REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON 98595

Ecology Facility Site ID: FS 1127
Ecology Cleanup Site ID: CS 4988
Agreed Order (AO) ID: DE 3812

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Sign-off Sheet

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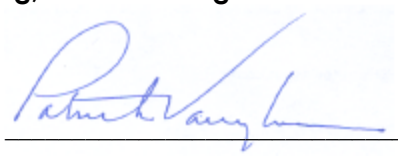
Reviewed by 

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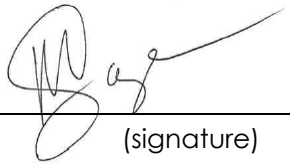
Approved by 
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1.0 INTRODUCTION

This Remedial Investigation-Feasibility Study (RI-FS) is for the Hungry Whale property located at 1680 North Montesano Street, Westport, Grays Harbor County, Washington. The property is owned by the Port of Grays Harbor (The Port) and is currently leased to a private entity. This document describes the property and surrounding area and summarizes the nature and extent of contamination; the results of the previous investigations completed to define the extent of the impacted area; a current CSM; a description of several potential approaches and alternatives for cleanup actions; an evaluation of the technical feasibility, effectiveness, protectiveness and cost of each alternative; and the selection of the preferred remedial alternative for final clean-up.

This RI-FS addresses requirements under the State of Washington Model Toxics Cleanup Act (MTCA) as outlined in Washington Administrative Code (WAC) Chapters 173-340-350 and 173-340-360. This RI-FS was prepared in accordance with Washington's Department of Ecology (Ecology) May 2016 RI Document Template, the FS Checklist, and the CSM Checklist.

1.1 GENERAL PROPERTY INFORMATION AND LOCATION

The Hungry Whale property is owned by The Port and is currently leased as a retail gasoline fueling station. The property is a small portion of the much larger, Port-owned APN No. 616120142001 and is situated in the western-most corner of APN No. 616120142001. The property is located at the east corner of the intersection of North Montesano Street and Wilson Avenue in Westport, Grays Harbor County, Washington (***Figure 1***). A copy of the legal description of the property (including the Port-provided Hungry Whale leasehold boundaries; a nearly-square shaped parcel with sides of approximately 150, 151, 155, and 173 feet in length) is contained in ***Appendix A***. The property is in the northeast quarter of the southeast quarter of Section 1, Township 16 North, Range 12 West.

The property is further identified by Ecology as Facility Site #1127 and Cleanup Site #4988 with Agreed Order #3812. Property improvements include a convenience store and a retail gasoline station that currently consists of three gasoline underground storage tanks (USTs) and one dispenser island equipped with four fuel dispensers. The current USTs are in the southern portion of the property. The former USTs consist of one removed UST and one abandoned-in-place UST, located in the central portion of the property. The surface of the property consists of weathered asphalt and/or concrete. A storage building and a vacant residence are in the eastern portion of the property. A generalized layout of the property (including the property boundaries and the locations of the current and former USTs) is provided on ***Figure 2***.

Ecology defines a Site by the limits of impacted media, not by the legal boundaries of the property. For the Hungry Whale, the impacted media extends off-property and therefore the Site boundary extends beyond the property limits. The extent of the Site limits is documented in subsequent sections and figures in this report.

Land Use Surrounding the Property

A currently vacant restaurant is located approximately 45 feet northeast of the property. Further northeast is vacant land. Vacant land is located immediately to the east and southeast of the property; further to the southeast is a small commercial structure with a former small go-cart race course currently used for equipment storage by a seafood processer. East of the go-cart race course is the Ocean Cold, LLC facility (a cold-storage seafood warehouse). South of the go-cart race course is the Westport Airport (general aviation facility). Land immediately east and south of the property is also owned by The Port. North/northwest of the property is Wilson Avenue and, across Wilson Avenue, is vacant land. Westport Shipyard occupies several large warehouse structures north of the vacant land.

West of the property (across the intersection of North Montesano Street and Wilson Avenue) is the 79-acre open-space Westhaven State Park. Southwest of the property is North Montesano Street and, across the street, is Englund Marine and Industrial Supply. Past the Englund Marine (further to the southwest) is the Holand Center RV Park and several small marine-related commercial businesses. South of the open land (along the west side of North Montesano Street) is a self-storage facility (lockable units with roll-up doors and exterior motor-home storage); a small card-lock self-service fueling center owned and operated by Masco Petroleum, with two dispenser islands and four dispenser pumps; and the American Sunset RV & Tent Resort.

1.2 PROPERTY HISTORY

The property was developed as a fueling station as early as 1976 and the following property/surrounding area history (based on 1976, 1981, 1990, and 2000 aerial photographs) was excerpted from the Sound Environmental Strategies (SES; now SoundEarth Strategies) *Draft Final Remedial Investigation Report,* dated June 5, 2008 (2008, SES RI), but adjusted to match the property leasehold boundary.

- 1976: The western portion of the existing Hungry Whale building is visible, and a single fuel-dispensing pump island is located to the west of the building. The location of the USTs on the property is not evident in the photo. The property appears to be unpaved. A building and a residence are in the eastern portion of the property with commercial buildings to the east of the property and what appears to be a commercial structure is located to the south of the property. Across Wilson Avenue north of the property is what appears to be either a sign or a fuel-dispensing pump island. A concrete pad, similar in appearance to those that commonly cover USTs, is located to the north of the sign/pump island. The land across North Montesano Street (to the west of the property) is undeveloped.

- 1981: An addition has been made to the eastern portion of the Hungry Whale building, and a canopy now extends over the pump island from the west side of the building. A concrete UST pad is clearly visible extending from the southern side of the Hungry Whale building. Boats and other debris are scattered on and southeast of the property. The pump island/sign and concrete pad remain visible on the land north of the property and north of Wilson Avenue. No other significant changes are noted.

- 1990: No significant changes are visible on the property. The sign/pump island and concrete pad have been removed from the land to the north (across Wilson Avenue).

- 2000: The concrete pad that formerly extended from the south side of the Hungry Whale building has been removed, and a new concrete pad is visible over the location of the current USTs. The structure to the south of the Site has been removed and a large parking lot has been paved to the southeast. The existing warehouse buildings have been constructed on the property across Wilson Avenue to the north of the Site.

- 2011-2018: At the time of Stantec's visits, the Site remained essentially unchanged from the 2000 SES observations.

The following environmental historical summary for the property is based on review of prior environmental documents and Ecology-provided project information:

- In 1985, an approximate 2,000-gallon release of gasoline occurred from a leaking product delivery line.

- In October 1990, soil samples were collected from areas near the former USTs (located near the south/southwest corner of the property's station building). Concentrations of petroleum hydrocarbons (Total Petroleum Hydrocarbons as gasoline [TPH-G] and benzene, toluene, ethylbenzene, and xylenes [BTEX]) in the soil samples reportedly exceeded current MTCA Method A cleanup levels (CULs).

- In March 1991, two former USTs were decommissioned: one 2,000-gallon UST that was apparently excavated and removed from the property, and one 6,000-gallon UST that was abandoned-in-place (to prevent structural instability of the convenience store) and filled with sand-and-concrete slurry. Both USTs were reportedly located immediately south/southwest of the convenience store building. During UST decommissioning, several test pits were excavated in the central portion of the property and a thin layer of separate-phase hydrocarbons (SPH) was detected in one of the UST excavations and/or test pits. Soil samples were also collected as part of preliminary assessment activities and found to contain TPH-G/BTEX above MTCA Method A CULs. Prior documentation reveals that impacted soil was excavated and removed from the property at this time as an interim remedial action; however, Ecology states that it has no documents related to the excavation and as such, concludes that impacted soil was <u>not</u> excavated or removed from the property at that or any subsequent time.

- At the same time the former USTs were decommissioned in 1991, the three current USTs were installed in the southeast portion of the property.

- Between November 1991 and May 1992, nine groundwater monitoring wells were installed at the property and 2 additional wells were installed north of the property (across and north of Wilson Avenue). This work was essentially the preliminary Remedial Investigation (RI). SPH was observed on the water table, and TPH-G and BTEX were detected at concentrations above MTCA Method A CULs.

- Between late 1991 and 1993, four groundwater monitoring events were conducted by SAIC and/or Development, Planning, Research, and Analysis (DPRA). During this period,

groundwater samples collected from the wells at the property contained TPH-G and BTEX above MTCA Method A cleanup standards. Additionally, measurable SPH was detected in wells located in the central portion and the west corner of the property, and in a well located near the on-property storage building.

- Between July 1997 and October 1999, a biosparge remediation system operated. The system consisted of one off-property air-injection well (IW-1, located in Wilson Street northeast of the property), four on-property air-injection wells (IW-2 through IW-5, located in the center of the property near the former USTs), and 11 surrounding off-property groundwater extraction wells (EW). Contaminant concentrations exhibited an initial decline; however, concentrations rebounded to pre-treatment levels in November 2000.

- In January 2005, Urban Redevelopment (UR) reportedly advanced approximately 7 soil borings, all of which were completed as groundwater monitoring wells. Three were located on the property: MW-01(UR) through MW-03(UR). Four were off-property: MW-05(UR), MW-06 (UR), MW-13(UR), and MW-14(UR). A storm water metal culvert located just beyond the southeastern property line was punctured during advancement of one of the borings (MW-13[UR]). SPH was noted floating on the water within the culvert – the SPH thickness was not specified.

- Between April and October 2007, SES conducted another RI investigation that consisted of 9 initial direct-push soil borings (on-property P01 through P06, P08 and P09, and nearby but off-property P07 to the southeast) and six additional soil borings/groundwater monitoring wells: on-property B-20/MW-20 through B-23/MW-23; off-property B-24/MW-24 to the west; and off-property B-25/MW-25 to the southwest. In late June 2007, groundwater monitoring and sampling was conducted during which SPH was detected in on-property wells MW-04 (0.02' thick) and MW-09 (0.08' thick). In October 2007, twelve (12) subsequent off-property direct-push soil borings (P10 through P21 in Wilson Avenue and N. Montesano Street) were advanced.

  Soil and shallow groundwater impacted with TPH-G, BTEX, and naphthalene above MTCA Method A CULs were detected in the northern, central, western and south/southeastern portions of the property. Impacted vadose and capillary fringe soil was detected in several nearby off-property direct-push borings in North Montesano Street (P11 through P13) and Wilson Avenue (P15 and P16). Shallow groundwater "grab" samples were collected from on-property P01 through P06 and P08, and from off-property P07, P11, P14, and P18 through P20. Impacted groundwater was encountered at on-property P01 through P06 and P08, and at off-property P07, P11, P14, and P18. During the June 2007 groundwater monitoring event, shallow groundwater impacts were not observed at off-property wells located just southeast of the property boundary (at MW-03 and MW-13[UR]), north of the property (at MW-03[UR] and MW-05[UR]), east of the property (at MW-01[UR] and MW-14[UR]), or west/southwest of the property (at MW-06[UR] and MW-25).

- Groundwater monitoring and sampling has been conducted since June 2007 at the on- and off-property groundwater wells as follows: November 2011; March 2012; June 2012; October 2012; June 2013; June 2014; April/May 2016; January 2018; and June 2019. Groundwater elevation contour maps are provided as ***Figures 3a through 3i*** and groundwater well analytical data are shown on ***Figure 4***.

Results from the April/May 2016, January 2018 and June 2019 groundwater sampling events (the most-recent events) indicate that shallow groundwater impacted with TPH-G and BTEX concentrations exceeding MTCA Method A CULs exists within the northern, western, and southern portions of the property near the former and current USTs and dispenser product piping. The only off-property location where groundwater impacts have exceeded MTCA A standards is to the south/southwest and across North Montesano Street. TPH-G and BTEX concentrations exceeded MTCA A CULs during one sampling event at MW-25 (located on the east side of Montesano Street) during one sampling event only (April 2016). Prior and subsequent sampling of MW-25 did not indicate concentration above MTCA A levels. Off-site groundwater impacts appear to be limited to east of Montesano Street as indicated by results of sampling groundwater from perimeter property wells MW-1, MW-21, and MW-3. Those wells continue to show non-detect TPH-G and BTEX concentrations. Additionally, groundwater from off-property wells MW-13, MW-14, MW-24, and MW-05 continue to show non-detect TPH-G and BTEX concentrations.

In summary, the gasoline-related impacts in the vadoze zone, capillary fringe, and saturated soil and in the shallow groundwater at and in the immediate vicinity of the property resulted from a release from the property's former piping and UST fueling system. Impacts exist within the northern, western, and southern portions of the property and appear to extend approximately 35 feet to the north/northwest and to the south/southwest beneath Wilson Avenue and North Montesano Street. The extent of these impacts defines the Site per Ecology's definition.

Leasehold Information for the Property

As required by Ecology, the following leasehold information for the property is provided.

- A lease for the property was initiated between the Port and Doug Cornman in 1977. This lease (Lease 433) was amended and reassigned several times between 1977 and approximately 1987.

- As of December 31, 1986 and as documented in a memorandum from Karl Wallin (Director of Port Terminals), occupant Paul Taylor (sub-lessee to Doug Cornman) had filed suit in Grays Harbor Superior Court for damages and recession of sub-lease due to the 1985 approximate 2,000-gallon gasoline release.

- In approximately 1987, Lease 433 was assigned from Doug Cornman to Berkley & Kathleen Barker. On October 29, 1990, the Barkers requested a new 30-year lease directly with the Port.

- On November 30, 1990, the Port and the Barkers entered into a new 30-year lease (Lease 619).

Details of the Lease 619 (that expires on November 30, 2020) between the Port and the Barkers were provided in Stantec's Draft Focused Feasibility Study (dated July 25, 2014) previously submitted to Ecology. The lease requires that the tenant accept the premises as-is and may not demand that the owner make any improvements or maintenance thereof. The tenant must gain owner approval before making any improvements to the property, and any alterations or improvements are at the sole expense of the tenant. All improvements may be removed by the

tenant prior to lease termination. Any remaining improvements revert to the owner; however, if the tenant removes any part of a building from the premises, it must remove all buildings, unless the owner requests portions, including the foundation, to remain. The owner may require the tenant to remove all or any portion of the improvements and must notify the tenant as such within 90 days of expiration of the lease.

The tenant must, at its own expense, maintain all building and improvement in good repair, and the tenant must comply with all federal, state, and municipal governmental requirements applicable to the property or any structures or improvements. The tenant expressly assumes all responsibility for petroleum and other products spilled or released from vehicles, rail cars, vessels, tanks, pipelines, structures or other leasehold improvements. The tenant holds the owner harmless from all liability, damages, suits, fines or penalties resulting from the escape of such products. The tenant also assumes responsibility for all hazardous substances deposited on the leased premises by the tenant or by any other party and assumes responsibility for the cost of any resulting remedial action necessary to restore the premises to a satisfactory condition, pursuant to federal, state and local regulations.

1.2 PROPERTY USE AND LAND ZONING

The property has operated as a fueling station since at least 1976 and Stantec understands that it is planned to operate as such at least until the end of the current lease. Future plans for the property have not been determined by the Port. APN #616120142001 was originally zoned as Commercial by the City of Westport. In 1995, the site and adjacent properties were reclassified to the Marine Industrial zoning district. During a comprehensive plan update in 1998, the site was included in a newly created Mixed-Use Tourist Commercial 1 (MUTC-1) zoning district which is its current designation by the City of Westport. In accordance with Chapter 17.20A of the Westport Municipal Code, the intent of the MUTC1 Zoning District is as follows:

(1) It is the intent of the mixed-use tourist commercial (MUTC) zone that there be a mixture of tourist commercial and residential uses in close proximity. Mixed use can include, but is not limited to, mixed use buildings with retail or office uses on the lower floors and residential above, or uses which mix commercial and residential.

(2) The MUTC zone provides an opportunity to develop areas in Westport that are tourist-oriented, pedestrian friendly, and provide a variety of housing and quality community design. For all purposes, the MUTC zone shall be considered a commercial zone.

Permitted uses in the district include public, commercial, recreational, and tourist related uses.

2.0 Remedial Investigation Summary

Results of prior investigations performed by Stantec and others (documented by SES, who summarized earlier site assessments and remediation during the 1990s and 2000s) are detailed in following reports that were previously submitted to the Washington State Department of Ecology (Ecology):

- *Draft Final Remedial Investigation Report*, Sound Environmental Strategies (SES) dated June 5, 2008;
- *Soil Gas Sampling and Groundwater Monitoring Assessment*, Stantec dated January 25, 2012;
- *Indoor/Outdoor Air Sampling Report,* Stantec dated April 25, 2012;
- *Supplemental Remedial Investigation Report*, Stantec dated January 22, 2013; and
- *Draft Focused Feasibility Study*, Stantec dated July 25, 2014.

Additional historical information was obtained from the initial Agreed Order 94-S388 (dated March 21, 1995), the Agreed Order 3812 (dated September 21, 2006) and the Agreed Order 3812 Amendment (dated February 24, 2016).

2.1 PRIOR ENVIRONMENTAL INVESTIGATIONS

The following presents additional details of the historical environmental investigations that were summarized in ***Section 1.2*** and that have been completed to date.

2.1.1 Previous Subsurface Investigations

In 1985, an approximate 2,000-gallon release of gasoline reportedly occurred from a leaking product delivery line. In October 1990, an Ecology contractor collected soil samples near the former USTs. Results indicated concentrations of TPH-G and BTEX exceeded MTCA Method A CULs.

<u>Former UST Abandonment, Current UST Installation, and Preliminary Assessments – 1991 through 1993</u>

In March 1991, two former USTs were decommissioned by Olympus Environmental: one 2,000-gallon gasoline UST was decommissioned by removal and one 6,000-gallon gasoline UST was decommissioned in-place (the UST interior was cleaned and filled with sand-and-concrete slurry). Both USTs were reportedly located immediately to the south/southwest of the convenience store building. A preliminary site assessment was also conducted, and soil samples collected during that assessment revealed impacts above MTCA Method A CULs. Several test pits were excavated on

the property at this time and a thin layer of SPH was found floating on the water table at a location close to the abandoned USTs. A test pit (located immediately east of the station building) revealed no petroleum hydrocarbon impacts. Ecology UST online summary records indicate that a third UST (closed-in-place) may exist at the property; however, there is no further information regarding the size, location, or former tank contents of this possible third UST. Following the UST abandonment activities, three replacement USTs (the current USTs) were installed at a new location in the southern portion of the property.

At the same time as the UST abandonment at the property, one off-property test pit (located north and across Wilson Avenue) was excavated to evaluate the potential risk for impacts that may have resulted from a Cardtrol facility that formerly operated on the north-adjacent property. No evidence of contamination was reportedly encountered at the former Cardtrol facility.

In November 1991, following the UST removal/in-place closure activities at the property, Ecology contracted with Science Applications International Corporation (SAIC) to conduct a remedial investigation/feasibility study (RI/FS). SAIC initially installed six groundwater monitoring wells to determine the extent of groundwater impacts. Laboratory analysis of groundwater samples identified TPH-G and BTEX at concentrations exceeding MTCA Method A CULs. SAIC installed three additional monitoring wells in May 1992 to further characterize subsurface conditions beneath the property and to collect data to aid in remedial system design. At that time, separate phase hydrocarbon (SPH) was observed on the water table.

Four groundwater monitoring events were conducted by Development, Planning Research and Analysis (DPRA) and SAIC between 1991 and 1993 (DPRA and SAIC 1993). Groundwater samples collected from the groundwater monitoring well network contained concentrations of TPH-G and BTEX above applicable CULs for unrestricted land use (MTCA Method A concentrations). Measurable SPH was reportedly observed in groundwater monitoring wells located in the central and northwestern portions of the property, and in a well located near the north corner of the property's storage building. According to SES' review of the SAIC-DPRA data, SPH was thickest in the central portion of the property.

In August 1993, Ecology requested that the Port of Grays Harbor assume responsibility for Site cleanup, resulting in the initial Agreed Order 94-S388 (dated March 21, 1995). It appears that an early Corrective Action Plan (CAP; undated) was prepared and submitted to Ecology; the CAP text was appended to the early Agreed Order as Exhibit A.

Biosparge Remediation (1997 through 1999) and Additional Assessment (January 2005)

Between July 1997 and October 1999, a biosparge remediation system was operated at the Site (discussed further in ***Section 2.1.2*** of this document). Contaminant concentrations exhibited an initial decline; however, concentrations rebounded to pre-treatment levels in November 2000.

Based on the November 2000 contaminant rebound, in 2004 Ecology requested an additional investigation to establish baseline concentrations of TPH-G and BTEX in both soil and groundwater.

In January 2005, Urban Redevelopment, LLC (UR) advanced approximately 7 soil borings/groundwater monitoring wells at and in the vicinity of the property: MW-01(UR) through MW-03(UR) on the property and four off-property, including MW-05(UR), MW-06 (UR), MW-13(UR), and MW-14(UR). A metal culvert located near the southwest corner of the property was punctured during advancement of well MW-13(UR). SPH was noted floating on the water within the culvert; however, the thickness of the SPH was not specified. According to SES' review of UR's data, the highest concentrations of TPH-G and BTEX in groundwater were detected in samples collected from the southwestern portion of the property near the current USTs. In general, concentrations of these compounds were similar to those prior to operation of the biosparge remediation system.

Remedial Investigation – 2007

Between April and October 2007, Sound Environmental Strategies (SES) conducted a remedial investigation at and in the vicinity of the property in order to identify the source(s) of the contamination beneath the site; more fully assess the vertical and lateral extent of the contamination; and, assist in the development of a remedial action. SES' 2007 field activities consisted of:

- Late April 2007 - sampling and analysis of soil and groundwater "grab" samples from eight (8) on-property direct-push soil borings (P01 through P06, P08 and P09, and nearby off-property P07 immediately south of the property). Most of these borings were drilled to depths of 12 to 15 feet below ground surface (bgs). Impacted soil (TPH-G, BTEX, and/or naphthalene above MTCA Method A CULs) was detected in the on-property borings but not at off-property boring P07 (see ***Table 1***). TPH-G and benzene isoconcentration maps are provided as ***Figures 6 and 7.*** Off-property test pits along the culvert south of the property were excavated to evaluate potential off-property contamination within or around the culvert;

- Also, late April 2007 - recovery of SPH within a nearby culvert and off-property test pits to the southeast along the culvert to control possible further off-property SPH migration (this was follow-up work performed as a result of UR's January 2005 inadvertent punctured culvert);

- Early June 2007 - drilling and installation of six additional on- and off-property soil borings, all of which were completed as groundwater monitoring wells: on-property B-20/MW-20 through B-23/MW-23; off-property B-24/MW-24 located west of the intersection of Wilson Avenue and N. Montesano Street; and off-property B-25/MW-25 located south of the property and across N. Montesano Street. B-21/MW-21 through B-25/MW-25 were drilled to depths of approximately 15 feet, completed with 10 feet of lower well screen and 5 feet of upper blank casing at the top of each well. B-20/MW-20 was drilled to a depth of 30 feet and completed as a single-cased well with screen from 25-30 feet bgs and again from 3-13 feet bgs;

- Late June 2007 - collection and analysis of groundwater samples from 16 of the 18 on- and off-property monitoring wells (including the six new wells; two pre-existing wells contained sheen or less than 0.1 feet of SPH and were not sampled);

- Early October 2007 - advancement of 11 additional direct-push soil borings (P10 through P21) located off-property within public rights-of-way in North Montesano Street and Wilson Avenue. Most of these borings were drilled to depths of approximately 8 feet bgs. Soil samples were collected from all 11 borings and groundwater "grab" samples were collected from P11, P14, and P18 through P20. The purpose of these off-property borings was to delineate the extent of petroleum-contaminated soil (PCS) previously identified along northern and western property boundaries. Impacted soil (TPH-G and/or BTEX at concentrations above MTCA Method A CULs) was encountered at off-property Borings P11, P12, P13, P14, P15 and P16; and,

- Early May 2007 - collection of water samples from cold- and hot-water faucets at a nearby residence, performed with Ecology's approval and as a result of that resident telling SES' field staff that the residential tap water had an odor of chlorine following rain storms. Information from public records review by others shows that water for residential and commercial uses is provided by the City of Westport, not domestic wells.

SES noted that laboratory analysis identified TPH-G and benzene in one or more soil samples collected from all of the on-property borings at concentrations above their respective MTCA Method A CULs (see Table 1). Soil contamination was also found to extend beneath the North Montesano Street and Wilson Avenue rights-of-way at distances of approximately 15 to 20 feet to the west and north of the property, but was not encountered in borings advanced further west and north of (beyond) North Montesano Street and Wilson Avenue. According to SES, off-property test pits that were excavated southeast of the January 2005 culvert puncture location did not show evidence of petroleum-hydrocarbon subsurface impacts.

During the late June 2007 groundwater monitoring event, thin layers of SPH were recorded in wells MW-04 and MW-09. In addition, concentrations of TPH-G and one or more of the BTEX constituents were detected in excess of their respective MTCA Method A CULs in groundwater samples collected from seven of the remaining 16 wells (see ***Table 2***). ***Figures F1 and F2*** in ***Appendix F*** are SES' TPH-G and benzene iso-concentration maps for June 2007. The contaminant distribution in groundwater monitoring wells closely resembled the distribution of the soil contamination, except for the northwest area of the active UST area (SES' boring P05).

Impacted groundwater (collected as "grab" samples via temporary stainless steel "hydropunch" and/or PVC screens placed inside the direct-push borings) was encountered in all of on-property borings and several of the off-property borings located in North Montesano Street and Wilson Avenue (see ***Table 2***); however, SES notes that the groundwater "grab" samples showed high turbidity and are more reflective of saturated soil impacts rather than groundwater. As requested by Ecology, ***Figures F3 and F4*** in ***Appendix F*** provide iso-concentration lines showing the extent of benzene and TPH-g concentrations using groundwater "grab" sample data.

Soil Vapor Extraction/Air Sparging (SVE/AS) Pilot Test Study – unknown date

During a September 2011 informal communication between Ecology, the Port, and Stantec, Ecology revealed that a Soil Vapor Extraction/Air Sparge (SVE/AS) pilot study was conducted at the property with a reported radius of influence (ROI) of approximately 50 feet and that "71 sparge points would be required". No further details of the pilot testing were provided. Neither the Port nor Stantec has a copy of the pilot test report, and one is not available on Ecology's public database/website.

Based on the primarily sandy/silty sand lithology beneath the property (and depending on the equipment & operating test pressures/vacuums), Stantec believes that the reported 50-foot ROI is technically feasible. Given the size of the property (a nearly-square parcel whose sides are approximately 150, 151, 154, and 173 feet in length), an approximate 10- to 15-point SVE/AS system could be accommodated at and in the immediate vicinity of the property with overlapping coverage based on a 50-foot ROI.

Soil Gas Survey and Vapor Intrusion Study – December 2011 and March 2012

On December 12, 2011, Stantec supervised the installation of seven shallow soil gas probes (SG-1 through SG-7) to depths 4.5 feet bgs at the property to evaluate the possible presence of subsurface soil gas impacted by petroleum hydrocarbons. Soil gas samples were collected from the shallow probes on December 20, 2011. Laboratory analysis of shallow soil vapor samples indicated that no VOCs were detected at concentrations at or above Table B-1 Screening Levels (in *Washington Department of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Review Draft, October 2009)* in samples from SG-1 or SG-7 only, located in the north portion of the property and approximately 40 feet south of Wilson Avenue. Concentrations of BTEX, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene exceeded their respective Table B-1 Screening Levels in the remaining five vapor samples SG-2 through SG-6, located in the central and southern portions of the property where impacted soil and shallow groundwater are present. Results of the shallow soil gas assessment are presented in ***Table 3a***.

Due to elevated concentrations of volatile organic compounds (VOCs) detected in the soil gas samples collected near the building (SG-2 and SG-3), Ecology recommended collecting indoor air samples to evaluate vapor intrusion[1]. On March 21, 2012, Stantec collected two indoor and two outdoor ambient air samples. Laboratory analysis of ambient air samples indicated that none of the VOCs analyzed were detected at concentrations at or above the Method C indoor air screening levels presented in Table B-1 (referenced above) and that results of the indoor and outdoor ambient samples were not discernably different. Based on the data, vapor intrusion did not appear to be occurring and as such, the vapor exposure pathway was determined to be incomplete. Results of the ambient air sampling event are presented in ***Table 3b***.

[1] Ecology has not developed guidance to assess vapor intrusion at sites where workers are exposed to the same chemicals in the work place (e.g., gasoline filling stations)

Groundwater Monitoring and Sampling – 2011 through 2019

Stantec has conducted eight groundwater monitoring and sampling events since SES' 2007 assessment work during the following timeframes: Fourth Quarter 2011; First through Third Quarters 2012; Second Quarter 2013; Second Quarter 2016; January 2018; and June 2019. Field parameters of dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, and/or conductivity have been measured at the wellheads during low-flow purging and sampling with pump intakes placed at depths of approximately 9 to 11 feet (varies depending on the depth to water each quarter but equivalent to 4 to 6 feet below the surface of shallow groundwater; mid-screen interval for SES' 2007 wells and upper screen interval for the earlier wells). Groundwater samples were analyzed for TPHg, BTEX, and one or more of the following general water quality/minerals parameters: DO, conductivity, total dissolved solids (TDS), nitrate, sulfate, total alkalinity, dissolved methane, ferrous iron, total iron, and chloride. The three 2012 quarterly events were only performed at selected on-property groundwater monitoring wells whereas the subsequent events were conducted at all on- and off-property wells. The January 2018 event included three onsite wells (MW-10, MW-21, and MW-22) and one offsite well (MW-25).

Table 4 is a cumulative summary of the monitoring and sampling results from the groundwater monitoring well network, including SES' June 2007 event. Copies of laboratory certificates of analyses for the April/May 2016, January 2018, and June 2019 groundwater samples (that have not yet been sent to Ecology) are included in ***Appendix B***.

As they relate to the definition of potable water, Site inorganic data were compared to national drinking water standards as Washington State (which does not have its own standards) defaults to the national standards. Iron and manganese exceed their National Secondary Drinking Water Maximum Contaminant Levels (MCLs) of 0.3 mg/L and 0.05 mg/L, respectively (ref: *National Primary and Secondary Drinking Water Regulations* in U.S. EPA 816-F-09-004, May 2009; the applicable standards on the State of Washington's Drinking Water Standards website, downloaded and reviewed by Stantec; February 21, 2017).

Site-Wide Groundwater Monitoring Well Professional Survey – April 2016

In April 2016, the tops of accessible well casings were professionally surveyed for vertical control by Berglund, Schmidt & Associates (under contract to Stantec). Berglund, Schmidt & Associates used area benchmark "Tidal 2 1952 reset, elevation 15.26' NAVD88". A copy of their survey (not previously provided to Ecology) is provided in ***Appendix C***.

2.1.2 Previous Remedial Measures: 1997 through 1999, and 2007

During the March 1991 UST decommissioning activities, impacted soil was observed in the vicinity of the USTs; however, there is no documentation that any impacted soil was excavated and removed off-property. Even if soil excavation had been conducted (but not documented), it would have likely been fairly limited in extent and focused in the area immediately surrounding

the two USTs. Similarly, impacted groundwater was observed but there is no documentation that any impacted groundwater was extracted, treated, and/or transported off-property.

Biosparge Remediation – 1997 through 1999

A biosparge remediation system was installed by Hobby, Ltd. in June 1997 and consisted of five injection wells (IWs); one off-property in Wilson Avenue and four on-property and 11 off-property extraction wells (EWs). The system operated between July 1997 and October 1999. Biosparging is an in-situ remediation technology that uses indigenous microorganisms to biodegrade organic constituents in the saturated zone. In biosparging, air (or oxygen) is injected into the saturated zone to increase the biological activity of the indigenous microorganisms. Biosparging can be used to reduce concentrations of petroleum constituents that are dissolved in groundwater, adsorbed to soil below the water table, and within the capillary fringe.

Groundwater was reportedly extracted from the off-property extraction wells, pumped through a combustion engine intended to heat the groundwater and volatilize contaminants. Following treatment, the groundwater was reinjected into the subsurface via the five injection wells. The injection wells were presumably in place to increase biological activity in the contaminated zone (to reduce contaminant concentrations). The extraction wells were presumably in place to increase the effect of injection activities by pulling groundwater toward the edges of the Site in all directions and to recover contaminated groundwater. Substantial declines in TPH-G and BTEX were initially observed during operation of the remediation system; however, contaminant concentrations rebounded to pretreatment levels in November 2000, following system shut-down.

SPH Removal as Interim Remedial Action - 2007

As a result of the rebound in contaminant concentrations, Ecology requested additional investigation to re-establish baseline soil and groundwater concentrations. Additional soil borings were advanced in early 2005 in various locations and, during the drilling of one of these borings (MW-13[UR]) just beyond the southern corner of the property, the soil boring punctured the top of a storm water metal culvert, and what appeared to be a layer of SPH was noted floating on the water that had collected in the culvert. As such, the culvert became a conduit through which SPH had migrated and the culvert itself considered to be a new and different source of contamination.

The subsurface culvert was unearthed during SES' 2007 investigation. SPH was noted in the culvert at an approximate thickness of two inches. As part of interim remedial action, a mixture of weathered gasoline and water was removed through vacuum extraction (using a stinger and vacuum truck). The contents of the culvert (estimated at approximately 1,620 gallons of liquid) were removed. Approximately 400 gallons of this total was considered by SES to be SPH in the form of weathered gasoline.

During culvert reconstruction, SES supervised the installation of a vertical standpipe in the culvert at the same location where the SPH removal stinger had operated, anchored in place, and sealed with bentonite. A small gap between the bottom of the culvert and the bottom of the

standpipe remained to allow convenient extraction of possible future contaminated fluids without re-excavation of the culvert.

2.1.3 Analysis of Previous Remedial Measures

The two historical remedial measures (biosparging and SPH removal from the culvert) appear to have varying degrees of success for long-term remediation of the petroleum hydrocarbon-impacted soil and shallow groundwater. The 1997 – 1999 biosparging was initially successful; however, following system shut down, hydrocarbon concentrations rebounded to pre-sparge levels. The 2007 interim remedial action (removal of SPH from the culvert) addressed the culvert as a source area and reduced additional impacts to groundwater from SPH seeping from the culvert into the groundwater.

Implementation of biosparging was likely intended to increase the biological activity of indigenous microorganisms (generally found in the saturated zone) through injection of air/oxygen to enhance aerobic biodegradation of petroleum hydrocarbons. Biosparging can be used to reduce concentrations of petroleum constituents dissolved in groundwater; adsorbed to soil below the water table; and within the capillary fringe. Based on reductions in concentrations of petroleum hydrocarbons, it appears that this measure was initially effective; however, groundwater contaminant concentrations in monitored portions of the property eventually rebounded to pre-remediation levels. This rebound is likely attributed to hydrocarbons adsorbed to soil within the vadose and capillary fringe zones, and/or SPH in saturated soil and on the water table: biosparging is not recommended where free product is present because it can create groundwater mounding, potentially causing free product migration and further spread of contamination (EPA, Oct 2017; Publication 510-B-17-003, Chapter 8).

The remedial measures may have been more effective if the source areas (SPH on groundwater, and impacted soils) had been removed prior to implementation of biosparging. By removing the source areas, residual dissolved-phase hydrocarbons present in groundwater would likely have been reduced significantly during biosparge remediation efforts. The early remedial operations may have also been more effective if air-sparging had occurred just beyond the lateral extent of the impacted media combined with on-property extraction (thereby pushing the contaminants back towards and extracting the contaminants at the center of the property).

