparent	x	x	x	x	x	x	x	x
A2320B	Alkalinity, Total (As CaCO3)	x	x	x	x	x	x	x	x
A2340B	Hardness As CaCO3	x	x	x	x	x	x	x	x
A2510B	Conductivity	x	x	x	x	x	x	x	x
A2540C	Total Dissolved Solids (Residue, Filterable)	x	x	x	x	x	x	x	x
A4500HB	pH								
A4500SIO2C	Silica	x	x	x	x	x	x	x	x
A5310C	Dissolved Organic Carbon								
A5310C	Total Organic Carbon	x	x	x	x	x	x	x	x
A9221E	Fecal Coliform	x	x	x	x	x	x	x	x
A9223B	Coliform	x	x	x	x	x	x	x	x
CAS SOP	Methyl Mercury	x	x	x	x	x	x	x	x
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	x	x	x	x	x	x	x	x
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x	x	x	x	x
E1653A	2,4,5-Trichlorophenol	x	x	x	x	x	x	x	x
E1653A	2,4,6-Trichlorophenol	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichlorocatechol	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichlorocatechol	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	Pentachlorophenol	x	x	x	x	x	x	x	x
E1653A	Tetrachlorocatechol	x	x	x	x	x	x	x	x
E1653A	Tetrachloroguaiacol	x	x	x	x	x	x	x	x
E1653A	Trichlorosyringol	x	x	x	x	x	x	x	x
E180.1	Turbidity	x	x	x	x	x	x	x	x
E200.7	Aluminum	x	x	x	x	x	x	x	x
E200.7	Barium		x			x			
E200.7	Calcium	x	x	x	x	x	x	x	x
E200.7	Iron	x	x	x	x	x	x	x	x
E200.7	Magnesium	x	x	x	x	x	x	x	x
E200.7	Manganese	x	x	x	x	x	x	x	x
E200.7	Potassium	x	x	x	x	x	x	x	x
E200.7	Silicon	x	x	x	x	x	x	x	x
E200.7	Sodium	x	x	x	x	x	x	x	x
E200.7	Zinc	x	x	x	x	x	x	x	x
E200.8	Aluminum								
E200.8	Antimony	x	x	x	x	x	x	x	x
E200.8	Arsenic	x	x	x	x	x	x	x	x
E200.8	Barium	x	x	x	x	x	x	x	x
E200.8	Beryllium	x	x	x	x	x	x	x	x
E200.8	Cadmium	x	x	x	x	x	x	x	x
E200.8	Chromium, Total	x	x	x	x	x	x	x	x
E200.8	Copper	x	x	x	x	x	x	x	x
E200.8	Lead	x	x	x	x	x	x	x	x
E200.8	Manganese								
E200.8	Nickel	x	x	x	x	x	x	x	x
E200.8	Selenium	x	x	x	x	x	x	x	x
E200.8	Silver	x	x	x	x	x	x	x	x
E200.8	Thallium	x	x	x	x	x	x	x	x
E200.8	Uranium	x	x	x	x	x	x	x	x
E245.1	Mercury	x	x	x	x	x	x	x	x
E300	Bromide	x		x	x				x
E300	Chloride	x	x	x	x	x	x	x	x
E300	Fluoride	x	x	x	x	x	x	x	x
E300	Nitrogen, Nitrate (As N)	x	x	x	x	x	x	x	x
E300	Nitrogen, Nitrite	x	x	x	x	x	x	x	x
E300	Sulfate	x	x	x	x	x	x	x	x
E314.0	Perchlorate	x	x	x	x	x	x	x	x
E335.4	Cyanide	x	x	x	x	x	x	x	x
E504.1	1,2,3-Trichloropropane	x	x	x	x	x	x	x	x
E504.1	1,2-Dibromo-3-Chloropropane	x	x	x	x	x	x	x	x
E504.1	1,2-Dibromoethane	x	x	x	x	x	x	x	x
E508.1	Aldrin	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Shallow Groundwater							
		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
E508.1	Alpha-BHC	x	x	x	x	x	x	x	x
E508.1	Alpha-Endosulfan	x	x	x	x	x	x	x	x
E508.1	Beta Endosulfan	x	x	x	x	x	x	x	x
E508.1	Beta-BHC'	x	x	x	x	x	x	x	x
E508.1	Chlordane	x	x	x	x	x	x	x	x
E508.1	Chlorinated Camphene	x	x	x	x	x	x	x	x
E508.1	DDT	x	x	x	x	x	x	x	x
E508.1	Dichlorodiphenyldichloroethane	x	x	x	x	x	x	x	x
E508.1	Dieldrin	x	x	x	x	x	x	x	x
E508.1	Endrin	x	x	x	x	x	x	x	x
E508.1	Heptachlor	x	x	x	x	x	x	x	x
E508.1	Heptachlor Epoxide	x	x	x	x	x	x	x	x
E508.1	Heptachlor Epoxide (Isomer A)	x	x	x	x	x	x	x	x
E508.1	Lindane	x	x	x	x	x	x	x	x
E508.1	Methoxychlor	x	x	x	x	x	x	x	x
E508.1	P,P'-DDE	x	x	x	x	x	x	x	x
E508.1	PCB-1016 (Arochlor 1016)	x	x	x	x	x	x	x	x
E508.1	PCB-1221 (Arochlor 1221)	x	x	x	x	x	x	x	x
E508.1	PCB-1232 (Arochlor 1232)	x	x	x	x	x	x	x	x
E508.1	PCB-1242 (Arochlor 1242)	x	x	x	x	x	x	x	x
E508.1	PCB-1248 (Arochlor 1248)	x	x	x	x	x	x	x	x
E508.1	PCB-1254 (Arochlor 1254)	x	x	x	x	x	x	x	x
E508.1	PCB-1260 (Arochlor 1260)	x	x	x	x	x	x	x	x
E515.4	2,4,5-T	x	x	x	x	x	x	x	x
E515.4	2,4,5-TP (Silvex)	x	x	x	x	x	x	x	x
E515.4	2,4-D	x	x	x	x	x	x	x	x
E515.4	2,4-DB	x	x	x	x	x	x	x	x
E515.4	Dalapon	x	x	x	x	x	x	x	x
E515.4	Dicamba	x	x	x	x	x	x	x	x
E515.4	Dinoseb	x	x	x	x	x	x	x	x
E515.4	Pentachlorophenol	x	x	x	x	x	x	x	x
E515.4	Picloram	x	x	x	x	x	x	x	x
E524.2	1,1,1,2-Tetrachloroethane	x	x	x	x	x	x	x	x
E524.2	1,1,1-Trichloroethane	x	x	x	x	x	x	x	x
E524.2	1,1,2,2-Tetrachloroethane	x	x	x	x	x	x	x	x
E524.2	1,1,2-Trichloroethane	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloroethane	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloroethene	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloropropene	x	x	x	x	x	x	x	x
E524.2	1,2,3-Trichlorobenzene	x	x	x	x	x	x	x	x
E524.2	1,2,3-Trichloropropane	x	x	x	x	x	x	x	x
E524.2	1,2,4-Trichlorobenzene	x	x	x	x	x	x	x	x
E524.2	1,2,4-Trimethylbenzene	x	x	x	x	x	x	x	x
E524.2	1,2-Dibromo-3-Chloropropane	x	x	x	x	x	x	x	x
E524.2	1,2-Dibromoethane	x	x	x	x	x	x	x	x
E524.2	1,2-Dichlorobenzene	x	x	x	x	x	x	x	x
E524.2	1,2-Dichloroethane	x	x	x	x	x	x	x	x
E524.2	1,2-Dichloropropane	x	x	x	x	x	x	x	x
E524.2	1,3,5-Trimethylbenzene	x	x	x	x	x	x	x	x
E524.2	1,3-Dichlorobenzene	x	x	x	x	x	x	x	x
E524.2	1,3-Dichloropropane	x	x	x	x	x	x	x	x
E524.2	1,4-Dichlorobenzene	x	x	x	x	x	x	x	x
E524.2	2,2-Dichloropropane	x	x	x	x	x	x	x	x
E524.2	2-Chlorotoluene	x	x	x	x	x	x	x	x
E524.2	4-Chlorotoluene	x	x	x	x	x	x	x	x
E524.2	Benzene	x	x	x	x	x	x	x	x
E524.2	Bromoform	x	x	x	x	x	x	x	x
E524.2	Butyl Benzene	x	x	x	x	x	x	x	x
E524.2	Carbon Tetrachloride	x	x	x	x	x	x	x	x
E524.2	Chlorobenzene	x	x	x	x	x	x	x	x
E524.2	Chlorobromomethane	x	x	x	x	x	x	x	x
E524.2	Chlorodibromomethane	x	x	x	x	x	x	x	x
E524.2	Chloroethane	x	x	x	x	x	x	x	x
E524.2	Chloroform	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Shallow Groundwater							
		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
E524.2	Chloromethane	x	x	x	x	x	x	x	x
E524.2	Cis-1,2-Dichloroethene	x	x	x	x	x	x	x	x
E524.2	Cis-1,3-Dichloropropene	x	x	x	x	x	x	x	x
E524.2	Cymene	x	x	x	x	x	x	x	x
E524.2	Dibromomethane	x	x	x	x	x	x	x	x
E524.2	Dichlorobromomethane	x	x	x	x	x	x	x	x
E524.2	Dichlorodifluoromethane	x	x	x	x	x	x	x	x
E524.2	Di-Isopropyl Ether (DIPE)	x	x	x	x	x	x	x	x
E524.2	Ethylbenzene	x	x	x	x	x	x	x	x
E524.2	Hexachlorobutadiene	x	x	x	x	x	x	x	x
E524.2	Isopropylbenzene	x	x	x	x	x	x	x	x
E524.2	Methyl Bromide	x	x	x	x	x	x	x	x
E524.2	Methyl Ethyl Ketone	x	x	x	x	x	x	x	x
E524.2	Methyl Isobutyl Ketone	x	x	x	x	x	x	x	x
E524.2	Methyl Tert-Butyl Ether	x	x	x	x	x	x	x	x
E524.2	Methylene Chloride	x	x	x	x	x	x	x	x
E524.2	Mono Bromo Benzene	x	x	x	x	x	x	x	x
E524.2	Naphthalene	x	x	x	x	x	x	x	x
E524.2	N-Propylbenzene	x	x	x	x	x	x	x	x
E524.2	Sec-Butylbenzene	x	x	x	x	x	x	x	x
E524.2	Styrene	x	x	x	x	x	x	x	x
E524.2	Tert-Butylbenzene	x	x	x	x	x	x	x	x
E524.2	Tetrachloroethene (PCE)	x	x	x	x	x	x	x	x
E524.2	Toluene	x	x	x	x	x	x	x	x
E524.2	Trans-1,2-Dichloroethene	x	x	x	x	x	x	x	x
E524.2	Trans-1,3-Dichloropropene	x	x	x	x	x	x	x	x
E524.2	Trichloroethene	x	x	x	x	x	x	x	x
E524.2	Trichlorofluoromethane	x	x	x	x	x	x	x	x
E524.2	Vinyl Chloride	x	x	x	x	x	x	x	x
E524.2	Xylene, M,P-	x	x	x	x	x	x	x	x
E524.2	Xylene, O-	x	x	x	x	x	x	x	x
E524.2	Xylene, Total								
E525.2	Acenaphthene	x	x	x	x	x	x	x	x
E525.2	Acetochlor	x	x	x	x	x	x	x	x
E525.2	Alachlor	x	x	x	x	x	x	x	x
E525.2	Ametryn	x	x	x	x	x	x	x	x
E525.2	Anthracene	x	x	x	x	x	x	x	x
E525.2	Atrazine	x	x	x	x	x	x	x	x
E525.2	Benzo(K)Fluoranthene	x	x	x	x	x	x	x	x
E525.2	Benzo(A)Anthracene	x	x	x	x	x	x	x	x
E525.2	Benzo(A)Pyrene	x	x	x	x	x	x	x	x
E525.2	Benzo(B)Fluoranthene	x	x	x	x	x	x	x	x
E525.2	Bis(2-Ethylhexyl) Phthalate	x	x	x	x	x	x	x	x
E525.2	Butyl Benzyl Phthalate	x	x	x	x	x	x	x	x
E525.2	Butylate	x	x	x	x	x	x	x	x
E525.2	Chlorothalonil	x	x	x	x	x	x	x	x
E525.2	Chlorpyrifos	x	x	x	x	x	x	x	x
E525.2	Chrysene	x	x	x	x	x	x	x	x
E525.2	Cis-Permethrin	x	x	x	x	x	x	x	x
E525.2	Cyanazine	x	x	x	x	x	x	x	x
E525.2	Diazinon	x	x	x	x	x	x	x	x
E525.2	Dibenz(A,H)Anthracene	x	x	x	x	x	x	x	x
E525.2	Dichlorovos	x	x	x	x	x	x	x	x
E525.2	Diethyl Phthalate	x	x	x	x	x	x	x	x
E525.2	Dimethoate	x	x	x	x	x	x	x	x
E525.2	Di-N-Butyl Phthalate	x	x	x	x	x	x	x	x
E525.2	Diocetyl Adipate	x	x	x	x	x	x	x	x
E525.2	Disulfoton	x	x	x	x	x	x	x	x
E525.2	Fenamiphos (Nemacur)	x	x	x	x	x	x	x	x
E525.2	Fluoranthene	x	x	x	x	x	x	x	x
E525.2	Fluorene	x	x	x	x	x	x	x	x
E525.2	Hexachlorobenzene	x	x	x	x	x	x	x	x
E525.2	Hexachlorocyclopentadiene	x	x	x	x	x	x	x	x
E525.2	Hexazinone	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Shallow Groundwater							
		SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
E525.2	Indeno(1,2,3-C,D)Pyrene	x	x	x	x	x	x	x	x
E525.2	Isophorone	x	x	x	x	x	x	x	x
E525.2	Malathion	x	x	x	x	x	x	x	x
E525.2	Metolachlor	x	x	x	x	x	x	x	x
E525.2	Metribuzin	x	x	x	x	x	x	x	x
E525.2	Napropamide	x	x	x	x	x	x	x	x
E525.2	Parathion, Ethyl	x	x	x	x	x	x	x	x
E525.2	Parathion, Methyl	x	x	x	x	x	x	x	x
E525.2	Pebulate	x	x	x	x	x	x	x	x
E525.2	Prometon	x	x	x	x	x	x	x	x
E525.2	Prometryn	x	x	x	x	x	x	x	x
E525.2	Pronamide	x	x	x	x	x	x	x	x
E525.2	Propachlor	x	x	x	x	x	x	x	x
E525.2	Propazine	x	x	x	x	x	x	x	x
E525.2	Pyrene	x	x	x	x	x	x	x	x
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	x	x	x	x	x	x	x	x
E525.2	Simazine	x	x	x	x	x	x	x	x
E525.2	Tebuthiuron	x	x	x	x	x	x	x	x
E525.2	Terbacil	x	x	x	x	x	x	x	x
E525.2	Terbufos	x	x	x	x	x	x	x	x
E525.2	Terbutryn	x	x	x	x	x	x	x	x
E525.2	Trans-Permethrin	x	x	x	x	x	x	x	x
E525.2	Trifluralin	x	x	x	x	x	x	x	x
E531.1	3-Hydroxycarbofuran	x	x	x	x	x	x	x	x
E531.1	Aldicarb	x	x	x	x	x	x	x	x
E531.1	Aldicarb Sulfone	x	x	x	x	x	x	x	x
E531.1	Aldicarb Sulfoxide	x	x	x	x	x	x	x	x
E531.1	Carbaryl	x	x	x	x	x	x	x	x
E531.1	Carbofuran	x	x	x	x	x	x	x	x
E531.1	Methiocarb	x	x	x	x	x	x	x	x
E531.1	Methyl N',N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	x	x	x	x	x	x	x	x
E531.1	Propoxur	x	x	x	x	x	x	x	x
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	x	x	x	x	x	x	x	x
E547	Glyphosate	x	x	x	x	x	x	x	x
E548.1	Endothal	x	x	x	x	x	x	x	x
E549.2	Diquat	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	12-Chlorodehydroabiatic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	14-Chlorodehydroabiatic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	1-Phenanthrenecarboxylic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	9,10-Dichlorostearic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Abietic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Dehydroabiatic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Dichlorodehydroabiatic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Linoleic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Pimaric Acid	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Tetrachloroguaiacol	x	x	x	x	x	x	x	x
SM2540C	Total Dissolved Solids (Residue, Filterable)								

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Deep Groundwater								
		DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
A2120B	Color, Apparent	x	x	x	x	x	x	x	x	x
A2320B	Alkalinity, Total (As CaCO3)	x	x	x	x	x	x	x	x	x
A2340B	Hardness As CaCO3	x	x	x	x	x	x	x	x	x
A2510B	Conductivity	x	x	x	x	x	x	x	x	x
A2540C	Total Dissolved Solids (Residue, Filterable)	x	x	x	x	x	x	x	x	x
A4500HB	pH									
A4500SIO2C	Silica	x	x	x	x	x	x	x	x	x
A5310C	Dissolved Organic Carbon									
A5310C	Total Organic Carbon	x	x	x	x	x	x	x	x	x
A9221E	Fecal Coliform	x	x	x	x	x	x	x	x	x
A9223B	Coliform	x	x	x	x	x	x	x	x	x
CAS SOP	Methyl Mercury	x	x	x	x	x	x	x	x	x
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	x	x	x	x	x	x	x	x	x
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x	x	x	x	x	x
E1653A	2,4,5-Trichlorophenol	x	x	x	x	x	x	x	x	x
E1653A	2,4,6-Trichlorophenol	x	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	Pentachlorophenol	x	x	x	x	x	x	x	x	x
E1653A	Tetrachlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	Tetrachloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	Trichlorosyringol	x	x	x	x	x	x	x	x	x
E180.1	Turbidity	x	x	x	x	x	x	x	x	x
E200.7	Aluminum	x	x	x	x	x	x	x	x	x
E200.7	Barium									
E200.7	Calcium	x	x	x	x	x	x	x	x	x
E200.7	Iron	x	x	x	x	x	x	x	x	x
E200.7	Magnesium	x	x	x	x	x	x	x	x	x
E200.7	Manganese	x	x	x	x	x	x	x	x	x
E200.7	Potassium	x	x	x	x	x	x	x	x	x
E200.7	Silicon	x	x	x	x	x	x	x	x	x
E200.7	Sodium	x	x	x	x	x	x	x	x	x
E200.7	Zinc	x	x	x	x	x	x	x	x	x
E200.8	Aluminum									
E200.8	Antimony	x	x	x	x	x	x	x	x	x
E200.8	Arsenic	x	x	x	x	x	x	x	x	x
E200.8	Barium	x	x	x	x	x	x	x	x	x
E200.8	Beryllium	x	x	x	x	x	x	x	x	x
E200.8	Cadmium	x	x	x	x	x	x	x	x	x
E200.8	Chromium, Total	x	x	x	x	x	x	x	x	x
E200.8	Copper	x	x	x	x	x	x	x	x	x
E200.8	Lead	x	x	x	x	x	x	x	x	x
E200.8	Manganese									
E200.8	Nickel	x	x	x	x	x	x	x	x	x
E200.8	Selenium	x	x	x	x	x	x	x	x	x
E200.8	Silver	x	x	x	x	x	x	x	x	x
E200.8	Thallium	x	x	x	x	x	x	x	x	x
E200.8	Uranium	x	x	x	x	x	x	x	x	x
E245.1	Mercury	x	x	x	x	x	x	x	x	x
E300	Bromide	x		x	x					x
E300	Chloride	x	x	x	x	x	x	x	x	x
E300	Fluoride	x	x	x	x	x	x	x	x	x
E300	Nitrogen, Nitrate (As N)	x	x	x	x	x	x	x	x	x
E300	Nitrogen, Nitrite	x	x	x	x	x	x	x	x	x
E300	Sulfate	x	x	x	x	x	x	x	x	x
E314.0	Perchlorate	x	x	x	x	x	x	x	x	x
E335.4	Cyanide	x	x	x	x	x	x	x	x	x
E504.1	1,2,3-Trichloropropane	x	x	x	x	x	x	x	x	x
E504.1	1,2-Dibromo-3-Chloropropane	x	x	x	x	x	x	x	x	x
E504.1	1,2-Dibromoethane	x	x	x	x	x	x	x	x	x
E508.1	Aldrin	x	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Deep Groundwater								
		DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
E508.1	Alpha-BHC	x	x	x	x	x	x	x	x	x
E508.1	Alpha-Endosulfan	x	x	x	x	x	x	x	x	x
E508.1	Beta Endosulfan	x	x	x	x	x	x	x	x	x
E508.1	Beta-BHC'	x	x	x	x	x	x	x	x	x
E508.1	Chlordane	x	x	x	x	x	x	x	x	x
E508.1	Chlorinated Camphene	x	x	x	x	x	x	x	x	x
E508.1	DDT	x	x	x	x	x	x	x	x	x
E508.1	Dichlorodiphenyldichloroethane	x	x	x	x	x	x	x	x	x
E508.1	Dieldrin	x	x	x	x	x	x	x	x	x
E508.1	Endrin	x	x	x	x	x	x	x	x	x
E508.1	Heptachlor	x	x	x	x	x	x	x	x	x
E508.1	Heptachlor Epoxide	x	x	x	x	x	x	x	x	x
E508.1	Heptachlor Epoxide (Isomer A)	x	x	x	x	x	x	x	x	x
E508.1	Lindane	x	x	x	x	x	x	x	x	x
E508.1	Methoxychlor	x	x	x	x	x	x	x	x	x
E508.1	P,P'-DDE	x	x	x	x	x	x	x	x	x
E508.1	PCB-1016 (Arochlor 1016)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1221 (Arochlor 1221)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1232 (Arochlor 1232)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1242 (Arochlor 1242)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1248 (Arochlor 1248)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1254 (Arochlor 1254)	x	x	x	x	x	x	x	x	x
E508.1	PCB-1260 (Arochlor 1260)	x	x	x	x	x	x	x	x	x
E515.4	2,4,5-T	x	x	x	x	x	x	x	x	x
E515.4	2,4,5-TP (Silvex)	x	x	x	x	x	x	x	x	x
E515.4	2,4-D	x	x	x	x	x	x	x	x	x
E515.4	2,4-DB	x	x	x	x	x	x	x	x	x
E515.4	Dalapon	x	x	x	x	x	x	x	x	x
E515.4	Dicamba	x	x	x	x	x	x	x	x	x
E515.4	Dinoseb	x	x	x	x	x	x	x	x	x
E515.4	Pentachlorophenol	x	x	x	x	x	x	x	x	x
E515.4	Picloram	x	x	x	x	x	x	x	x	x
E524.2	1,1,1,2-Tetrachloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,1,1-Trichloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,1,2,2-Tetrachloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,1,2-Trichloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloroethene	x	x	x	x	x	x	x	x	x
E524.2	1,1-Dichloropropene	x	x	x	x	x	x	x	x	x
E524.2	1,2,3-Trichlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	1,2,3-Trichloropropane	x	x	x	x	x	x	x	x	x
E524.2	1,2,4-Trichlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	1,2,4-Trimethylbenzene	x	x	x	x	x	x	x	x	x
E524.2	1,2-Dibromo-3-Chloropropane	x	x	x	x	x	x	x	x	x
E524.2	1,2-Dibromoethane	x	x	x	x	x	x	x	x	x
E524.2	1,2-Dichlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	1,2-Dichloroethane	x	x	x	x	x	x	x	x	x
E524.2	1,2-Dichloropropane	x	x	x	x	x	x	x	x	x
E524.2	1,3,5-Trimethylbenzene	x	x	x	x	x	x	x	x	x
E524.2	1,3-Dichlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	1,3-Dichloropropane	x	x	x	x	x	x	x	x	x
E524.2	1,4-Dichlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	2,2-Dichloropropane	x	x	x	x	x	x	x	x	x
E524.2	2-Chlorotoluene	x	x	x	x	x	x	x	x	x
E524.2	4-Chlorotoluene	x	x	x	x	x	x	x	x	x
E524.2	Benzene	x	x	x	x	x	x	x	x	x
E524.2	Bromoform	x	x	x	x	x	x	x	x	x
E524.2	Butyl Benzene	x	x	x	x	x	x	x	x	x
E524.2	Carbon Tetrachloride	x	x	x	x	x	x	x	x	x
E524.2	Chlorobenzene	x	x	x	x	x	x	x	x	x
E524.2	Chlorobromomethane	x	x	x	x	x	x	x	x	x
E524.2	Chlorodibromomethane	x	x	x	x	x	x	x	x	x
E524.2	Chloroethane	x	x	x	x	x	x	x	x	x
E524.2	Chloroform	x	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Deep Groundwater								
		DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
E524.2	Chloromethane	x	x	x	x	x	x	x	x	x
E524.2	Cis-1,2-Dichloroethene	x	x	x	x	x	x	x	x	x
E524.2	Cis-1,3-Dichloropropene	x	x	x	x	x	x	x	x	x
E524.2	Cymene	x	x	x	x	x	x	x	x	x
E524.2	Dibromomethane	x	x	x	x	x	x	x	x	x
E524.2	Dichlorobromomethane	x	x	x	x	x	x	x	x	x
E524.2	Dichlorodifluoromethane	x	x	x	x	x	x	x	x	x
E524.2	Di-Isopropyl Ether (DIPE)	x	x	x	x	x	x	x	x	x
E524.2	Ethylbenzene	x	x	x	x	x	x	x	x	x
E524.2	Hexachlorobutadiene	x	x	x	x	x	x	x	x	x
E524.2	Isopropylbenzene	x	x	x	x	x	x	x	x	x
E524.2	Methyl Bromide	x	x	x	x	x	x	x	x	x
E524.2	Methyl Ethyl Ketone	x	x	x	x	x	x	x	x	x
E524.2	Methyl Isobutyl Ketone	x	x	x	x	x	x	x	x	x
E524.2	Methyl Tert-Butyl Ether	x	x	x	x	x	x	x	x	x
E524.2	Methylene Chloride	x	x	x	x	x	x	x	x	x
E524.2	Mono Bromo Benzene	x	x	x	x	x	x	x	x	x
E524.2	Naphthalene	x	x	x	x	x	x	x	x	x
E524.2	N-Propylbenzene	x	x	x	x	x	x	x	x	x
E524.2	Sec-Butylbenzene	x	x	x	x	x	x	x	x	x
E524.2	Styrene	x	x	x	x	x	x	x	x	x
E524.2	Tert-Butylbenzene	x	x	x	x	x	x	x	x	x
E524.2	Tetrachloroethene (PCE)	x	x	x	x	x	x	x	x	x
E524.2	Toluene	x	x	x	x	x	x	x	x	x
E524.2	Trans-1,2-Dichloroethene	x	x	x	x	x	x	x	x	x
E524.2	Trans-1,3-Dichloropropene	x	x	x	x	x	x	x	x	x
E524.2	Trichloroethene	x	x	x	x	x	x	x	x	x
E524.2	Trichlorofluoromethane	x	x	x	x	x	x	x	x	x
E524.2	Vinyl Chloride	x	x	x	x	x	x	x	x	x
E524.2	Xylene, M,P-	x	x	x	x	x	x	x	x	x
E524.2	Xylene, O-	x	x	x	x	x	x	x	x	x
E524.2	Xylene, Total									
E525.2	Acenaphthene	x	x	x	x	x	x	x	x	x
E525.2	Acetochlor	x	x	x	x	x	x	x	x	x
E525.2	Alachlor	x	x	x	x	x	x	x	x	x
E525.2	Ametryn	x	x	x	x	x	x	x	x	x
E525.2	Anthracene	x	x	x	x	x	x	x	x	x
E525.2	Atrazine	x	x	x	x	x	x	x	x	x
E525.2	Benzo(K)Fluoranthene	x	x	x	x	x	x	x	x	x
E525.2	Benzo(A)Anthracene	x	x	x	x	x	x	x	x	x
E525.2	Benzo(A)Pyrene	x	x	x	x	x	x	x	x	x
E525.2	Benzo(B)Fluoranthene	x	x	x	x	x	x	x	x	x
E525.2	Bis(2-Ethylhexyl) Phthalate	x	x	x	x	x	x	x	x	x
E525.2	Butyl Benzyl Phthalate	x	x	x	x	x	x	x	x	x
E525.2	Butylate	x	x	x	x	x	x	x	x	x
E525.2	Chlorothalonil	x	x	x	x	x	x	x	x	x
E525.2	Chlorpyrifos	x	x	x	x	x	x	x	x	x
E525.2	Chrysene	x	x	x	x	x	x	x	x	x
E525.2	Cis-Permethrin	x	x	x	x	x	x	x	x	x
E525.2	Cyanazine	x	x	x	x	x	x	x	x	x
E525.2	Diazinon	x	x	x	x	x	x	x	x	x
E525.2	Dibenz(A,H)Anthracene	x	x	x	x	x	x	x	x	x
E525.2	Dichlorovos	x	x	x	x	x	x	x	x	x
E525.2	Diethyl Phthalate	x	x	x	x	x	x	x	x	x
E525.2	Dimethoate	x	x	x	x	x	x	x	x	x
E525.2	Di-N-Butyl Phthalate	x	x	x	x	x	x	x	x	x
E525.2	Diocetyl Adipate	x	x	x	x	x	x	x	x	x
E525.2	Disulfoton	x	x	x	x	x	x	x	x	x
E525.2	Fenamiphos (Nemacur)	x	x	x	x	x	x	x	x	x
E525.2	Fluoranthene	x	x	x	x	x	x	x	x	x
E525.2	Fluorene	x	x	x	x	x	x	x	x	x
E525.2	Hexachlorobenzene	x	x	x	x	x	x	x	x	x
E525.2	Hexachlorocyclopentadiene	x	x	x	x	x	x	x	x	x
E525.2	Hexazinone	x	x	x	x	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