2.2 SITE CHARACTERIZATION

As described above, prior Site environmental work has been conducted by several different firms with the most-recent intrusive subsurface soil and groundwater assessment being performed by SES in 2007. Stantec cannot comment on the details of the field/analytical protocols of the early assessment and UST decommissioning work as Stantec has not seen or reviewed those original assessment documents. The most-recent sampling work has been conducted by Stantec and includes: a soil gas survey at the property (December 2011); a vapor intrusion study at the property (March 2012); and Site-wide groundwater monitoring and sampling conducted periodically since December 2011.

2.2.1 Review of Investigation Methods – SES' 2007 Remedial Investigation

Review of SES' *Draft Final Remedial Investigation Report* (dated June 5, 2008) shows SES' RI work was conducted in accordance with Ecology-approved work plans and with acceptable industry-standard environmental procedures. As noted in their report, SES subcontracted with Locating, Inc. (a private utility-locating firm), ESN Northwest (a state-licensed driller), Friedman & Bruya, Inc. (an Ecology-accredited analytical testing laboratory) and with Cowlitz Clean Sweep (a state-licensed UST program contractor and experienced emergency responder) for the removal of the SPH from the culvert. SES' RI drilling and sampling (soil borings drilled by direct-push and hollow stem auger methods; soil sampling was conducted in accordance with EPA Sampling Method 5035; groundwater monitoring well installation and development; groundwater well purging and low-flow sampling; groundwater "grab" hydropunch sampling; and excavation of test pits along the nearby off-property culvert) was overseen by a Washington state-licensed geologist. Soil and groundwater samples appear to have been handled correctly and analyzed for gasoline-related petroleum hydrocarbon constituents and additives (TPH-G by NWTPH-Gx and BTEX by EPA Test Method 8021B; selected samples were further analyzed for full-scan VOCs by EPA Test Method 8260B).

Stantec notes that well MW-20 was completed as a single-cased well with two screen intervals (25–30 feet bgs and 3-13 feet bgs), allowing the potential mixing of shallow groundwater with deeper saturated media. According to the B-20/MW-20 boring log, there is no aquitard/aquiclude from ground surface to a depth of 30 feet (maximum depth explored at B-20/MW-20) so there does not appear to be any natural separation of the upper and lower monitored saturated sandy zone at this location that could be compromised by this well. Additional information regarding this well is provided in ***Sections 2.2.3 and 2.2.4***.

2.2.2 Review of Investigation Methods – Stantec's 2011/2012 Soil Gas & Vapor Intrusion Studies

Stantec's December 2011 soil gas survey and March 2012 vapor intrusion investigation were conducted in accordance with the Ecology-approved work plans. In December 2011, semi-permanent soil vapor probes were installed at 7 locations to depths of 4.5 feet (rather than the planned 5-foot depths due to shallow groundwater) at the property by Cascade Drilling (a state-licensed driller working under contract to Stantec). Field work was conducted by a Washington state-licensed geologist and overseen by a Washington state-licensed professional engineer. Prior to soil gas sampling and to evaluate the effectiveness of probe seals, shut-in tests were performed at each probe. Shut-in testing was successful without the need to reseal or reinstall any probes. Soil gas samples were collected in 1-liter Summa™ stainless-steel, passivated canisters, transported to Air Toxics, Ltd (a Washington state-certified NELAP laboratory; now Eurofins), and analyzed for VOCs using EPA Test Method TO-15 (the appropriate fuel-related vapor/air testing method).

As previously noted, compounds exceeding screening levels were detected at 5 of the 7 locations. In March 2012, Stantec returned to the property to conduct a vapor intrusion investigation inside and outside of the property's station building. A total of 4 ambient air samples

were collected in 6-liter Summa™ canisters: two indoor samples and two outdoor samples. Following the approximate 8-hour sample collection period, the valves on the canisters were closed and the canisters shipped to Eurofins where the vapor samples were analyzed using EPA Test Method TO-15 SIM. No constituent in any of the indoor or outdoor air samples exceeded screening levels.

2.2.3 Groundwater Sampling Methods

To date, Stantec has conducted 8 groundwater monitoring and sampling events at the Site: Fourth Quarter 2011 (late November/early December); First through Third Quarters 2012 (March, June, and October); Second Quarter 2013 (June); Second Quarter 2016 (April/May); January 2018; and June 2019. During each monitoring event, depth to groundwater/SPH and total well depths are measured and recorded, and the wells are purged and sampled using low-flow techniques. During purging, field parameters of pH, temperature, dissolved oxygen (DO), and conductivity are measured (using portable field instruments) and recorded. Once the parameters are stable, groundwater samples are collected in appropriate laboratory-supplied containers and shipped to certified laboratories (KIFF Analytical; Pace Analytical Services; Friedman & Bruya; Fremont Analytical; Apex Labs, or Eurofins/TestAmerica) under chain-of-custody protocols. Groundwater samples are analyzed for gasoline-related petroleum hydrocarbons (TPH-G by NWTPH-Gx and BTEX by EPA Test Method 8260B) and for monitored natural attenuation (MNA) parameters (such as DO, oxygen-reduction potential [ORP], ferrous iron, nitrate, and several other compounds by a variety of EPA Test Methods). General mineral parameters (such as total dissolved solids [TDS], alkalinity, chloride, and several other compounds by a variety of EPA Test Methods) have been analyzed at least one time.

Results of the most-recent groundwater sampling (April/May 2016; January 2018; and June 2019) indicate that groundwater impacted by petroleum hydrocarbons remain at levels above MTCA Method A CULs on the property and close to the northern, western, and southern property boundaries. One off-property well (downgradient MW-25) contained TPH-G and benzene concentrations above MTCA A CULs during one monitoring event in April 2016. MW-25 has been sampled three times since that event (in May 2016, January 2018, and June 2019) and TPH-G/benzene concentrations were below MTCA Method A CULs during each events. We consider the April 2016 groundwater monitoring results showing concentrations above MTCA Method A CULs anomalous but recognize the probability that contaminated groundwater has likely extended off-property beneath Montesano Street. The likelihood of contaminant migration beneath Montesano street is supported by results showing groundwater "grab" samples containing TPH-G and BTEX above MTCA Method A CULs collected by SES in 2007. These samples were collected from several direct-push borings located off-property at a distance of 15 to 20 feet away from the property beneath Wilson Avenue and N. Montesano Street. We agree with SES' assertions that the elevated TPH-G/BTEX concentrations can be partially attributed to the high turbidity in these "grab" hydropunch samples.

2.2.4 Site Geology and Topography

The topographic surface at the property is relatively flat with elevations ranging from approximately 12.5 to 14 feet above mean sea level (msl). Beyond the property boundaries, the ground surface gently undulates.

No drilling or logging has been conducted by Stantec. Based on SES' boring logs, near-surface material at the property (from ground surface to depths ranging from approximately 5 to 7 feet bgs) consists of fine-grained sand with minor silt and gravel, interpreted to be fill or marsh deposits. In the center of the property (at borings P01, P02, P04 and P08) and in the southeastern portion of the property (at boring P06), a silty clay/clayey silt layer was observed at the base of the fill/marsh deposits at depths of approximately 6.5 feet that may be representative of dredged marsh or tidal flat sediments that were historically imported as fill. The thickness of the fill decreases significantly at the off-property borings.

Native soil beneath the fill consists of fine- to medium sand with varying amounts of silt, interpreted to be eolian and/or shallow marine deposits. The exception to this overall lithology is found at B-20/MW-20 (located in the center of the property between the former USTs and the current USTs) and drilled to a depth of 30 feet bgs (twice as deep as the other borings/wells). At this location, native soil has a higher percentage of silt as indicated by "silty sand (SM)" on the boring log to a depth of 25 feet. From 25 to 30 feet bgs, soil coarsens to medium-grained sand with some coarse sand and fine gravel. Copies of SES' and other available boring logs and well construction details are provided in ***Appendix D***. Copies of SES' geologic cross-sections are provided in ***Appendix E***.

2.2.5 Site Hydrogeology

The Site is located near a large barrier beach at the end of a peninsula that is surrounded by Grays Harbor (approximately 800 feet to the east) and the Pacific Ocean (approximately 0.8 mile to the west). Tidal flats along Grays Harbor are present north, east, and southeast of the Site. During previous Site drilling, groundwater was generally encountered between 4 to 8 feet bgs. Based on the prior 9 Site monitoring events (2007 through 2019; the data that are available to Stantec), depth to groundwater also ranges from 4 to 8 feet bgs with higher groundwater levels occurring during the wet seasons and lower levels during the drier summer months. Groundwater flow direction, however, does not appear to be variable based on seasonality: overall flow direction was to the southeast during 6 of the 9 events (measured during different seasons) and to the south/southwest for the remaining three events (October 2012, April 2016, and June 2019).

Micro-flow directions on portions of the property that differ from the dominant southeasterly flow direction have occurred during several events, as follows: a northeasterly flow direction in the northern portion of the property (from MW-10 towards MW-23 and/or MW-03) during June 2007, June 2012, June 2013, and April 2016); northerly and southwesterly micro-flow directions in the southern portion of the property in October 2012; and northwesterly-northerly-northeasterly micro-flow directions in the southern portion of the property in April 2016. Copies of groundwater elevation contour maps for the past 9 Site monitoring events for which data are available to

Stantec are provided as ***Figures 3a through 3i***. Overall horizontal groundwater gradients from 2007 through 2019 range from 0.003 to 0.05 feet per foot.

A hydrologic survey was conducted in 1991/1992 to evaluate diurnal changes in groundwater elevations and flow directions in relation to tidal cycles. Based on SES' review of the SAIC-DPRA report, the results revealed that the measured elevation changes were insignificant and that tidal influence at the Site was minimal.

Wells MW-11 and MW-20 are completed in deeper saturated sands as compared to the remaining Site wells, and were not used by Stantec during generation of the groundwater elevation maps (***Figures 3a through 3i***). Well MW-11 is completed to a depth of 40 feet with 10 feet of screen from 30 to 40 feet bgs (sand pack up to 27 feet bgs). Well MW-20 is a single-cased well completed to a depth of 30 feet with two screened intervals: a lower interval with 5 feet of screen from 25 to 30 feet bgs and an upper interval with 10 feet of screen from 3 to 13 feet bgs. Water levels in these two wells are generally 0.5 to 0.7 feet (sometimes 2+ feet) lower than the surrounding wells, indicating a slight downward vertical gradient within the sandy saturated zone. Because groundwater at MW-20 exhibits among the highest fuel-related hydrocarbon concentrations (along with groundwater from MW-04, MW-07, and MW-12), the slight downward vertical gradient, and the potential for cross-contamination/mixing of water within the saturated zone at the property, Stantec recommends that MW-20 be properly abandoned.

Hydraulic conductivity for the fine- to medium-grained sand with varying amounts of silt are estimated to range from 10^{-6} to 10^{-4} meters/second (m/s) and porosities ranging from 30% to 35% (ref: Tables 2.2 and 2.4 in *Groundwater*, Allen Freeze and John Cherry, 1979).

3.0 Conceptual Site Model

A Conceptual Site Model (CSM) was originally developed by SES and presented in their June 2008 *Draft Final RI Report*. The CSM has been updated in general accordance with American Society for Testing and Materials (ASTM) E1689-95 (2014) *Standard Guide for Developing Conceptual Site Models for Contaminated Sites*. The model is based on the data obtained in Site investigations to date, as described in ***Section 2***. The CSM is dynamic and can be updated with additional information.

3.1 AREA OF CONCERN/EXTENT OF IMPACTED SOIL & GROUNDWATER

For purposes of this CSM, the Site is defined as the extent of soil, soil vapor, and shallow groundwater (a saturated zone from approximately 4 to 13 feet bgs) at and in the immediately vicinity of the property, where contaminants of potential concern (COPCs) have been detected at concentrations exceeding the MTCA Method A CULs and/or Site-Specific remediation levels (RELs). This would include groundwater represented by monitoring wells MW-22 and MW-23 in the northern portion of the property; MW-10 in the west corner of the property; MW-09, MW-07, MW-04, and MW-12 in the southern portion of the property; MW-20 in the south-central portion of the property; and MW-02 in the east-central portion of the property.

TPH-G and benzene iso-concentration maps for soil and groundwater are provided in ***Appendix F***. The extent of impacts to soil and groundwater from TPH-G and benzene are predominantly on the property and within short distances (approximately 35 feet) beyond the property to the north, west and south beneath Wilson Avenue and N. Montesano Street (represented by off-property direct-push borings P12 through P17).

3.2 AFFECTED MEDIA

Affected media include soil vapor (an incomplete pathway), soil, and shallow groundwater.

3.3 CONTAMINANTS OF POTENTIAL CONCERN (COPC)

The primary COPCs include TPH-G and BTEX constituents (benzene is the primary risk driver). These COPCs have been selected based on the historical use of the property as a retail gasoline service station, as well as the results of the subsurface investigations.

3.4 POTENTIAL SOURCES OF CONTAMINATION

Based on our review of the available historical information, along with the current distribution of contamination in both soil and groundwater, the primary source areas appear to be the former UST systems located along the south side of the convenience store and the reported 2,000-gallon release from a leaking product line in 1985. Additional potential contaminant sources include surface spills that may have occurred in previously unpaved portions of the Site, as well as more

recent minor spills that may have occurred near the dispenser island in the course of the normal operation of a retail gasoline station.

Seepage of SPH in the culvert may have been an ongoing contributor of petroleum hydrocarbons to the groundwater and to other areas of the property along the west/southwest side of the property. The contaminated vadose and saturated zone soils also continued to contribute petroleum hydrocarbons to the groundwater through seasonal groundwater fluctuations.

The source of the contaminated soil and groundwater encountered at and near MW-23 has not been determined. MW-23 is located upgradient (based on the overall southeasterly groundwater flow direction) of the UST systems; however, it is possible that the northeasterly groundwater micro-flow in the northern portion of the property (as measured during 4 of the last 7 monitoring events) has pushed contamination in that direction. Alternatively, it is possible that prior injection at IW-2, IW-3, and IW-4 may have pushed contamination northerly towards MW-23; however, this cannot be demonstrated as there are no pre-injection assessment data to document pre-injection subsurface conditions in the vicinity of MW-23.

Regular tightness tests on the current USTs and product delivery lines have not identified a release (SES 2008). Despite these results, significant contaminant levels were observed in groundwater collected in the vicinity of the operational USTs and associated product lines.

3.5 CONTAMINANT FATE AND TRANSPORT

3.5.1 Transport Mechanisms Affecting Distribution of Contaminants

One of the primary mechanisms of contaminant transport at the property is the lateral migration of separate-and dissolved-phase hydrocarbons near the top of the shallow water table. Site geology is characterized by sandy fill materials and extensive native sand deposits, which provide a relatively permeable medium through which contaminants can migrate. Despite the geologic conditions, the relatively flat horizontal hydraulic gradient appears to have limited the lateral extent of contaminants and confined the bulk of petroleum hydrocarbon contamination to within the boundaries of the property.

As noted in ***Section 2.2.5***, MW-11 monitors deeper groundwater at a depth of approximately 30 to 40 feet and it is not impacted by petroleum hydrocarbons. Based on these data, vertical migration of contaminants is not occurring.

The subsurface culvert located beneath the western boundary of the Site appears to represent a historical preferential pathway for the migration of SPH and dissolved-phase hydrocarbons (SPH [mixed with water/other fluids] within the culvert has reportedly been removed). The results of subsurface investigations performed by SES indicate that petroleum-impacted soil and groundwater remain present within the vicinity of the culvert where SPH was formerly detected and removed; however, the full extent of the culvert has not been identified or investigated.

3.5.2 Environmental Fate of Contaminants

The COPCs at the Site have the potential to be degraded in the environment. Once contaminants are released to the environment, they are subject to various biological and chemical processes that can naturally attenuate them over time. Beginning in the first quarter 2012, Stantec included Monitored Natural Attenuation (MNA) parameters for analysis of groundwater samples to evaluate the effectiveness of contaminant attenuation. Groundwater monitoring from selected wells are sampled for one or more of the MNA parameters including:

- Dissolved oxygen (DO) and oxygen reduction potential (ORP);
- Nitrate as NO_3;
- Sulfate as SO_4;
- Total alkalinity;
- Dissolved methane; and,
- Ferrous iron as Fe^{+2}.

MNA regulatory guidance documents (EPA October 2017, Publication 510-B-17-003, Chapter 9 and Ecology July 2005, Publication 05-09-091) indicate that biodegradation is occurring when one or more the following occur: DO exhibits a decreasing concentration trend and is less than 0.5 mg/L; nitrate exhibits a decreasing concentration trend and is less than 1 mg/L; sulfate exhibits a decreasing concentration trend; methane exhibits an increasing concentration trend and is greater than 0.5 mg/L; and ORP exhibits a decreasing trend and is generally less than -100 mV. Although one or more of these conditions have been observed in the Site's MNA parameter results in the past, corresponding decreasing fuel hydrocarbon concentrations have not been observed. The overall groundwater plume, however, remains stable and the majority of the impacted groundwater remains on the property with some off-property impacts observed towards Montesano Street. Based on the lack of significant decrease in contaminant concentrations in groundwater, it appears subsurface conditions are not particularly favorable for contaminant reductions through naturally-occurring biodegradation.

3.6 POTENTIAL EXPOSURE PATHWAYS

The evaluation of exposure pathways described as follows are based on typical activities at the Site. In the event that Site land use or work outside of the typical scope of on-Site activities is performed (e.g., construction, soil excavation, utility repair), the potential routes of exposure should be re-evaluated within the context of those activities.

3.6.1 Direct Contact with Soil

Elevated contaminant concentrations in soil have been encountered during subsurface environmental investigations from depths extending from near ground surface to approximately 13 to 14 feet bgs in various portions of the Site (SES 2008). However, areas exhibiting elevated concentrations of COPCs are generally limited to portions of the Site which are paved with asphalt or concrete. A change in property use, redevelopment or construction activities may bring receptors in contact with petroleum impacted soils. As such, the direct contact pathway for soils (e.g., dermal absorption, incidental ingestion of soil) is considered to be complete.

3.6.2 Groundwater

Elevated concentrations of COPCs have been detected in shallow groundwater beneath the Site. The groundwater plume is generally confined beneath areas of the Site paved with asphalt or concrete; however, because the historical depths to groundwater are relatively shallow (4 to 8 feet), the direct contact with groundwater pathway (dermal contact, incidental ingestion and inhalation of VOCs partitioning from groundwater) is considered complete for construction/excavation worker scenarios.

3.6.3 Drinking Water

Drinking water to the Site is provided by the City of Westport, and no municipal supply wells are in the vicinity of the Site. SES' 2008 Draft RI report states "following shutdown of the remediation system, analytical testing of a water sample collected on November 11, 2003 from within the Hungry Whale building, reported that elevated concentrations of TPH-G and BTEX constituents were present in the sample. Upon receiving these results, the water line to the building was immediately repaired, and water samples collected from the two faucets within the Hungry Whale building on December 11, 2003 confirmed that no detectable concentrations of gasoline or BTEX remained" (no other information or reference regarding the water line repair was provided). It is not known if water supply piping supplying water to the other structures runs beneath the site. Drinking water samples collected from sink facets at a residence located in the east portion of the property in May 2007 did not contain detectable concentrations of TPH-G or BTEX constituents.

Because there is no documented use of shallow groundwater as domestic or municipal water supply at or within 0.5-mile of the Site (see ***Section 3.6.5***, below), ingestion of groundwater (including volatilization of contaminants in tap water) is not considered complete.

3.6.4 Vapor Intrusion Pathway

The presence of contamination in exploratory locations immediately surrounding the on-property station building performed by SES suggests that the contamination extends beneath the building.

Soil vapor samples collected on the property have identified concentrations of TPH-G and BTEX above MTCA Table B-1 Screening Levels in soil vapor across the Area of Concern. However, indoor air samples collected by Stantec from within the on-property station building have not detected

elevated concentrations of COPCs in indoor air at levels inconsistent with those concentrations detected in outdoor air. The vapor intrusion pathway is thus considered incomplete and there is no evidence of potential vapor intrusion risk to the occupants of the building. However, re-evaluation of this pathway should be performed if any property re-development is considered including those activities which may create a preferential pathway from subsurface soil vapor to indoor air.

3.6.5 Terrestrial Ecological Evaluation and Sensitive Receptor Survey

Stantec conducted a sensitive receptor survey in April/May 2016 that consisted of walking the immediate Site area to identify domestic or other municipal, non-Site-related groundwater supply wells; reviewing Google aerial-photograph imagery and topographic maps for the potential presence of nearby surface water bodies and wetlands areas; and a drive-by reconnaissance for land use in the overall Site area. As previously noted, a residence is located in the east portion of the property but it is beyond the limits of impacted media. Adjacent land use is either vacant or commercially-developed parcels, including paved N. Montesano Street along one side and paved Wilson Avenue along another side. The vacant contiguous land consists of small areas of bare dirt with some weeds, several fences, several small above-ground propane tanks, temporary parking areas for boats and RVs with most of the vacant land (75% to 80%) being paved and gravel-covered parking lots and driveways for the nearby commercial buildings. The eastern boundary of the Westhaven State Park is located across N. Montesano Street approximately 50 feet west of the intersection of Wilson Avenue and N. Montesano Street and approximately 120 feet west of the Site limits.

A municipal well survey was conducted by DPRA which identified three City of Westport-owned 105-foot-deep wells, all of which are located approximately 0.7-mile south/southwest (cross- to down-gradient) of the Site. According to DPRA, only the lower 5 feet of each well is screened (from 100 to 105 feet bgs). Based on distance, direction, and extraction zone depth, these wells are not considered to be at risk from Site impacts.

Stantec conducted a desk-top survey of wells (supply, domestic, dewatering, or other) for the Site area using Ecology's Well Logs Map database. The search revealed two 40-foot-deep dewatering wells, located approximately 0.5-mile west/northwest (upgradient) of the Site. These wells are located at and owned/operated by the Westport Water Treatment Plant and, due to distance and direction from the Site, these two dewatering wells are not believed to be at risk from Site impacts.

One 40-foot-deep "supply well" identified by Stantec is located approximately 0.7-mile west (upgradient) of the Site (on Westhaven State Park land) and owned/operated by State Parks & Recreation. Due to distance and direction from the Site, this well is not believed to be a risk from Site impacts.

Drainage ditches are located off-site, along the north side of Wilson Avenue and the east side of Montesano Street. Based on discussions with the street supervisor for the City of Westport, the ditch on the south side of Montesano Street is approximately 4' to 4'6" below the road level and is

basically flat for the length of the property. The City of Westport street supervisor says he has not seen standing groundwater in the that ditch. The depth to groundwater in some areas can be at the same level as the bottom of the ditch and it is therefore possible that groundwater could seep into the ditches. The City of Westport personnel are frequently in the ditch to clean out trash, cut down vegetation and work on water lines and have not reported signs of contamination.

No paths or contact of surface water with groundwater and no wetlands-type vegetation were observed by Stantec in the immediate Site area.

Stantec completed a Simplified Terrestrial Ecological Evaluation (TEE) in April 2019, a copy of which is included in ***Appendix G***. Impacted soil at the property is covered by pavement or buildings at the property and impacted soil already is or will be at least 6 feet bgs with institutional controls used to manage remaining impacts. The April 2019 Simplified TEE Form was submitted to Ecology on April 30, 2019 and Ecology's approval of this TEE is also included in ***Appendix G***.

3.7 CLEANUP STANDARDS

Washington MTCA regulations define Cleanup Standards for contaminated groundwater and soil in WAC 173-240-700 and 173-340-720. A Cleanup Standard consists of three distinct elements:

- Cleanup Levels, expressed as allowable concentrations of hazardous substances present in Site soil and groundwater;
- Point of Compliance, the location(s) where soil and groundwater quality is monitored to determine the need for, and effectiveness of, any cleanup action; and,
- Any other applicable state and federal laws.

3.7.1 Cleanup Levels and Site-Specific Remediation Levels (RELs)

Cleanup levels may be established under MTCA regulations using one of the three following methods:

- Method A CULs for Potable Groundwater are presented in lookup tables published by Ecology (Cleanup Levels and Risk Calculations [CLARC]) for multiple contaminants. These concentrations must be at least as stringent as concentrations specified in any applicable state or federal laws (including, for example, Maximum Contaminant Levels (MCLs established under the federal Safe Drinking Water Act). In addition, Method A CULs must not exceed natural background concentrations or the practical quantitation limit, whichever is higher.

  Facilities where sampled media contaminant concentrations meet Method A CUL generally do not require any further actions or restrictions.

- Method B CUL for Potable Groundwater provides a method for determining cleanup levels for all media at all sites. For individual carcinogens, the Method B calculation of CUL is based on

not exceeding the upper bound of estimated excess cancer risk (ECR) of one in a million (1 x 10^{-6}). For non-carcinogenic substances, CUL concentrations are calculated to result in no acute or chronic toxic effects on human health (that is, a hazard quotient ≤ 1) and no significant adverse effects on the propagation of aquatic and terrestrial species.

Sites that meet Method B CULs generally do not require any further actions or restrictions on future site use.

- Method C CUL for Potable Groundwater are established to be protective of human health and the environment for certain specified site uses and conditions. Method C CULs may be established and used if: 1) Method A and B CUL are below the naturally-occurring background concentrations; 2) Method A and B CUL have the potential for creating significantly higher health risks than a Method C level; or 3) Method A or B CUL are below technically possible concentrations.

Method C CULs must be at least as stringent as concentrations established under any other applicable federal or state laws. In this case, Applicable Relevant and Appropriate Requirements (ARARs) include primary and secondary Maximum Contaminant Levels [MCLs] under the federal Safe Drinking Water Act, and potentially U.S. EPA Regional Screening Levels (RSLs; current version, November 2018). Ecology allows for the generation of Site-specific RELs using CLARC (Cleanup Levels and Risk Calculation) Tool.

MTCA regulations specify that all groundwater CULs must be based on estimates of the highest beneficial use of the groundwater. The default assumption (WAC 173-340-720(1)(a)) is that the highest beneficial use of groundwater at most sites is as a source of drinking water, and exposure to hazardous substances through ingestion of drinking water represents the maximum exposure scenario. Alternate groundwater cleanup levels may be proposed if it can be shown that groundwater at a Site does not meet the criteria for potable water. Groundwater may be classified as non-potable if it is not currently used as a potable water source and is not suitable for future potable water use because:

- The groundwater is present in insufficient quantity (yield of 0.5 gallons per minute [gpm] or less);
- The groundwater contains natural background concentrations of organic or inorganic constituents that make it unsuitable as a drinking water source; or,
- The depth of the groundwater makes it infeasible to recover and use.

To Stantec's knowledge, the yield of Site groundwater has not been measured; groundwater monitoring wells are purged using low-flow methods and testing for yield has not been conducted and/or reported. As such, it is not clear whether the Site meets this criterion (0.5 gpm or less to be classified as non-potable). Groundwater is very shallow (generally ranging from less than 4-feet to less than 9-feet bgs); as such, it does not meet the infeasible depth criteria for recovery and/or use. Thus, it cannot be currently demonstrated that groundwater on-site is non-potable based on

these criteria and for this reason the MTCA Method A CULs are provided for comparison purposes. We anticipate that the site clean-up remedy will require a covenant to restrict groundwater use. This restriction will include prohibiting the use of groundwater as potable water, and irrigation use.

In accordance with WAC 173-340-355, remediation levels (RELs) have been developed for off-property areas that will not be remediated to CULs namely, possible off-property impacts to public rights-of-way. Such alternative remediation levels may also be applied to areas where a more permanent cleanup action is not practical based on a disproportionate cost analysis.

Stantec developed the following RELs for COPCs in soil and groundwater that are based on protection of the human receptor most likely to be exposed to COPCs in soil and groundwater: a construction/excavation worker. As detailed in the calculations provided in ***Appendix H***, the TPH-G and BTEX soil and groundwater RELs are as follows:

	Soil (mg/kg)	Groundwater (ug/L)	Comments
TPH-G	30	800	MTCA Method A
Benzene	202	878	Const. Worker REL, cancer
Toluene	9,850	24,000	Const. Worker REL, non-cancer
Ethylbenzene	1,011	2,040	Const. Worker REL, cancer
Xylenes	1,450	4,800	Const. Worker REL, non-cancer

No CULs or RELs are presented for surface water or soil vapor as both of these pathways are incomplete.

At Ecology's request, Stantec has provided drinking water cleanup levels for groundwater in the following table:

	Groundwater (ug/L)	Comments
TPH-G	800	MTCA Method B, non-cancer
Benzene	0.80	MTCA Method B, cancer
Toluene	640	MTCA Method B, non-cancer
Ethylbenzene	800	MTCA Method B, non-cancer
Xylenes	1,600	MTCA Method B, non-cancer

3.7.2 Points of Compliance

To develop a Cleanup Standard for the Site, the location where the CUL must be met, defined as the Point of Compliance (POC), must be determined. Two options exist for identifying the POC, a Standard POC and a Conditional POC. WAC 173-340-720(6) defines a Standard POC for groundwater as "established throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected by the site."

A POC for soil is defined in accordance with WAC 173-340-740(8) and will include soils throughout the property. At this time, it is anticipated that CULs for soil will initially be based on either human exposure due to direct contact with soils extending to a depth from the surface to 15 feet below the ground surface and/or protection of groundwater since ecological receptors have not been identified previously (see Simplified Terrestrial Ecological Evaluation Form, SES 2008). A site-specific human health risk assessment may be required to document that contaminants remaining following corrective action are protective of human health. In addition, the placement of institutional controls in accordance with WAC 173-340-440 which prohibit property development or use which 1) could allow or facilitate direct contact with impacted soils or, 2) create conditions which could facilitate transport of chemicals of concern from soil to groundwater (e.g. removal of impervious surfaces allowing infiltration of surface water) may be necessary. When it is demonstrated under WAC 173-340-350 through 390 that it is not practicable to achieve the CUL throughout the site within a reasonable restoration time frame, a Conditional POC may be used. Factors such as potential risks posed by contamination at the site, current and potential future uses of the site, likely effectiveness of institutional controls, toxicity of hazardous substances at the site, and the likely natural attenuation of hazardous substances at the site are all considered in assessing whether a cleanup action provides for a reasonable restoration time frame.

4.0 Feasibility Study

The following sections detail the various proposed remedial alternatives and the preferred alternative. It is intended to time the remedy selection with the termination of the lease. However, timing the implementation of the clean-up action will depend on funding with the assumption that clean-up costs will be shared between the Port of Grays Harbor and Ecology.

4.1 OVERVIEW OF EVALUATION CRITERIA FOR CLEANUP ACTION ALTERNATIVES

Based on available Site characterization data and previous experience with remediation of petroleum hydrocarbon impacted sites, several potential Site cleanup action alternatives were identified for consideration. ***Section 4.2*** provides a general description of each of the cleanup action components under consideration and lists typical advantages and disadvantages associated with each technology. ***Section 4.3*** presents a Site-specific evaluation of each of the proposed alternatives against the criteria listed in WAC 173-340-360. All evaluated remedial alternatives will include the requirement for fire department ingress and egress at the property during implementation of the selected remedy.

These criteria include four threshold and other requirements (WAC 173-340-360(2)(a) and (b):

- Protective of human health and the environment;
- Complies with cleanup standards;
- Complies with applicable state and federal laws;
- Provides for compliance monitoring;
- Use permanent solutions to the maximum extent practicable;
- Provide for a reasonable restoration timeframe; and,
- Consider public concerns.

Any cleanup action alternative that fails to meet one or more of these threshold criteria was excluded from further detailed evaluation. Each of the alternatives that achieved these threshold requirements was then evaluated further against the following criteria (WAC 173-340-360(2)(b):

- Permanence;
- Protectiveness;
- Long-Term Effectiveness;
- Management of Short-Term Risks;

- Technical Implementability;
- Administrative Implementability;
- Cost; and,
- Consideration of Public Concerns.

4.2 SUMMARY OF CLEANUP ACTION COMPONENTS

The following cleanup measures were considered:

- Natural Attenuation
- In-situ Treatment;
- Air Sparging and Soil Vapor Extraction;
- Groundwater Extraction and Treatment;
- Interim Monitoring and Source Removal;
- Interim Monitoring and Area-Wide Soil Excavation;
- Institutional Controls;

Institutional controls (IC) are included as a supplemental action to be implemented in conjunction with the other listed actions. Further details regarding the purpose of IC is provided in ***Section 4.2.6***.

The following clean-up measures were not considered for the reasons cited:

- Chemical Oxidation

Chemical oxidation is not effective when sheen/SPH is present (as is the condition at MW04, MW12, and MW23) and is normally used as a "polishing technique" for residual petroleum hydrocarbons after other remediation methods have reduced formerly-elevated contaminant concentrations. Furthermore, certain chemical oxidation could not be completed safely at an active gas station due to the exothermic reactions associated with the technology.

- Dual Phase Extraction

Dual phase extraction is normally selected when a reasonable vadose zone thickness is available for vapor extraction in combination with groundwater extraction, when lithology allows a lowering of groundwater table to expose previously-saturated materials to the vapor extraction part of the dual phase system, and/or when high volumes of groundwater are not expected. Because groundwater is very shallow at the Site (resulting in a thin vadose zone ranging seasonally in

thickness [and in feet bgs] from 3.5 to 8 feet) with expected high volumes of extracted groundwater, and it is unknown whether a cone of depression will readily occur in the near-coastal sandy lithology, this technology was not evaluated further.

- Bioremediation/Biosparging

Bioremediation (biosparging) is not effective when sheen/SPH is present (as is the condition at MW04, MW12, and MW23). Because biosparging causes an increase in pressure in the subsurface (resulting in pushing contaminants through the subsurface), plume perimeter biosparging in conjunction with central extraction can be an effective remediation method. Although bioremediation was attempted, it was unsuccessful likely because of the presence of SPH and possibly because biosparging was conducted in the center of the plume with perimeter extraction (see ***Sections 2.1.2 and 2.1.3***).

4.2.1 Natural Attenuation

Ecology's July 2005 guidance 'Remediation of Contaminated Ground Water By Natural Attenuation' was referenced to evaluate natural attenuation as a clean-up measure for the Site. Natural attenuation refers to a variety of physical, chemical and/or biological processes that under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of hazardous substances in the environment. When applied as a part of clean-up action, natural attenuation is typically referred to as 'Monitored Natural Attenuation' to distinguish it from 'No Action'.

The natural attenuation processes can be classified as either:

- Physical (dispersion, dilution by recharge, and volatilization);
- Chemical (sorption and chemical degradation); or
- Biological (biodegradation).

Although some natural attenuation typically occurs at most contaminated sites, the effectiveness of these processes varies depending on the types and concentrations of contaminants present at the site and the physical, chemical, and biological characteristics of the site. Consequently, use of natural attenuation as a cleanup action at a particular site often may be inappropriate. Natural attenuation should be evaluated as one potential remedial approach along with other cleanup action alternatives involving more active remedial technologies.

The following is a review of the advantages and disadvantages of using Natural Attenuation as the sole cleanup action (i.e. not in combination with another cleanup action). Ecology recommends that at least one of the cleanup action alternatives include Natural Attenuation as a component of other cleanup actions to remediate groundwater. A minimum period of ten years required to observe contaminant degradation. Ten year period used to determine cost.