		Sentinel Wells - Deep Groundwater								
Method	Analyte	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
E525.2	Indeno(1,2,3-C,D)Pyrene	x	x	x	x	x	x	x	x	x
E525.2	Isophorone	x	x	x	x	x	x	x	x	x
E525.2	Malathion	x	x	x	x	x	x	x	x	x
E525.2	Metolachlor	x	x	x	x	x	x	x	x	x
E525.2	Metribuzin	x	x	x	x	x	x	x	x	x
E525.2	Napropamide	x	x	x	x	x	x	x	x	x
E525.2	Parathion, Ethyl	x	x	x	x	x	x	x	x	x
E525.2	Parathion, Methyl	x	x	x	x	x	x	x	x	x
E525.2	Pebulate	x	x	x	x	x	x	x	x	x
E525.2	Prometon	x	x	x	x	x	x	x	x	x
E525.2	Prometryn	x	x	x	x	x	x	x	x	x
E525.2	Pronamide	x	x	x	x	x	x	x	x	x
E525.2	Propachlor	x	x	x	x	x	x	x	x	x
E525.2	Propazine	x	x	x	x	x	x	x	x	x
E525.2	Pyrene	x	x	x	x	x	x	x	x	x
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	x	x	x	x	x	x	x	x	x
E525.2	Simazine	x	x	x	x	x	x	x	x	x
E525.2	Tebuthiuron	x	x	x	x	x	x	x	x	x
E525.2	Terbacil	x	x	x	x	x	x	x	x	x
E525.2	Terbufos	x	x	x	x	x	x	x	x	x
E525.2	Terbutryn	x	x	x	x	x	x	x	x	x
E525.2	Trans-Permethrin	x	x	x	x	x	x	x	x	x
E525.2	Trifluralin	x	x	x	x	x	x	x	x	x
E531.1	3-Hydroxycarbofuran	x	x	x	x	x	x	x	x	x
E531.1	Aldicarb	x	x	x	x	x	x	x	x	x
E531.1	Aldicarb Sulfone	x	x	x	x	x	x	x	x	x
E531.1	Aldicarb Sulfoxide	x	x	x	x	x	x	x	x	x
E531.1	Carbaryl	x	x	x	x	x	x	x	x	x
E531.1	Carbofuran	x	x	x	x	x	x	x	x	x
E531.1	Methiocarb	x	x	x	x	x	x	x	x	x
E531.1	Methyl N',N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	x	x	x	x	x	x	x	x	x
E531.1	Propoxur	x	x	x	x	x	x	x	x	x
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	x	x	x	x	x	x	x	x	x
E547	Glyphosate	x	x	x	x	x	x	x	x	x
E548.1	Endothal	x	x	x	x	x	x	x	x	x
E549.2	Diquat	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	12-Chlorodehydroabiatic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	14-Chlorodehydroabiatic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	1-Phenanthrenecarboxylic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	9,10-Dichlorostearic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Abietic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Dehydroabiatic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Dichlorodehydroabiatic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Linoleic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Pimaric Acid	x	x	x	x	x	x	x	x	x
NCASI85.02RA_FA	Tetrachloroguaiacol	x	x	x	x	x	x	x	x	x
SM2540C	Total Dissolved Solids (Residue, Filterable)									

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water		PW-1
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)	
A2120B	Color, Apparent	x	x	x	x	x
A2320B	Alkalinity, Total (As CaCO3)	x	x	x	x	x
A2340B	Hardness As CaCO3	x	x	x	x	x
A2510B	Conductivity	x	x	x	x	x
A2540C	Total Dissolved Solids (Residue, Filterable)	x	x	x	x	x
A4500HB	pH					x
A4500SIO2C	Silica	x	x	x	x	x
A5310C	Dissolved Organic Carbon					x
A5310C	Total Organic Carbon	x	x	x	x	x
A9221E	Fecal Coliform	x	x	x	x	x
A9223B	Coliform	x	x	x	x	x
CAS SOP	Methyl Mercury	x	x	x	x	
E1613B	2,3,7,8-Tetrachlorodibenzo-P-Dioxin	x	x	x	x	x
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x	
E1653A	2,4,5-Trichlorophenol	x	x	x	x	
E1653A	2,4,6-Trichlorophenol	x	x	x	x	
E1653A	3,4,5-Trichlorocatechol	x	x	x	x	
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x	
E1653A	3,4,6-Trichlorocatechol	x	x	x	x	
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x	
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x	
E1653A	Pentachlorophenol	x	x	x	x	
E1653A	Tetrachlorocatechol	x	x	x	x	
E1653A	Tetrachloroguaiacol	x	x	x	x	
E1653A	Trichlorosyringol	x	x	x	x	
E180.1	Turbidity	x	x	x	x	x
E200.7	Aluminum	x	x	x	x	x
E200.7	Barium					
E200.7	Calcium	x	x	x	x	x
E200.7	Iron	x	x	x	x	x
E200.7	Magnesium	x	x	x	x	x
E200.7	Manganese	x	x	x	x	x
E200.7	Potassium	x	x	x	x	x
E200.7	Silicon	x	x	x	x	x
E200.7	Sodium	x	x	x	x	x
E200.7	Zinc	x	x	x	x	x
E200.8	Aluminum					x
E200.8	Antimony	x	x	x	x	x
E200.8	Arsenic	x	x	x	x	x
E200.8	Barium	x	x	x	x	x
E200.8	Beryllium	x	x	x	x	x
E200.8	Cadmium	x	x	x	x	x
E200.8	Chromium, Total	x	x	x	x	x
E200.8	Copper	x	x	x	x	x
E200.8	Lead	x	x	x	x	x
E200.8	Manganese					x
E200.8	Nickel	x	x	x	x	x
E200.8	Selenium	x	x	x	x	x
E200.8	Silver	x	x	x	x	x
E200.8	Thallium	x	x	x	x	x
E200.8	Uranium	x	x	x	x	x
E245.1	Mercury	x	x	x	x	x
E300	Bromide	x	x	x	x	
E300	Chloride	x	x	x	x	x
E300	Fluoride	x	x	x	x	x
E300	Nitrogen, Nitrate (As N)	x	x	x	x	x
E300	Nitrogen, Nitrite	x	x	x	x	x
E300	Sulfate	x	x	x	x	x
E314.0	Perchlorate	x	x	x	x	
E335.4	Cyanide	x	x	x	x	x
E504.1	1,2,3-Trichloropropane	x	x	x	x	
E504.1	1,2-Dibromo-3-Chloropropane	x	x	x	x	x
E504.1	1,2-Dibromoethane	x	x	x	x	x
E508.1	Aldrin	x	x	x	x	

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water		PW-1
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)	
E508.1	Alpha-BHC	x	x	x	x	
E508.1	Alpha-Endosulfan	x	x	x	x	
E508.1	Beta Endosulfan	x	x	x	x	
E508.1	Beta-BHC'	x	x	x	x	
E508.1	Chlordane	x	x	x	x	x
E508.1	Chlorinated Camphene	x	x	x	x	x
E508.1	DDT	x	x	x	x	
E508.1	Dichlorodiphenyldichloroethane	x	x	x	x	
E508.1	Dieldrin	x	x	x	x	
E508.1	Endrin	x	x	x	x	x
E508.1	Heptachlor	x	x	x	x	x
E508.1	Heptachlor Epoxide	x	x	x	x	x
E508.1	Heptachlor Epoxide (Isomer A)	x	x	x	x	
E508.1	Lindane	x	x	x	x	x
E508.1	Methoxychlor	x	x	x	x	x
E508.1	P,P'-DDE	x	x	x	x	
E508.1	PCB-1016 (Arochlor 1016)	x	x	x	x	x
E508.1	PCB-1221 (Arochlor 1221)	x	x	x	x	x
E508.1	PCB-1232 (Arochlor 1232)	x	x	x	x	x
E508.1	PCB-1242 (Arochlor 1242)	x	x	x	x	x
E508.1	PCB-1248 (Arochlor 1248)	x	x	x	x	x
E508.1	PCB-1254 (Arochlor 1254)	x	x	x	x	x
E508.1	PCB-1260 (Arochlor 1260)	x	x	x	x	x
E515.4	2,4,5-T	x	x	x	x	
E515.4	2,4,5-TP (Silvex)	x	x	x	x	x
E515.4	2,4-D	x	x	x	x	x
E515.4	2,4-DB	x	x	x	x	
E515.4	Dalapon	x	x	x	x	x
E515.4	Dicamba	x	x	x	x	
E515.4	Dinoseb	x	x	x	x	x
E515.4	Pentachlorophenol	x	x	x	x	x
E515.4	Picloram	x	x	x	x	x
E524.2	1,1,1,2-Tetrachloroethane	x	x	x	x	
E524.2	1,1,1-Trichloroethane	x	x	x	x	x
E524.2	1,1,2,2-Tetrachloroethane	x	x	x	x	
E524.2	1,1,2-Trichloroethane	x	x	x	x	x
E524.2	1,1-Dichloroethane	x	x	x	x	
E524.2	1,1-Dichloroethene	x	x	x	x	x
E524.2	1,1-Dichloropropene	x	x	x	x	
E524.2	1,2,3-Trichlorobenzene	x	x	x	x	
E524.2	1,2,3-Trichloropropane	x	x	x	x	
E524.2	1,2,4-Trichlorobenzene	x	x	x	x	x
E524.2	1,2,4-Trimethylbenzene	x	x	x	x	
E524.2	1,2-Dibromo-3-Chloropropane	x	x	x	x	x
E524.2	1,2-Dibromoethane	x	x	x	x	x
E524.2	1,2-Dichlorobenzene	x	x	x	x	x
E524.2	1,2-Dichloroethane	x	x	x	x	x
E524.2	1,2-Dichloropropane	x	x	x	x	x
E524.2	1,3,5-Trimethylbenzene	x	x	x	x	
E524.2	1,3-Dichlorobenzene	x	x	x	x	
E524.2	1,3-Dichloropropane	x	x	x	x	
E524.2	1,4-Dichlorobenzene	x	x	x	x	x
E524.2	2,2-Dichloropropane	x	x	x	x	
E524.2	2-Chlorotoluene	x	x	x	x	
E524.2	4-Chlorotoluene	x	x	x	x	
E524.2	Benzene	x	x	x	x	x
E524.2	Bromoform	x	x	x	x	x
E524.2	Butyl Benzene	x	x	x	x	
E524.2	Carbon Tetrachloride	x	x	x	x	x
E524.2	Chlorobenzene	x	x	x	x	x
E524.2	Chlorobromomethane	x	x	x	x	
E524.2	Chlorodibromomethane	x	x	x	x	x
E524.2	Chloroethane	x	x	x	x	
E524.2	Chloroform	x	x	x	x	x