Advantages:

- Lowest cost option – involves only groundwater monitoring with testing for additional parameters to measure occurrence of natural attenuation;
- Appropriate for a gasoline-impacted groundwater;
- Contaminants reduced in-situ with no requirement for equipment installation; and,
- Easily combined with other remedial approaches.

Disadvantages:

- Long time period required to reach remedial goals if not combined with other remedial methods;
- Subsurface conditions may not support biodegradation of contaminants;
- Need or institutional controls until contaminants no longer pose a threat;
- Not effective for treating contaminated soil. Therefore, sites with substantial vadose or smear zone contamination, re-contamination of groundwater may occur;

4.2.2 In Situ Treatment

In-situ treatment of the contaminated groundwater can be achieved using a carbon-based petroleum degradation product such as the proprietary product BOS-200®, an activated carbon/sulfate bioremediation compound. The activated carbon draws in the volatile contamination, and the sulfate salts create a sulfate-reducing environment to biodegrade the petroleum hydrocarbons, particularly benzene. The technology has proven effective in a reduced oxygen or anaerobic environment typically associated with a petroleum hydrocarbon plume.

The injected activated carbon is a mixture of approximately 80% powdered or granulated activated carbon that is combined with a blend of sulfate reduction material and micronutrients. The mixture traps subsurface contamination and the remediation ingredients immediately begin to degrade the contamination. This "treatment" occurs through a biological process that works with or without the presence of subsurface oxygen. This method typically requires at least two applications. The first application is site wide followed by up to four quarters of monitoring. A second application is typically implemented as a polisher to reduce contaminant concentrations in recalcitrant areas. A period of approximately three years is required to reach target clean-up levels and confirm contaminant concentrations have stabilized.

Advantages:

- Technology is appropriate for a gasoline-impacted groundwater;
- Contaminants reduced in-situ;
- Short treatment times under optimal conditions; and,
- No permanent or semi-permanent facilities required.

Disadvantages:

- Fairly new technology without the track record of more traditional remedial approaches;
- Carbon-based petroleum degradation product must come into contact with the contaminant to be effective, which can prove challenging if the exact location of the product is not fully known, resulting in untreated areas;
- For sites with substantial vadose or smear zone contamination, re-contamination of groundwater may occur; and,
- Costs associated with purchasing and injection of the product can be high if multiple injections are required.

4.2.3 Air Sparging and Soil Vapor Extraction (AS/SVE)

Air sparging (AS) is an in-situ remedial technology which reduces concentrations of VOCs that are adsorbed to soils and/or dissolved in groundwater. AS technology involves the injection of air into the saturated zone enabling partitioning of contaminants from the dissolved phase to the vapor phase. Injected air moves vertically and horizontally through the saturated zone creating an underground air stripping process. Ultimately, the injected air migrates to the unsaturated zone where a soil vapor extraction (SVE) system creates negative pressure to capture stripped VOCs. AS can raise dissolved oxygen levels thereby enhancing potential for biodegradation of petroleum contaminants.

The effectiveness of an AS/SVE system depends on:

- Permeability of soil;
- Soil structure and stratification;
- Soil moisture; and,
- Depth to groundwater.

Stantec understands (from informal communication provided by Ecology) that AS/SVE pilot testing was conducted at the Site and a reported approximate 50-foot ROI was achieved; however, no further data are known. As such, a second pilot test is recommended for evaluating AS/SVE

effectiveness and developing required design parameters. The pilot test typically includes short term extraction of vapors from a single well (or existing monitoring well) and application of different extraction rates and wellhead vacuums. For the same reasons that biosparging and dual-phase extraction are not technically feasible, AS/SVE is not considered viable at this time.

Advantages:

- Proven technology, readily available equipment, easy installation;
- Minimal disturbance to site operations;
- Short treatment times (6 months to 2 years); and,
- Requires no removal, treatment, storage, or discharge considerations for groundwater.

Disadvantages:

- Concentration reductions >90% can be difficult to achieve;
- Potential for inducing migration of contaminants;
- Effectiveness may be reduced when applied to sites with low-permeable or stratified soil;
- May require treatment for discharge of extracted vapor to atmosphere; and,
- Air discharge permits generally required.

4.2.4 Groundwater Extraction and Treatment (GWET)

In general, a GWET (aka pump and treat) system is designed to remove contaminated groundwater through a series of extraction wells, pass extracted groundwater through a treatment device (e.g. granulated activated carbon), then discharge the treated groundwater to surface water, storm sewer or publicly owned treatment works (POTW). The technology has three components: groundwater extraction, groundwater treatment, and treated groundwater discharge.

Although this technology targets groundwater clean-up, contaminants adhered to soil can be stripped through a concentration gradient or 'soil washing'. As contaminant concentrations in groundwater decrease and 'clean' groundwater flows through the soil pore volume, contaminants adhered to soil particles are stripped from the soil particles and become solubilized in groundwater which in turn is treated to remove contaminants.

Advantages:

- Proven and mature technology;

- Technology is appropriate for a variety of contaminants including petroleum hydrocarbons; and,

- May be used as a hydraulic barrier to prevent off-site migration of contaminant plumes.

Disadvantages:

- Attainment of cleanup levels estimated to take approximately five years, this is greater than soil excavation and removal approach;

- Pumping depresses the groundwater level leaving residuals sorbed to soil. When groundwater level returns to a normal static level, contaminants sorbed to soil may become dissolved (resulting in a rebound of contaminant concentrations in groundwater);

- Pump and Treat technology may not be feasible for sites with low-permeable zones (less than about 10-5 cm/sec) which restrict contaminant flow to extraction wells; and,

- Capital costs for installation and annual costs for O&M are high.

4.2.5 Interim Monitoring and Soil Excavation

Interim Monitoring and Area Wide Soil Excavation comprises interim groundwater monitoring with Institutional Controls and area wide soil excavation to remove a large volume of contaminated soils.

Upon termination of the lease and as necessary for cleanup and in accordance with future change in Site use, removal of the fuel storage tanks and distribution infrastructure may be necessary. The remedial activities will be implemented and will consist of removing UST backfill materials to the limits of the UST cavity and soils associated with the fuel islands and distribution lines. In addition, contaminated soils beyond the fueling infrastructure will be removed. The intent of the soil excavation is to remove soils containing contaminant concentrations greater than MTCA A Clean-up Standards to the extent practicable. The convenience store will remain in place and its presence will limit the extent of the soil excavation. The extent of the excavation will be driven by field observation of contaminated soil, field-screening soil samples with a photo-ionizing detector and previously collected soil samples indicating the presence of contaminants in soil. The estimated extent the excavation is shown on ***Figure I1*** in ***Appendix I***. Based on the estimated horizontal extent of excavation and the targeted excavation zone of between 2 and 12 feet below ground surface the volume of soil to be excavated is estimated at 2,800 cubic yards. During soil excavation activities, contaminated groundwater will be pumped from excavation, treated and disposed. Removing source soils and pumping contaminated groundwater will eliminate a large portion of contaminant mass and should result in a substantial decrease in concentrations of dissolved petroleum in groundwater beneath the Site. Pumped contaminated groundwater will be treated to remove contaminants prior to discharge to the appropriate conveyance. In the interim, and prior to lease expiration in 2020, bi-annual groundwater monitoring will be implemented.

Institutional Controls will be employed to restrict groundwater use and exposure to contaminated soil. These controls will require implementation of a contaminated media management plan during any construction activities involving disturbance of the subsurface. Environmental covenants (EC) will be recorded at the Grays Harbor County Auditor's Office within 60 days following completion of source removal. The ECs will be submitted to Ecology for review prior to submission for recording.

Groundwater monitoring will continue following source removal to track anticipated decreasing contaminant concentrations. For planning purposes, annual monitoring over a period of ten years is anticipated.

4.2.6 Interim Monitoring and Site-Wide Soil Excavation

The Interim Monitoring and Area Wide Soil Excavation comprises interim groundwater monitoring with Institutional Controls and area wide soil excavation to remove a large volume of contaminated soils.

Upon termination of the lease and as necessary for cleanup and in accord with future change in Site use, removal of all fuel storage tanks, distribution infrastructure and the convenience store may be necessary. The remedial activities will be implemented and will consist of removing UST backfill materials to the limits of the UST cavity and soils associated with the fuel islands and distribution lines. In addition, contaminated soils beyond the fueling infrastructure will be removed including soils beneath for former location of the convenience store and potentially extending to the property limits. The intent of the soil excavation will be to remove all soils containing contaminant concentrations greater than MTCA A Clean-up Standards. The extent of the excavation will be driven by field observation of contaminated soil, field-screening soil samples with a photo-ionizing detector and previously-collected soil samples indicating concentrations of contaminants above MTCA A Clean-up Standards. The estimated extent the excavation is shown on ***Figure I2*** in ***Appendix I***. Based on the estimated horizontal extent of excavation and the targeted excavation zone is between approximately 2 feet and 12 feet below ground surface, the estimated volume of soil to be excavated is 5,200 cubic yards. During soil removal activities, contaminated groundwater will be pumped from excavation and disposed. Removing source soils and pumping contaminated groundwater will eliminate a large portion of contaminant mass and should result in a substantial decrease in concentrations of dissolved petroleum in groundwater beneath the Site. Pumped contaminated groundwater will be treated to remove contaminants prior to discharge to the appropriate conveyance. In the interim, and prior to lease expiration in 2020, bi-annual groundwater monitoring will be implemented.

Institutional Controls will be employed to restrict groundwater use and exposure to contaminated soil. These controls will require implementation of a contaminated media management plan during any construction activities involving disturbance of the subsurface. Environmental covenants (EC) will be recorded at the Grays Harbor County Auditor's Office within 60 days following completion of source removal. The ECs will be submitted to Ecology for review prior to submission for recording.

Groundwater monitoring will continue following source removal to track anticipated decreasing contaminant concentrations. For planning purposes, annual monitoring over a period of five years is anticipated.

4.2.7 Institutional Controls (IC)

ICs are administrative and/or legal controls that prevent exposure to constituents by limiting land use. To preclude consumption or other use of groundwater at the Site, and to prevent direct contact with contaminated soils determined to represent an unacceptable potential risk to human health or the environment, an IC (e.g., deed restriction) would be placed on the property to increase the protectiveness of the selected remedy throughout the duration of the remedial action. A restrictive covenant would include the following elements:

- A restriction on installation of drinking water wells in the shallow aquifer on-Site while contaminant concentrations in groundwater exceed applicable Federal Maximum Contaminant Levels (MCLs);

- A requirement to limit property zoning and use to commercial/industrial activities consistent with the current zoning and uses, and;

- A requirement for development and implementation of a contaminated media management plan during any disturbance of the subsurface (excavation, trenching).

While restrictive covenants have been used for many years, they have sometimes been rendered unenforceable under common law (e.g., waiver, abandonment, acquiescence, adverse possession, foreclosure of a tax lien, the rule against perpetuities, and requirements for privity or appurtenance, etc.). However, in 2007, Washington State enacted the Uniform Environmental Covenants Act (UECA), which establishes environmental covenants for sites in Washington that are remediated under oversight of Ecology or USEPA. Environmental covenants created under the UECA contain activity or land use restrictions on real property that legally stay with the land, regardless of changes of property ownership. The covenants are based on traditional property law principles and are recorded in local land records, thereby binding successive owners of the property. The purpose of the UECA is to ensure that environmental covenants created for a particular Site are not invalidated by conflicts or misunderstandings with other local, state, or federal regulations. The UECA provides clear rights for Ecology to create, record, monitor, enforce, modify, and terminate environmental covenants, and thereby ensure with greater certainty the protection of human health and the environment throughout the life of the environmental covenant, including during real estate transactions or legal actions. Ecology has updated the language in its Model Restrictive (Environmental) Covenant to be consistent with the UECA.

4.3 DISPROPORTIONATE COST ANALYSIS

The Disproportionate Cost Analysis (DCA) is summarized in Table 5 and detailed in this section. The benefits of each of the alternatives are ranked under the criteria specified below. The costs are then compared against these benefits, and the relationship between the costs and benefits

shown in ***Section 4.3.1***. This analysis then defines which alternative is permanent to the maximum extent practicable.

Relative rankings for the alternatives were determined by assigning a value on a scale from 1 to 10, where 10 is the highest benefit/value. Each criterion value was multiplied by a weighting factor, and the weighted values were summed to determine an overall alternative benefit ranking score. Weighting factors were based on regulatory guidance and accepted weighting factors that have been used for similar sites. The six evaluation criteria and associated weighting factors are:

- Overall protectiveness: 30 percent
- Permanence: 20 percent
- Long-term effectiveness: 20 percent
- Short-term risk management: 10 percent
- Implementability: 10 percent
- Considerations of public concerns: 10 percent

4.3.1 Cost Analysis

Estimated costs were developed for each remedial alternative. Costs were estimated using relative expenses based on our experience at similar sites. For planning purposes, a restorative timeframe of 15 years was applied to Alternatives 1 and 2 (the in-situ treatment alternatives), a restorative timeframe of 10 years was applied to Alternative 3, and a restorative timeframe of 5 years to Alternative 4 (the soil excavation alternatives). These timeframes are based on reaching MTCA A clean-up levels for groundwater. It is understood that MTCA A CULs for groundwater may not be reached within the restoration timeframe, the timeframes are for planning purposes and to allow comparison of alternative. The purpose of the institutional controls is to protect human health should MTCA A CULs for groundwater not be attained. It is assumed that the MTCA A clean-up levels for on-property soils are most likely to be reached with Alternative 4 only and that the institutional controls will protect human health from contaminated soils left in place following implementation of the other alternatives.

Costs for Alternatives 1 and 2 include equipment, installation, sampling and groundwater monitoring for up to 15 years, and operation and maintenance (O&M) for five years. Costs for Alternatives 3 and 4 include remedial excavation with removal of impacted groundwater, and groundwater monitoring for 10 years for Alternative 3 and 5 years for Alternative 4.

COMPARISON OF ESTIMATED COSTS - CLEAN-UP ALTERNATIVES Clean-up Action	TOTAL
Alternative 1: In-situ Treatment	$2,178,176
Alternative 2: Groundwater Extraction and Treatment	$1,129,611
Alternative 3: Interim Monitoring and Source Removal	$ 931,409
Alternative 4-: Interim Monitoring and Site-Wide Soil Excavation	$1,537,885

As shown in the table above, estimated costs range from $ 931,400 for Source Removal and Groundwater Monitoring to $ 2,178,100 for In-situ treatment. Detailed costs for each of the alternatives are provided in ***Appendix I (Tables I1 through I4)***.

4.3.2 COMPARATIVE EVALUATION OF ALTERNATIVES

The DCA is a comparative analysis of the alternatives against the six specified criteria. Relative rankings of each alternative against the criteria are provided in ***Table 5*** and discussed as follows:

- **Overall Protectiveness**

Alternative 4 is ranked highest for protectiveness with a score of 9 out of 10 based on the relatively higher level of certainty that protectiveness will be achieved by area-wide excavation and off-Site disposal of contaminated soil. The other alternatives score lower because relatively more contaminated soil is left on Site and the extent to which protectiveness relies on capping and institutional controls.

- **Permanence and Long-Term Effectiveness**

Alternative 4 is the 'most permanent' alternative because it removes the largest volume of contaminated soil. Each of the alternatives reduces contaminant mobility through removal of soil contamination and/or maintenance of permanent physical barriers (asphalt paving) between contaminated soil and potential receptors. None of the alternatives permanently reduce the toxicity or volume of hazardous substances; they only contain the contaminants on-Site or at an appropriate off-Site disposal facility. The relative permanence of each alternative is dependent on the amount of contaminated soil removed and the amount left in place. Once the predominant source is removed, natural attenuation of any residual groundwater contamination will occur resulting further reduction of contaminants in groundwater.

Each of the alternatives (except for Alternative 2 – groundwater extraction and treatment) -is expected to be effective over the long term because each have a high certainty of success and reliability for removing and/or preventing exposure to human receptors.

- **Management of Short-Term Risks**

The highest short-term risks are associated with excavation-related activities. Alternatives 3 and 4 involve excavating of soils in various locations including adjacent to buildings and near subsurface utilities. For these reasons, Alternatives 3 and 4 are assigned the highest short-term risks. Alternatives 1 and 2 do not involve significant soil disturbance and are assigned lower scores for short term risk.

- **Technical and Administrative Implementability**

Each of the alternatives are roughly equal in technical and administrative implementability. None of the technologies proposed are particularly challenging to implement.

- **Consideration of Public Concerns**

Public concerns regarding Site clean-up will be solicited during the public comment period. Public concerns are currently unknown. Slightly higher scores were assigned to the excavation options because of potential concerns regarding increased truck traffic.

This scoring may change following the public review process if concerns are raised.

4.3.3 Comparison of Overall Weighted Benefit Scores

Alternative 4 has the highest overall weighted benefit score of **8.3,** followed by Alternative 1 with a score of **7.7**. Alternative 3 has the lowest weighted benefit score of **6.9**.

4.4 SUMMARY AND CONCLUSIONS – DISPROPORTIONATE COST ANALYSIS

The DCA process is applied to each of the alternatives to help determine the preferred alternative. Through the DCA process, an alternative is considered impracticable if the incremental cost is disproportionally greater than the incremental benefit.

Alternative 4 (Interim Monitoring and Site Wide Remedial Excavation) provides the greatest overall benefit of the alternatives considered. Alternative 4 removes the largest volume of contaminated soil, which results in the greatest risk reduction and the most permanent solution. The estimated cost to implement Alternative 4 is $1,537,885, and the overall weighted benefit score is 8.3, resulting in a cost benefit ratio of 18.5 (result divided by100,000 for brevity).

Alternative 4 is relatively the most permanent alternative, thus the relative benefits and costs of the other alternatives are compared to Alternative 4 in order to determine which alternative is permanent to the maximum extent practicable.

Alternative 1 (In-situ Treatment) has an overall benefit score of 7.7, which is 8% lower that Alternative 4. The costs of Alternative 1, however, are higher – approximately 20% higher than for Alternative 4. The increased cost to complete Alternative 1 is significant and considered

disproportionate given no increase in benefit (7.1 for Alternative 1 and 8.3 for Alternative 4). Alternative 1 is therefore removed from consideration.

Alternatives 2 (Groundwater Extraction and Treatment) and 3 (Interim Monitoring and Source Removal) had overall benefit scores of 7.1 and 6.9, respectively. These are lower than Alternative 4's score of 8.3. The costs of Alternatives 2 and 3 are significantly lower than Alternative 4 but do not provide an acceptable benefit.

Based on the relative cost and benefits, Alternative 4 is not considered disproportionate relative to the increase in benefit. Therefore, Alternative 4 is considered the FS alternative that is permanent to the maximum extent practicable.

5.0 Selection of Preferred Cleanup Action Alternative

Based on the evaluation of remedial alternatives, Alternative 4: Interim Monitoring and Site-Wide Soil Excavation is recommended.

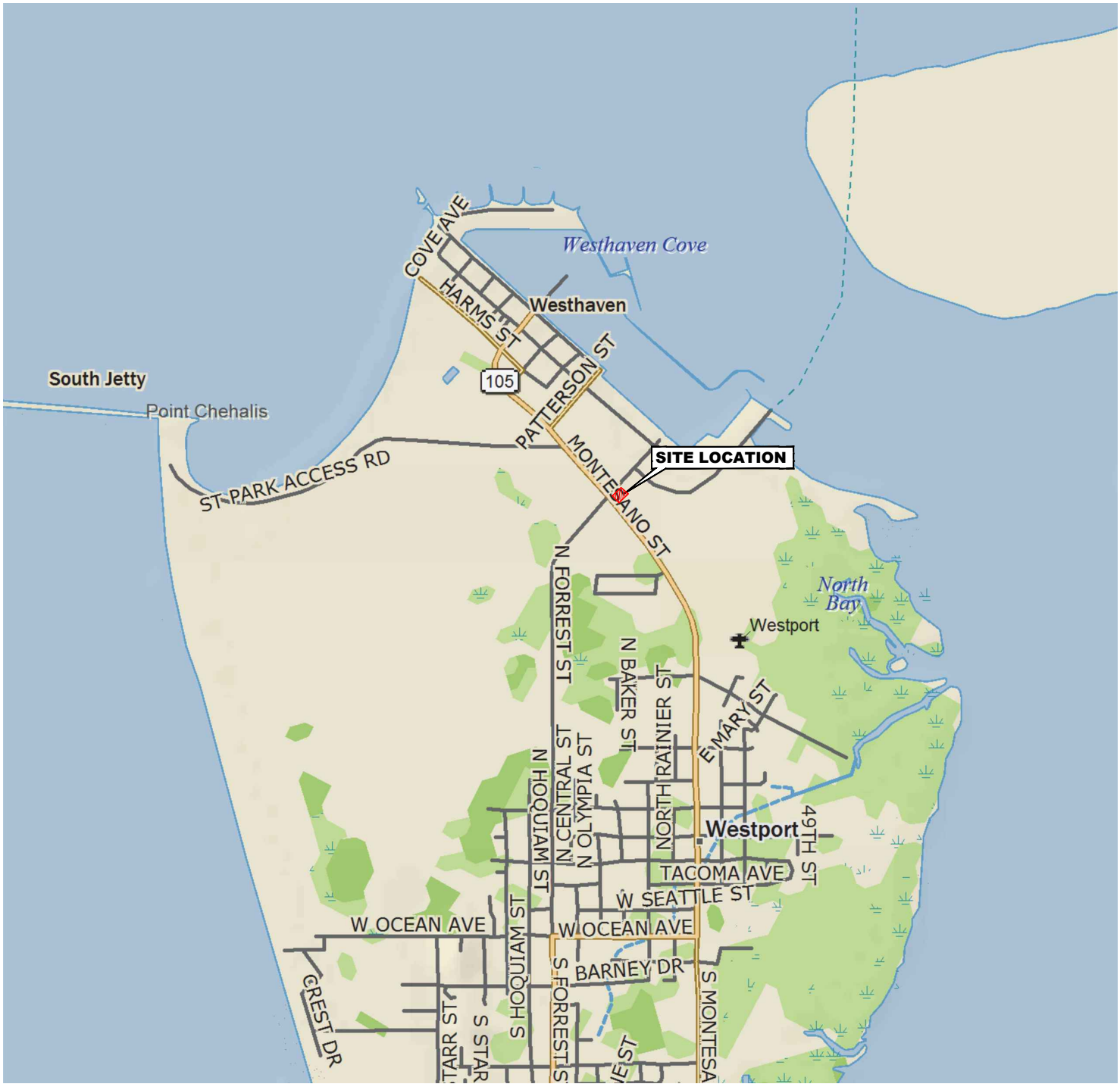
This recommendation is based on comparison of the four alternatives presented. Each alternative removes contaminant mass and reduces risk that humans or the environment will be exposed to contaminants. Alternative 4 removes the greatest mass of contaminants from the Site and is the most protective of the alternatives presented. Alternative 4 is the second most costly choice but is not disproportionally costly when compared to the additional benefit.

Note that each of the alternatives presented (including Alternative 4) will not likely result in meeting clean-up levels and will not achieve site closure as defined as a No Further Action determination from Ecology.

Institutional controls (restricting groundwater use and managing contaminated media during subsurface disturbance activities) will reduce the risks to human health. Groundwater monitoring will confirm that contaminants are not migrating off-site. For planning purposes annual monitoring is proposed until implementation of the clean-up remedy.

A draft Cleanup Action Plan (CAP) will be developed to implement the selected alternative. The draft CAP will include the elements required in Washington Administrative Code 173-340-380 and will be submitted to Ecology for review and approval. Upon review, the CAP will become final following a 30-day public comment period and will be considered the Site remedy.

FIGURES



North

1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, WESTPORT, WASHINGTON

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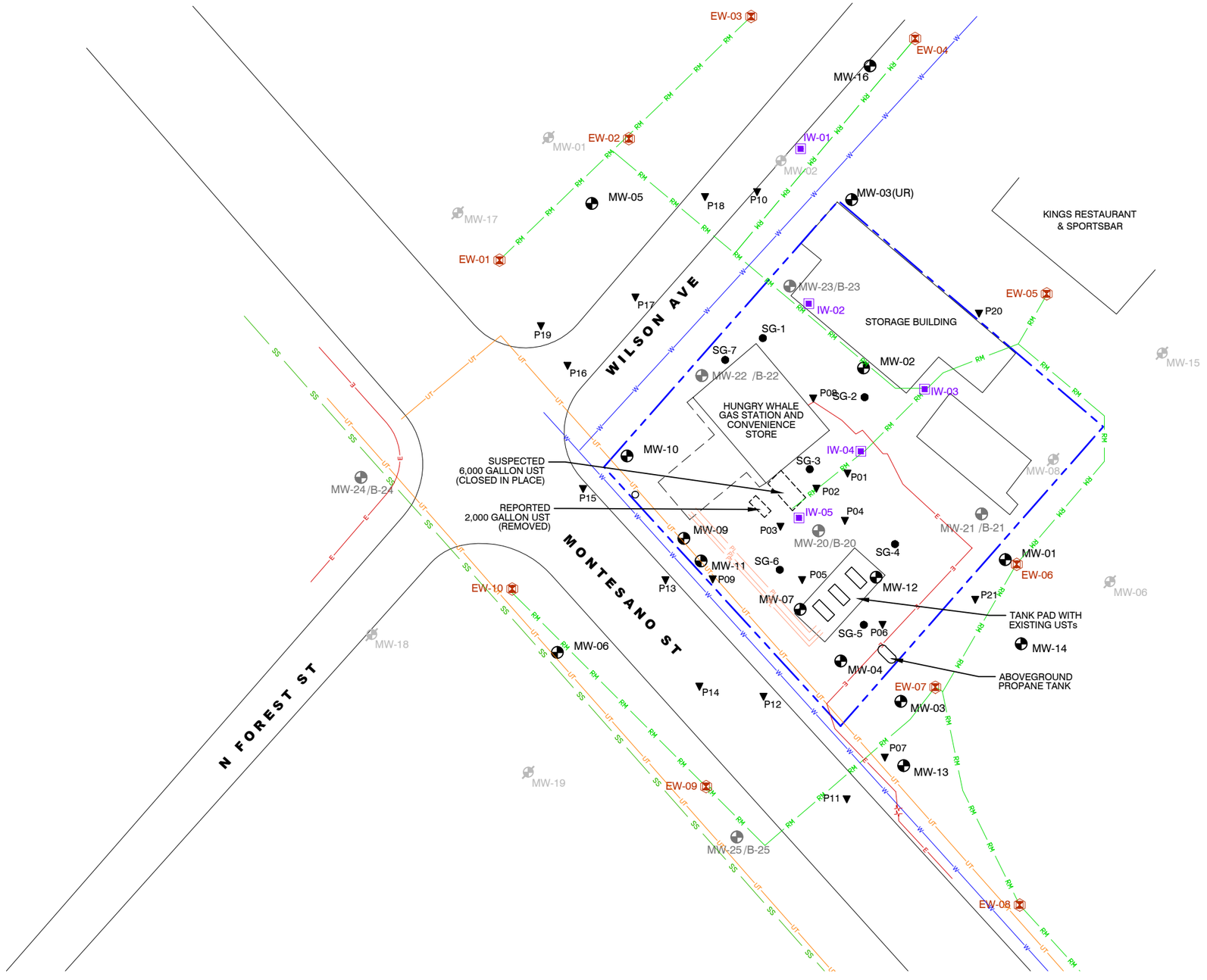
WESPORT, WASHINGTON

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	DH	--	SEPT 2016

FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\FIG-1_SITE LOC.dwg | Layout Tab: Layout1 | Drafter: miramirez | Sep 21, 2016 at 15:06



LEGEND

- MW-1 ⊕ MONITORING WELL (pre-2007)
- MW-1 ⊕ MONITORING WELL/BORING (2007)
- EW-01 ⊠ EXTRACTION WELL (OPERATED 7/1997-10/1999)
- IW-01 ▣ INJECTION WELL (OPERATED 7/1997-10/1999)
- SG-1 ● SOIL GAS POINT (2011)
- P01 ▼ SOIL BORING (DIRECT PUSH, 2007)
- DESTROYED/ABANDONED WELL
- ○ POWER POLE
- LEASEHOLD BOUNDARY
- E ELECTRIC LINE
- SS SANITARY SEWER LINE
- UT UNDERGROUND TELEPHONE LINE
- W WATER LINE
- RM REMEDIATION SYSTEM PIPING
- PL STATION FUEL/PRODUCT LINE

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SITE PLAN

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	CS		JAN 2017

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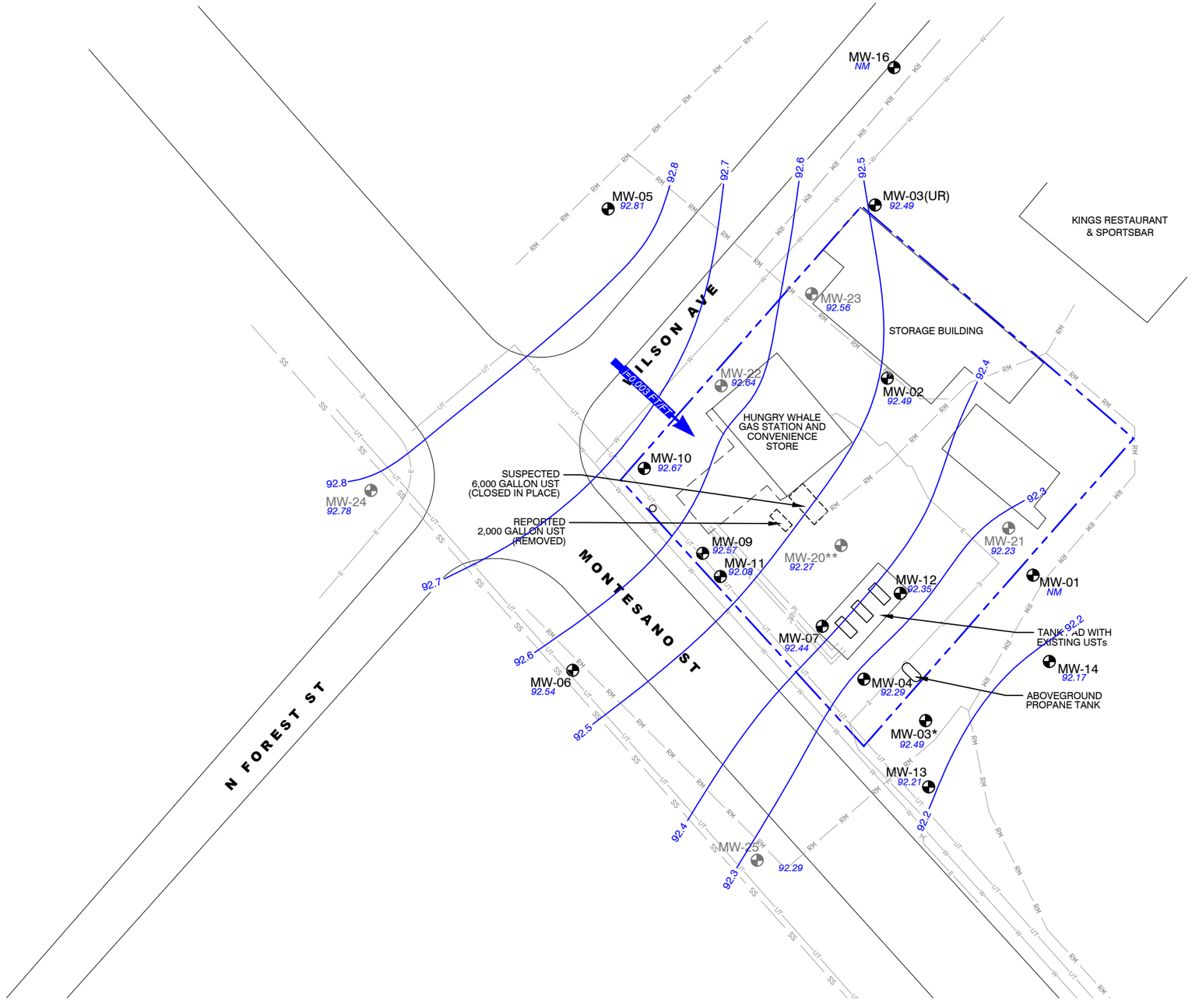

LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 92.81 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- NM — NOT MEASURED
- 92.4 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □ 0.1 FT
- * — NOT USED FOR CONTOURING, POSSIBLY ANOMALOUS
- ** — DATA FROM MW-11 AND MW-20 NOT USED FOR CONTOURING, AS THESE WELLS ARE COMPLETED IN A LOWER ZONE THAN THE OTHER WELLS.

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GROUNDWATER ELEVATION CONTOUR MAP JUNE 27, 2007

FIGURE: 3a

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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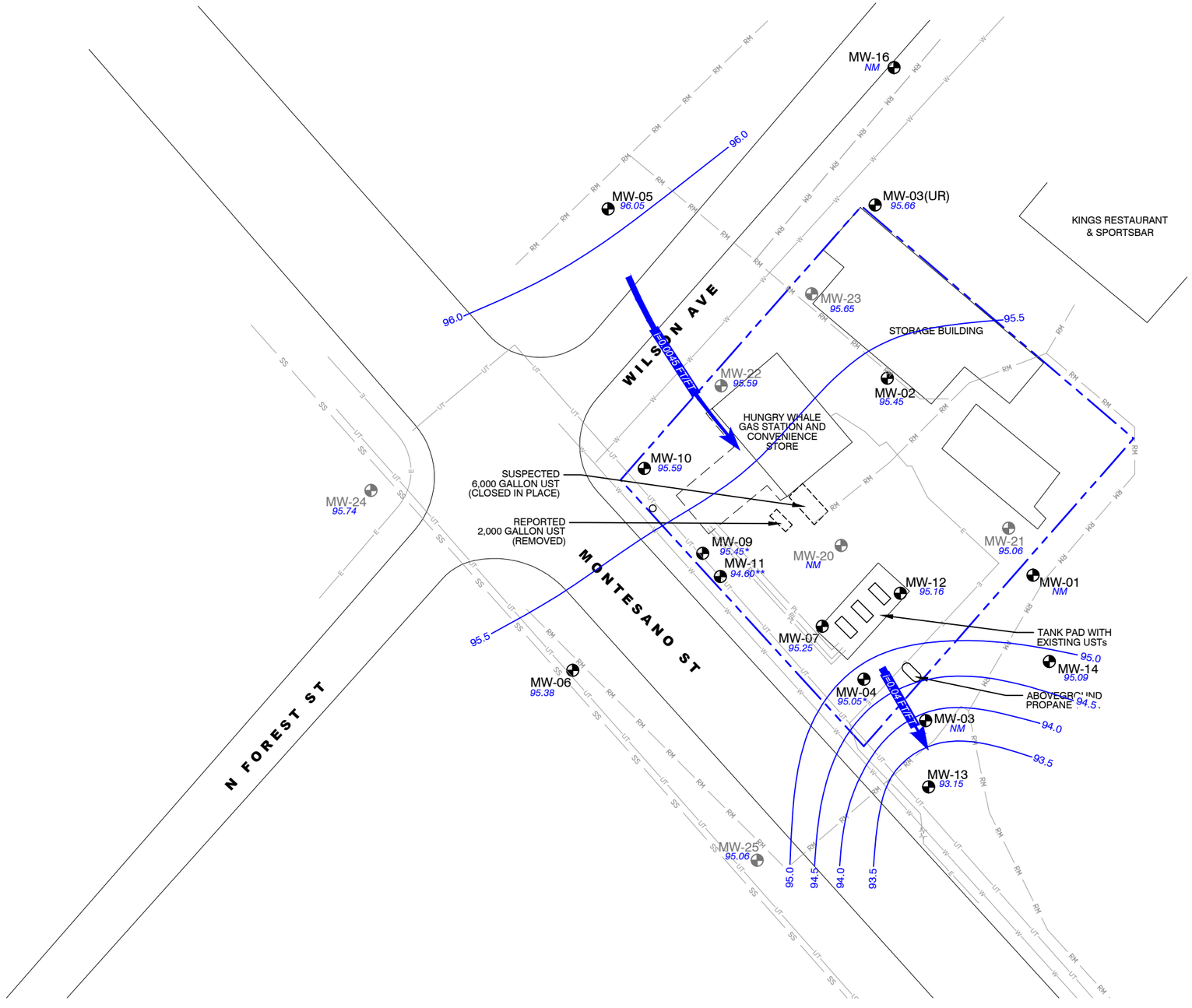

LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 92.81 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- NM — NOT MEASURED
- 94.5 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □0.5 FT
- * — 0.1 FOOT SPH IN MW-09 AND 0.01 FOOT SPH IN MW04
- ** — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING□WELLS IN A DEEPER ZONE

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GROUNDWATER ELEVATION CONTOUR MAP NOVEMBER 30, 2011

FIGURE: **3b**

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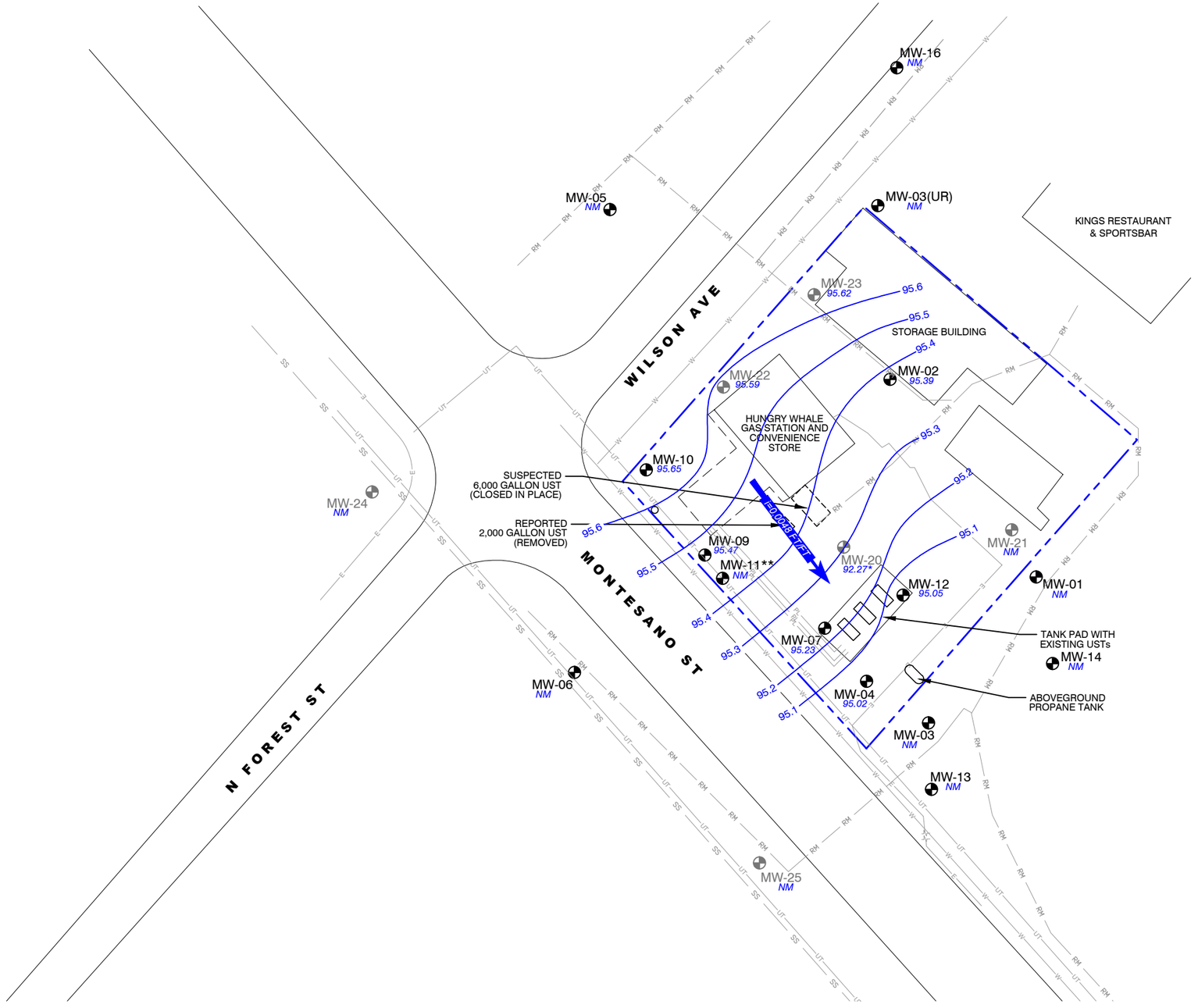
185703328	MDR	CS		JAN 2017

FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\2017\HungryWhale-2017 GWE_3a-3d.dwg | Layout Tab: FIG-3b SITE GWE | Drafter: miramirez | Feb 01, 2017 at 15:21



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 95.02 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- 94.5 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □0.1 FT
- * — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING□WELLS IN A DEEPER ZONE
- NM — NOT MEASURED

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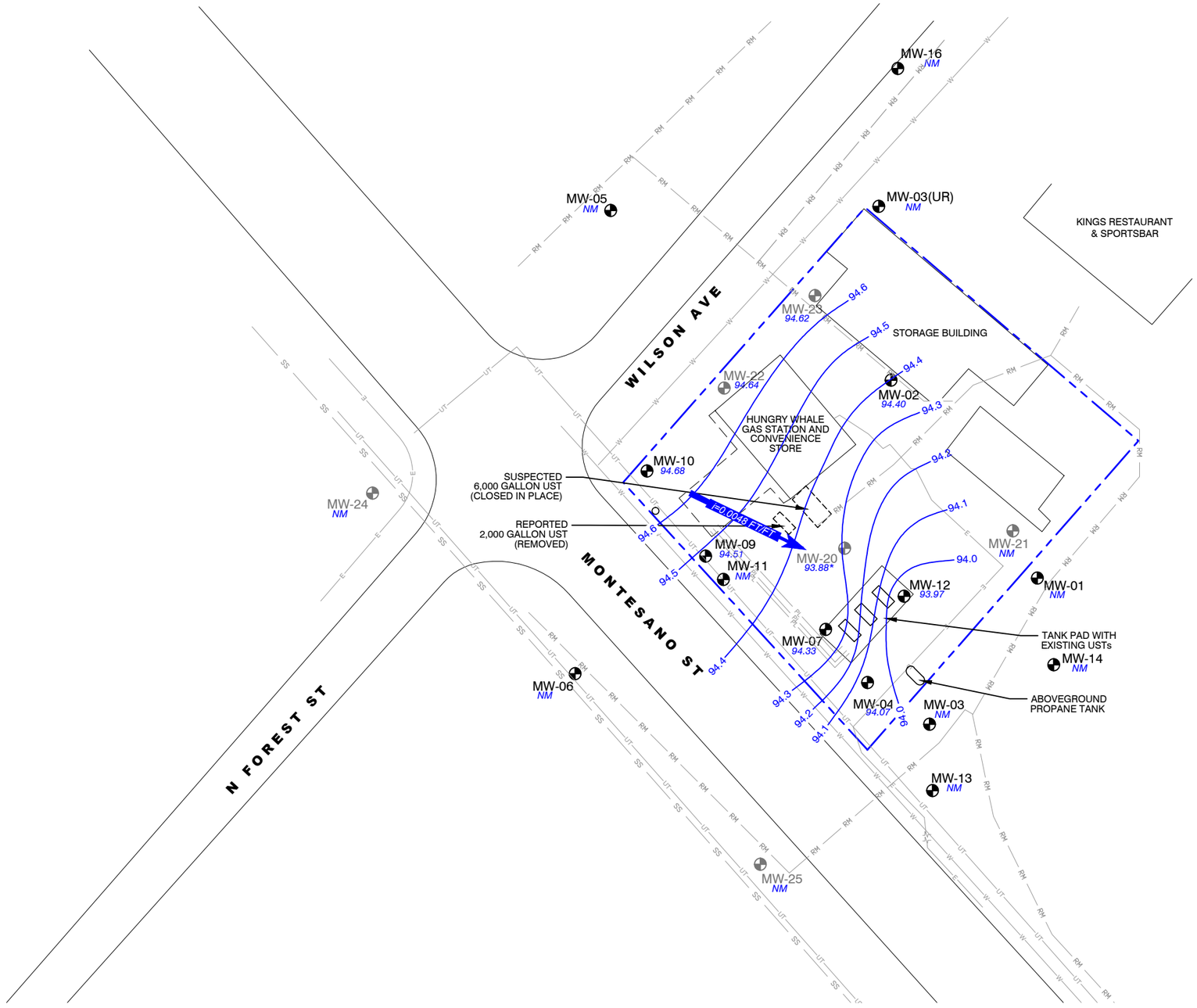
GROUNDWATER ELEVATION CONTOUR MAP MARCH 6, 2012

FIGURE: 3c

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	CS		JAN 2017



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 92.81 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- 94.5 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □0.1 FT
- * — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING□WELLS IN A DEEPER ZONE
- NM — NOT MEASURED

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GROUNDWATER ELEVATION CONTOUR MAP JUNE 13, 2012

FIGURE: **3d**

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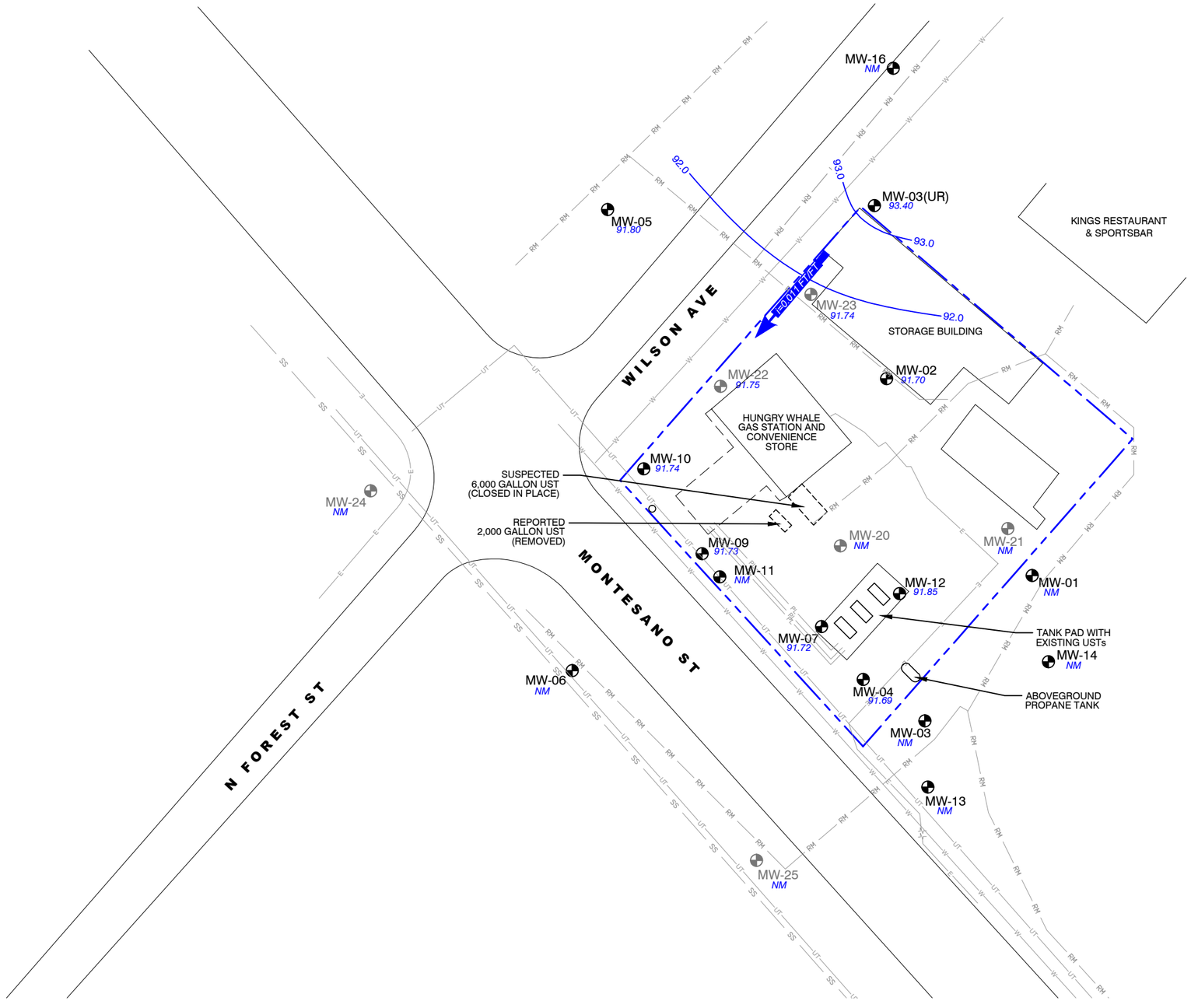
FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\2017\HungryWhale-2017 GWE_3a-3d.dwg | Layout Tab: FIG-3d SITE GWE | Drafter: miramirez | Feb 01, 2017 at 15:16



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 93.40 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- NM — NOT MEASURED
- 93.0 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □ 1.0 FT

N

0 50 100

APPROXIMATE SCALE IN FEET

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GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 4, 2012

FIGURE: 3e

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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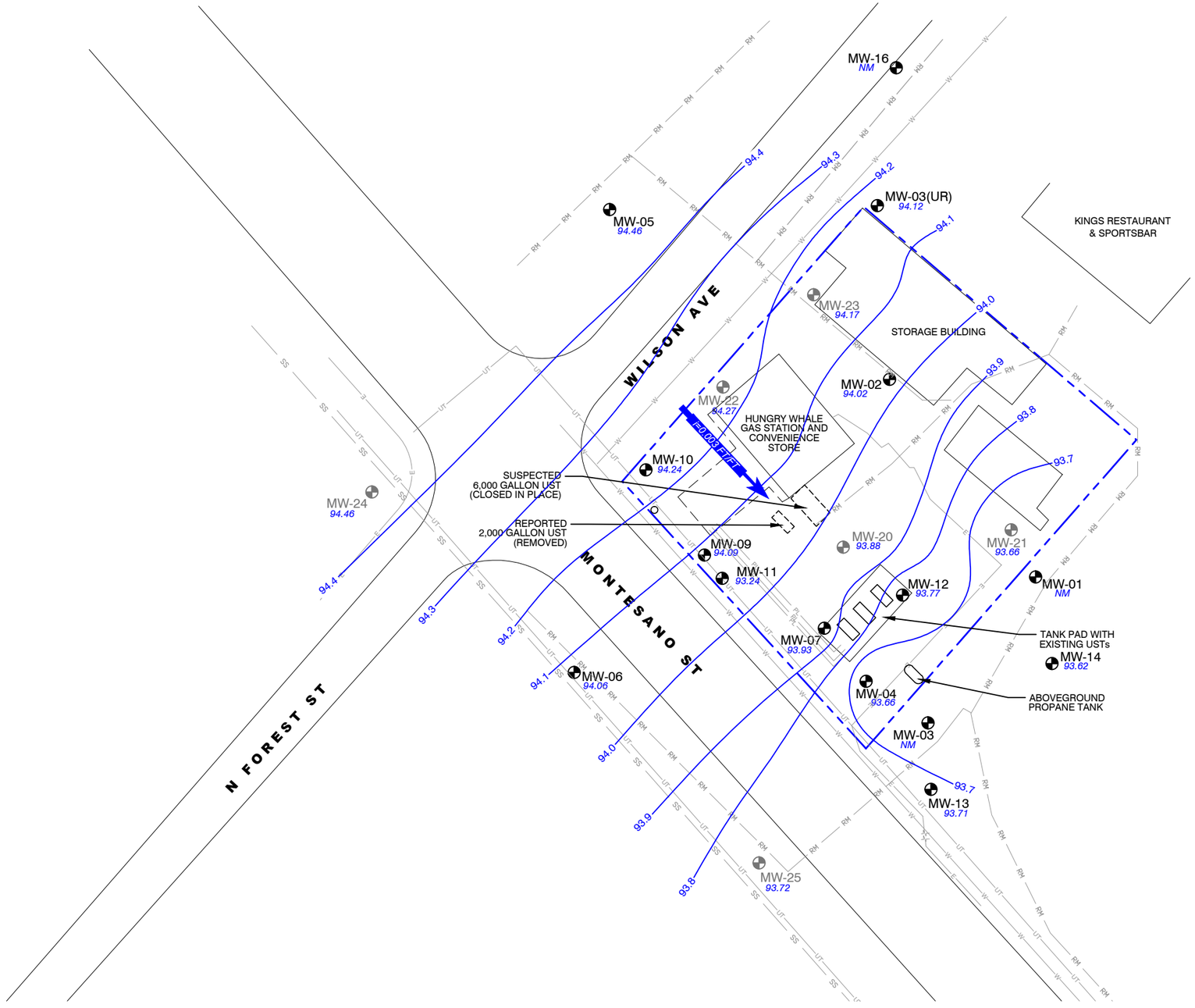
FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\2017\HungryWhale-2017 GWE_3e-3g.dwg | Layout Tab: FIG-3e SITE GWE | Drafter: miramirez | Feb 02, 2017 at 10:35



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 93.66 — GROUNDWATER ELEVATION (BASED ON AN ARBITRARY TOP OF CASING ELEVATION AT MW-2 0F 100.00 FEET ABOVE MEAN SEA LEVEL)
- NM — NOT MEASURED
- 93.8 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □0.1 FT
- * — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING□WELLS IN A DEEPER ZONE

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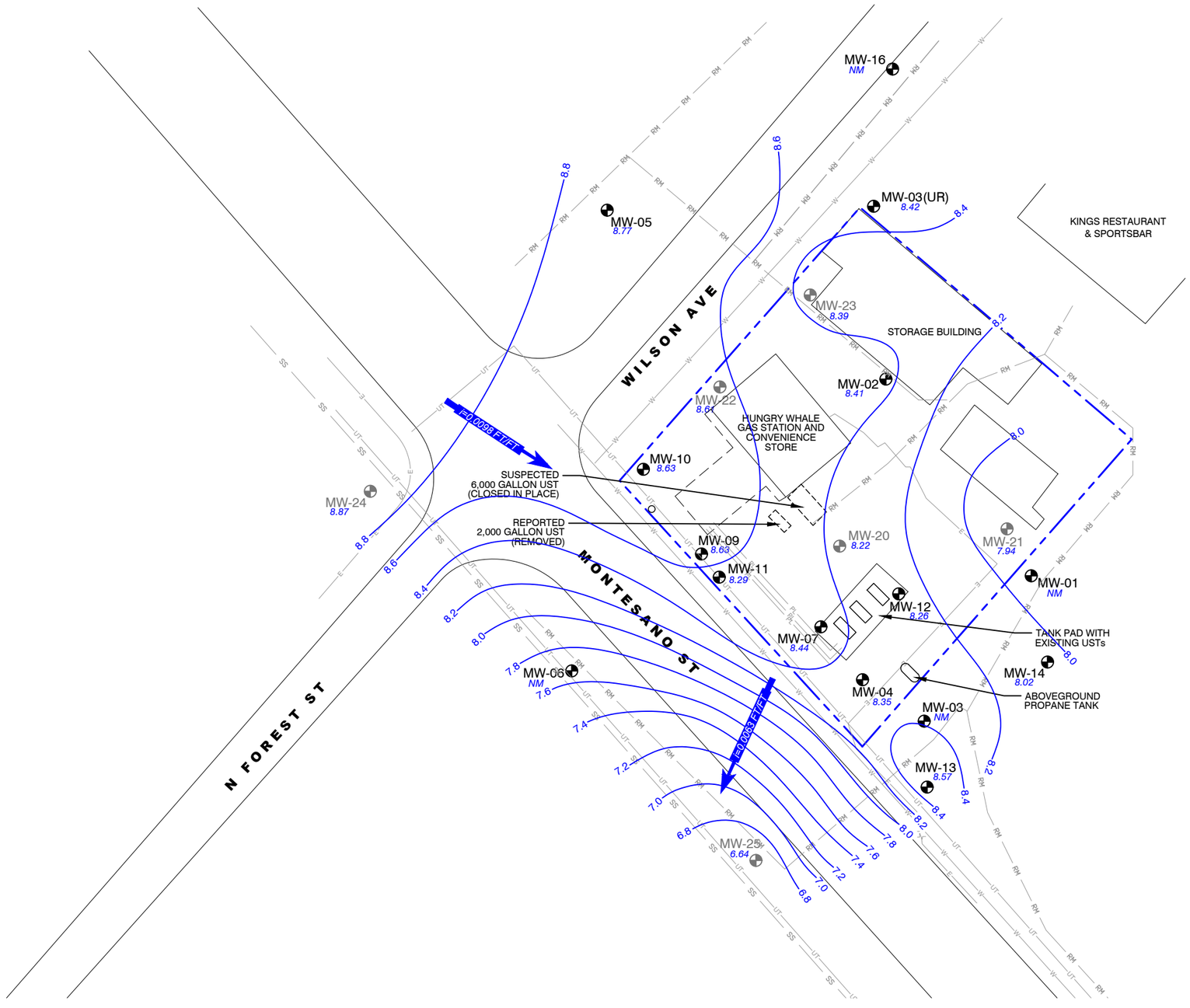
GROUNDWATER ELEVATION CONTOUR MAP JUNE 4, 2013

FIGURE: 3f

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	CS		JAN 2017

FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\2017\HungryWhale-2017 GWE_3e-3g.dwg | Layout Tab: FIG-3f SITE GWE | Drafter: miramirez | Feb 02, 2017 at 10:36



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 8.22 — GROUNDWATER ELEVATION (BASED ON A PROFESSIONAL WELL SURVEY CONDUCTED APRIL 11-12, 2016 BY BERGLUND, SCHMIDT & ASSOCIATES USING AREA BENCHMARK ID□TIDAL 2 1952 RESET, ELEVATION 15.26□NAVD88)
- NM — NOT MEASURED
- 8.4 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL □ 0.2 FT
- * — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING□WELLS IN A DEEPER ZONE

N

0 50 100

APPROXIMATE SCALE IN FEET

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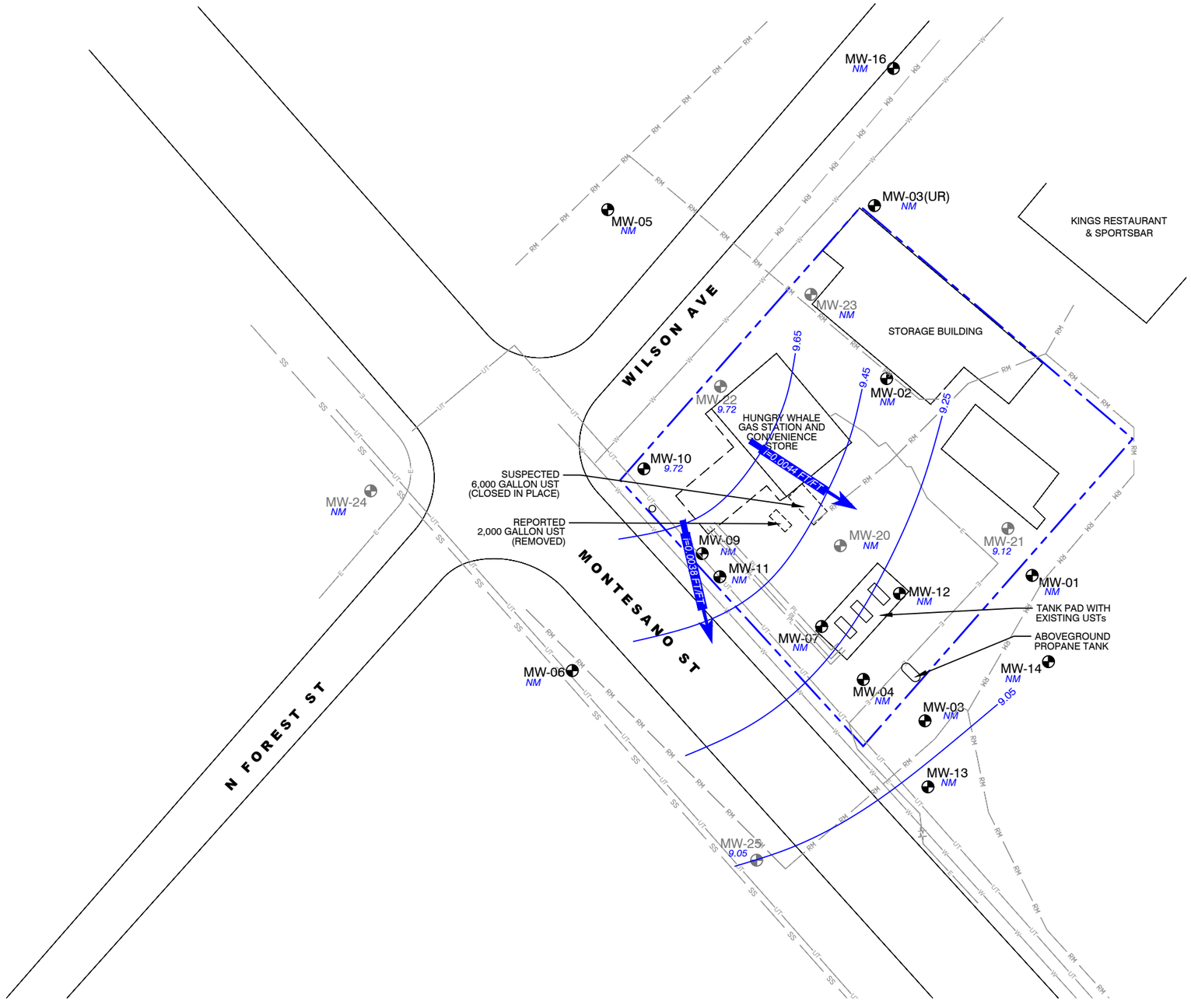
GROUNDWATER ELEVATION CONTOUR MAP APRIL 13, 2016

FIGURE: 3g

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	CS		JAN 2017



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 9.72 — GROUNDWATER ELEVATION (BASED ON A PROFESSIONAL WELL SURVEY CONDUCTED APRIL 11-12, 2016 BY BERGLUND, SCHMIDT & ASSOCIATES USING AREA BENCHMARK ID TIDAL 2 1952 RESET, ELEVATION 15.26 NAVD88)
- NM — NOT MEASURED
- 9.45 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL 0.2 FT

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FOR:
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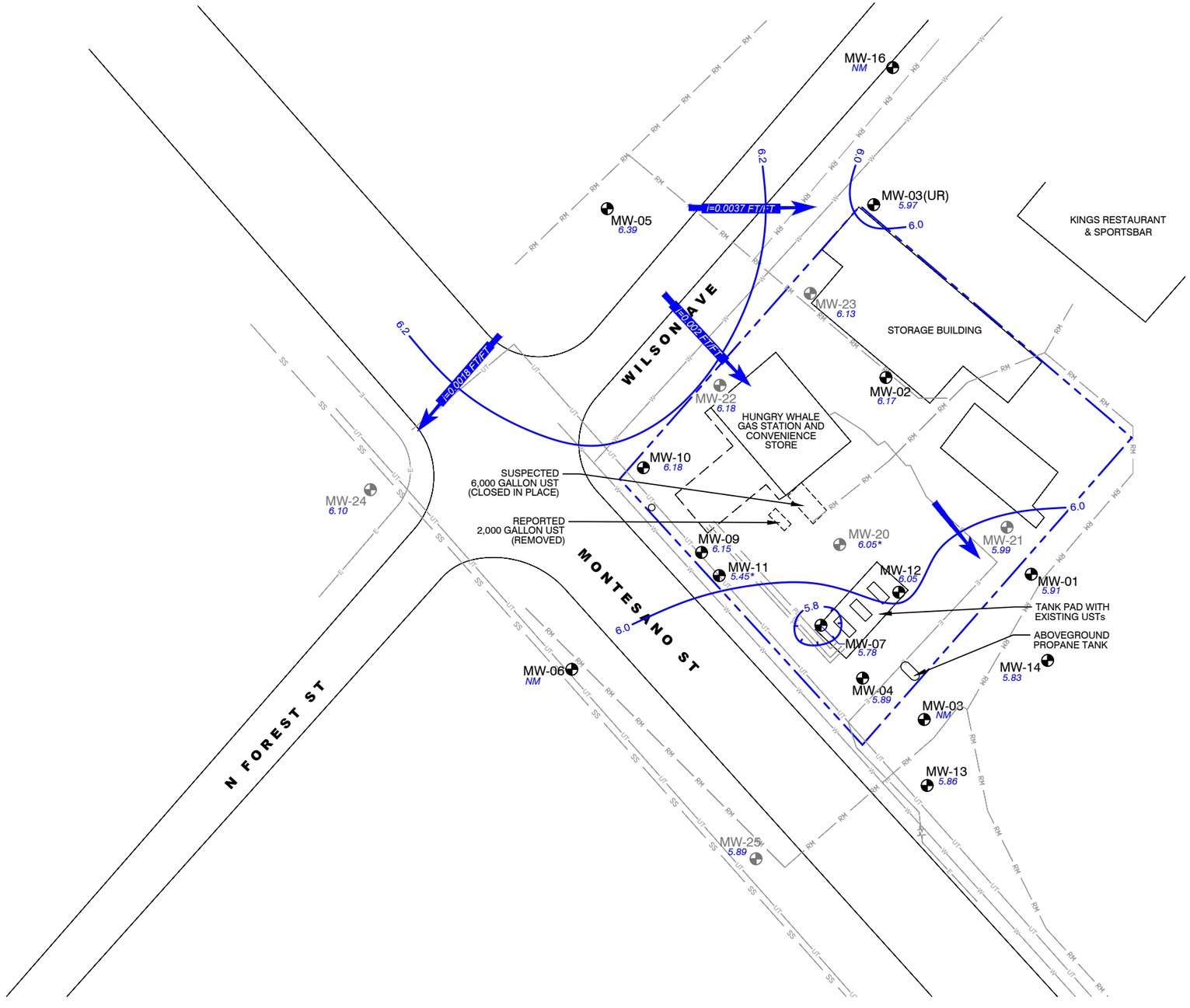
WESTPORT, WASHINGTON

GROUNDWATER ELEVATION CONTOUR MAP JANUARY 9, 2018

FIGURE: **3h**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	MDR	CS		JAN 2017



LEGEND

- MW-20 — MONITORING WELL (pre-2007)
- MW-1 — MONITORING WELL/BORING (2007)
- POWER POLE
- LEASEHOLD BOUNDARY
- E — ELECTRIC LINE
- SS — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- RM — REMEDIATION SYSTEM PIPING
- PL — STATION FUEL/PRODUCT LINE
- 6.17 — GROUNDWATER ELEVATION (BASED ON A PROFESSIONAL WELL SURVEY CONDUCTED APRIL 11-12, 2016 BY BERGLUND, SCHMIDT & ASSOCIATES USING AREA BENCHMARK ID; TIDAL 2 1952 RESET, ELEVATION 15.26' NAVD88)
- NM — NOT MEASURED
- 6.00 — GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- CONTOUR INTERVAL = 0.2 FT
- DEPRESSION CONTOUR
- * — DATA FROM MW-11 AND MW-20 NOT USED IN CONTOURING; WELLS IN A DEEPER ZONE

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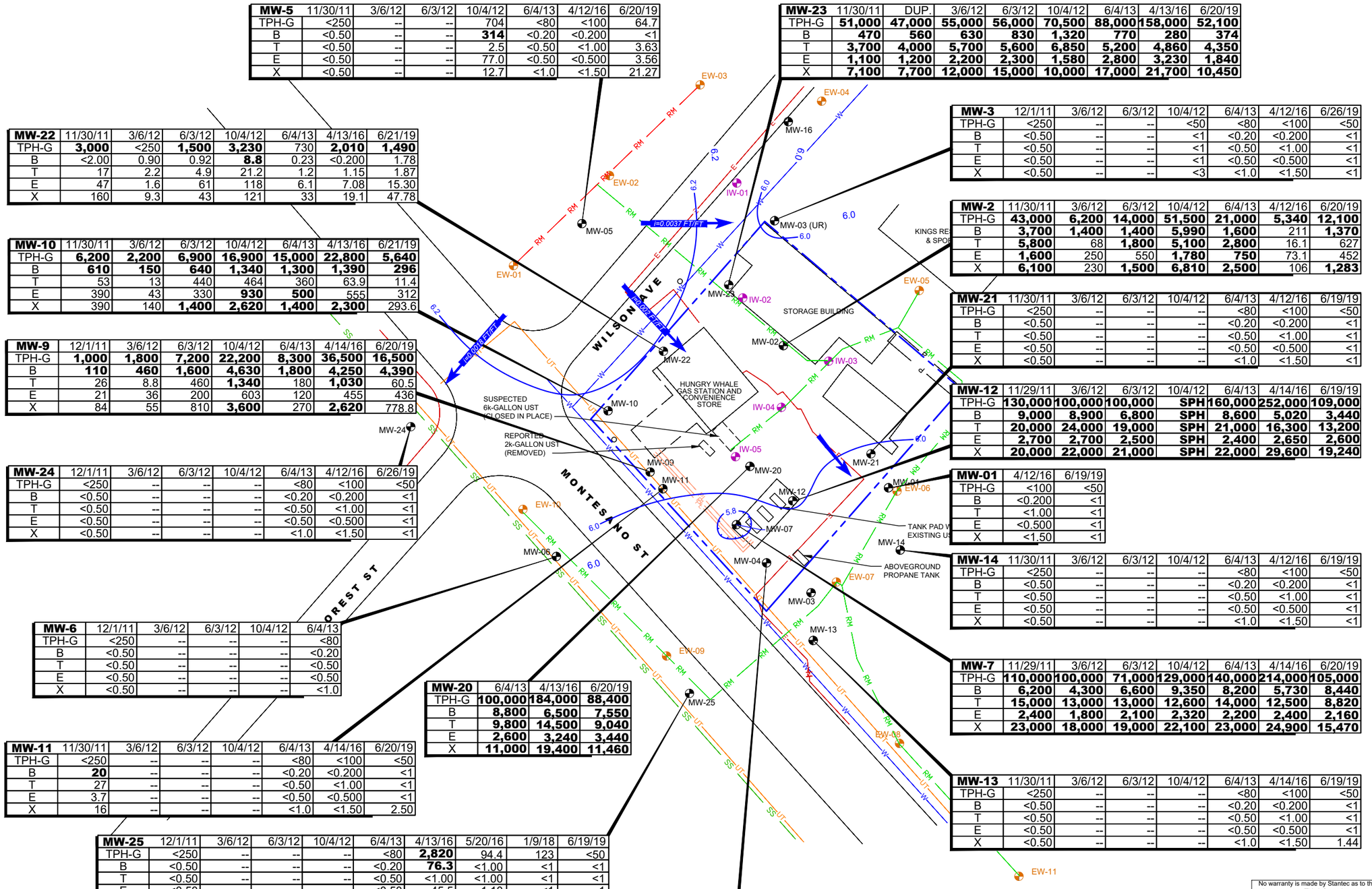
GROUNDWATER ELEVATION CONTOUR MAP JUNE 19-21, 2019