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water		PW-1
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)	
E524.2	Chloromethane	x	x	x	x	
E524.2	Cis-1,2-Dichloroethene	x	x	x	x	x
E524.2	Cis-1,3-Dichloropropene	x	x	x	x	
E524.2	Cymene	x	x	x	x	
E524.2	Dibromomethane	x	x	x	x	
E524.2	Dichlorobromomethane	x	x	x	x	x
E524.2	Dichlorodifluoromethane	x	x	x	x	
E524.2	Di-Isopropyl Ether (DIPE)	x	x	x	x	
E524.2	Ethylbenzene	x	x	x	x	x
E524.2	Hexachlorobutadiene	x	x	x	x	
E524.2	Isopropylbenzene	x	x	x	x	
E524.2	Methyl Bromide	x	x	x	x	
E524.2	Methyl Ethyl Ketone	x	x	x	x	
E524.2	Methyl Isobutyl Ketone	x	x	x	x	
E524.2	Methyl Tert-Butyl Ether	x	x	x	x	
E524.2	Methylene Chloride	x	x	x	x	x
E524.2	Mono Bromo Benzene	x	x	x	x	
E524.2	Naphthalene	x	x	x	x	
E524.2	N-Propylbenzene	x	x	x	x	
E524.2	Sec-Butylbenzene	x	x	x	x	
E524.2	Styrene	x	x	x	x	x
E524.2	Tert-Butylbenzene	x	x	x	x	
E524.2	Tetrachloroethene (PCE)	x	x	x	x	x
E524.2	Toluene	x	x	x	x	x
E524.2	Trans-1,2-Dichloroethene	x	x	x	x	x
E524.2	Trans-1,3-Dichloropropene	x	x	x	x	
E524.2	Trichloroethene	x	x	x	x	x
E524.2	Trichlorofluoromethane	x	x	x	x	
E524.2	Vinyl Chloride	x	x	x	x	x
E524.2	Xylene, M,P-	x	x	x	x	
E524.2	Xylene, O-	x	x	x	x	
E524.2	Xylene, Total					x
E525.2	Acenaphthene	x	x	x	x	
E525.2	Acetochlor	x	x	x	x	
E525.2	Alachlor	x	x	x	x	x
E525.2	Ametryn	x	x	x	x	
E525.2	Anthracene	x	x	x	x	
E525.2	Atrazine	x	x	x	x	x
E525.2	Benzo(K)Fluoranthene	x	x	x	x	
E525.2	Benzo(A)Anthracene	x	x	x	x	
E525.2	Benzo(A)Pyrene	x	x	x	x	x
E525.2	Benzo(B)Fluoranthene	x	x	x	x	
E525.2	Bis(2-Ethylhexyl) Phthalate	x	x	x	x	x
E525.2	Butyl Benzyl Phthalate	x	x	x	x	
E525.2	Butylate	x	x	x	x	
E525.2	Chlorothalonil	x	x	x	x	
E525.2	Chlorpyrifos	x	x	x	x	
E525.2	Chrysene	x	x	x	x	
E525.2	Cis-Permethrin	x	x	x	x	
E525.2	Cyanazine	x	x	x	x	
E525.2	Diazinon	x	x	x	x	
E525.2	Dibenz(A,H)Anthracene	x	x	x	x	
E525.2	Dichlorovos	x	x	x	x	
E525.2	Diethyl Phthalate	x	x	x	x	
E525.2	Dimethoate	x	x	x	x	
E525.2	Di-N-Butyl Phthalate	x	x	x	x	
E525.2	Dioctyl Adipate	x	x	x	x	x
E525.2	Disulfoton	x	x	x	x	
E525.2	Fenamiphos (Nemacur)	x	x	x	x	
E525.2	Fluoranthene	x	x	x	x	
E525.2	Fluorene	x	x	x	x	
E525.2	Hexachlorobenzene	x	x	x	x	x
E525.2	Hexachlorocyclopentadiene	x	x	x	x	x
E525.2	Hexazinone	x	x	x	x	

Table 3.2: Tier 2 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water		PW-1
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)	
E525.2	Indeno(1,2,3-C,D)Pyrene	x	x	x	x	
E525.2	Isophorone	x	x	x	x	
E525.2	Malathion	x	x	x	x	
E525.2	Metolachlor	x	x	x	x	
E525.2	Metribuzin	x	x	x	x	
E525.2	Napropamide	x	x	x	x	
E525.2	Parathion, Ethyl	x	x	x	x	
E525.2	Parathion, Methyl	x		x	x	
E525.2	Pebulate	x	x	x	x	
E525.2	Prometon	x		x	x	
E525.2	Prometryn	x		x	x	
E525.2	Pronamide	x	x	x	x	
E525.2	Propachlor	x	x	x	x	
E525.2	Propazine	x	x	x	x	
E525.2	Pyrene	x	x	x	x	
E525.2	S-Ethyl Di-N,N-Propylthiocarbamate	x	x	x	x	
E525.2	Simazine	x	x	x	x	x
E525.2	Tebuthiuron	x	x	x	x	
E525.2	Terbacil	x	x	x	x	
E525.2	Terbufos	x	x	x	x	
E525.2	Terbutryn	x		x	x	
E525.2	Trans-Permethrin	x	x	x	x	
E525.2	Trifluralin	x	x	x	x	
E531.1	3-Hydroxycarbofuran	x	x	x	x	
E531.1	Aldicarb	x	x	x	x	x
E531.1	Aldicarb Sulfone	x	x	x	x	x
E531.1	Aldicarb Sulfoxide	x	x	x	x	x
E531.1	Carbaryl	x	x	x	x	
E531.1	Carbofuran	x	x	x	x	x
E531.1	Methiocarb	x	x	x	x	
E531.1	Methyl N',N'-Dimethyl-N-((Methylcarbamoyl)Oxy)-1-	x	x	x	x	x
E531.1	Propoxur	x	x	x	x	
E531.1	S-Methyl-N-((Methylcarbamoyl)-Oxy)-Thioacetimidate	x	x	x	x	
E547	Glyphosate	x	x	x	x	x
E548.1	Endothal	x	x	x	x	x
E549.2	Diquat	x	x	x	x	x
NCASI85.02RA_FA	12-Chlorodehydroabiatic Acid	x	x	x	x	
NCASI85.02RA_FA	14-Chlorodehydroabiatic Acid	x	x	x	x	
NCASI85.02RA_FA	1-Phenanthrenecarboxylic Acid	x	x	x	x	
NCASI85.02RA_FA	3,4,5-Trichloroguaiacol	x	x	x	x	
NCASI85.02RA_FA	9,10-Dichlorostearic Acid	x	x	x	x	
NCASI85.02RA_FA	Abietic Acid	x	x	x	x	
NCASI85.02RA_FA	Dehydroabiatic Acid	x	x	x	x	
NCASI85.02RA_FA	Dichlorodehydroabiatic Acid	x	x	x	x	
NCASI85.02RA_FA	Linoleic Acid	x	x	x	x	
NCASI85.02RA_FA	Oleic Acid/Linolenic Acid	x	x	x	x	
NCASI85.02RA_FA	Pimaric Acid	x	x	x	x	
NCASI85.02RA_FA	Tetrachloroguaiacol	x	x	x	x	
SM2540C	Total Dissolved Solids (Residue, Filterable)					x