FIGURE: 3i

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185751088	MDR	CS	MS	JAN 2020

FILEPATH:V:\1857\active\Secor\CADD_00 OTHER OFFICES\01-REDMOND\HUNGRY WHALE\2020\HungryWhale-2017 GWE_3e-3g.dwg | Layout Tab: FIG-3i SITE GWE | Drafter: MiRamirez | Jan 24, 2020 at 13:08



MW-5	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/20/19
TPH-G	<250	--	--	704	<80	<100	64.7
B	<0.50	--	--	**314**	<0.20	<0.200	<1
T	<0.50	--	--	2.5	<0.50	<1.00	3.63
E	<0.50	--	--	77.0	<0.50	<0.500	3.56
X	<0.50	--	--	12.7	<1.0	<1.50	21.27

MW-22	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/13/16	6/21/19
TPH-G	**3,000**	<250	**1,500**	**3,230**	730	**2,010**	**1,490**
B	<2.00	0.90	0.92	**8.8**	0.23	<0.200	1.78
T	17	2.2	4.9	21.2	1.2	1.15	1.87
E	47	1.6	61	118	6.1	7.08	15.30
X	160	9.3	43	121	33	19.1	47.78

MW-10	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/13/16	6/21/19
TPH-G	**6,200**	**2,200**	**6,900**	**16,900**	**15,000**	**22,800**	**5,640**
B	**610**	**150**	**640**	**1,340**	**1,300**	**1,390**	**296**
T	53	13	440	464	360	63.9	11.4
E	390	43	330	**930**	**500**	555	312
X	390	140	**1,400**	**2,620**	**1,400**	**2,300**	293.6

MW-9	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/20/19
TPH-G	**1,000**	**1,800**	**7,200**	**22,200**	**8,300**	**36,500**	**16,500**
B	**110**	**460**	**1,600**	**4,630**	**1,800**	**4,250**	**4,390**
T	26	8.8	460	**1,340**	180	**1,030**	60.5
E	21	36	200	603	120	455	436
X	84	55	810	**3,600**	270	**2,620**	778.8

MW-24	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/26/19
TPH-G	<250	--	--	--	<80	<100	<50
B	<0.50	--	--	--	<0.20	<0.200	<1
T	<0.50	--	--	--	<0.50	<1.00	<1
E	<0.50	--	--	--	<0.50	<0.500	<1
X	<0.50	--	--	--	<1.0	<1.50	<1

MW-6	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13
TPH-G	<250	--	--	--	<80
B	<0.50	--	--	--	<0.20
T	<0.50	--	--	--	<0.50
E	<0.50	--	--	--	<0.50
X	<0.50	--	--	--	<1.0

MW-11	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/20/19
TPH-G	<250	--	--	--	<80	<100	<50
B	**20**	--	--	--	<0.20	<0.200	<1
T	27	--	--	--	<0.50	<1.00	<1
E	3.7	--	--	--	<0.50	<0.500	<1
X	16	--	--	--	<1.0	<1.50	2.50

MW-25	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13	4/13/16	5/20/16	1/9/18	6/19/19
TPH-G	<250	--	--	--	<80	**2,820**	94.4	123	<50
B	<0.50	--	--	--	<0.20	**76.3**	<1.00	<1	<1
T	<0.50	--	--	--	<0.50	<1.00	<1.00	<1	<1
E	<0.50	--	--	--	<0.50	45.5	1.10	<1	1
X	<0.50	--	--	--	<1.0	101	1.08	1.60	1.60

MW-20	6/4/13	4/13/16	6/20/19
TPH-G	**100,000**	**184,000**	**88,400**
B	**8,800**	**6,500**	**7,550**
T	**9,800**	**14,500**	**9,040**
E	**2,600**	**3,240**	**3,440**
X	**11,000**	**19,400**	**11,460**

MW-4	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/20/19
TPH-G	**SPH**	**74,000**	**75,000**	**116,000**	**120,000**	**106,000**	**66,000**
B	**SPH**	**4,700**	**6,900**	**13,800**	**7,000**	**3,170**	**8,310**
T	**SPH**	**5,800**	**9,700**	**13,200**	**6,400**	748	**5,910**
E	**SPH**	**2,000**	**2,000**	**2,570**	**2,400**	**1,740**	**1,620**
X	**SPH**	**16,000**	**13,000**	**14,900**	**19,000**	**9,130**	**6,890**

MW-23	11/30/11	DUP.	3/6/12	6/3/12	10/4/12	6/4/13	4/13/16	6/20/19
TPH-G	**51,000**	**47,000**	**55,000**	**56,000**	**70,500**	**88,000**	**158,000**	**52,100**
B	**470**	**560**	**630**	**830**	**1,320**	**770**	**280**	**374**
T	**3,700**	**4,000**	**5,700**	**5,600**	**6,850**	**5,200**	**4,860**	**4,350**
E	**1,100**	**1,200**	**2,200**	**2,300**	**1,580**	**2,800**	**3,230**	**1,840**
X	**7,100**	**7,700**	**12,000**	**15,000**	**10,000**	**17,000**	**21,700**	**10,450**

MW-3	12/1/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/26/19
TPH-G	<250	--	--	<50	<80	<100	<50
B	<0.50	--	--	<1	<0.20	<0.200	<1
T	<0.50	--	--	<1	<0.50	<1.00	<1
E	<0.50	--	--	<1	<0.50	<0.500	<1
X	<0.50	--	--	<3	<1.0	<1.50	<1

MW-2	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/20/19
TPH-G	**43,000**	**6,200**	**14,000**	**51,500**	**21,000**	**5,340**	**12,100**
B	**3,700**	**1,400**	**1,400**	**5,990**	**1,600**	211	**1,370**
T	**5,800**	68	**1,800**	**5,100**	**2,800**	16.1	627
E	**1,600**	250	550	**1,780**	**750**	73.1	452
X	**6,100**	230	**1,500**	**6,810**	**2,500**	106	**1,283**

MW-21	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/19/19
TPH-G	<250	--	--	--	<80	<100	<50
B	<0.50	--	--	--	<0.20	<0.200	<1
T	<0.50	--	--	--	<0.50	<1.00	<1
E	<0.50	--	--	--	<0.50	<0.500	<1
X	<0.50	--	--	--	<1.0	<1.50	<1

MW-12	11/29/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/19/19
TPH-G	**130,000**	**100,000**	**100,000**	**SPH**	**160,000**	**252,000**	**109,000**
B	**9,000**	**8,900**	**6,800**	**SPH**	**8,600**	**5,020**	**3,440**
T	**20,000**	**24,000**	**19,000**	**SPH**	**21,000**	**16,300**	**13,200**
E	**2,700**	**2,700**	**2,500**	**SPH**	**2,400**	**2,650**	**2,600**
X	**20,000**	**22,000**	**21,000**	**SPH**	**22,000**	**29,600**	**19,240**

MW-01	4/12/16	6/19/19
TPH-G	<100	<50
B	<0.200	<1
T	<1.00	<1
E	<0.500	<1
X	<1.50	<1

MW-14	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/12/16	6/19/19
TPH-G	<250	--	--	--	<80	<100	<50
B	<0.50	--	--	--	<0.20	<0.200	<1
T	<0.50	--	--	--	<0.50	<1.00	<1
E	<0.50	--	--	--	<0.50	<0.500	<1
X	<0.50	--	--	--	<1.0	<1.50	<1

MW-7	11/29/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/20/19
TPH-G	**110,000**	**100,000**	**71,000**	**129,000**	**140,000**	**214,000**	**105,000**
B	**6,200**	**4,300**	**6,600**	**9,350**	**8,200**	**5,730**	**8,440**
T	**15,000**	**13,000**	**13,000**	**12,600**	**14,000**	**12,500**	**8,820**
E	**2,400**	**1,800**	**2,100**	**2,320**	**2,200**	**2,400**	**2,160**
X	**23,000**	**18,000**	**19,000**	**22,100**	**23,000**	**24,900**	**15,470**

MW-13	11/30/11	3/6/12	6/3/12	10/4/12	6/4/13	4/14/16	6/19/19
TPH-G	<250	--	--	--	<80	<100	<50
B	<0.50	--	--	--	<0.20	<0.200	<1
T	<0.50	--	--	--	<0.50	<1.00	<1
E	<0.50	--	--	--	<0.50	<0.500	<1
X	<0.50	--	--	--	<1.0	<1.50	1.44

LEGEND

- APPROXIMATE BOUNDARY
- E — ELECTRIC LINE
- SA — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- P — SYSTEM PIPING
- PR — PRODUCT LINE
- MW-03 — MONITORING WELL (1992 & 2005)
- MW-20 — MONITORING WELL (2007)
- EW-05 — EXTRACTION WELL (1997-1999)
- IW-01 — INJECTION WELL (1997-1999)

ANALYTE

WELL ID	
TPH-G	TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE
B	BENZENE
T	TOLUENE
E	ETHYL BENZENE
X	TOTAL XYLENES

NS NOT SAMPLED

µg/L MICROGRAMS PER LITER

BOLD EXCEEDS MTCA METHOD A CLEANUP LEVELS

SPH SEPARATE PHASE HYDROCARBONS

-- NOT MEASURED OR ANALYZED

<0.20 NOT DETECTED ABOVE METHOD REPORTING LIMIT OF 0.20 µg/L

ALL ANALYTICAL DATA REPORTED IN µg/L

GENERALIZED GROUNDWATER GRADIENT AND DIRECTION. GROUNDWATER CONTOURS BASED ON JUNE 2019 DATA; SEE FIG-3i

N

0 60 120

APPROXIMATE SCALE IN FEET

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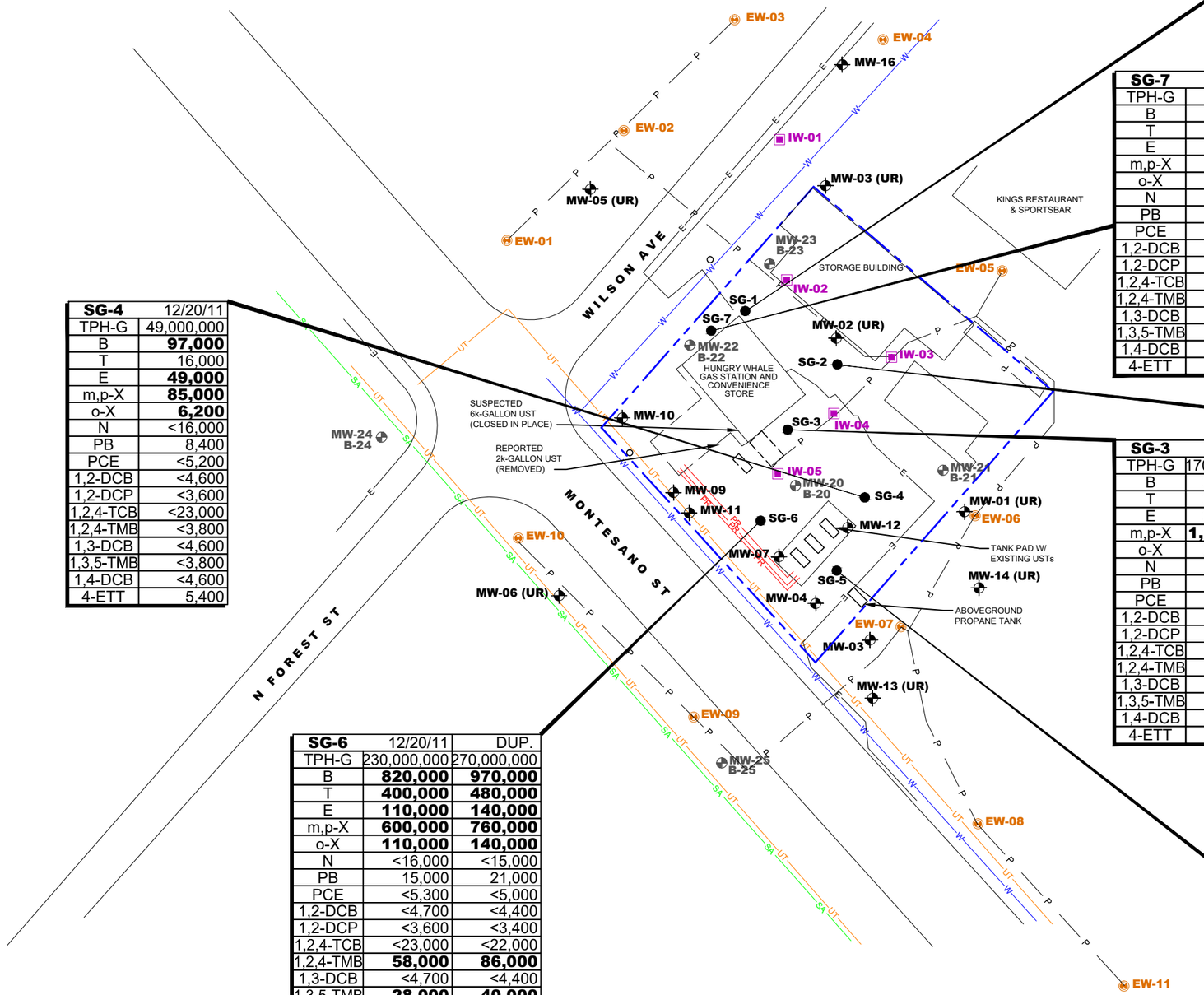
FOR:
THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

GROUNDWATER ANALYTICAL RESULTS (2011-2019) AND GRADIENT MAP (JUNE 2019)

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185751088	MDR	CBS	MS	JAN 2020



SG-4	12/20/11
TPH-G	49,000,000
B	**97,000**
T	16,000
E	**49,000**
m,p-X	**85,000**
o-X	**6,200**
N	<16,000
PB	8,400
PCE	<5,200
1,2-DCB	<4,600
1,2-DCP	<3,600
1,2,4-TCB	<23,000
1,2,4-TMB	<3,800
1,3-DCB	<4,600
1,3,5-TMB	<3,800
1,4-DCB	<4,600
4-ETT	5,400

SG-6	12/20/11	DUP.
TPH-G	230,000,000	270,000,000
B	**820,000**	**970,000**
T	**400,000**	**480,000**
E	**110,000**	**140,000**
m,p-X	**600,000**	**760,000**
o-X	**110,000**	**140,000**
N	<16,000	<15,000
PB	15,000	21,000
PCE	<5,300	<5,000
1,2-DCB	<4,700	<4,400
1,2-DCP	<3,600	<3,400
1,2,4-TCB	<23,000	<22,000
1,2,4-TMB	**58,000**	**86,000**
1,3-DCB	<4,700	<4,400
1,3,5-TMB	**28,000**	**40,000**
1,4-DCB	<4,700	<4,400
4-ETT	86,000	120,000

SG-7	12/20/11
TPH-G	650
B	<2.4
T	8.7
E	<3.3
m,p-X	9.2
o-X	<3.3
N	<16
PB	<3.8
PCE	<5.2
1,2-DCB	<4.6
1,2-DCP	<3.5
1,2,4-TCB	<23
1,2,4-TMB	3.9
1,3-DCB	<4.6
1,3,5-TMB	<3.8
1,4-DCB	<4.6
4-ETT	<3.8

SG-1	12/20/11
TPH-G	1,800
B	<2.4
T	<2.8
E	<3.2
m,p-X	7.3
o-X	<3.2
N	<16
PB	<3.7
PCE	<5.0
1,2-DCB	<4.5
1,2-DCP	<3.4
1,2,4-TCB	<22
1,2,4-TMB	9.1
1,3-DCB	<4.5
1,3,5-TMB	7.8
1,4-DCB	<4.5
4-ETT	4.5

SG-3	12/20/11
TPH-G	170,000,000
B	**370,000**
T	**380,000**
E	**310,000**
m,p-X	**1,100,000**
o-X	**270,000**
N	<16,000
PB	28,000
PCE	<5,200
1,2-DCB	<4,600
1,2-DCP	<3,600
1,2,4-TCB	<23,000
1,2,4-TMB	**63,000**
1,3-DCB	<4,600
1,3,5-TMB	**32,000**
1,4-DCB	<4,600
4-ETT	100,000

SG-2	12/20/11
TPH-G	11,000
B	58
T	35
E	87
m,p-X	140
o-X	34
N	<16
PB	14
PCE	<5.2
1,2-DCB	<4.6
1,2-DCP	<3.5
1,2,4-TCB	<23
1,2,4-TMB	40
1,3-DCB	<4.6
1,3,5-TMB	**130**
1,4-DCB	<4.6
4-ETT	36

SG-5	12/20/11
TPH-G	190,000,000
B	**460,000**
T	**1,200,000**
E	**260,000**
m,p-X	**1,200,000**
o-X	**350,000**
N	<16,000
PB	28,000
PCE	<5,200
1,2-DCB	<4,600
1,2-DCP	<3,500
1,2,4-TCB	<22,000
1,2,4-TMB	**99,000**
1,3-DCB	<4,600
1,3,5-TMB	**47,000**
1,4-DCB	<4,600
4-ETT	140,000

LEGEND

- APPROXIMATE BOUNDARY
- E — ELECTRIC LINE
- SA — SANITARY SEWER LINE
- UT — UNDERGROUND TELEPHONE LINE
- W — WATER LINE
- P — SYSTEM PIPING
- PR — PRODUCT LINE
- MW-03 — PREVIOUS MONITORING WELL
- MW-20 / B-20 — MONITORING WELL (SES 2007)
- EW-05 — EXTRACTION WELL
- IW-01 — INJECTION WELL
- SG-1 — PROPOSED SOIL GAS SAMPLE POINTS
- POWER POLE

ANALYTE

WELL ID	
TPH-G	TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE
B	BENZENE
T	TOLUENE
E	ETHYL BENZENE
X	TOTAL XYLENES
m,p-X	m,p-XYLENE
o-X	o-XYLENE
N	NAPHTHALENE
PB	PROPYLBENZENE
PCE	TETRACHLOROETHANE
1,2-DCB	1,2-DICHLOROBENZENE
1,2-DCP	1,2-DICHLOROPROPANE
1,2,4-TCB	1,2,4-TRIMCHLOROBENZENE
1,2,4-TMB	1,2,4-TRIMETHYLBENZENE
1,3-DCB	1,3-DICHLOROBENZENE
1,3,5-TMB	1,3,5-TRIMETHYLBENZENE
1,4-DCB	1,4-DICHLOROBENZENE
4-ETT	4-ETHYLTOLUENE

µg/m³ MICROGRAMS PER CUBIC METER

RESULTS OR REPORTING LIMITS IN **BOLD** EXCEED THE TABLE B-1 SCREENING LEVELS

0 60 120

APPROXIMATE SCALE IN FEET

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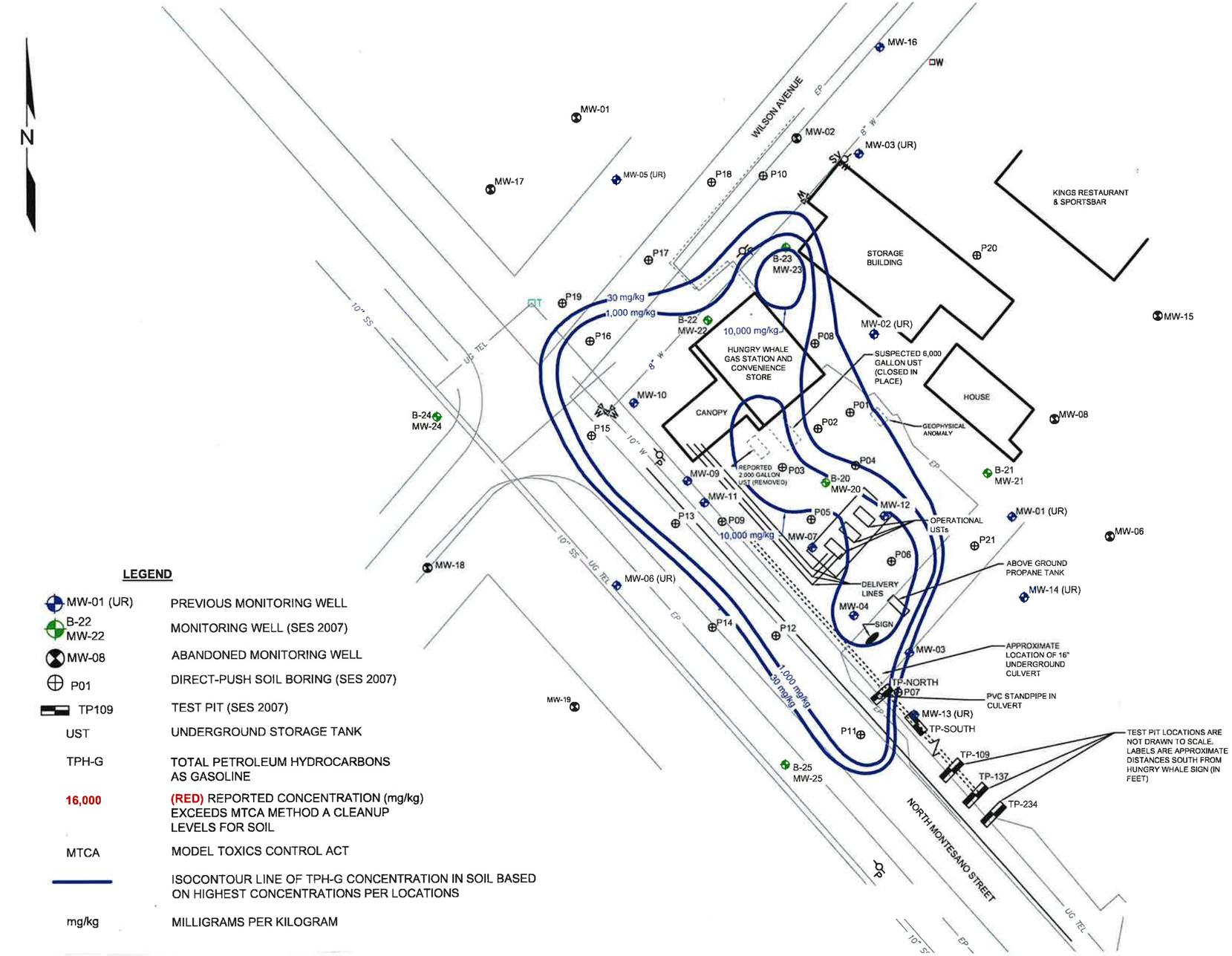
FOR:
THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESPORT, WASHINGTON

SOIL GAS RESULTS

FIGURE: **5**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185750236	JCR/MDR	RM	PF	JANUARY 2012



LEGEND

MW-01 (UR)	PREVIOUS MONITORING WELL
B-22 / MW-22	MONITORING WELL (SES 2007)
MW-08	ABANDONED MONITORING WELL
P01	DIRECT-PUSH SOIL BORING (SES 2007)
TP109	TEST PIT (SES 2007)
UST	UNDERGROUND STORAGE TANK
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
16,000	(RED) REPORTED CONCENTRATION (mg/kg) EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR SOIL
MTCA	MODEL TOXICS CONTROL ACT
	ISOCONTOUR LINE OF TPH-G CONCENTRATION IN SOIL BASED ON HIGHEST CONCENTRATIONS PER LOCATIONS
mg/kg	MILLIGRAMS PER KILOGRAM

Location	Depth (feet)	TPH-G (mg/kg)
P01	3.5	150
	6	280
	12	200
P02	1.5	26
	6.5	76
	12	25
P03	3	4,300
	6	16,000
	12	57
P04	3.5	1,000
	6	340
	12	13
	16	6
P05	3	2,000
	5	4,600
	9	2,900
	12	90
P06	3	1,700
	6	12,000
	12	42
P07	4	<2
	8	4
P08	3	<2
	5.5	210
	9	660
P09	5	1,700
	8	6,100
P10	7	<2
	10	4
	12	<2
P11	4	550
	7	2,200
	10	11
P12	3	5,100
	6	7,300
	8	100
P13	3	1,500
	6	5,200
	10	11
P14	7	<2
P15	3	1,600
	6	2,300
	8	8
P16	3	8
	6	5,300
	8	7
P17	7	5
P18	8	<2
P19	3	<2
	6	<2
P20	7	<2
P21	6	<2
TP-South	4.5	<2
TP-North	4.5	8,000
TP-109	4.5	<2
B-20	3	5,600
	7	12,000
	17	76
	28.5	7
B-21	7.5	<2
B-22	5	<2
	9	2,000
	12	4
	15.5	5
B-23	4.5	<2
	7.5	10,000
	11	20
	15	<2
B-24	4.5	<2
B-25	6	<2
MTCA Method A		100/30

SOUND ENVIRONMENTAL STRATEGIES
SOUNDENVIRONMENTAL.COM

DATE: 01/09/08
DRAWN BY: ..... BLR
CHECKED BY: ..... RKB
CAD FILE: ..... 0461-001-02 FIG10 SD TPHG

0 50 100
APPROXIMATE SCALE IN FEET

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FOR: THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

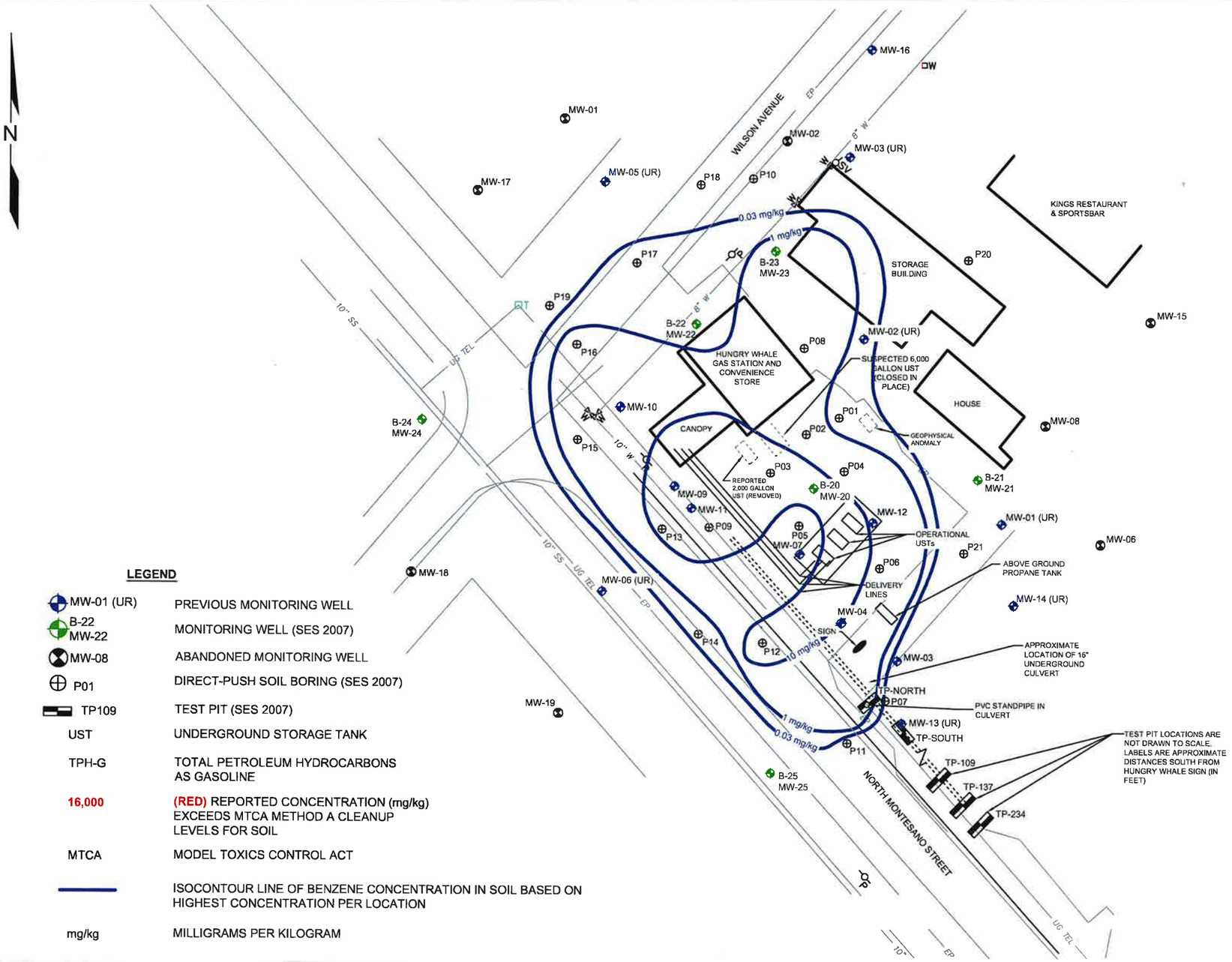
TPH-G SOIL ANALYTICAL MAP (reference: SES' June 2008 DRAFT RIFS Figure 10)

FIGURE: **6**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	SCL	CBS	MS	OCT 2018

FILEPATH:C:\AK_WORK DATA\01 Work data\2018\06 Hungary Whale\01 Input\Drawing to be used\CAD\HungryWhale-2017.dwg | Layout Tab: FIG-1 SITE PLAN | Drafter: akulkarni | Oct 25, 2018 at 15:52

\\Sound-dc\sesdirectory\SES CURRENT PROJECTS\0461-001 Port of Grays Harbor\0461-001-02 Hungry Whale\Miscellaneous\dmb\0461-001-02 FIG10 SD TPHG.dwg



LEGEND

MW-01 (UR)	PREVIOUS MONITORING WELL
B-22 MW-22	MONITORING WELL (SES 2007)
MW-08	ABANDONED MONITORING WELL
P01	DIRECT-PUSH SOIL BORING (SES 2007)
TP109	TEST PIT (SES 2007)
UST	UNDERGROUND STORAGE TANK
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
16,000	(RED) REPORTED CONCENTRATION (mg/kg) EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR SOIL
MTCA	MODEL TOXICS CONTROL ACT
	ISOCONTOUR LINE OF BENZENE CONCENTRATION IN SOIL BASED ON HIGHEST CONCENTRATION PER LOCATION
mg/kg	MILLIGRAMS PER KILOGRAM

Location	Depth (feet)	Benzene (mg/kg)
P01	3.5	<0.02
	6	0.73
	12	0.13
P02	1.5	0.05
	6.5	4.2
	12	0.85
P03	3	9
	6	74
	12	1.8
P04	3.5	6.9
	6	6.4
	12	0.4
	16	0.06
P05	3	<1
	5	2.2
	9	7
	12	1.4
P06	3	0.8
	6	6.7
	12	1.5
P07	4	<0.02
	8	<0.03
P08	3	<0.02
	5.5	2.9
	9	4.4
P09	5	29
	8	44
P10	7	<0.02
	10	<0.02
	12	<0.02
P11	4	<1
	7	<2
	10	<0.02
P12	3	11
	6	20
	8	0.61
P13	3	0.55
	6	14
	10	3.2
P14	7	0.61
P15	3	2.2
	6	0.30
	8	1.5
P16	3	0.13
	6	1.6
	8	0.14
P17	7	0.07
P18	8	<0.02
P19	3	<0.02
	6	<0.02
P20	7	<0.02
P21	6	<0.02
TP-South	4.5	<0.02
TP-North	4.5	1.6
TP-109	4.5	<0.02
B-20	3	2.4
	7	27
	17	0.11
	28.5	0.54
B-21	7.5	<0.02
B-22	5	<0.02
	9	<1
	12	<0.02
	15.5	<0.02
B-23	4.5	<0.02
	7.5	2.5
	11	0.45
	15	<0.02
B-24	4.5	<0.02
B-25	6	<0.02
MTCA Method A		0.03

SOUND ENVIRONMENTAL STRATEGIES
SOUNDENVIRONMENTAL.COM

DATE: 01/09/08
DRAWN BY:.....BLR
CHECKED BY: .....RKB
CAD FILE: .....0461-001-02 FIG11 SD BENZ

0 50 100
APPROXIMATE SCALE IN FEET

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FOR:
THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

BENZENE SOIL ANALYTICAL MAP (reference: SES' June 2008 DRAFT RIFS Figure 11)

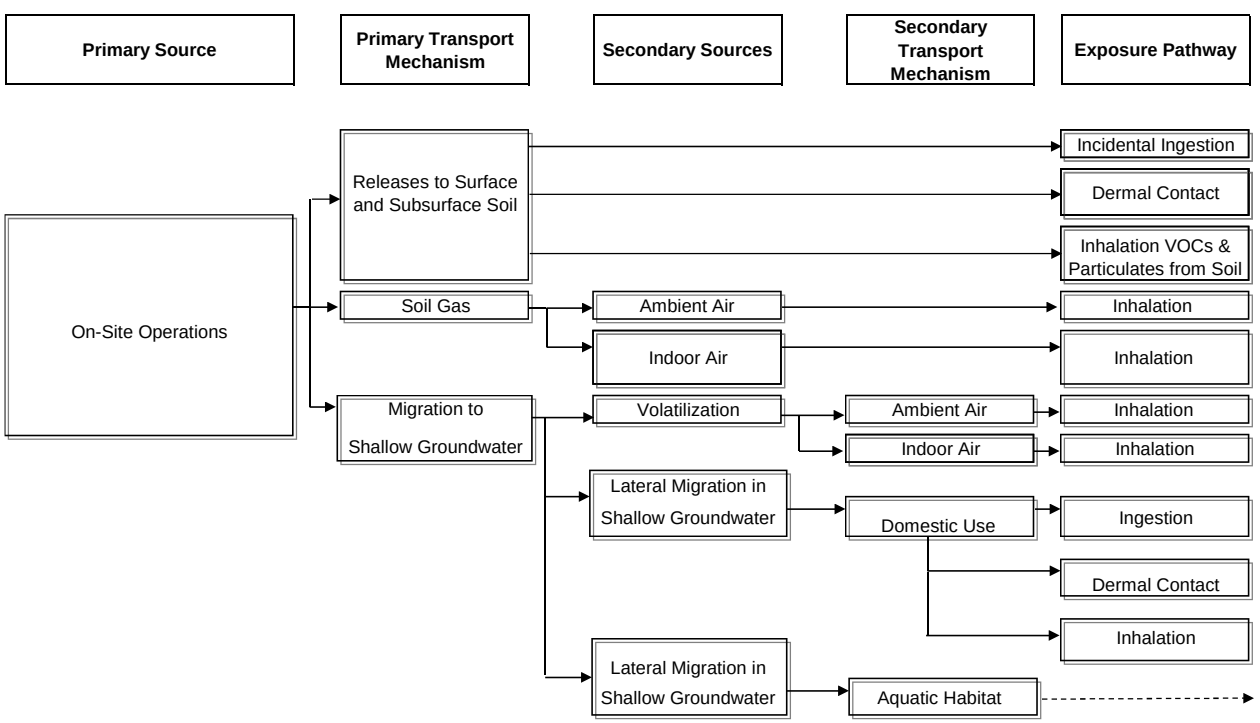
FIGURE: **7**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	SCL	CBS	MS	OCT 2018

FILEPATH:C:\AK_WORK DATA\01 Work data\2018\06 Hungary Whale\01 Input\Drawing to be used\CAD\HungryWhale-2017.dwg | Layout Tab: FIG-1 SITE PLAN | Drafter: akulkarni | Oct 25, 2018 at 15:52

\\Sound-dc\sesdirector\SES CURRENT PROJECTS\0461-001 Port of Grays Harbor\0461-001-02 Hungry Whale\Miscellaneous\dmp\0461-001-02 FIG11 SD BENZ.dwg

FIGURE 8
Potential Exposure Pathways Flow Chart
Current and Future Onsite Receptors
The Hungry Whale
1680 North Montesano Streeet
Westport, Washington



Primary Source	Primary Transport Mechanism	Secondary Sources	Secondary Transport Mechanism	Exposure Pathway	Current and Future Receptors: Commercial or Industrial Worker (Outdoors)	Commercial or Industrial Worker (Indoors)	Construction or Utility Worker	Resident
On-Site Operations	Releases to Surface and Subsurface Soil			Incidental Ingestion	O	-	O	O
				Dermal Contact	O	-	O	O
				Inhalation VOCs & Particulates from Soil	O	-	O	O
	Soil Gas	Ambient Air		Inhalation	Δ	Δ	Δ	Δ
		Indoor Air		Inhalation	-[a]	-[a]	-[a]	-[a]
	Migration to Shallow Groundwater	Volatilization	Ambient Air	Inhalation	Δ	-	Δ	Δ
			Indoor Air	Inhalation	-	-	-	-
		Lateral Migration in Shallow Groundwater	Domestic Use	Ingestion	-[b]	-[b]	-[b]	-[b]
				Dermal Contact	-[b]	-[b]	-[b]	-[b]
				Inhalation	-[b]	-[b]	-[b]	-[b]
		Lateral Migration in Shallow Groundwater	Aquatic Habitat		-	-	-	

O	Receptor likely to be exposed via this route. Exposure pathway is considered potentially complete.
-	Pathway is incomplete; one or more of the components required for a complete pathways is not present.
Δ	Pathway potentially complete but contributes little to site risk

UST = Underground storage tank
[a] The indoor air pathway has been assessed via site-wide soil gas and indoor air sampling.
[b] Groundwater is considered non-potable at this time.

TABLES

SOUND ENVIRONMENTAL STRATEGIES
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Table 1
Summary of Soil Analytical Results
The Hungry Whale
1680 North Montesano Street, Westport, Washington

Sample ID	Date Sampled	Location	Depth (feet)	PID Headspace (ppm)	TPH-G[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Total Xylenes[2]	Naphthalene[2]
Direct Push Investigation										
P01-03.5	04/26/07	P01	3.5	118	**150**	<0.02	0.03	0.30	1.9	--
P01-06	04/26/07	P01	6	216	**280**	**0.73**	5.3	6.9	**43**	**6.0**
P01-12	04/26/07	P01	12	357	**200**	**0.13**	0.36	1.7	**9.3**	--
P02-01.5	04/26/07	P02	1.5	209	26	**0.05**	0.13	0.32	1.8	--
P02-06.5	04/26/07	P02	6.5	1,660	**76**	**4.2**	**13**	**10**	**57**	**5.5**
P02-12	04/26/07	P02	12	281	25	**0.85**	3.2	0.45	2.7	--
P03-03	04/26/07	P03	3	4,001	**4,300**	**9.0**	**140**	**68**	**420**	--
P03-06	04/26/07	P03	6	4,484	**16,000**	**74**	**580**	**230**	**1,380**	**89**
P03-12	04/26/07	P03	12	--	**57**	**1.8**	0.57	0.92	2.4	--
P04-03.5	04/26/07	P04	3.5	>4,600	**1,000**	**6.9**	**130**	**88**	**570**	**49**
P04-06	04/26/07	P04	6	766	**340**	**6.4**	**8.1**	**11**	**60**	--
P04-12	04/26/07	P04	12	230	13	**0.40**	0.07	0.50	2.0	--
P04-16	04/26/07	P04	16	136	6	**0.06**	0.08	0.12	0.39	--
P05-03	04/26/07	P05	3	3,516	**2,000**	<1	**13**	3.5	**140**	--
P05-05	04/26/07	P05	5	3,055	**4,600**	**2.2**	**26**	**24**	**285**	**26**
P05-09	04/26/07	P05	9	3,333	**2,900**	**7**	**48**	**23**	**190**	--
P05-12	04/26/07	P05	12	473	**90**	**1.4**	0.58	0.37	1.2	--
P06-03	04/26/07	P06	3	3,479	**1,700**	**0.80**	**21**	**16**	**120**	--
P06-06	04/26/07	P06	6	3,046	**12,000**	**6.7**	**220**	**160**	**1,270**	**100**
P06-12	04/26/07	P06	12	240	**42**	**1.5**	4.4	0.69	4.3	--
P07-04	04/26/07	P07	4	8.1	<2	<0.02	<0.02	<0.02	<0.06	--
P07-08	04/26/07	P07	8	35.9	4	<0.03	<0.05	<0.05	<0.15	<0.05
P08-03	04/26/07	P08	3	4.8	<2	<0.02	<0.02	<0.02	<0.06	--
P08-05.5	04/26/07	P08	5.5	26.8	**210**	**2.9**	3.2	4.9	**25**	--
P08-09	04/26/07	P08	9	2,607	**660**	**4.4**	**12**	**18**	**102**	4.6
P09-05	04/26/07	P09	5	2,732	**1,700**	**29**	**260**	**75**	**790**	**65**
P09-08	04/26/07	P09	8	2,708	**6,100**	**44**	**340**[ve]	**100**	**650**	--

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Summary of Soil Analytical Results
The Hungry Whale
1680 North Montesano Street, Westport, Washington

Sample ID	Date Sampled	Location	Depth (feet)	PID Headspace (ppm)	TPH-G[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Total Xylenes[2]	Naphthalene[2]
Test Pits										
TP-North	04/26/07	TP-North	4.5	--	**8,000**	**1.6**	**120**	**96**	**800**	--
TP-South	04/26/07	TP-South	4.5	--	<2	<0.02	0.03	<0.02	<0.06	--
TP109-04.5	04/26/07	TP-109	4.5	--	<2	<0.02	<0.02	<0.02	<0.06	--
Soil Borings - Well Installations										
B-20-03	06/11/07	B-20	3	2,980	**5,600**	**2.4**	**110**	**69**	**500**	--
B-20-07	06/11/07	B-20	7	1,677	**12,000**	**27**	**430**	**180**	**1,200**	--
B-20-17	06/11/07	B-20	17	100	**76**	**0.11**	0.64	0.70	3.4	--
B-20-28.5	06/11/07	B-20	28.5	49.9	7	**0.54**	0.28	0.08	0.28	--
B-21-07.5	06/11/07	B-21	7.5	2.1	<2	<0.02	<0.02	<0.02	<0.06	--
B-22-05	06/12/07	B-22	5	6.8	<2	<0.02	<0.02	<0.02	<0.06	--
B-22-09	06/12/07	B-22	9	764	**2,000**	<1	5.6	**9.3**	**49**	--
B-22-12	06/12/07	B-22	12	83.1	4	<0.02	<0.02	0.03	0.09	--
B-22-15.5	06/12/07	B-22	15.5	28.7	5	<0.02	<0.02	<0.02	0.10	--
B-23-04.5	06/12/07	B-23	4.5	2.2	<2	<0.02	<0.02	<0.02	<0.06	--
B-23-07.5	06/12/07	B-23	7.5	2,442	**10,000**	**2.5**	**120**	**150**	**850**	--
B-23-11	06/12/07	B-23	11	63.0	20	**0.45**	2.7	0.42	2.1	--
B-23-15	06/12/07	B-23	15	8.6	<2	<0.02	<0.02	<0.02	<0.06	--
B-24-04.5	06/12/07	B-24	4.5	2.4	<2	<0.02	<0.02	<0.02	<0.06	--
B-25-06	06/13/07	B-25	6	0.3	<2	<0.02	<0.02	<0.02	<0.06	--
P10-07	06/13/07	P10	7	5.4	<2	<0.02	<0.02	<0.02	<0.06	--
P10-10	06/13/07	P10	10	50.9	4	<0.02	<0.02	0.03	0.15	--
P10-12	06/13/07	P10	12	5.0	<2	<0.02	<0.02	<0.02	<0.06	--
P11-04	10/02/07	P11	4	911	**550**	<1	<1	2.8	**24**	--
P11-07	10/02/07	P11	7	1,990	**2,200**	<2	71	**33**	**250**	--
P11-10	10/02/07	P11	10	37.3	11	<0.02	0.08	0.18	1.4	--
P12-03	10/02/07	P12	3	2,449	**5,100**	**11**	**73**	**67**	**480**	--
P12-06	10/02/07	P12	6	>2,500	**7,300**	**20**	**150**	**95**	**680**	--
P12-08	10/02/07	P12	8	1,872	**100**	**0.61**	0.36	1.8	1.2	--
P13-03	10/02/07	P13	3	1,774	**1,500**	**0.55**	**11**	**14**	**110**[ve]	--

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Sample ID	Date Sampled	Location	Depth (feet)	PID Headspace (ppm)	TPH-G[1]	Benzene[2]	Toluene[2]	Ethylbenzene[2]	Total Xylenes[2]	Naphthalene[2]
P13-06	10/02/07	P13	6	2,131	**5,200**	**14**	**110**	**66**	**480**	--
P13-10	10/02/07	P13	10	79.2	11	**3.2**	0.06	0.19	0.10	--
P14-07	10/02/07	P14	7	16.9	<2	**0.61**	<0.02	<0.02	<0.06	--
P15-03	10/02/07	P15	3	2,194	**1,600**	**2.2**	**34**	**24**	**150**	--
P15-06	10/02/07	P15	6	>2,500	**2,300**	**0.30**	**30**	**35**	**230**	--
P15-08	10/02/07	P15	8	112	8	**1.5**	0.09	0.48	0.29	--
P16-03	10/02/07	P16	3	14.7	8	**0.13**	0.03	0.07	0.07	--
P16-06	10/02/07	P16	6	2,050	**5,300**	**1.6**	**9.9**	**99**	**520**	--
P16-08	10/02/07	P16	8	200	7	**0.14**	0.03	0.39	0.42	--
P17-07	10/02/07	P17	7	47.4	5	**0.07**	<0.02	<0.02	<0.06	--
P18-08	10/02/07	P18	8	0.0	<2	<0.02	<0.02	<0.02	<0.06	--
P19-03	10/02/07	P19	3	1.8	<2	<0.02	<0.02	<0.02	<0.06	--
P19-06	10/02/07	P19	6	0.0	<2	<0.02	<0.02	<0.02	<0.06	
P20-07	10/02/07	P20	7	0.0	<2	<0.02	<0.02	<0.02	<0.06	
P21-06	10/02/07	P21	6	0.0	<2	<0.02	<0.02	<0.02	<0.06	--
MTCA Method A Cleanup Levels for Soil[3]					100/30[a]	0.03	7	6	9	5

NOTES:

Bold indicates concentrations that exceed MTCA Method A Cleanup Levels for unrestricted land use.

Results reported in milligrams per kilogram unless otherwise indicated.

Chemical analyses conducted by Friedman & Bruya, Inc. of Seattle, Washington.

[1]Analyzed by Northwest Method NWTPH-Gx.

[2]Analyzed by EPA Method 8021B or 8260B.

[3]MTCA Method A Cleanup Levels for Soil from Table 740-1 of Washington Administrative Code 173-340-900 Tables.

[a]100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

-- = not analyzed

< = not detected at a concentration exceeding the laboratory reporting limit

> = detected at a concentration exceeding the operational range of the instrument

EPA = United States Environmental Protection Agency

MTCA = Model Toxics Control Act

PID = photoionization detector

PPM = parts per million

TPH-G = gasoline-range petroleum hydrocarbons

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Table 2
Summary of Groundwater Analytical Results
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well/Sample ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation (feet)	TPH-G[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	Naphthalene[3]	MTBE[3]	EDC[3]
Monitoring Wells											
MW01 (UR) TOC: No elevation	Not Located										
MW02 (UR) TOC: 100.00	06/27/07	7.51	92.49	**44,000**	**5,400**	**5,900**	**1,300**	**5,200**	--	--	--
MW03 (UR) TOC: 100.40	06/27/07	7.91	92.49	<100	<1	<1	<1	<3	--	--	--
MW04* TOC: 99.17	06/27/07	6.90	92.27	**SPH**	**SPH**	**SPH**	**SPH**	**SPH**	--	--	--
MW05 (UR) TOC: 99.60	06/27/07	6.79	92.81	<100	<1	<1	<1	<3	--	--	--
MW06 (UR) TOC: 98.52	06/27/07	5.98	92.54	<100	<1	<1	<1	<3	--	--	--
MW07 TOC: 99.73	06/27/07	7.29	92.44	**110,000**	**15,000**	**13,000**	**2,600**	**18,000**	--	--	--
MW09* TOC: 99.01	06/27/07	6.50	92.51	**SPH**	**SPH**	**SPH**	**SPH**	**SPH**	--	--	--
MW10 TOC: 99.18	06/27/07	6.51	92.67	**50,000**	**1,300**	**2,200**	**1,200**	**6,700**	--	--	--
MW11 TOC: 98.97	06/27/07	6.89	92.08	<100	<1	<1	<1	<3	--	--	--
MW12 TOC: 100.17	06/27/07	7.82	92.35	**20,000**	**14,000**	**28,000**	**1,700**	**21,000**	--	--	--
MW13 (UR) TOC: 98.70	06/27/07	6.49	92.21	<100	<1	<1	<1	<3	--	--	--
MW14 (UR) TOC: 99.53	06/27/07	7.36	92.17	<100	<1	<1	<1	<3	--	--	--
MW16 TOC: No elevation	Not Located										
MW20 TOC: 100.09	06/27/07	7.82	92.27	**130,000**	**6,900**	**14,000**	**2,800**	**15,000**	--	--	--
MW21 TOC: 99.88	06/27/07	7.62	92.26	<100	<1	<1	<1	<3	--	--	--
MW22 TOC: 100.09	06/27/07	7.45	92.64	**7,100**	**78**	42	57	520	--	--	--
MW23 TOC: 99.57	06/27/07	7.01	92.56	**92,000**	**1,500**	**9,300**	**2,000**	**14,000**	--	--	--
MW24 TOC: 97.93	06/27/07	5.15	92.78	<100	<1	<1	<1	<3	--	--	--
MW25 TOC: 98.74	06/27/07	6.45	92.29	<100	<1	<1	<1	<3	--	--	--

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Table 2
Summary of Groundwater Analytical Results
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well/Sample ID	Sample Date	Depth to Groundwater[1] (feet)	Groundwater Elevation (feet)	TPH-G[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]	Naphthalene[3]	MTBE[3]	EDC[3]
Push-Probe Investigations											
P01	04/26/07	--	--	**110,000**	**780**	**10,000**	**3,600**	**21,000**	--	--	--
P02	04/26/07	--	--	**120,000**	**5,400**	**22,000**[ve]	**3,200**	**19,000**	--	--	--
P03	04/26/07	--	--	**250,000**	**29,000**	**47,000**	**4,300**	**26,200**	**720**	<100	<100
P04	04/26/07	--	--	**150,000**	**8,500**	**25,000**[ve]	**3,600**	**22,000**	--	--	--
P05	04/26/07	--	--	**100,000**	**9,500**	**10,000**	**1,700**	**14,000**	--	--	--
P06	04/26/07	--	--	**140,000**	**8,700**	**20,000**[ve]	**2,700**	**19,000**	--	--	--
P07	04/26/07	--	--	**15,000**	<10	21	210	**1,580**	100	<10	<10
P08	04/26/07	--	--	**71,000**	**4,100**	**4,000**	**2,000**	**11,000**	--	--	--
P11	10/02/07	--	--	**87,000**	**1,200**	**9,300**	**2,500**	**19,000**	--	--	--
P14	10/02/07	--	--	**5,400**	**1,800**	12	12	12	--	--	--
P18	10/02/07	--	--	**5,500**	**11**	7	300	980	--	--	--
P19	10/02/07	--	--	140	4	2	<1	<3	--	--	--
P20	10/02/07	--	--	<100	<1	<1	<1	<3	--	--	--
Drinking Water Sampling											
DW-C1	05/04/07	--	--	<100	<1	<1	<1	<3	--	--	--
DW-C2	05/04/07	--	--	<100	<1	<1	<1	<3	--	--	--
DW-H1	05/04/07	--	--	<100	<1	<1	<1	<3	--	--	--
DW-H2	05/04/07	--	--	<100	<1	<1	<1	<3	--	--	--
MTCA Method A Cleanup Levels for Groundwater[4]				1,000/800[a]	5	1,000	700	1,000	160	20	5

NOTES:

Results reported in µg/L.

Concentrations exceeding MTCA Method A cleanup levels for groundwater are shown in **red**.

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

[1]Depth to water as measured from a fixed spot on the well casing rim.

[2]Analyzed by Northwest Method NWTPH-Gx.

[3]Analyzed by EPA Method 8260B or 8021B.

[4]MTCA Method A Cleanup Levels from Table 720-1 of Washington Administrative Code 173-340-900.

[a]Cleanup level is 1,000 µg/L if benzene is not present and 800 µg/L if benzene is present.

[ve]The value reported exceeded the calibration range for the analyte. The reported concentration is an estimate.

*Groundwater elevation corrected for the presence of separate-phase hydrocarbons

< = not detected at a concentration exceeding the laboratory reporting limit

-- = not analyzed/measured

µg/L = micrograms per liter

EDC = 1,2-dichloroethane (ethylene dichloride)

EPA = United States Environmental Protection Agency

MTBE = methyl tertiary-butyl ether

MTCA = Model Toxics Control Act

SPH = separate-phase hydrocarbons

TOC = Top of casing elevation based on a relative site datum of 100.00 feet.

TPH-G = gasoline-range petroleum hydrocarbons

Table 3a
Soil Gas Sample Results
The Hungry Whale
Westport, Washington

Compound		Concentration (µg/m^3)								
		Sample ID	**SG-1**	**SG-2**	**SG-3**	**SG-4**	**SG-5**	**SG-6**	**SG-7[3]**	**SG-6-DUP**
	Table B-1 Screening Levels[1] (µg/m^3)	**Date sampled**	12/20/2011	12/20/2011	12/20/2011	12/20/2011	12/20/2011	12/20/2011	12/20/2011	12/20/2011
TPH-g	NE[2]	--	1,800	11,000	170,000,000	49,000,000	190,000,000	230,000,000	650	270,000,000
Benzene	32	--	<2.4	**58**	**370,000**	**97,000**	**460,000**	**820,000**	<2.4	**970,000**
Toluene	49,000	--	<2.8	35	**380,000**	16,000	**1,200,000**	**400,000**	8.7	**480,000**
Ethylbenzene	10,000	--	<3.2	87	**310,000**	**49,000**	**260,000**	**110,000**	<3.3	**140,000**
m,p-Xylene	1,000	--	7.3	140	**1,100,000**	**85,000**	**1,200,000**	**600,000**	9.2	**760,000**
o-Xylene	1,000	--	<3.2	34	**270,000**	**6,200**	**350,000**	**110,000**	<3.3	**140,000**
Naphthalene	30	--	<16	<16	<16,000	<16,000	<16,000	<16,000	<16	<15,000
Propylbenzene	NE	--	<3.7	14	28,000	8,400	28,000	15,000	<3.8	21,000
Tetrachloroethane	42	--	<5.0	<5.2	<5,200	<5,200	<5,200	<5,300	<5.2	<5,000
1,2-Dichlorobenzene	1,400	--	<4.5	<4.6	<4,600	<4,600	<4,600	<4,700	<4.6	<4,400
1,2-Dichloropropane	40	--	<3.4	<3.5	<3,600	<3,600	<3,500	<3,600	<3.5	<3,400
1,2,4-Trichlorobenzene	2,000	--	<22	<23	<23,000	<23,000	<22,000	<23,000	<23	<22,000
1,2,4-Trimethylbenzene	60	--	9.1	40	**63,000**	<3,800	**99,000**	**58,000**	3.9	**86,000**
1,3-Dichlorobenzene	NE	--	<4.5	<4.6	<4,600	<4,600	<4,600	<4,700	<4.6	<4,400
1,3,5-Trimethylbenzene	60	--	7.8	**130**	**32,000**	<3,800	**47,000**	**28,000**	<3.8	**40,000**
1,4-Dichlorobenzene	8,000	--	<4.5	<4.6	<4,600	<4,600	<4,600	<4,700	<4.6	<4,400
4-Ethyltoluene	NE	--	4.5	36	100,000	5,400	140,000	86,000	<3.8	120,000

Notes:

[1] - Sub-Slab Soil Gas Screening Levels; Washington Department of Ecology Model Toxics Control Act (MTCA), Method C Clean Up Levels (CUL), Review Draft October 2009

[2] - MTCA Method C CUL not established for this analyte.

[3] - Sample possibly biased low due to detection of tracer gas (Helium) in sample.

Analytical values in **BOLD** indicate a value exceeding Table B-1 Screening Level

Table 3b
Indoor/Outdoor Air Sample Results
The Hungry Whale
Westport, Washington

Compound	Table B-1 Indoor Air Screening Levels[1] (µg/m^3)	Sample # and Reported Concentration (µg/m^3)			
		OA-1	**OA-2**	**IA-1**	**IA-2**
		3/21/2012	3/21/2012	3/21/2012	3/21/2012
TPH-g	NE[2]	<62	<65	280	110
Benzene	3.2	0.38	0.40	1.2	0.59
Toluene	4,900	0.55	0.30	13	2.1
Ethylbenzene	1,000	<0.13	<0.14	0.81	0.32
4-Ethyltoluene	NE[2]	<0.75	<0.78	1.2	<0.78
m,p-Xylene	100	<0.26	<0.27	3.7	1.7
o-Xylene	100	<0.13	<0.14	1.3	0.59
Propylbenzene	NE[2]	<0.75	<0.78	<0.79	<0.78
1,3,5-Trimethylbenzene	6	<0.75	<0.78	<0.79	<0.78
1,2,4-Trimethylbenzene	6	<0.75	<0.78	1.5	0.85

Notes:
All analysis by EPA Method TO-15 GC/MS SIM/Full Scan
[1] - Washington Department of Ecology Method C Indoor Air Screening Levels, Table B-1, Review Draft October 2009
[2] - MTCA Method C CUL not established for this analyte.
OA = Outdoor Air
IA = Indoor Air
Analytical values in **BOLD** indicate a value exceeding Table B-1 Screening Level

Table 4. Cumulative Summary (2007 - 2019) of Groundwater Analytical Results - TPH, VOCs, and Geochemical Parameters
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well Number (TOC in feet)	Sample Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPH-G[1] (µg/L)	Volatile Organic Compounds[2] (VOCs)				Geochemical Parameters							
						Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential (ORP)[4] (mV)	Ferrous Iron[5] (mg/L)	Nitrate[6] as NO_3 (mg/L)	Sulfate[6] as SO_4(mg/L)	Methane[7] (µg/L)	Total Alkalinity[8] as $CaCO_3$ (mg/L)	Manganese[9], Dissolved (µg/L)
MW-01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(13.72)	04/12/16	5.81	0.00	7.91	<100	<0.200	<1.00	<0.500	<1.50	--	--	--	--	--	--	--	--
(13.72)	06/19/19	7.81	0.00	5.91	<50	<1	<1	<1	<1	--	--	--	--	--	--	--	--
MW-02	6/27/07	7.51	0.00	92.49	**44,000**	**5,400**	**5,900**	**1,300**	**5,200**	--	--	--	--	--	--	--	--
	11/30/11	4.55	0.00	95.45	**43,000**	**3,700**	**5,800**	**1,600**	**6,100**	4.90 H	-196	5.6 H	<0.100	11.0	--	--	--
(100.00)	3/6/12	4.61	0.00	95.39	**6,200**	**1,400**	68	250	230	0.79	-92	17.4	0.141	6.8	642	246	--
	6/13/12	5.60	0.00	94.40	**14,000**	**1,400**	**1,800**	550	**1,500**	3.36	-88.2	16 H	<0.50	3.6	817	228	--
	10/4/12	8.30	0.00	91.70	**51,500**	**5,990**	**5,100**	**1,780**	**6,810**	2.88	-120.4	27.2	<0.20	<1.0	3,320	297	257
	6/4/13	5.98	0.00	94.02	**21,000**	**1,600**	**2,800**	**750**	**2,500**	--	--	--	--	--	--	--	--
(13.69)	4/12/16	5.28	0.00	8.41	**5,340**	**211**	16.1	73.1	106	1.0	-103	21,500	<0.250	15.5	--	146	209
(13.69)	6/20/19	7.52	0.00	6.17	**10,600**	**1,160**	474	410	**1,101**	--	--	--	--	--	--	--	--
(13.69)	6/20/2019 DUP	7.52	0.00	6.17	**12,100**	**1,370**	627	452	**1,283**	--	--	--	--	--	--	--	--
MW-03 (UR)	6/27/07	7.91	0.00	92.49	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	12/1/11	4.74	0.00	95.66	<250	<0.50	<0.50	<0.50	<0.50	--	-121	--	--	--	--	146	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(100.40)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	7.00	0.00	93.40	<50	<1.0	<1.0	<1.0	<3.0	2.30	-30.8	0.21	<0.20	2.4	<6.6	17.3	35.0
	6/4/13	6.28	0.00	94.12	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(14.07)	4/12/16	5.65	0.00	8.42	<100	<0.200	<1.00	<0.500	<1.50	6.4	67	4,220	0.488	14.8	--	66.0	12.4
(14.07)	6/26/19	8.10	0.00	5.97	<50	<1	<1	<1	<1	--	--	--	--	--	--	--	--
MW-04	6/27/07	6.90	0.02	92.29	**SPH (0.02')**	**SPH (0.02')**	**SPH (0.02')**	**SPH (0.02')**	**SPH (0.02')**	--	--	--	--	--	--	--	--
	12/1/11	4.20	0.10	95.05	**SPH (0.10')**	**SPH (0.10')**	**SPH (0.10')**	**SPH (0.10')**	**SPH (0.10')**	--	--	--	--	--	--	66.0	--
	3/6/12	4.16	0.01	95.02	**74,000/SPH**	**4,700/SPH**	**5,800/SPH**	**2,300/SPH**	**16,000/SPH**	0.26	-80	--	--	--	--	--	--
(99.17)	6/13/12	5.10	0.00	94.07	**75,000**	**6,900**	**9,700**	**2,000**	**13,000**	1.64	-19.0	--	--	--	--	--	--
	10/4/12	7.60	0.15	91.69	**116,000/SPH**	**13,800/SPH**	**13,200/SPH**	**2,570/SPH**	**14,900/SPH**	3.79	-39.4	39.6	<0.20	<1.0	13,000	283	1,130
	6/4/13	5.51	0.00	93.66	**120,000/sheen**	**7,000/sheen**	**6,400/sheen**	**2,400/sheen**	**19,000/sheen**	--	--	--	--	--	--	--	--
(12.85)	4/14/16	4.51	0.01	8.35	**106,000/SPH**	**3,170/SPH**	748/SPH	**1,740/SPH**	**9,130/SPH**	1.3	-100	45,200	<0.250	<1.00	--	112	714
(12.85)	6/20/19	6.97	0.01	5.89	**66,000/SPH**	**8,310/SPH**	**5,910/SPH**	**1,620/SPH**	**6,890/SPH**	--	--	--	--	--	--	--	--
MW-05	6/27/07	6.79	0.00	92.81	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	11/30/11	3.55	0.00	96.05	<250	<0.50	<0.50	<0.50	<0.50	10.1 H	-113	0.15 H	0.104	5.26	--	74.8	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(99.60)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	7.80	0.00	91.80	704	**314**	2.5	77.0	12.7	4.79	-114.2	2.5	0.30	19.1	293	150	92.2
	6/4/13	5.14	0.00	94.46	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(13.30)	4/12/16	4.53	0.00	8.77	<100	<0.200	<1.00	<0.500	<1.50	6.2	89	3,540	0.271	12.7	--	74.8	<1.00
(13.30)	6/20/19	6.91	0.00	6.39	64.7	<1	3.63	3.56	21.27	--	--	--	--	--	--	--	--
MW-06	6/27/07	5.98	0.00	92.54	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	12/1/11	3.14	0.00	95.38	<250	<0.50	<0.50	<0.50	<0.50	--	-137	--	--	--	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(98.52)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	4.46	0.00	94.06	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	4/12/16	Unable to Locate															

Table 4. Cumulative Summary (2007 - 2019) of Groundwater Analytical Results - TPH, VOCs, and Geochemical Parameters
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well Number (TOC in feet)	Sample Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPH-G[1] (µg/L)	Volatile Organic Compounds[2] (VOCs)				Geochemical Parameters							
						Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential (ORP)[4] (mV)	Ferrous Iron[5] (mg/L)	Nitrate[6] as NO_3 (mg/L)	Sulfate[6] as SO_4(mg/L)	Methane[7] (µg/L)	Total Alkalinity[8] as $CaCO_3$ (mg/L)	Manganese[9], Dissolved (µg/L)
	6/19/19	Unable to Locate															
MW-07	6/27/07	7.29	0.00	92.44	**110,000**	**15,000**	**13,000**	**2,600**	**18,000**	--	--	--	--	--	--	--	--
	11/29/11	4.48	0.00	95.25	**110,000**	**6,200**	**15,000**	**2,400**	**23,000**	7.70 H	-114	5.1 H	<0.100 H	2.10 H	--	--	--
	3/6/12	4.50	0.00	95.23	**100,000**	**4,300**	**13,000**	**1,800**	**18,000**	0.29	25	10.0	<0.100	0.60	692	53.0	--
(99.73)	6/13/12	5.40	0.00	94.33	**71,000**	**6,600**	**13,000**	**2,100**	**19,000**	8.60	-24.8	31	<0.50	<0.50	1,490	160	--
	10/4/12	8.05	0.05	91.72	**129,000/SPH**	**9,350/SPH**	**12,600/SPH**	**2,320/SPH**	**22,100/SPH**	14.02	98.7	39.3	<0.20	<1.0	4,730	230	1,250
	6/4/13	5.80	0.00	93.93	**140,000/sheen**	**8,200/sheen**	**14,000/sheen**	**2,200/sheen**	**23,000/sheen**	--	--	--	--	--	--	--	--
(13.41)	4/14/16	4.97	0.00	8.44	**214,000**	**5,730**	**12,500**	**2,400**	**24,900**	1.4	-44	44,200	<0.250	<1.00	--	129	743
(13.41)	6/20/19	7.63	0.00	5.78	**105,000**	**8,440**	**8,820**	**2,160**	**15,470**	--	--	--	--	--	--	--	--
MW-09	6/27/07	6.50	0.08	92.57	**SPH (0.08')**	**SPH (0.08')**	**SPH (0.08')**	**SPH (0.08')**	**SPH (0.08')**	--	--	--	--	--	--	--	--
	12/1/11	3.57	0.01	95.45	**1,000**	**110**	26	21	84	--	636	--	--	--	--	--	--
	3/6/12	3.55	0.01	95.47	**1,800**	**460**	8.8	36	55	0.14	-135	--	--	--	--	--	--
(99.01)	6/13/12	4.50	0.00	94.51	**7,200**	**1,600**	460	200	810	1.10	-79.90	--	--	--	--	--	--
	10/4/12	7.28	0.00	91.73	**22,200**	**4,630**	**1,340**	603	**3,600**	1.14	-13.8	26.4	<0.20	<1.0	7,190	164	466
	6/4/13	4.92	0.00	94.09	**8,300**	**1,800**	180	120	270	--	--	--	--	--	--	--	--
(12.69)	4/14/16	4.06	0.00	8.63	**36,500**	**4,250**	**1,030**	455	**2,620**	1.1	-141	63,100	<0.250	<1.00	--	228	1,290
(12.69)	6/20/19	6.54	0.00	6.15	**16,500**	**4,390**	60.5	436	778.8	--	--	--	--	--	--	--	--
MW-10	6/27/07	6.51	0.00	92.67	**50,000**	**1,300**	**2,200**	**1,200**	**6,700**	--	--	--	--	--	--	--	--
	11/30/11	3.59	0.00	95.59	**6,200**	**610**	53	390	390	4.80 H	-103	7.0 H	<0.100	9.99	--	--	--
	3/6/12	3.53	0.00	95.65	**2,200**	**150**	13	43	140	0.00	-125	9.10	<0.100	4.0	1,330	105	--
	3/6/12 DUP	3.53	0.00	95.65	**2,100**	**180**	20	68	210	--	--	--	--	--	--	--	--
(99.18)	6/13/12	4.50	0.00	94.68	**6,900**	**640**	440	330	**1,400**	0.92	-82.4	30 H	<0.50	<0.50	1,450	185	--
	10/4/12	7.44	0.00	91.74	**16,900**	**1,340**	464	**930**	**2,620**	1.60	32.4	40.1	<0.20	4.3	7,750	250	1,460
	6/4/13	4.94	0.00	94.24	**15,000**	**1,300**	360	500	**1,400**	--	--	--	--	--	--	--	--
(12.86)	4/13/16	4.23	0.00	8.63	**22,800**	**1,390**	63.9	555	**2,300**	1.10	-153.0	72,200	<0.250	<1.00	--	256	1,230
(12.86)	4/13/16 DUP	4.23	0.00	8.63	**21,600**	**1,340**	<100	457	**1,730**	--	--	--	--	--	--	--	--
(12.86)	6/21/19	6.68	0.00	6.18	**5,640**	**296**	11.4	312	293.6	--	--	--	--	--	--	--	--
MW-11	6/27/07	6.89	0.00	92.08	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	11/30/11	4.37	0.00	94.60	<250	**20**	27	3.7	16	5.70 H	128	0.090 H	<0.100	6.63	--	--	--
	3/6/12	--	--	--	--	**--**	--	--	--	--	--	--	--	--	--	--	--
(98.97)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	5.73	0.00	93.24	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(12.77)	4/14/16	4.48	0.00	8.29	<100	<0.200	<1.00	<0.500	<1.50	3.3	-77	140	<0.250	5.05	--	78	1.12
(12.77)	6/20/19	7.32	0.00	5.45	<50	<1	<1	<1	2.50	--	--	--	--	--	--	--	--
MW-12	6/27/07	7.82	0.00	92.35	**20,000**	**14,000**	**28,000**	**1,700**	**21,000**	--	--	--	--	--	--	--	--
	11/29/11	5.01	0.00	95.16	**130,000**	**9,000**	**20,000**	**2,700**	**20,000**	2.90 H	627	5.8 H	<0.100 H	0.447 H	--	--	--
	3/6/12	5.12	0.00	95.05	**100,000**	**8,900**	**24,000**	**2,700**	**22,000**	0.54	-139	--	--	--	--	--	--
(100.17)	6/13/12	6.20	0.00	93.97	**100,000**	**6,800**	**19,000**	**2,500**	**21,000**	2.74	-105.8	--	--	--	--	--	--
	10/4/12	9.00	0.88	91.85	**SPH**	**SPH**	**SPH**	**SPH**	**SPH**	--	--	--	--	--	--	--	--
	6/4/13	6.40	0.00	93.77	**160,000/sheen**	**8,600/sheen**	**21,000/sheen**	**2,400/sheen**	**22,000/sheen**	--	--	--	--	--	--	--	--
(13.87)	4/14/16	5.61	0.00	8.26	**252,000/sheen**	**5,020/sheen**	**16,300/sheen**	**2,650/sheen**	**29,600/sheen**	1.1	-118	46,800	<0.250	169	--	273	2,770