Table 3.3: Tier 3 Analytical Methods and Analytes

		Sentinel Wells - Shallow Groundwater							
Method	Analyte	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x	x	x	x	x
E1653A	2,4,5-Trichlorophenol	x	x	x	x	x	x	x	x
E1653A	2,4,6-Trichlorophenol	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichlorocatechol	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichlorocatechol	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x	x	x	x	x
E1653A	Pentachlorophenol	x	x	x	x	x	x	x	x
E1653A	Tetrachlorocatechol	x	x	x	x	x	x	x	x
E1653A	Tetrachloroguaiacol	x	x	x	x	x	x	x	x
E1653A	Trichlorosyringol	x	x	x	x	x	x	x	x
E1694M	2-Hydroxy-4-Methoxybenzophenone								x
E1694M	5,5-Diphenylhydantoin								
E1694M	Acetaminophen								x
E1694M	alpha-Estradiol								x
E1694M	Androstenedione								x
E1694M	Atrazine								x
E1694M	Bisphenol A								x
E1694M	Caffeine								x
E1694M	Carbamazepine								x
E1694M	Diazepam								x
E1694M	Diclofenac								
E1694M	Diethylstilbestrol								x
E1694M	Estradiol								x
E1694M	Estriol								x
E1694M	Estrone								x
E1694M	Ethinyl Estradiol								x
E1694M	Fluoxetine								x
E1694M	Gemfibrozil								
E1694M	Hydrocodone								x
E1694M	Ibuprofen								
E1694M	Iopromide								
E1694M	Meprobamate								x
E1694M	Methadone								x
E1694M	N,N-Diethyl-3-Methyl Benzamide								x
E1694M	Naproxen								
E1694M	Pentoxifylline								x
E1694M	Progesterone								x
E1694M	Salicylic Acid								
E1694M	Sulfamethoxazole								x
E1694M	Testosterone								x
E1694M	Triclosan								
E1694M	Trimethoprim								x
SW8081	Mirex								x
SW8270	1,2,4,5-Tetrachlorobenzene								x
SW8270	1-Amino-3-Nitrobenzene								x
SW8270	1-Methylnaphthalene								x
SW8270	2,2'-Dichlorodiethylether								x
SW8270	2,3,4,6-Tetrachlorophenol								x
SW8270	2,4,5-Trichlorophenol								x
SW8270	2,4,6-Trichlorophenol								x
SW8270	2,4-Dichlorophenol								x
SW8270	2,4-Dimethylphenol								x
SW8270	2,4-Dinitrophenol								x
SW8270	2-Chloronaphthalene								x
SW8270	2-Chlorophenol								x
SW8270	2-Methylnaphthalene								x
SW8270	3,3'-Dichlorobenzidine								x
SW8270	4-Chloroaniline								x
SW8270	4-Nitroaniline								x
SW8270	Aniline								x
SW8270	Azobenzene								x
SW8270	Benzoic Acid								x

Table 3.3: Tier 3 Analytical Methods and Analytes

		Sentinel Wells - Shallow Groundwater							
Method	Analyte	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6	SW-7	SW-9
SW8270	Benzyl Alcohol								x
SW8270	Bis(2-Chloroethoxy) Methane								x
SW8270	Chlorobenzilate								x
SW8270	Demeton-O								x
SW8270	Demeton-S								x
SW8270	Dichlorovos								x
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphate)								x
SW8270	Hexachloroethane								x
SW8270	Nitrobenzene								x
SW8270	N-Nitrosodimethylamine								x
SW8270	N-Nitrosodiphenylamine								x
SW8270	N-Nitrosodipropylamine								x
SW8270	O-Cresol								x
SW8270	Parathion, Methyl								x
SW8270	P-Cresol								x
SW8270	Pentachlorobenzene								x
SW8270	Pentachloronitrobenzene								x
SW8270	Phenol								x
SW8270	Phorate								x
SW8270	S,S,S-Tributyl Phosphorotrithioate								x
SW8270	Stirophos								x
SW8270	Sulfotep								x
SW8270SIM	PBDE 100								x
SW8270SIM	PBDE 128								x
SW8270SIM	PBDE 138								x
SW8270SIM	PBDE 153								x
SW8270SIM	PBDE 154								x
SW8270SIM	PBDE 17								x
SW8270SIM	PBDE 183								x
SW8270SIM	PBDE 190								x
SW8270SIM	PBDE 203								x
SW8270SIM	PBDE 206								x
SW8270SIM	PBDE 209								x
SW8270SIM	PBDE 28								x
SW8270SIM	PBDE 47								x
SW8270SIM	PBDE 66								x
SW8270SIM	PBDE 71								x
SW8270SIM	PBDE 85								x
SW8270SIM	PBDE 99								x

Table 3.3: Tier 3 Analytical Methods and Analytes

		Sentinel Wells - Deep Groundwater								
Method	Analyte	DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x	x	x	x	x	x
E1653A	2,4,5-Trichlorophenol	x	x	x	x	x	x	x	x	x
E1653A	2,4,6-Trichlorophenol	x	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	Pentachlorophenol	x	x	x	x	x	x	x	x	x
E1653A	Tetrachlorocatechol	x	x	x	x	x	x	x	x	x
E1653A	Tetrachloroguaiacol	x	x	x	x	x	x	x	x	x
E1653A	Trichlorosyringol	x	x	x	x	x	x	x	x	x
E1694M	2-Hydroxy-4-Methoxybenzophenone									x
E1694M	5,5-Diphenylhydantoin									
E1694M	Acetaminophen									x
E1694M	alpha-Estradiol									x
E1694M	Androstenedione									x
E1694M	Atrazine									x
E1694M	Bisphenol A									x
E1694M	Caffeine									x
E1694M	Carbamazepine									x
E1694M	Diazepam									x
E1694M	Diclofenac									
E1694M	Diethylstilbestrol									x
E1694M	Estradiol									x
E1694M	Estriol									x
E1694M	Estrone									x
E1694M	Ethinyl Estradiol									x
E1694M	Fluoxetine									x
E1694M	Gemfibrozil									
E1694M	Hydrocodone									x
E1694M	Ibuprofen									
E1694M	Iopromide									
E1694M	Meprobamate									x
E1694M	Methadone									x
E1694M	N,N-Diethyl-3-Methyl Benzamide									x
E1694M	Naproxen									
E1694M	Pentoxifylline									x
E1694M	Progesterone									x
E1694M	Salicylic Acid									
E1694M	Sulfamethoxazole									x
E1694M	Testosterone									x
E1694M	Triclosan									
E1694M	Trimethoprim									x
SW8081	Mirex									x
SW8270	1,2,4,5-Tetrachlorobenzene									x
SW8270	1-Amino-3-Nitrobenzene									x
SW8270	1-Methylnaphthalene									x
SW8270	2,2'-Dichlorodiethylether									x
SW8270	2,3,4,6-Tetrachlorophenol									x
SW8270	2,4,5-Trichlorophenol									x
SW8270	2,4,6-Trichlorophenol									x
SW8270	2,4-Dichlorophenol									x
SW8270	2,4-Dimethylphenol									x
SW8270	2,4-Dinitrophenol									x
SW8270	2-Chloronaphthalene									x
SW8270	2-Chlorophenol									x
SW8270	2-Methylnaphthalene									x
SW8270	3,3'-Dichlorobenzidine									x
SW8270	4-Chloroaniline									x
SW8270	4-Nitroaniline									x
SW8270	Aniline									x
SW8270	Azobenzene									x
SW8270	Benzoic Acid									x

Table 3.3: Tier 3 Analytical Methods and Analytes

Method	Analyte	Sentinel Wells - Deep Groundwater								
		DW-1	DW-2	DW-3	DW-4	DW-5	DW-6	DW-7	DW-8	DW-9
SW8270	Benzyl Alcohol									x
SW8270	Bis(2-Chloroethoxy) Methane									x
SW8270	Chlorobenzilate									x
SW8270	Demeton-O									x
SW8270	Demeton-S									x
SW8270	Dichlorovos									x
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphate)									x
SW8270	Hexachloroethane									x
SW8270	Nitrobenzene									x
SW8270	N-Nitrosodimethylamine									x
SW8270	N-Nitrosodiphenylamine									x
SW8270	N-Nitrosodipropylamine									x
SW8270	O-Cresol									x
SW8270	Parathion, Methyl									x
SW8270	P-Cresol									x
SW8270	Pentachlorobenzene									x
SW8270	Pentachloronitrobenzene									x
SW8270	Phenol									x
SW8270	Phorate									x
SW8270	S,S,S-Tributyl Phosphorotrithioate									x
SW8270	Stirophos									x
SW8270	Sulfotep									x
SW8270SIM	PBDE 100									x
SW8270SIM	PBDE 128									x
SW8270SIM	PBDE 138									x
SW8270SIM	PBDE 153									x
SW8270SIM	PBDE 154									x
SW8270SIM	PBDE 17									x
SW8270SIM	PBDE 183									x
SW8270SIM	PBDE 190									x
SW8270SIM	PBDE 203									x
SW8270SIM	PBDE 206									x
SW8270SIM	PBDE 209									x
SW8270SIM	PBDE 28									x
SW8270SIM	PBDE 47									x
SW8270SIM	PBDE 66									x
SW8270SIM	PBDE 71									x
SW8270SIM	PBDE 85									x
SW8270SIM	PBDE 99									x

Table 3.3: Tier 3 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water	
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
E1653A	2,3,4,6-Tetrachlorophenol	x	x	x	x
E1653A	2,4,5-Trichlorophenol	x	x	x	x
E1653A	2,4,6-Trichlorophenol	x	x	x	x
E1653A	3,4,5-Trichlorocatechol	x	x	x	x
E1653A	3,4,5-Trichloroguaiacol	x	x	x	x
E1653A	3,4,6-Trichlorocatechol	x	x	x	x
E1653A	3,4,6-Trichloroguaiacol	x	x	x	x
E1653A	4,5,6-Trichloroguaiacol	x	x	x	x
E1653A	Pentachlorophenol	x	x	x	x
E1653A	Tetrachlorocatechol	x	x	x	x
E1653A	Tetrachloroguaiacol	x	x	x	x
E1653A	Trichlorosyringol	x	x	x	x
E1694M	2-Hydroxy-4-Methoxybenzophenone	x	x	x	x
E1694M	5,5-Diphenylhydantoin	x	x	x	x
E1694M	Acetaminophen	x	x	x	x
E1694M	alpha-Estradiol	x	x	x	x
E1694M	Androstenedione	x	x	x	x
E1694M	Atrazine	x	x	x	x
E1694M	Bisphenol A	x	x	x	x
E1694M	Caffeine	x	x	x	x
E1694M	Carbamazepine	x	x	x	x
E1694M	Diazepam	x	x	x	x
E1694M	Diclofenac	x	x	x	x
E1694M	Diethylstilbestrol	x	x	x	x
E1694M	Estradiol	x	x	x	x
E1694M	Estriol	x	x	x	x
E1694M	Estrone	x	x	x	x
E1694M	Ethinyl Estradiol	x	x	x	x
E1694M	Fluoxetine	x	x	x	x
E1694M	Gemfibrozil	x	x	x	x
E1694M	Hydrocodone	x	x	x	x
E1694M	Ibuprofen	x	x	x	x
E1694M	Iopromide	x	x	x	x
E1694M	Meprobamate	x	x	x	x
E1694M	Methadone	x	x	x	x
E1694M	N,N-Diethyl-3-Methyl Benzamide	x	x	x	x
E1694M	Naproxen	x	x	x	x
E1694M	Pentoxifylline	x	x	x	x
E1694M	Progesterone	x	x	x	x
E1694M	Salicylic Acid	x	x	x	x
E1694M	Sulfamethoxazole	x	x	x	x
E1694M	Testosterone	x	x	x	x
E1694M	Triclosan	x	x	x	x
E1694M	Trimethoprim	x	x	x	x
SW8081	Mirex	x	x	x	x
SW8270	1,2,4,5-Tetrachlorobenzene	x		x	x
SW8270	1-Amino-3-Nitrobenzene	x	x	x	x
SW8270	1-Methylnaphthalene	x	x	x	x
SW8270	2,2'-Dichlorodiethylether	x	x	x	x
SW8270	2,3,4,6-Tetrachlorophenol	x	x	x	x
SW8270	2,4,5-Trichlorophenol	x	x	x	x
SW8270	2,4,6-Trichlorophenol	x	x	x	x
SW8270	2,4-Dichlorophenol	x	x	x	x
SW8270	2,4-Dimethylphenol	x	x	x	x
SW8270	2,4-Dinitrophenol	x	x	x	x
SW8270	2-Chloronaphthalene	x	x	x	x
SW8270	2-Chlorophenol	x	x	x	x
SW8270	2-Methylnaphthalene	x	x	x	x
SW8270	3,3'-Dichlorobenzidine	x	x	x	x
SW8270	4-Chloroaniline	x	x	x	x
SW8270	4-Nitroaniline	x	x	x	x
SW8270	Aniline	x	x	x	x
SW8270	Azobenzene	x	x	x	x
SW8270	Benzoic Acid	x	x	x	x