Table 4. Cumulative Summary (2007 - 2019) of Groundwater Analytical Results - TPH, VOCs, and Geochemical Parameters
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well Number (TOC in feet)	Sample Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPH-G[1] (µg/L)	Volatile Organic Compounds[2] (VOCs)				Geochemical Parameters							
						Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential (ORP)[4] (mV)	Ferrous Iron[5] (mg/L)	Nitrate[6] as NO_3 (mg/L)	Sulfate[6] as SO_4(mg/L)	Methane[7] (µg/L)	Total Alkalinity[8] as $CaCO_3$ (mg/L)	Manganese[9], Dissolved (µg/L)
(13.87)	6/19/19	7.82	0.00	6.05	**98,900**	**3,360**	**10,800**	**2,470**	**17,890**	--	--	--	--	--	--	--	--
(13.87)	6/19/16 DUP	7.82	0.00	6.05	**109,000**	**3,440**	**13,200**	**2,600**	**19,240**	--	--	--	--	--	--	--	--
MW-13	6/27/07	6.49	0.00	92.21	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	11/30/11	5.55	0.00	93.15	<250	<0.50	<0.50	<0.50	<0.50	10.6 H	-105	0.070 H	<0.100	1.81	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(98.70)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	4.99	0.00	93.71	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(12.36)	4/14/16	3.79	0.00	8.57	<100	<0.200	<1.00	<0.500	<1.50	8.9	56	1,680	<0.250	1.75	--	<20.0	1.24
(12.36)	6/19/19	6.50	0.00	5.86	<50	<1	<1	<1	1.44	--	--	--	--	--	--	--	--
MW-14	6/27/07	7.36	0.00	92.17	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	11/30/11	4.44	0.00	95.09	<250	<0.50	<0.50	<0.50	<0.50	--	76	--	--	--	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(99.53)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	5.91	0.00	93.62	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(13.24)	4/12/16	5.22	0.00	8.02	<100	<0.200	<1.00	<0.500	<1.50	0.9	22.3	369	0.867	3.55	--	64.6	<1.00
(13.24)	6/19/19	7.41	0.00	5.83	<50	<1	<1	<1	<1	--	--	--	--	--	--	--	--
MW-16 No elevation	Not Located																
MW-20	6/27/07	7.82	0.00	92.27	**130,000**	**6,900**	**14,000**	**2,800**	**15,000**	--	--	--	--	--	--	--	--
(100.09)	Not Located																
	6/4/13	6.21	0.00	93.88	**100,000/sheen**	**8,800/sheen**	**9,800/sheen**	**2,600/sheen**	**11,000/sheen**	--	--	--	--	--	--	--	--
(13.66)	4/13/16	5.44	0.00	8.22	**184,000**	**6,500**	**14,500**	**3,240**	**19,400**	1.5	-137	64,500	<0.250	8.7	--	379	968
(13.66)	6/20/19	7.61	0.00	6.05	**88,400**	**7,550**	**9,040**	**3,440**	**11,460**	--	--	--	--	--	--	--	--
MW-21	6/27/07	7.62	0.00	92.26	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	11/30/11	4.82	0.00	95.06	<250	<0.50	<0.50	<0.50	<0.50	--	138	--	--	--	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(99.88)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	6.22	0.00	93.66	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(13.57)	4/12/16	5.63	0.00	7.94	<100	<0.200	<1.00	<0.500	<1.50	8.3	127	368	<.250	3.12	--	31.1	2.30
(13.57)	6/19/19	7.58	0.00	5.99	<50	<1	<1	<1	<1	--	--	--	--	--	--	--	--
MW-22	6/27/07	7.45	0.00	92.64	**7,100**	**78**	42	57	520	--	--	--	--	--	--	--	--
	11/30/11	4.50	0.00	95.59	**3,000**	<2.00	17	47	160	6.10 H	125	4.4 H	<0.100	9.30	--	--	--
	3/6/12	4.50	0.00	95.59	<250	0.90	2.2	1.6	9.3	0.57	-31	--	--	--	--	--	--
(100.09)	6/13/12	5.45	0.00	94.64	**1,500**	0.92	4.9	61	43	2.38	-209.7	--	--	--	--	--	--
	10/4/12	8.34	0.00	91.75	**3,230**	**8.8**	21.2	118	121	2.52	-158.3	1.5	<0.20	5.2	1,910	230	136
	6/4/13	5.82	0.00	94.27	730	0.23	1.2	6.1	33	--	--	--	--	--	--	--	--
(13.77)	4/13/16	5.16	0.00	8.61	**2,010**	<0.200	1.15	7.08	19.1	1.1	12	2,870	<0.250	95	--	306	136
(13.77)	4/13/16 DUP	5.16	0.00	8.61	**1,890**	0.349	1.06	6.31	18.0	--	--	--	--	--	--	--	--

Table 4. Cumulative Summary (2007 - 2019) of Groundwater Analytical Results - TPH, VOCs, and Geochemical Parameters
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well Number (TOC in feet)	Sample Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPH-G[1] (µg/L)	Volatile Organic Compounds[2] (VOCs)				Geochemical Parameters							
						Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential (ORP)[4] (mV)	Ferrous Iron[5] (mg/L)	Nitrate[6] as NO_3 (mg/L)	Sulfate[6] as SO_4(mg/L)	Methane[7] (µg/L)	Total Alkalinity[8] as $CaCO_3$ (mg/L)	Manganese[9], Dissolved (µg/L)
(13.77)	6/21/19	7.59	0.00	6.18	**1,490**	1.78	1.87	15.30	47.78	--	--	--	--	--	--	--	--
MW-23	6/27/07	7.01	0.00	92.56	**92,000**	**1,500**	**9,300**	**2,000**	**14,000**	--	--	--	--	--	--	--	--
	11/30/11	3.92	0.00	95.65	**51,000**	**470**	**3,700**	**1,100**	**7,100**	--	-121	--	--	--	--	35.6	--
(99.57)	11/30/11 DUP	3.92	0.00	95.65	**47,000**	**560**	**4,000**	**1,200**	**7,700**	--	--	--	--	--	--	--	--
	3/6/12	3.95	0.00	95.62	**55,000**	**630**	**5,700**	**2,200**	**12,000**	0.56	-107	12.6	<0.100	6.6	527	136	--
	6/13/12	4.95	0.00	94.62	**56,000**	**830**	**5,600**	**2,300**	**15,000**	1.28	-103.7	15 H	<0.50	12	387	169	--
	10/4/12	7.95	0.15	91.74	**70,500**	**1,320**	**6,850**	**1,580**	**10,000**	3.86	-112.8	13.5	<0.20	1.6	2,170	176	219
	6/4/13	5.40	0.00	94.17	**88,000/sheen**	**770/sheen**	**5,200/sheen**	**2,800/sheen**	**17,000/sheen**	--	--	--	--	--	--	--	--
(13.23)	4/13/16	4.84	0.00	8.39	**158,000/sheen**	**280/sheen**	**4,860/sheen**	**3,230/sheen**	**21,700/sheen**	1.1	-105	16,600	<0.250	1.32	--	96.1	128
(13.23)	6/20/19	7.10	0.00	6.13	**52,100**	**374**	**4,350**	**1,840**	**10,450**	--	--	--	--	--	--	--	--
MW-24	6/27/07	5.15	0.00	92.78	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	12/1/11	2.14	0.00	95.79	<250	<0.50	<0.50	<0.50	<0.50	--	-133	--	--	--	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(97.93)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	3.47	0.00	94.46	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
(11.61)	4/12/16	2.74	0.00	8.87	<100	<0.200	<1.00	<0.500	<1.50	1.4	99	5,170	<0.250	<1.00	--	35.6	105
(11.61)	6/26/19	5.51	0.00	6.10	<50	<1	<1	<1	<1	--	--	--	--	--	--	--	--
MW-25	6/27/07	6.45	0.00	92.29	<100	<1	<1	<1	<3	--	--	--	--	--	--	--	--
	12/1/11	3.68	0.00	95.06	<250	<0.50	<0.50	<0.50	<0.50	--	123	--	--	--	--	--	--
	3/6/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
(98.74)	6/13/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/4/12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/4/13	5.02	0.00	93.72	<80	<0.20	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	4/13/16	4.25	0.00	8.16	**2,820**	**76.3**	<1.00	45.5	101	1.2	25	9,690	<0.250	6.24	--	65.0	235
(12.41)	5/20/16	5.77	0.00	6.64	94.4	<1.00	<1.00	1.10	1.08	--	--	--	--	--	--	--	--
(12.41)	1/9/18	3.36	0.00	9.05	123	2.15	<1.00	<1.00	33.7	--	--	--	--	--	--	--	--
(12.41)	6/19/19	6.52	0.00	5.89	<50	<1	<1	<1	1.60	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels [10]		N/A	N/A	N/A	800/1,000 [11]	5	1,000	700	1,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:
µg/L = micrograms per liter
mV = millivolts
mg/L = milligram per liter
"--" = Not measured or analyzed
BOLD = value exceeds MTCA Method A cleanup levels
Top of well casings professionally surveyed by Berglund, Schmidt & Associates on April 11 - 12, 2016.
N/A = Not applicable
<0.20 = Analyte not detected a method reporting limit of 0.20 µg/L.
H = Holding time for sample preparation or analysis exceeded
TOC = Top of casing measured in feet
[1] TPH as Gasoline (TPH-G) analysis by Method NWTPH-Gx.
[2] VOC analysis by EPA Method 8260B, 8260C, or 8021B.

Table 4. Cumulative Summary (2007 - 2019) of Groundwater Analytical Results - TPH, VOCs, and Geochemical Parameters
The Hungry Whale
1680 North Montesano Street
Westport, Washington

Well Number (TOC in feet)	Sample Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPH-G[1] (µg/L)	Volatile Organic Compounds[2] (VOCs)				Geochemical Parameters							
						Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Dissolved Oxygen[3] (mg/L)	Oxygen Reduction Potential (ORP)[4] (mV)	Ferrous Iron[5] (mg/L)	Nitrate[6] as NO_3 (mg/L)	Sulfate[6] as SO_4(mg/L)	Methane[7] (µg/L)	Total Alkalinity[8] as $CaCO_3$ (mg/L)	Manganese[9], Dissolved (µg/L)

[3] Dissolved Oxygen analysis collected as a field parameter, except samples collected November 2011, which were analyzed by laboratory

[4] Oxygen Reduction Potential collected as a field parameter

[5] Ferrous Iron analysis by Method SM3500-Fe B

[6] Nitrate and Sulfate analysis by Ion Chromatography by EPA Method 300.0

[7] Methane analysis by Method RSK-175M

[8] Total Alkalinity analysis by Method SM 2320B

[9] Manganese analysis bu EPA Method 6010

[10] Washington State Department of Ecology Model Toxics Control Act (MTCA) Method A Cleanup Level for groundwater. November 2007.

[11] MTCA Method A Cleanup Level for TPH-G in groundwater is 800 µg/L if benzene is detected; but is 1,000 µg/L if benzene is not detected.

SPH = Separate Phase Hydrocarbons

Groundwater Elevation calculated using "Groundwater Elevation = TOC-(Depth to Water -(SPH thickness*0.77))" where 0.77 is a generic density of gasoline.

TABLE 5 - DISPROPORTIONATE COST ANALYSIS

The Hungry Whale, 1680 North Montesano Street, Westport, Washington

	Alternative 1 In-Situ Treatment				Alternative 2 Groundwater Extraction and Treatment				Alternative 3 Interim Monitoring and Source Removal (2,800 CY)				Alternative 4 Interim Monitoring and Site Wide Soil Excavation (5,200 CY)			
Relative Benefits Ranking for DCA	**Comparitive Benefit Rating**	**Score**	**Weighting Factor**	**Weighted Score**	**Comparitive Benefit Rating**	**Score**	**Weighting Factor**	**Weighted Score**	**Comparitive Benefit Rating**	**Score**	**Weighting Factor**	**Weighted Score**	**Comparitive Benefit Rating**	**Score**	**Weighting Factor**	**Weighted Score**
Overall Protectiveness	Medium High	8	0.3	2.4	Medium High	7	0.3	2.1	Medium High	7	0.3	2.1	High	9	0.3	2.7
Permanence	Medium High	8	0.2	1.6	Medium High	7	0.2	1.4	Medium High	7	0.2	1.4	High	9	0.2	1.8
Long Term Effectiveness	Medium High	8	0.2	1.6	Medium High	8	0.2	1.6	Medium High	7	0.2	1.4	High	9	0.2	1.8
Manageability of Short Term Risk	Medium High	8	0.1	0.8	Medium High	8	0.1	0.8	Medium High	7	0.1	0.7	Medium High	7	0.1	0.7
Implementability	Medium High	8	0.1	0.8	Medium High	7	0.1	0.7	Medium High	7	0.1	0.7	Medium	7	0.1	0.7
Consideration of Public Concerns	Medium	5	0.1	0.5	Medium	5	0.1	0.5	Medium	6	0.1	0.6	Medium	6	0.1	0.6
Comparitive Overall Benefit				**7.7**				**7.1**				**6.9**				**8.3**
Disproportionate Cost Analysis																
Overall Weighted Benefit Score	7.7				7.1				6.9				8.3			
Estimated Remedy Cost (including interim action)	$2,178,176				$1,129,611				$931,409				$1,537,885			
Most Practicable Permenant Solution	No				No				Yes				No			
Lowest Cost Alternative	No				No				Yes				No			
Relative Cost/Benefit Ratio (divided by 10,000)	28.3				15.9				13.5				18.5			
Costs Disproportionate to Incremental Benefits	Yes				Yes				No				No			
Remedy Permanent to the Maximum Extent Practicable?	No				No				Yes				No			
Preferred Alternative	**No**				**No**				**No**				**YES**			

APPENDIX A

Property Boundary and Legal Description

PORT OF GRAYS HARBOR

LEASE NUMBER 619

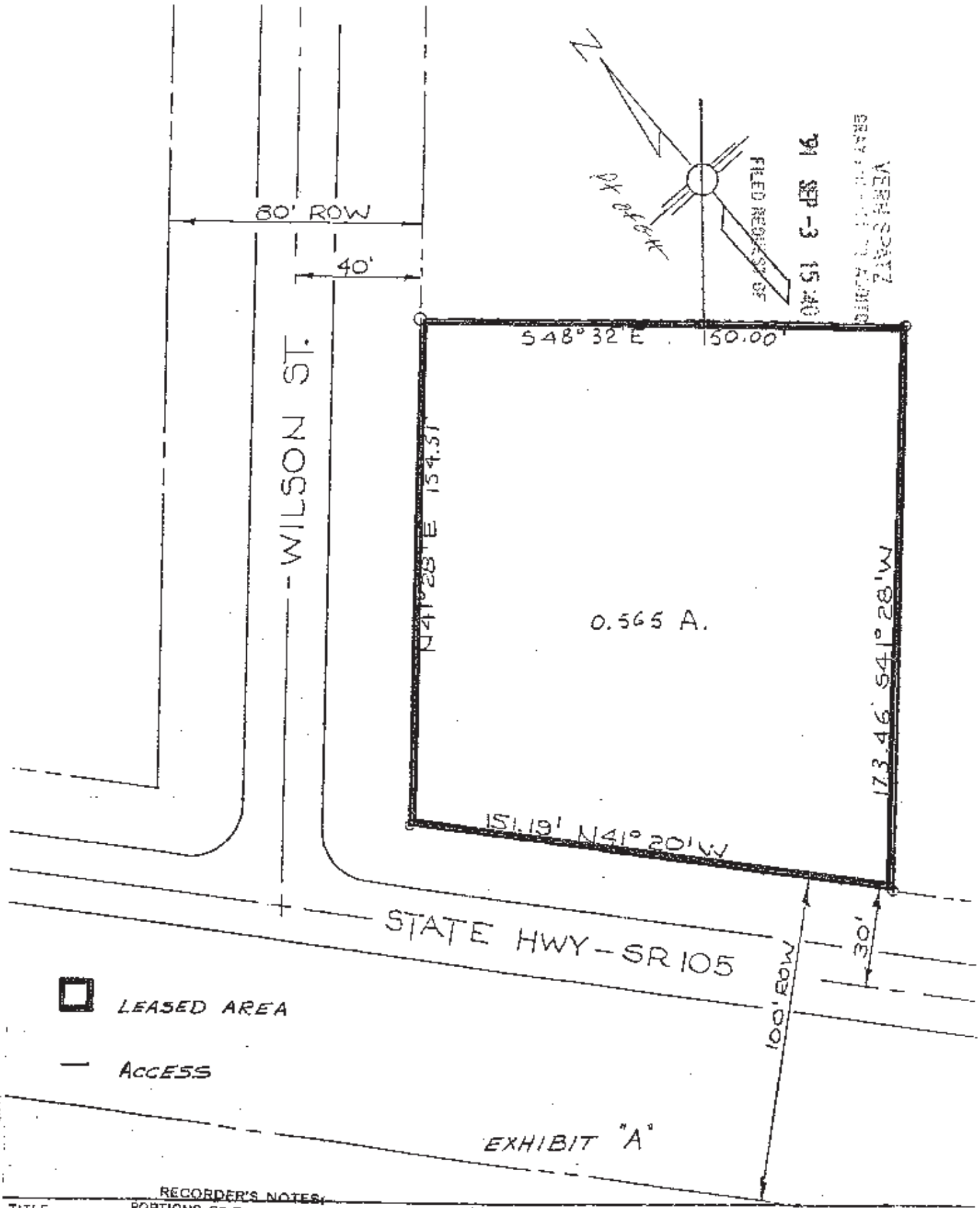
SCHEDULE "A"

That portion of the Northeast Quarter of the Southeast Quarter (NESE) of Section 1, Township 16 North, Range 12 West, W. M., in the Town of Westport, Grays Harbor County, Washington, more particularly described as follows:

Beginning at the most easterly corner of Lot 13, Block 19 of the First Addition to Westhaven, as shown on plat recorded in Grays Harbor Auditor's Book of Plats, Volume 8, Pages 133 to 137 inclusive; thence along the southwesterly line of First Avenue (Nyhus Street), bearing South 48° 32' East, a distance of 465.00 feet; thence along the southeasterly line of Wilson Street, bearing South 41° 28' West, a distance of 635.00 feet to the True Point of Beginning;

Thence South 48° 32' East, a distance of 150.00 feet;
Thence South 41° 28' West, a distance of 173.46 feet
to a point on the northeasterly line of State Highway 105;
Thence along said northeasterly line of Highway 105,
bearing North 41° 20' West, a distance of 151.19 feet
to a point on the southeasterly line of Wilson Street;
Thence northeasterly along said line of Wilson Street,
bearing North 41° 28' East, a distance of 154.51 feet
to the True Point of Beginning.

91 20460



RECORDER'S NOTES:
PORTIONS OF THIS DOCUMENT
POOR QUALITY FOR FILMING

TITLE:		PORT OF GRAYS HARBOR	
DRWN BY: SMH	SCALE: 1" = 40'	Steve M. Hall	DWG. WFB 204
DATE: 13 MAR. 67	LOC'N: WFB	PORT ENGINEER	No. 708

91 20461

APPENDIX B

Groundwater Analytical Reports – April/May 2016; January 2018; and June 2019

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Thursday, April 28, 2016

Patrick Vaughan
Stantec Portland
9400 SW Barnes Rd Ste 200
Portland, OR 97225

RE: Hungry Whale / 185703328

Enclosed are the results of analyses for work order A6D0406, which was received by the laboratory on 4/13/2016 at 3:40:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01 UR	A6D0406-01	Water	04/12/16 10:23	04/13/16 15:40
MW-02 UR	A6D0406-02	Water	04/12/16 08:50	04/13/16 15:40
MW-03 UR	A6D0406-03	Water	04/12/16 09:20	04/13/16 15:40
MW-05 UR	A6D0406-04	Water	04/12/16 09:45	04/13/16 15:40
MW-14 UR	A6D0406-05	Water	04/12/16 08:25	04/13/16 15:40
MW-21	A6D0406-06	Water	04/12/16 10:55	04/13/16 15:40
MW-24	A6D0406-07	Water	04/12/16 11:30	04/13/16 15:40
EB041216	A6D0406-08	Water	04/12/16 12:00	04/13/16 15:40

Apex Laboratories

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Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 02:30	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
MW-02 UR (A6D0406-02)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	**5.34**	---	1.00	mg/L	10	04/15/16 02:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*105 %*	*Limits: 50-150 %*	"	"	"	
MW-03 UR (A6D0406-03)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 03:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*108 %*	*Limits: 50-150 %*	"	"	"	
MW-05 UR (A6D0406-04)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 04:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 106 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
MW-14 UR (A6D0406-05)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 04:35	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 105 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*112 %*	*Limits: 50-150 %*	"	"	"	
MW-21 (A6D0406-06)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 04:59	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*109 %*	*Limits: 50-150 %*	"	"	"	
MW-24 (A6D0406-07)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 05:24	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*109 %*	*Limits: 50-150 %*	"	"	"	
EB041216 (A6D0406-08)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/15/16 05:49	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*109 %*	*Limits: 50-150 %*	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 02:30	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
MW-02 UR (A6D0406-02)			**Matrix: Water**		**Batch: 6040410**			
Benzene	**211**	---	2.00	ug/L	10	04/15/16 02:55	EPA 8260B	
Toluene	**16.1**	---	10.0	"	"	"	"	
Ethylbenzene	**73.1**	---	5.00	"	"	"	"	
Xylenes, total	**106**	---	15.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 92 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*94 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
MW-03 UR (A6D0406-03)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 03:45	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
MW-05 UR (A6D0406-04)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 04:10	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-05 UR (A6D0406-04)			**Matrix: Water**		**Batch: 6040410**			
Surrogate: 4-Bromofluorobenzene (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
MW-14 UR (A6D0406-05)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 04:35	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
MW-21 (A6D0406-06)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 04:59	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
MW-24 (A6D0406-07)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 05:24	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
EB041216 (A6D0406-08)			**Matrix: Water**		**Batch: 6040410**			
Benzene	**0.429**	---	0.200	ug/L	1	04/15/16 05:49	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB041216 (A6D0406-08)			**Matrix: Water**		**Batch: 6040410**			
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	**0.255**	---	0.250	mg/L	1	04/14/16 00:19	EPA 300.0	
Sulfate	**5.36**	---	1.00	"	"	"	"	
MW-02 UR (A6D0406-02)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 00:41	EPA 300.0	
Sulfate	**15.5**	---	1.00	"	"	"	"	
MW-03 UR (A6D0406-03)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	**0.488**	---	0.250	mg/L	1	04/14/16 01:02	EPA 300.0	
Sulfate	**14.8**	---	1.00	"	"	"	"	
Batch: 6040596								
Chloride	**47.0**	---	5.00	"	5	04/21/16 21:06	"	
MW-05 UR (A6D0406-04)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	**0.271**	---	0.250	mg/L	1	04/14/16 01:45	EPA 300.0	
Sulfate	**12.7**	---	1.00	"	"	"	"	
MW-14 UR (A6D0406-05)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	**0.867**	---	0.250	mg/L	1	04/14/16 02:07	EPA 300.0	
Sulfate	**3.55**	---	1.00	"	"	"	"	
Batch: 6040596								
Chloride	**11.2**	---	1.00	"	"	04/21/16 21:27	"	
MW-21 (A6D0406-06)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 02:28	EPA 300.0	
Sulfate	**3.12**	---	1.00	"	"	"	"	
MW-24 (A6D0406-07)			**Matrix: Water**					
Batch: 6040352								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 02:50	EPA 300.0	
Sulfate	ND	---	1.00	"	"	"	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**					
Batch: 6040730								
Iron	**1070**	---	50.0	ug/L	1	04/26/16 17:06	EPA 200.8	
MW-02 UR (A6D0406-02)			**Matrix: Water**					
Batch: 6040730								
Iron	**21500**	---	50.0	ug/L	1	04/26/16 17:09	EPA 200.8	
MW-03 UR (A6D0406-03)			**Matrix: Water**					
Batch: 6040730								
Iron	**4220**	---	50.0	ug/L	1	04/26/16 17:12	EPA 200.8	
MW-05 UR (A6D0406-04)			**Matrix: Water**					
Batch: 6040730								
Iron	**3540**	---	50.0	ug/L	1	04/26/16 17:21	EPA 200.8	
MW-14 UR (A6D0406-05)			**Matrix: Water**					
Batch: 6040730								
Iron	**369**	---	50.0	ug/L	1	04/26/16 17:24	EPA 200.8	
MW-21 (A6D0406-06)			**Matrix: Water**					
Batch: 6040730								
Iron	**368**	---	50.0	ug/L	1	04/26/16 17:27	EPA 200.8	
MW-24 (A6D0406-07)			**Matrix: Water**					
Batch: 6040730								
Iron	**5170**	---	50.0	ug/L	1	04/26/16 17:30	EPA 200.8	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**					
Batch: 6040662								
Iron	**169**	---	50.0	ug/L	1	04/26/16 19:54	EPA 200.8 (Diss)	
Manganese	**2.41**	---	1.00	"	"	"	"	
MW-02 UR (A6D0406-02)			**Matrix: Water**					
Batch: 6040662								
Iron	**19100**	---	50.0	ug/L	1	04/26/16 19:57	EPA 200.8 (Diss)	
Manganese	**209**	---	1.00	"	"	"	"	
MW-03 UR (A6D0406-03)			**Matrix: Water**					
Batch: 6040662								
Iron	**749**	---	50.0	ug/L	1	04/26/16 20:00	EPA 200.8 (Diss)	
Manganese	**12.4**	---	1.00	"	"	"	"	
MW-05 UR (A6D0406-04)			**Matrix: Water**					
Batch: 6040662								
Iron	**87.3**	---	50.0	ug/L	1	04/26/16 20:03	EPA 200.8 (Diss)	
Manganese	ND	---	1.00	"	"	"	"	
MW-14 UR (A6D0406-05)			**Matrix: Water**					
Batch: 6040662								
Iron	**116**	---	50.0	ug/L	1	04/28/16 00:52	EPA 200.8 (Diss)	
Manganese	ND	---	1.00	"	"	"	"	
MW-21 (A6D0406-06)			**Matrix: Water**					
Batch: 6040662								
Iron	**62.9**	---	50.0	ug/L	1	04/28/16 00:55	EPA 200.8 (Diss)	
Manganese	**2.30**	---	1.00	"	"	"	"	
MW-24 (A6D0406-07)			**Matrix: Water**					
Batch: 6040662								
Iron	**717**	---	50.0	ug/L	1	04/28/16 00:57	EPA 200.8 (Diss)	
Manganese	**105**	---	1.00	"	"	"	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-01 UR (A6D0406-01)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**89.0**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**89.0**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-02 UR (A6D0406-02)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**146**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**146**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-03 UR (A6D0406-03)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**66.0**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**66.0**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
Batch: 6040491								
Total Dissolved Solids	**201**	---	10.0	mg/L	"	04/19/16 15:34	SM 2540 C	
Batch: 6040628								
Conductivity	**299**	---	2.50	umhos/cm	"	04/21/16 14:28	SM 2510 B	
MW-05 UR (A6D0406-04)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**74.8**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**74.8**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-14 UR (A6D0406-05)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**64.6**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**64.6**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
Batch: 6040491								
Total Dissolved Solids	**114**	---	10.0	mg/L	"	04/19/16 15:34	SM 2540 C	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-14 UR (A6D0406-05)			**Matrix: Water**					
Batch: 6040628								
Conductivity	**182**	---	2.50	umhos/cm	1	04/21/16 14:28	SM 2510 B	
MW-21 (A6D0406-06)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**31.1**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**31.1**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-24 (A6D0406-07)			**Matrix: Water**					
Batch: 6040437								
Total Alkalinity	**35.6**	---	20.0	mg CaCO3/L	1	04/15/16 18:45	SM 2320 B	
Bicarbonate Alkalinity	**35.6**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040410 - EPA 5030B									Water			
Blank (6040410-BLK1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 23:10							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*111 %*	*50-150 %*			*"*					
LCS (6040410-BS2)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 22:45							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.498	---	0.100	mg/L	1	0.500	---	100	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*102 %*	*50-150 %*			*"*					
Duplicate (6040410-DUP2)					Prepared: 04/14/16 22:14 Analyzed: 04/15/16 03:20							
QC Source Sample: MW-02 UR (A6D0406-02)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**5.81**	---	1.00	mg/L	10	---	5.34	---	---	8	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*104 %*	*50-150 %*			*"*					

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040410 - EPA 5030B									Water			
Blank (6040410-BLK1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 23:10							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Surr)			*100 %*		*80-120 %*				*"*			
Toluene-d8 (Surr)			*100 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*104 %*		*80-120 %*				*"*			
LCS (6040410-BS1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 22:19							
EPA 8260B												
Benzene	18.4	---	0.200	ug/L	1	20.0	---	92	70-130%	---	---	
Toluene	20.0	---	1.00	"	"	"	---	100	"	---	---	
Ethylbenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
Xylenes, total	65.6	---	1.50	"	"	60.0	---	109	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Surr)			*92 %*		*80-120 %*				*"*			
Toluene-d8 (Surr)			*94 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			
Duplicate (6040410-DUP2)					Prepared: 04/14/16 22:14 Analyzed: 04/15/16 03:20							
QC Source Sample: MW-02 UR (A6D0406-02)												
EPA 8260B												
Benzene	**225**	---	2.00	ug/L	10	---	211	---	---	6	30%	
Toluene	**17.2**	---	10.0	"	"	---	16.1	---	---	7	30%	
Ethylbenzene	**77.5**	---	5.00	"	"	---	73.1	---	---	6	30%	
Xylenes, total	**116**	---	15.0	"	"	---	106	---	---	9	30%	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Surr)			*93 %*		*80-120 %*				*"*			
Toluene-d8 (Surr)			*100 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040352 - Method Prep: Aq								**Water**				
Blank (6040352-BLK1)					Prepared: 04/13/16 13:16 Analyzed: 04/13/16 15:43							
EPA 300.0												
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	---	---	---	---	---	---	
Sulfate	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040352-BS1)					Prepared: 04/13/16 13:16 Analyzed: 04/13/16 16:04							
EPA 300.0												
Nitrate-Nitrogen	1.97	---	0.250	mg/L	1	2.00	---	99	90-110%	---	---	
Sulfate	7.81	---	1.00	"	"	8.00	---	98	"	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040596 - Method Prep: Aq									Water			
Blank (6040596-BLK1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:24					
EPA 300.0												
Chloride	ND	---	1.00	mg/L	1	---	---	---	---	---	---	
LCS (6040596-BS1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:46					
EPA 300.0												
Chloride	8.02	---	1.00	mg/L	1	8.00	---	100	90-110%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040730 - EPA 3015A							**Water**					
Blank (6040730-BLK1)					Prepared: 04/25/16 13:52		Analyzed: 04/26/16 16:49					
EPA 200.8												
Iron	ND	---	50.0	ug/L	1	---	---	---	---	---	---	
LCS (6040730-BS1)					Prepared: 04/25/16 13:52		Analyzed: 04/26/16 16:52					
EPA 200.8												
Iron	5490	---	50.0	ug/L	1	5560	---	99	85-115%	---	---	
Duplicate (6040730-DUP1)					Prepared: 04/25/16 13:52		Analyzed: 04/26/16 17:15					
QC Source Sample: MW-03 UR (A6D0406-03)												
EPA 200.8												
Iron	**4380**	---	50.0	ug/L	1	---	4220	---	---	4	20%	
Matrix Spike (6040730-MS1)					Prepared: 04/25/16 13:52		Analyzed: 04/26/16 17:18					
QC Source Sample: MW-03 UR (A6D0406-03)												
EPA 200.8												
Iron	9510	---	50.0	ug/L	1	5560	4220	95	70-130%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040662 - Matrix Matched Direct Inject								**Water**				
Blank (6040662-BLK1)					Prepared: 04/22/16 10:27		Analyzed: 04/28/16 00:49					
EPA 200.8 (Diss)												
Iron	ND	---	50.0	ug/L	1	---	---	---	---	---	---	
Manganese	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040662-BS1)					Prepared: 04/22/16 10:27		Analyzed: 04/26/16 19:51					
EPA 200.8 (Diss)												
Iron	5450	---	50.0	ug/L	1	5560	---	98	85-115%	---	---	
Manganese	54.9	---	1.00	"	"	55.6	---	99	"	---	---	
Duplicate (6040662-DUP1)					Prepared: 04/22/16 10:27		Analyzed: 04/26/16 20:06					
QC Source Sample: MW-05 UR (A6D0406-04)												
EPA 200.8 (Diss)												
Iron	**79.2**	---	50.0	ug/L	1	---	87.3	---	---	10	20%	
Manganese	ND	---	1.00	"	"	---	ND	---	---	---	20%	
Matrix Spike (6040662-MS1)					Prepared: 04/22/16 10:27		Analyzed: 04/26/16 20:09					
QC Source Sample: MW-05 UR (A6D0406-04)												
EPA 200.8 (Diss)												
Iron	5540	---	50.0	ug/L	1	5560	87.3	98	70-130%	---	---	
Manganese	56.1	---	1.00	"	"	55.6	ND	101	"	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040437 - Method Prep: Aq								**Water**				
Blank (6040437-BLK1)					Prepared: 04/15/16 11:45		Analyzed: 04/15/16 18:45					
SM 2320 B												
Total Alkalinity	ND	---	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Bicarbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Carbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
LCS (6040437-BS1)					Prepared: 04/15/16 11:45		Analyzed: 04/15/16 18:45					
SM 2320 B												
Total Alkalinity	190	---	20.0	mg CaCO3/L	1	191	---	99	85-115%	---	---	
Duplicate (6040437-DUP2)					Prepared: 04/15/16 11:45		Analyzed: 04/15/16 18:45					
QC Source Sample: MW-21 (A6D0406-06)												
SM 2320 B												
Total Alkalinity	**29.4**	---	20.0	mg CaCO3/L	1	---	31.1	---	---	6	20%	
Bicarbonate Alkalinity	**29.4**	---	20.0	"	"	---	31.1	---	---	6	20%	
Carbonate Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040491 - Total Dissolved Solids									Water			
Blank (6040491-BLK1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	ND	---	10.0	mg/L	1	---	---	---	---	---	---	
Reference (6040491-SRM1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	997	---		mg/L	1	1000		100	75.1-120%	---	---	