Table 3.3: Tier 3 Analytical Methods and Analytes

Method	Analyte	Deep Groundwater		Surface Water	
		Chinook Ventures	RSW-2 (Mint Farm Energy Well)	RSW-1 (Columbia River)	RSW-3 (Cowlitz River)
SW8270	Benzyl Alcohol	x	x	x	x
SW8270	Bis(2-Chloroethoxy) Methane	x	x	x	x
SW8270	Chlorobenzilate	x		x	x
SW8270	Demeton-O	x	x	x	x
SW8270	Demeton-S	x	x	x	x
SW8270	Dichlorovos	x	x	x	x
SW8270	EPN (O-Ethyl Phnyl (P-Nitrophenyl) Thiophosphate)	x	x	x	x
SW8270	Hexachloroethane	x	x	x	x
SW8270	Nitrobenzene	x	x	x	x
SW8270	N-Nitrosodimethylamine	x	x	x	x
SW8270	N-Nitrosodiphenylamine	x	x	x	x
SW8270	N-Nitrosodipropylamine	x	x	x	x
SW8270	O-Cresol	x	x	x	x
SW8270	Parathion, Methyl	x	x	x	x
SW8270	P-Cresol	x	x	x	x
SW8270	Pentachlorobenzene	x		x	x
SW8270	Pentachloronitrobenzene	x		x	x
SW8270	Phenol	x	x	x	x
SW8270	Phorate	x	x	x	x
SW8270	S,S,S-Tributyl Phosphorotrithioate	x	x	x	x
SW8270	Stirophos	x	x	x	x
SW8270	Sulfotep	x	x	x	x
SW8270SIM	PBDE 100	x	x	x	x
SW8270SIM	PBDE 128	x	x	x	x
SW8270SIM	PBDE 138	x	x	x	x
SW8270SIM	PBDE 153	x	x	x	x
SW8270SIM	PBDE 154	x	x	x	x
SW8270SIM	PBDE 17	x	x	x	x
SW8270SIM	PBDE 183	x	x	x	x
SW8270SIM	PBDE 190	x	x	x	x
SW8270SIM	PBDE 203	x	x	x	x
SW8270SIM	PBDE 206	x	x	x	x
SW8270SIM	PBDE 209	x	x	x	x
SW8270SIM	PBDE 28	x	x	x	x
SW8270SIM	PBDE 47	x	x	x	x
SW8270SIM	PBDE 66	x	x	x	x
SW8270SIM	PBDE 71	x	x	x	x
SW8270SIM	PBDE 85	x	x	x	x
SW8270SIM	PBDE 99	x	x	x	x

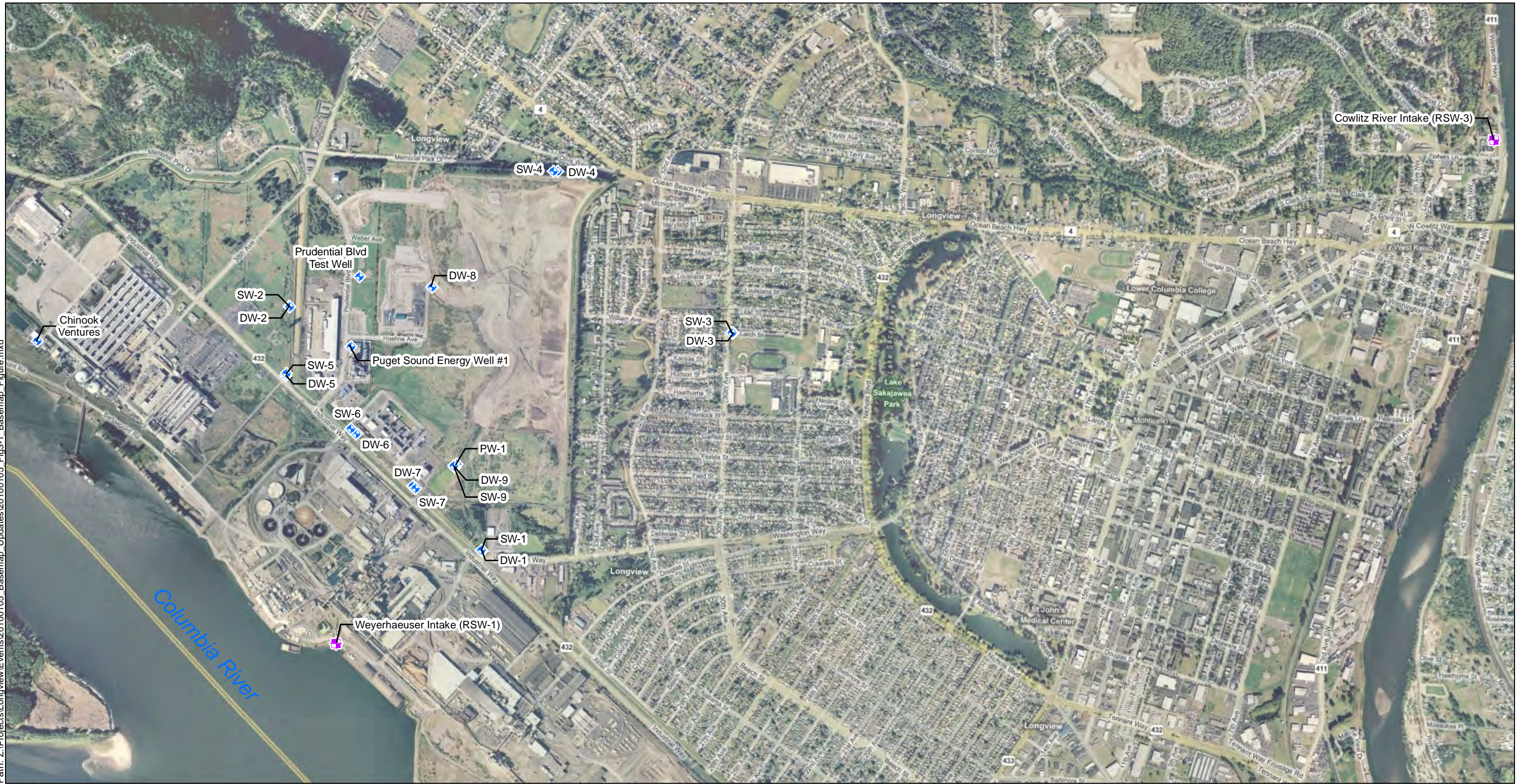
Table 4.1: Summary of Water Quality for Human Health Risk Assessment, Mint Farm Industrial Park Area - City of Longview, WA

DRAFT: January 4, 2010

Method	Tier	Analyte	Cas #	Units	Screening Level		Surface Water					Deep Groundwater Aquifer													
					Value	Source	RSW-1	RSW-3	RSW-2	Chinook	PW-1	PW-1	PW-1	DW-9	DW-9	DW-8	DW-7	DW-7	DW-6	DW-5	DW-4	DW-3	DW-2	DW-1	DW-1
							(Columbia River) 06/08/2009	(Cowlitz River) 06/08/2009	(Puget Sound Energy) 06/08/2009	Ventures 07/14/2009	10/05/2009	11/04/2009	11/11/2009	08/13/2009	11/12/2009	06/09/2009	06/10/2009	11/12/2009	06/10/2009	06/11/2009	06/11/2009	06/12/2009	06/11/2009	06/12/2009	06/09/2009
General Parameters																									
A2120B	2a	Color, Apparent	COLOR	color unit	--	--	10	10	5	5	25	20	15	10	20	5	ND	25	ND	10	10	10	5	10	15
A2320B	2a	Alkalinity, Total (As CaCO3)	ALK	mg/l	--	--	43	27	104	164	105	102	104	112	89	112	86	87	112	112	170	163	133	85	85
A2340B	2a	Hardness As CaCO3	HARDNESS	mg/l	--	--	43.2	24	87.8	140	99	87	88	92.9	70	87.9	72.5	74	85.9	99.2	134	151	103	69.8	74
A2510B	2a	Conductivity	COND	umhos/cm	--	--	128	83	247	376	240	232	228	435	194	239	197	191	239	273	377	407	293	194	189
A2540C	2a	Total Dissolved Solids (Residue, Filterable)	TDS	mg/l	--	--	62	55	164	235	187	166	175	161	145	160	150	147	161	165	233	247	182	160	144
A4500SIO2	2a	Silica	7631-86-9	mg/l	--	--	10.7	23.9	58.8	43.1	51	59	59	59.7	55	76.9	70.3	55	64.2	67	54.3	72.5	52.6	74.7	55
A5310C	2a	Total Organic Carbon	TOC	mg/l	--	--	2.2	1.3	0.8	1.9	1.62	1.45	1.29	1.9	1.2	1.5	1.4	1.17	2.5	2.3	4.3	1.8	2.1	1.3	1.28
A5910B	2a	UV254	CASID10075	cm -1	--	--	33.4	40.9	29	0.048	0.039	0.04	0.05	0.037	0.054	0.04	0.04	0.054	0.03	0.03	0.05	0.04	0.04	0.06	0.053
E150.1	2a	pH	pH	pH units	--	--	7.55	7.54	7.56	7.73	7.34	7.91	7.37	7.78	7.38	7.61	7.53	7.22	7.83	8.04	7.55	7.83	8.05	7.46	7.26
E180.1	2a	Turbidity	TURBIDITY	ntu	--	--	6	8	3.6	3.9	2.97	2.01	1.28	3.3	0.99	6.7	3.3	2.58	1.3	0.5	33.7	4.2	11.5	8.8	12
Microbial Parameters																									
A9221E	2a	Fecal Coliform	FECCOLI	mpn/100ml	--	--	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
A9223B	2a	Coliform	COLIF	mpn/100ml	--	--	205	210	ND	ND	7.4	1.0	ND	2	ND	7	12	ND	1	22	248	ND	7	ND	ND
Contaminants To Be Removed Using Treatment																									
E200.8	2a	Arsenic	7440-38-2	µg/l	10	MCL	0.85	ND	7.24	7.6	6.1	5.7	5.85	3.46	4.14	9.17	2.95	4.3	2.29	3.75	6.32	5.82	4.88	2.44	3.77
E200.7	2a	Iron	7439-89-6	µg/l	26,000	EPA RSL ²	358	492	1,110	808	1,050	867	901	1,060	637	1,840	1,220	1,220	450	308	5,030	966	895	2,250	2,370
E200.7	2a	Manganese	7439-96-5	µg/l	2,200	MTCA Method B ²	17.2	17	498	415	681	554	574	587	513	593	671	662	371	233	804	377	216	605	548
Naturally Occurring Minerals and Salts																									
E200.7	2a	Calcium	7440-70-2	µg/l	--	--	11,300	7,100	24,400	36,900	28,200	23,900	25,500	26,500	22,600	24,800	20,800	21,600	24,100	26,400	41,900	44,600	27,000	20,200	21,500
E200.7	2a	Magnesium	7439-95-4	µg/l	--	--	3,630	1,530	6,530	11,500	7,020	6,670	5,790	6,500	5,010	6,280	4,950	4,950	6,270	8,070	7,030	9,730	8,660	4,740	4,810
E200.7	2a	Potassium	7440-09-7	µg/l	--	--	1,170	584	4,040	5,040	3,570	3,620	3,250	3,620	3,200	4,140	3,010	2,950	3,670	4,050	3,740	3,960	5,610	2,730	2,650
E200.7	2a	Silicon	Si	µg/l	--	--	5,630	7,550	24,100	21,500	26,400	27,200	24,700	24,600	25,300	22,600	23,200	24,200	21,100	20,400	24,000	21,500	17,900	23,400	24,500
E200.7	2a	Sodium	7440-23-5	µg/l	--	--	9,470	5,030	9,580	16,400	11,000	10,100	9,280	10,300	8,890	11,500	8,990	8,620	10,800	12,000	23,700	18,800	14,000	8,650	8,850
E300	2a	Bromide	BROMIDE	mg/l	--	--	ND	ND	0.2	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	0.2	NA	0.2	NA	0.2	ND
E300	2a	Chloride	CHLORIDE	mg/l	--	--	5.4	3.3	12.1	19.2	8.36	7.48	7.56	6.5	5.28	7.9	5.7	6.3	12.3	16.4	18.7	32.4	12.1	5.4	5.17
E300	2a	Fluoride	FL_T	mg/l	4	MCL	ND	ND	0.2	0.3	ND	0.21	0.24	ND	0.27	ND	0.3	0.28	0.2	ND	ND	ND	0.3	0.2	0.31
E300	2a	Nitrogen, Nitrate (As N)	N_NO3	mg/l	10	MCL	0.4	0.3	ND	ND	ND	ND	ND	ND	ND	0.3	0.3	ND	0.3	0.3	0.3	0.3	0.3	0.3	ND
E300	2a	Nitrogen, Nitrite	NO2N	mg/l	1	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
E350.1	2a	Nitrogen, Ammonia (As N)	N_NH3	mg/l	--	--	ND	ND	0.28	0.26	0.194	0.197	0.213	0.13	ND	0.34	0.25	0.232	0.1	ND	0.51	0.16	ND	0.32	0.345
E365.3	2a	Phosphate, Ortho-	14265-44-2	mg/l	--	--	0.03	0.03	0.58	0.35	NA	NA	NA	0.41	NA	0.25	0.35	NA	0.45	0.53	0.09	0.21	0.34	0.17	NA
E365.3	2a	Phosphorus, Total (As P)		mg/l	--	--	NA	NA	NA	NA	NA	NA	0.585	NA	0.566	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E365.3	2a	Phosphorus, Total Orthophosphate (As P)		mg/l	--	--	NA	NA	NA	NA	0.329	0.346	0.575	NA	0.386	NA	NA	0.247	NA	NA	NA	NA	NA	NA	0.102
E300	2a	Sulfate	SULFATE	mg/l	--	--	6.9	5.8	0.3	0.2	0.45	0.57	0.6	0.4	1.42	0.3	2.4	1.61	1.7	0.7	1	0.5	3.4	1.6	1.26
Metals																									
E200.7	2a	Aluminum	7429-90-5	µg/l	37,000	EPA RSL	392	704	54	ND	ND	ND	2.3	23.2	2.5	4.3	4.7	ND	47.6	23.2	1,460	37.9	435	4.3	ND
E200.7	2a	Zinc	7440-66-6	µg/l	4,800	MTCA Method B	22.3	ND	ND	ND	ND	ND	3.6	ND	ND	2.3	ND	ND	ND	ND	8.5	ND	ND	ND	ND
E200.8	2a	Antimony	7440-36-0	µg/l	6	MCL	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND
E200.8	2a	Barium	7440-39-3	µg/l	2,000	MCL	18.1	4.01	20.4	25.7	14	12	13	13.8	10	25.1	12.9	11	12.5	13.2	24.8	30.9	27.7	12	11
E200.8	2a	Beryllium	7440-41-7	µg/l	4	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.043	ND	0.021	ND	ND
E200.8	2a	Cadmium	7440-43-9	µg/l	5	MCL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.029	ND	0.039	ND	ND	ND
E200.8	2a	Chromium, Total	7440-47-3	µg/l	100	MCL	0.34	0.26	ND	ND	0.2	ND	0.73	ND	ND	ND	ND	ND	ND	2.59	ND	0.63	ND	0.27	
E200.8	2a	Copper	7440-50-8	µg/l	1,300	MCL	1.48	2.08	0.33	0.15	0.2	ND	0.3	ND	ND	ND	ND	ND	ND	2.27	0.17	0.8	ND	ND	
E200.8	2a	Lead	7439-92-1	µg/l	15	MCL	0.267	0.105	0.061	ND	ND	ND	0.05	ND	ND	ND	ND	0.033	ND	0.355	0.022	0.177	ND	ND	
E200.8	2a	Nickel	7440-02-0	µg/l	100	MCL	0.45	0.34	0.26	0.48	0.6	0.67	0.67	1.68	0.63	0.86	0.77	0.61	0.91	0.96	2.59	1.51	1.26	0.74	0.57
E200.8	2a	Silver	7440-22-4	µg/l	50	WA GQC	ND	ND	ND	ND	0.07	0.08	0.033	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
E200.8	2a	Uranium	U	µg/l	30	MCL	0.375	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.025	ND	0.052	ND	ND	ND	ND	ND
Volatile and Synthetic Organics																									
E524.2	2a	Chloroform	00067-66-3	µg/l	80	MCL (total trihalomethanes)	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	0.86	ND	ND	ND	2.4	ND	ND	
E525.2	2a	Bis(2-Ethylhexyl) Phthalate	00117-81-7	µg/l	6	MCL	ND	ND	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND
E525.2	2b	Diocetyl Adipate	103-23-1	µg/l	56	EPA RSL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	
E525.2	2b	Fluoranthene	00206-44-0	µg/l	640	MTCA Method B	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
E525.2	2b	Isophorone	00078-59-1	µg/l	46	MTCA Method B	ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	
Radiation																									
E900	2a	Alpha, Gross	ALPHA	pci/l	15	MCL	1.5	1.5	0.79		-0.56	-3.1	0.21		0.28	3.8		0.34	-0.26	0.57	0.47	-0.5	0.37		
E900	2a	Beta, Gross	BETA	pci/l	50	WA GQC (MCL is 4 millirems/year)	3.8	0.85	6.4	4	2.9	1.2	5.0	3.7	1.										



Figures

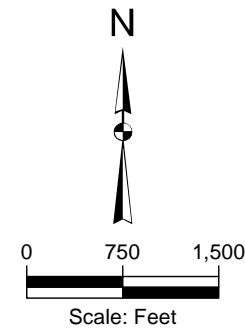
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Aerial Source: (c)2009 Microsoft Corporation

Legend

-  Well Location
-  Surface Water Sample Location



Kennedy/Jenks Consultants

Mint Farm RWTP Design
Longview, Washington

Basemap

KJ 0997003*00
January 2010

Figure 3.1