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Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040628 - Method Prep: Aq									**Water**			
Blank (6040628-BLK1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	ND	---	2.50	umhos/cm	1	---	---	---	---	---	---	
Duplicate (6040628-DUP1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
QC Source Sample: MW-03 UR (A6D0406-03)												
SM 2510 B												
Conductivity	**298**	---	2.50	umhos/cm	1	---	299	---	---	0.2	10%	
Reference (6040628-SRM1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	1410	---		umhos/cm	1	1410		100	95-105%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040410							
A6D0406-01	Water	NWTPH-Gx (MS)	04/12/16 10:23	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-02	Water	NWTPH-Gx (MS)	04/12/16 08:50	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-03	Water	NWTPH-Gx (MS)	04/12/16 09:20	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-04	Water	NWTPH-Gx (MS)	04/12/16 09:45	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-05	Water	NWTPH-Gx (MS)	04/12/16 08:25	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-06	Water	NWTPH-Gx (MS)	04/12/16 10:55	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-07	Water	NWTPH-Gx (MS)	04/12/16 11:30	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-08	Water	NWTPH-Gx (MS)	04/12/16 12:00	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00

BTEX Compounds by EPA 8260B

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040410							
A6D0406-01	Water	EPA 8260B	04/12/16 10:23	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-02	Water	EPA 8260B	04/12/16 08:50	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-03	Water	EPA 8260B	04/12/16 09:20	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-04	Water	EPA 8260B	04/12/16 09:45	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-05	Water	EPA 8260B	04/12/16 08:25	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-06	Water	EPA 8260B	04/12/16 10:55	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-07	Water	EPA 8260B	04/12/16 11:30	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0406-08	Water	EPA 8260B	04/12/16 12:00	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040352							
A6D0406-01	Water	EPA 300.0	04/12/16 10:23	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-02	Water	EPA 300.0	04/12/16 08:50	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-03	Water	EPA 300.0	04/12/16 09:20	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-04	Water	EPA 300.0	04/12/16 09:45	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-05	Water	EPA 300.0	04/12/16 08:25	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-06	Water	EPA 300.0	04/12/16 10:55	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00
A6D0406-07	Water	EPA 300.0	04/12/16 11:30	04/13/16 18:22	10mL/10mL	10mL/10mL	1.00

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

SAMPLE PREPARATION INFORMATION

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040596							
A6D0406-03	Water	EPA 300.0	04/12/16 09:20	04/21/16 09:04	10mL/10mL	10mL/10mL	1.00
A6D0406-05	Water	EPA 300.0	04/12/16 08:25	04/21/16 09:04	10mL/10mL	10mL/10mL	1.00

Total Metals by EPA 200.8 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040730							
A6D0406-01	Water	EPA 200.8	04/12/16 10:23	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-02	Water	EPA 200.8	04/12/16 08:50	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-03	Water	EPA 200.8	04/12/16 09:20	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-04	Water	EPA 200.8	04/12/16 09:45	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-05	Water	EPA 200.8	04/12/16 08:25	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-06	Water	EPA 200.8	04/12/16 10:55	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00
A6D0406-07	Water	EPA 200.8	04/12/16 11:30	04/25/16 13:52	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040662							
A6D0406-01	Water	EPA 200.8 (Diss)	04/12/16 10:23	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-02	Water	EPA 200.8 (Diss)	04/12/16 08:50	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-03	Water	EPA 200.8 (Diss)	04/12/16 09:20	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-04	Water	EPA 200.8 (Diss)	04/12/16 09:45	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-05	Water	EPA 200.8 (Diss)	04/12/16 08:25	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-06	Water	EPA 200.8 (Diss)	04/12/16 10:55	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0406-07	Water	EPA 200.8 (Diss)	04/12/16 11:30	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00

Conventional Chemistry Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040437							
A6D0406-01	Water	SM 2320 B	04/12/16 10:23	04/15/16 11:45	50mL/50mL	50mL/50mL	NA

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

SAMPLE PREPARATION INFORMATION

Conventional Chemistry Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6D0406-02	Water	SM 2320 B	04/12/16 08:50	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
A6D0406-03	Water	SM 2320 B	04/12/16 09:20	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
A6D0406-04	Water	SM 2320 B	04/12/16 09:45	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
A6D0406-05	Water	SM 2320 B	04/12/16 08:25	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
A6D0406-06	Water	SM 2320 B	04/12/16 10:55	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
A6D0406-07	Water	SM 2320 B	04/12/16 11:30	04/15/16 11:45	50mL/50mL	50mL/50mL	NA
Batch: 6040628							
A6D0406-03	Water	SM 2510 B	04/12/16 09:20	04/21/16 13:46	40mL/40mL	40mL/40mL	NA
A6D0406-05	Water	SM 2510 B	04/12/16 08:25	04/21/16 13:46	40mL/40mL	40mL/40mL	NA

Prep: Total Dissolved Solids

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040491							
A6D0406-03	Water	SM 2540 C	04/12/16 09:20	04/18/16 17:10	1N/A/1N/A	1N/A/1N/A	NA
A6D0406-05	Water	SM 2540 C	04/12/16 08:25	04/18/16 17:10	1N/A/1N/A	1N/A/1N/A	NA

Apex Laboratories

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Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

Notes and Definitions

Qualifiers:

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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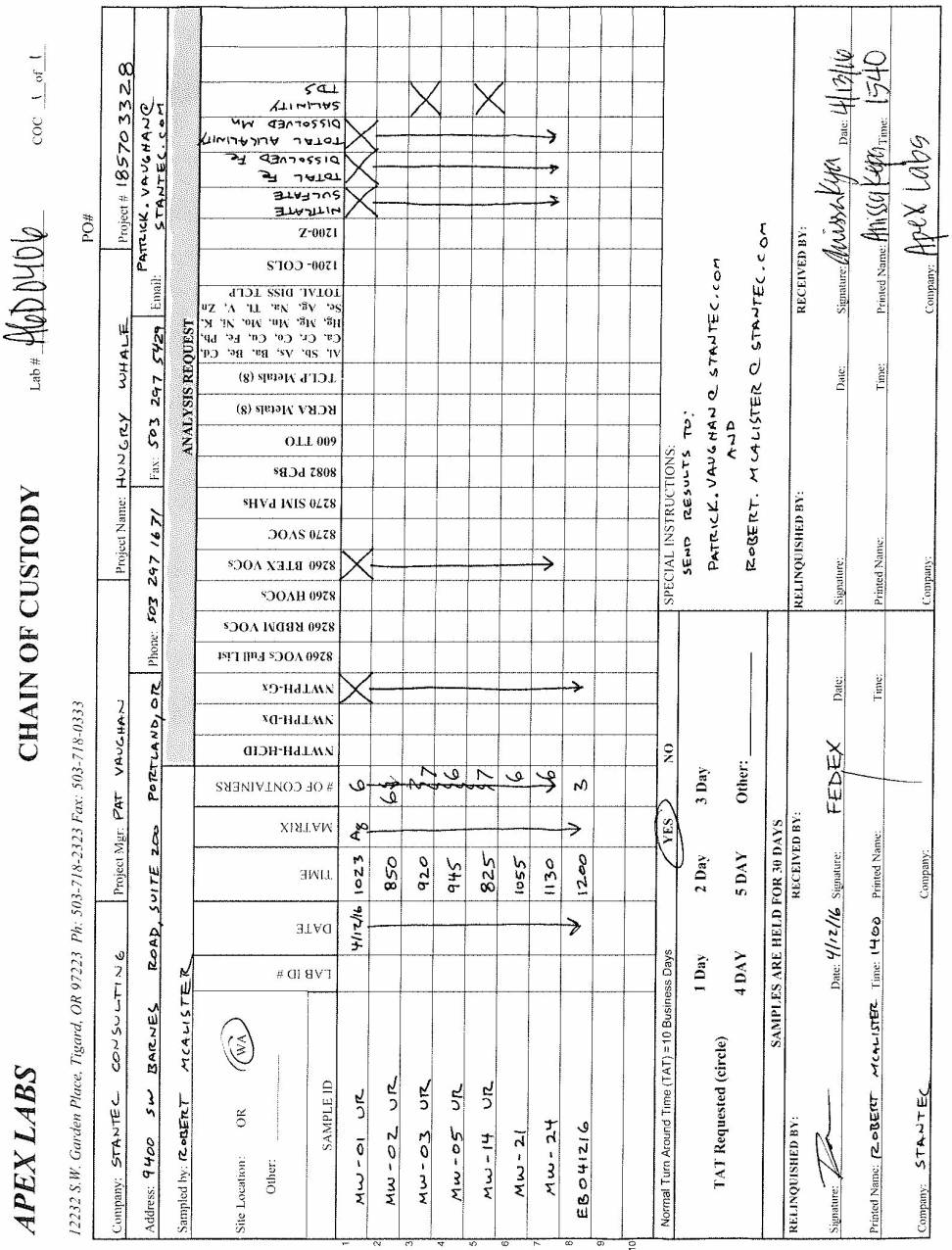
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47



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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	04/28/16 14:47

APEX LABS COOLER RECEIPT FORM

Client: Stantec Consulting Element WO#: A6 D0406

Project/Project #: Hungry Whale / 185703328

Delivery info:

Date/Time Received: 4/13/16 @ 1540 By: AKK

Delivered by: Apex Courier___Client___FedEx X UPS___Swift____Senvoy ___SDS___Other_____

Cooler Inspection Inspected by: AKK : 4/13/16 @ 1540

Chain of Custody Included? Yes Y No ___

Signed/Dated by Client? Yes Y No ___

Signed/Dated by Apex? Yes Y No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	4.1						
Received on Ice? (Y/N)	(Y)						
Temp. Blanks? (Y/N)	(Y)						
Ice Type: (Gel/Real/Other)	(Real)						
Condition:	good						

Cooler out of temp? (Y/N) Possible reason why:_____

If some coolers are in temp and some out, were green dot applied to out of temperature samples Yes/No/NA

Samples Inspection: Inspected by: VMS : 4/13/16 @ 17:44

All Samples Intact? Yes X No ___ Comments:_____

Bottle Labels/COCs agree? Yes X No ___ Comments: _____

Containers Appropriate for Analysis? Yes X No ___ Comments: _____

Do VOA Vials have Visible Headspace? Yes ___ No X NA ___

Comments_____

Water Samples: pH Checked and Appropriate (except VOAs): Yes___No___NA_____

Comments: _____

Additional Information: _____

Labeled by: VMS Cooler Inspected by: VMS See Project Contact Form: Y

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Monday, May 9, 2016

Patrick Vaughan
Stantec Portland
9400 SW Barnes Rd Ste 200
Portland, OR 97225

RE: The Hungry Whale / 185703328

Enclosed are the results of analyses for work order A6D0424, which was received by the laboratory on 4/14/2016 at 11:05:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-10	A6D0424-01	Water	04/13/16 08:55	04/14/16 11:05
MW-20	A6D0424-02	Water	04/13/16 10:45	04/14/16 11:05
MW-22	A6D0424-03	Water	04/13/16 08:28	04/14/16 11:05
MW-23	A6D0424-04	Water	04/13/16 10:05	04/14/16 11:05
MW-25	A6D0424-05	Water	04/13/16 09:25	04/14/16 11:05
DUP-1	A6D0424-06	Water	04/13/16 08:30	04/14/16 11:05
DUP-2	A6D0424-07	Water	04/13/16 09:00	04/14/16 11:05
EB041316	A6D0424-08	Water	04/13/16 11:30	04/14/16 11:05

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01RE1)			**Matrix: Water**		**Batch: 6040461**			
Gasoline Range Organics	**22.8**	---	1.00	mg/L	10	04/16/16 15:12	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW-20 (A6D0424-02)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	**184**	---	2.00	mg/L	20	04/15/16 07:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 108 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*101 %*	*Limits: 50-150 %*	"	"	"	
MW-22 (A6D0424-03)			**Matrix: Water**		**Batch: 6040410**			
Gasoline Range Organics	**2.01**	---	0.100	mg/L	1	04/15/16 06:39	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*106 %*	*Limits: 50-150 %*	"	"	"	
MW-23 (A6D0424-04RE1)			**Matrix: Water**		**Batch: 6040461**			
Gasoline Range Organics	**158**	---	5.00	mg/L	50	04/16/16 16:45	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 106 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
MW-25 (A6D0424-05)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	**2.82**	---	0.100	mg/L	1	04/17/16 17:34	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
DUP-1 (A6D0424-06)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	**1.89**	---	0.100	mg/L	1	04/17/16 18:08	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*108 %*	*Limits: 50-150 %*	"	"	"	
DUP-2 (A6D0424-07)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	**21.6**	---	10.0	mg/L	100	04/17/16 19:10	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
EB041316 (A6D0424-08)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/17/16 18:39	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 101 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01RE1)			**Matrix: Water**		**Batch: 6040461**			
Benzene	**1390**	---	2.00	ug/L	10	04/16/16 15:12	EPA 8260B	
Toluene	**63.9**	---	10.0	"	"	"	"	
Ethylbenzene	**555**	---	5.00	"	"	"	"	
Xylenes, total	**2300**	---	15.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 89 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
MW-20 (A6D0424-02)			**Matrix: Water**		**Batch: 6040410**			
Ethylbenzene	**3240**	---	10.0	ug/L	20	04/15/16 07:04	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 86 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*106 %*	*Limits: 80-120 %*	"	"	"	
MW-20 (A6D0424-02RE1)			**Matrix: Water**		**Batch: 6040461**			
Benzene	**6500**	---	40.0	ug/L	200	04/16/16 16:15	EPA 8260B	
Toluene	**14500**	---	200	"	"	"	"	
Xylenes, total	**19400**	---	300	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
MW-22 (A6D0424-03)			**Matrix: Water**		**Batch: 6040410**			
Benzene	ND	---	0.200	ug/L	1	04/15/16 06:39	EPA 8260B	
Toluene	**1.15**	---	1.00	"	"	"	"	
Ethylbenzene	**7.08**	---	0.500	"	"	"	"	
Xylenes, total	**19.1**	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
MW-23 (A6D0424-04RE1)			**Matrix: Water**		**Batch: 6040461**			
Benzene	**280**	---	10.0	ug/L	50	04/16/16 16:45	EPA 8260B	
Toluene	**4860**	---	50.0	"	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-23 (A6D0424-04RE1)			**Matrix: Water**		**Batch: 6040461**			
Ethylbenzene	**3230**	---	25.0	ug/L	50	"	EPA 8260B	
Xylenes, total	**21700**	---	75.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
MW-25 (A6D0424-05)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**76.3**	---	0.200	ug/L	1	04/17/16 17:34	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	**45.5**	---	0.500	"	"	"	"	
Xylenes, total	**101**	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*89 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
DUP-1 (A6D0424-06)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**0.349**	---	0.200	ug/L	1	04/17/16 18:08	EPA 8260B	
Toluene	**1.06**	---	1.00	"	"	"	"	
Ethylbenzene	**6.31**	---	0.500	"	"	"	"	
Xylenes, total	**18.0**	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
DUP-2 (A6D0424-07)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**1340**	---	20.0	ug/L	100	04/17/16 19:10	EPA 8260B	
Toluene	ND	---	100	"	"	"	"	
Ethylbenzene	**457**	---	50.0	"	"	"	"	
Xylenes, total	**1730**	---	150	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
EB041316 (A6D0424-08)			**Matrix: Water**		**Batch: 6040463**			

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB041316 (A6D0424-08)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**0.499**	---	0.200	ug/L	1	04/17/16 18:39	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01)			**Matrix: Water**					
Batch: 6040397								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 14:59	EPA 300.0	
Sulfate	ND	---	1.00	"	"	"	"	
MW-20 (A6D0424-02)			**Matrix: Water**					
Batch: 6040397								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 16:03	EPA 300.0	
Sulfate	**8.70**	---	1.00	"	"	"	"	
MW-22 (A6D0424-03)			**Matrix: Water**					
Batch: 6040397								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 16:25	EPA 300.0	
Batch: 6040596								
Chloride	**251**	---	10.0	"	10	04/21/16 21:49	"	
MW-22 (A6D0424-03RE1)			**Matrix: Water**					
Batch: 6040514								
Sulfate	**95.0**	---	10.0	mg/L	10	04/20/16 06:44	EPA 300.0	
MW-23 (A6D0424-04)			**Matrix: Water**					
Batch: 6040397								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 16:46	EPA 300.0	
Sulfate	**1.32**	---	1.00	"	"	"	"	
MW-25 (A6D0424-05)			**Matrix: Water**					
Batch: 6040397								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/14/16 17:08	EPA 300.0	
Sulfate	**6.24**	---	1.00	"	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01)			**Matrix: Water**					
Batch: 6040779								
Iron	**72200**	---	1000	ug/L	10	04/30/16 15:07	EPA 200.8	
MW-20 (A6D0424-02)			**Matrix: Water**					
Batch: 6040779								
Iron	**64500**	---	1000	ug/L	10	04/30/16 15:24	EPA 200.8	
MW-22 (A6D0424-03)			**Matrix: Water**					
Batch: 6040779								
Iron	**2870**	---	100	ug/L	1	04/30/16 15:27	EPA 200.8	
MW-23 (A6D0424-04)			**Matrix: Water**					
Batch: 6040779								
Iron	**16600**	---	100	ug/L	1	04/30/16 15:30	EPA 200.8	
MW-25 (A6D0424-05)			**Matrix: Water**					
Batch: 6040779								
Iron	**9690**	---	100	ug/L	1	04/30/16 15:33	EPA 200.8	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01RE1)			**Matrix: Water**					
Batch: 6040662								
Iron	**70300**	---	500	ug/L	5	04/28/16 18:09	EPA 200.8 (Diss)	
Manganese	**1230**	---	5.00	"	"	"	"	
MW-20 (A6D0424-02)			**Matrix: Water**					
Batch: 6040662								
Manganese	**968**	---	1.00	ug/L	1	04/28/16 01:03	EPA 200.8 (Diss)	
MW-20 (A6D0424-02RE1)			**Matrix: Water**					
Batch: 6040662								
Iron	**62300**	---	500	ug/L	5	04/28/16 18:12	EPA 200.8 (Diss)	
MW-22 (A6D0424-03)			**Matrix: Water**					
Batch: 6040662								
Iron	**1350**	---	50.0	ug/L	1	04/28/16 01:07	EPA 200.8 (Diss)	
Manganese	**136**	---	1.00	"	"	"	"	
MW-23 (A6D0424-04)			**Matrix: Water**					
Batch: 6040662								
Iron	**15700**	---	50.0	ug/L	1	04/28/16 01:10	EPA 200.8 (Diss)	
Manganese	**128**	---	1.00	"	"	"	"	
MW-25 (A6D0424-05)			**Matrix: Water**					
Batch: 6040662								
Iron	**5030**	---	50.0	ug/L	1	04/28/16 01:13	EPA 200.8 (Diss)	
Manganese	**235**	---	1.00	"	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-10 (A6D0424-01)			**Matrix: Water**					
Batch: 6040747								
Total Alkalinity	**256**	---	20.0	mg CaCO3/L	1	04/26/16 14:58	SM 2320 B	
Bicarbonate Alkalinity	**256**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-20 (A6D0424-02)			**Matrix: Water**					
Batch: 6040747								
Total Alkalinity	**379**	---	20.0	mg CaCO3/L	1	04/26/16 14:58	SM 2320 B	
Bicarbonate Alkalinity	**379**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-22 (A6D0424-03)			**Matrix: Water**					
Batch: 6040491								
Total Dissolved Solids	**988**	---	20.0	mg/L	1	04/19/16 15:34	SM 2540 C	
Batch: 6040628								
Conductivity	**1420**	---	2.50	umhos/cm	"	04/21/16 14:28	SM 2510 B	
Batch: 6040747								
Total Alkalinity	**306**	---	20.0	mg CaCO3/L	"	04/26/16 14:58	SM 2320 B	
Bicarbonate Alkalinity	**306**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-23 (A6D0424-04)			**Matrix: Water**					
Batch: 6040747								
Total Alkalinity	**96.1**	---	20.0	mg CaCO3/L	1	04/26/16 14:58	SM 2320 B	
Bicarbonate Alkalinity	**96.1**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-25 (A6D0424-05)			**Matrix: Water**					
Batch: 6040747								
Total Alkalinity	**65.0**	---	20.0	mg CaCO3/L	1	04/26/16 14:58	SM 2320 B	
Bicarbonate Alkalinity	**65.0**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040410 - EPA 5030B									Water			
Blank (6040410-BLK1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 23:10							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*111 %*		*50-150 %*				*"*			
LCS (6040410-BS2)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 22:45							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.498	---	0.100	mg/L	1	0.500	---	100	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*102 %*		*50-150 %*				*"*			
Batch 6040461 - EPA 5030B									Water			
Blank (6040461-BLK1)					Prepared: 04/16/16 10:21 Analyzed: 04/16/16 12:37							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*110 %*		*50-150 %*				*"*			
LCS (6040461-BS2)					Prepared: 04/16/16 10:21 Analyzed: 04/16/16 12:08							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.526	---	0.100	mg/L	1	0.500	---	105	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*105 %*		*50-150 %*				*"*			

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040463 - EPA 5030B									**Water**			
Blank (6040463-BLK1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 16:28							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*112 %*		*50-150 %*				*"*			
LCS (6040463-BS2)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 15:55							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.546	---	0.100	mg/L	1	0.500	---	109	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*103 %*		*50-150 %*				*"*			
Duplicate (6040463-DUP1)					Prepared: 04/17/16 15:52 Analyzed: 04/17/16 19:41							
QC Source Sample: DUP-2 (A6D0424-07)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**22.4**	---	10.0	mg/L	100	---	21.6	---	---	3	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*		*Limits: 50-150 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Sur)			*105 %*		*50-150 %*				*"*			

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040410 - EPA 5030B									**Water**			
Blank (6040410-BLK1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 23:10							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*104 %*		*80-120 %*			*"*				
LCS (6040410-BS1)					Prepared: 04/14/16 21:02 Analyzed: 04/14/16 22:19							
EPA 8260B												
Benzene	18.4	---	0.200	ug/L	1	20.0	---	92	70-130%	---	---	
Toluene	20.0	---	1.00	"	"	"	---	100	"	---	---	
Ethylbenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
Xylenes, total	65.6	---	1.50	"	"	60.0	---	109	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*92 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*94 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*			*"*				
Matrix Spike (6040410-MS1)					Prepared: 04/14/16 22:14 Analyzed: 04/15/16 08:18							
QC Source Sample: MW-10 (A6D0424-01)												
EPA 8260B												
Benzene	1430	---	2.00	ug/L	10	200	1250	90	70-130%	---	---	
Toluene	254	---	10.0	"	"	"	81.2	87	"	---	---	
Ethylbenzene	736	---	5.00	"	"	"	534	101	"	---	---	
Xylenes, total	2830	---	15.0	"	"	600	2260	96	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 87 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*91 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040461 - EPA 5030B									**Water**			
Blank (6040461-BLK1)					Prepared: 04/16/16 10:21 Analyzed: 04/16/16 12:37							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Surr)			*99 %*		*80-120 %*				*"*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*				*"*			
LCS (6040461-BS1)					Prepared: 04/16/16 10:21 Analyzed: 04/16/16 11:40							
EPA 8260B												
Benzene	19.7	---	0.200	ug/L	1	20.0	---	99	70-130%	---	---	
Toluene	20.2	---	1.00	"	"	"	---	101	"	---	---	
Ethylbenzene	21.5	---	0.500	"	"	"	---	107	"	---	---	
Xylenes, total	67.0	---	1.50	"	"	60.0	---	112	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 93 %*		*Limits: 80-120 %*				*Dilution: 1x*			
1,4-Difluorobenzene (Surr)			*95 %*		*80-120 %*				*"*			
Toluene-d8 (Surr)			*95 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*				*"*			

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040463 - EPA 5030B									**Water**			
Blank (6040463-BLK1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 16:28							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
LCS (6040463-BS1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 15:22							
EPA 8260B												
Benzene	17.7	---	0.200	ug/L	1	20.0	---	89	70-130%	---	---	
Toluene	18.9	---	1.00	"	"	"	---	95	"	---	---	
Ethylbenzene	20.1	---	0.500	"	"	"	---	101	"	---	---	
Xylenes, total	62.6	---	1.50	"	"	60.0	---	104	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				
Duplicate (6040463-DUP1)					Prepared: 04/17/16 15:52 Analyzed: 04/17/16 19:41							
QC Source Sample: DUP-2 (A6D0424-07)												
EPA 8260B												
Benzene	**1370**	---	20.0	ug/L	100	---	1340	---	---	3	30%	
Toluene	ND	---	100	"	"	---	66.7	---	---	***	30%	
Ethylbenzene	**456**	---	50.0	"	"	---	457	---	---	0.4	30%	
Xylenes, total	**1750**	---	150	"	"	---	1730	---	---	0.8	30%	
Surr: Dibromofluoromethane (Surr)			*Recovery: 96 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*104 %*		*80-120 %*			*"*				

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040397 - Method Prep: Aq								**Water**				
Blank (6040397-BLK1)					Prepared: 04/14/16 12:48		Analyzed: 04/14/16 14:16					
EPA 300.0												
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	---	---	---	---	---	---	
Sulfate	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040397-BS1)					Prepared: 04/14/16 12:48		Analyzed: 04/14/16 14:37					
EPA 300.0												
Nitrate-Nitrogen	2.02	---	0.250	mg/L	1	2.00	---	101	90-110%	---	---	
Sulfate	7.88	---	1.00	"	"	8.00	---	99	"	---	---	
Duplicate (6040397-DUP1)					Prepared: 04/14/16 12:48		Analyzed: 04/14/16 15:20					
QC Source Sample: MW-10 (A6D0424-01)												
EPA 300.0												
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	---	ND	---	---	---	15%	
Sulfate	ND	---	1.00	"	"	---	ND	---	---	---	15%	
Matrix Spike (6040397-MS1)					Prepared: 04/14/16 12:48		Analyzed: 04/14/16 15:42					
QC Source Sample: MW-10 (A6D0424-01)												
EPA 300.0												
Nitrate-Nitrogen	2.41	---	0.312	mg/L	1	2.50	ND	97	80-120%	---	---	
Sulfate	10.1	---	1.25	"	"	10.0	ND	101	"	---	---	

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Lisa A Domenighini

Lisa Domenighini, Client Services Manager

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Stantec Portland	Project: **The Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040514 - Method Prep: Aq									Water			
Blank (6040514-BLK1)					Prepared: 04/19/16 09:54		Analyzed: 04/19/16 22:28					
EPA 300.0												
Sulfate	ND	---	1.00	mg/L	1	---	---	---	---	---	---	
LCS (6040514-BS1)					Prepared: 04/19/16 09:54		Analyzed: 04/19/16 22:49					
EPA 300.0												
Sulfate	7.76	---	1.00	mg/L	1	8.00	---	97	90-110%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040596 - Method Prep: Aq									Water			
Blank (6040596-BLK1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:24					
EPA 300.0												
Chloride	ND	---	1.00	mg/L	1	---	---	---	---	---	---	
LCS (6040596-BS1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:46					
EPA 300.0												
Chloride	8.02	---	1.00	mg/L	1	8.00	---	100	90-110%	---	---	

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040779 - EPA 3015A							**Water**					
Blank (6040779-BLK1)					Prepared: 04/26/16 15:08		Analyzed: 04/30/16 14:49					
EPA 200.8												
Iron	ND	---	100	ug/L	1	---	---	---	---	---	---	
LCS (6040779-BS1)					Prepared: 04/26/16 15:08		Analyzed: 04/30/16 14:52					
EPA 200.8												
Iron	5480	---	100	ug/L	1	5560	---	99	85-115%	---	---	
Duplicate (6040779-DUP1)					Prepared: 04/26/16 15:08		Analyzed: 04/30/16 15:10					
QC Source Sample: MW-10 (A6D0424-01)												
EPA 200.8												
Iron	**70700**	---	1000	ug/L	10	---	72200	---	---	2	20%	
Matrix Spike (6040779-MS1)					Prepared: 04/26/16 15:08		Analyzed: 04/30/16 15:21					
QC Source Sample: MW-10 (A6D0424-01)												
EPA 200.8												
Iron	77400	---	1000	ug/L	10	5560	72200	92	70-130%	---	---	

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040662 - Matrix Matched Direct Inject								**Water**				
Blank (6040662-BLK1)					Prepared: 04/22/16 10:27		Analyzed: 04/28/16 00:49					
EPA 200.8 (Diss)												
Iron	ND	---	50.0	ug/L	1	---	---	---	---	---	---	
Manganese	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040662-BS1)					Prepared: 04/22/16 10:27		Analyzed: 04/26/16 19:51					
EPA 200.8 (Diss)												
Iron	5450	---	50.0	ug/L	1	5560	---	98	85-115%	---	---	
Manganese	54.9	---	1.00	"	"	55.6	---	99	"	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040491 - Total Dissolved Solids									Water			
Blank (6040491-BLK1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	ND	---	10.0	mg/L	1	---	---	---	---	---	---	
Reference (6040491-SRM1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	997	---		mg/L	1	1000		100	75.1-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040628 - Method Prep: Aq									**Water**			
Blank (6040628-BLK1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	ND	---	2.50	umhos/cm	1	---	---	---	---	---	---	
Reference (6040628-SRM1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	1410	---		umhos/cm	1	1410		100	95-105%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040747 - Method Prep: Aq							**Water**					
Blank (6040747-BLK1)					Prepared: 04/26/16 08:54		Analyzed: 04/26/16 14:58					
SM 2320 B												
Total Alkalinity	ND	---	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Bicarbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Carbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
LCS (6040747-BS1)					Prepared: 04/26/16 08:54		Analyzed: 04/26/16 14:58					
SM 2320 B												
Total Alkalinity	186	---	20.0	mg CaCO3/L	1	191	---	97	85-115%	---	---	
Duplicate (6040747-DUP1)					Prepared: 04/26/16 08:54		Analyzed: 04/26/16 14:58					
QC Source Sample: MW-10 (A6D0424-01)												
SM 2320 B												
Total Alkalinity	**260**	---	20.0	mg CaCO3/L	1	---	256	---	---	1	20%	
Bicarbonate Alkalinity	**260**	---	20.0	"	"	---	256	---	---	1	20%	
Carbonate Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040410							
A6D0424-02	Water	NWTPH-Gx (MS)	04/13/16 10:45	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0424-03	Water	NWTPH-Gx (MS)	04/13/16 08:28	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
Batch: 6040461							
A6D0424-01RE1	Water	NWTPH-Gx (MS)	04/13/16 08:55	04/16/16 12:15	5mL/5mL	5mL/5mL	1.00
A6D0424-04RE1	Water	NWTPH-Gx (MS)	04/13/16 10:05	04/16/16 12:15	5mL/5mL	5mL/5mL	1.00
Batch: 6040463							
A6D0424-05	Water	NWTPH-Gx (MS)	04/13/16 09:25	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-06	Water	NWTPH-Gx (MS)	04/13/16 08:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-07	Water	NWTPH-Gx (MS)	04/13/16 09:00	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-08	Water	NWTPH-Gx (MS)	04/13/16 11:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00

BTEX Compounds by EPA 8260B

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040410							
A6D0424-02	Water	EPA 8260B	04/13/16 10:45	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
A6D0424-03	Water	EPA 8260B	04/13/16 08:28	04/14/16 22:14	5mL/5mL	5mL/5mL	1.00
Batch: 6040461							
A6D0424-01RE1	Water	EPA 8260B	04/13/16 08:55	04/16/16 12:15	5mL/5mL	5mL/5mL	1.00
A6D0424-02RE1	Water	EPA 8260B	04/13/16 10:45	04/16/16 12:15	5mL/5mL	5mL/5mL	1.00
A6D0424-04RE1	Water	EPA 8260B	04/13/16 10:05	04/16/16 12:15	5mL/5mL	5mL/5mL	1.00
Batch: 6040463							
A6D0424-05	Water	EPA 8260B	04/13/16 09:25	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-06	Water	EPA 8260B	04/13/16 08:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-07	Water	EPA 8260B	04/13/16 09:00	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0424-08	Water	EPA 8260B	04/13/16 11:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040397							
A6D0424-01	Water	EPA 300.0	04/13/16 08:55	04/14/16 12:48	10mL/10mL	10mL/10mL	1.00

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

SAMPLE PREPARATION INFORMATION

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6D0424-02	Water	EPA 300.0	04/13/16 10:45	04/14/16 12:48	10mL/10mL	10mL/10mL	1.00
A6D0424-03	Water	EPA 300.0	04/13/16 08:28	04/14/16 12:48	10mL/10mL	10mL/10mL	1.00
A6D0424-04	Water	EPA 300.0	04/13/16 10:05	04/14/16 12:48	10mL/10mL	10mL/10mL	1.00
A6D0424-05	Water	EPA 300.0	04/13/16 09:25	04/14/16 12:48	10mL/10mL	10mL/10mL	1.00
Batch: 6040514							
A6D0424-03RE1	Water	EPA 300.0	04/13/16 08:28	04/19/16 09:54	10mL/10mL	10mL/10mL	1.00
Batch: 6040596							
A6D0424-03	Water	EPA 300.0	04/13/16 08:28	04/21/16 09:04	10mL/10mL	10mL/10mL	1.00

Total Metals by EPA 200.8 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040779							
A6D0424-01	Water	EPA 200.8	04/13/16 08:55	04/26/16 15:08	45mL/50mL	45mL/50mL	1.00
A6D0424-02	Water	EPA 200.8	04/13/16 10:45	04/26/16 15:08	45mL/50mL	45mL/50mL	1.00
A6D0424-03	Water	EPA 200.8	04/13/16 08:28	04/26/16 15:08	45mL/50mL	45mL/50mL	1.00
A6D0424-04	Water	EPA 200.8	04/13/16 10:05	04/26/16 15:08	45mL/50mL	45mL/50mL	1.00
A6D0424-05	Water	EPA 200.8	04/13/16 09:25	04/26/16 15:08	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040662							
A6D0424-01RE1	Water	EPA 200.8 (Diss)	04/13/16 08:55	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0424-02	Water	EPA 200.8 (Diss)	04/13/16 10:45	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0424-02RE1	Water	EPA 200.8 (Diss)	04/13/16 10:45	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0424-03	Water	EPA 200.8 (Diss)	04/13/16 08:28	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0424-04	Water	EPA 200.8 (Diss)	04/13/16 10:05	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00
A6D0424-05	Water	EPA 200.8 (Diss)	04/13/16 09:25	04/22/16 10:27	45mL/50mL	45mL/50mL	1.00

Conventional Chemistry Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

SAMPLE PREPARATION INFORMATION

Conventional Chemistry Parameters

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040628							
A6D0424-03	Water	SM 2510 B	04/13/16 08:28	04/21/16 13:46	40mL/40mL	40mL/40mL	NA
Batch: 6040747							
A6D0424-01	Water	SM 2320 B	04/13/16 08:55	04/26/16 08:54	50mL/50mL	50mL/50mL	NA
A6D0424-02	Water	SM 2320 B	04/13/16 10:45	04/26/16 08:54	50mL/50mL	50mL/50mL	NA
A6D0424-03	Water	SM 2320 B	04/13/16 08:28	04/26/16 08:54	50mL/50mL	50mL/50mL	NA
A6D0424-04	Water	SM 2320 B	04/13/16 10:05	04/26/16 08:54	50mL/50mL	50mL/50mL	NA
A6D0424-05	Water	SM 2320 B	04/13/16 09:25	04/26/16 08:54	50mL/50mL	50mL/50mL	NA

Prep: Total Dissolved Solids

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040491							
A6D0424-03	Water	SM 2540 C	04/13/16 08:28	04/18/16 17:10	1N/A/1N/A	1N/A/1N/A	NA

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Notes and Definitions

Qualifiers:

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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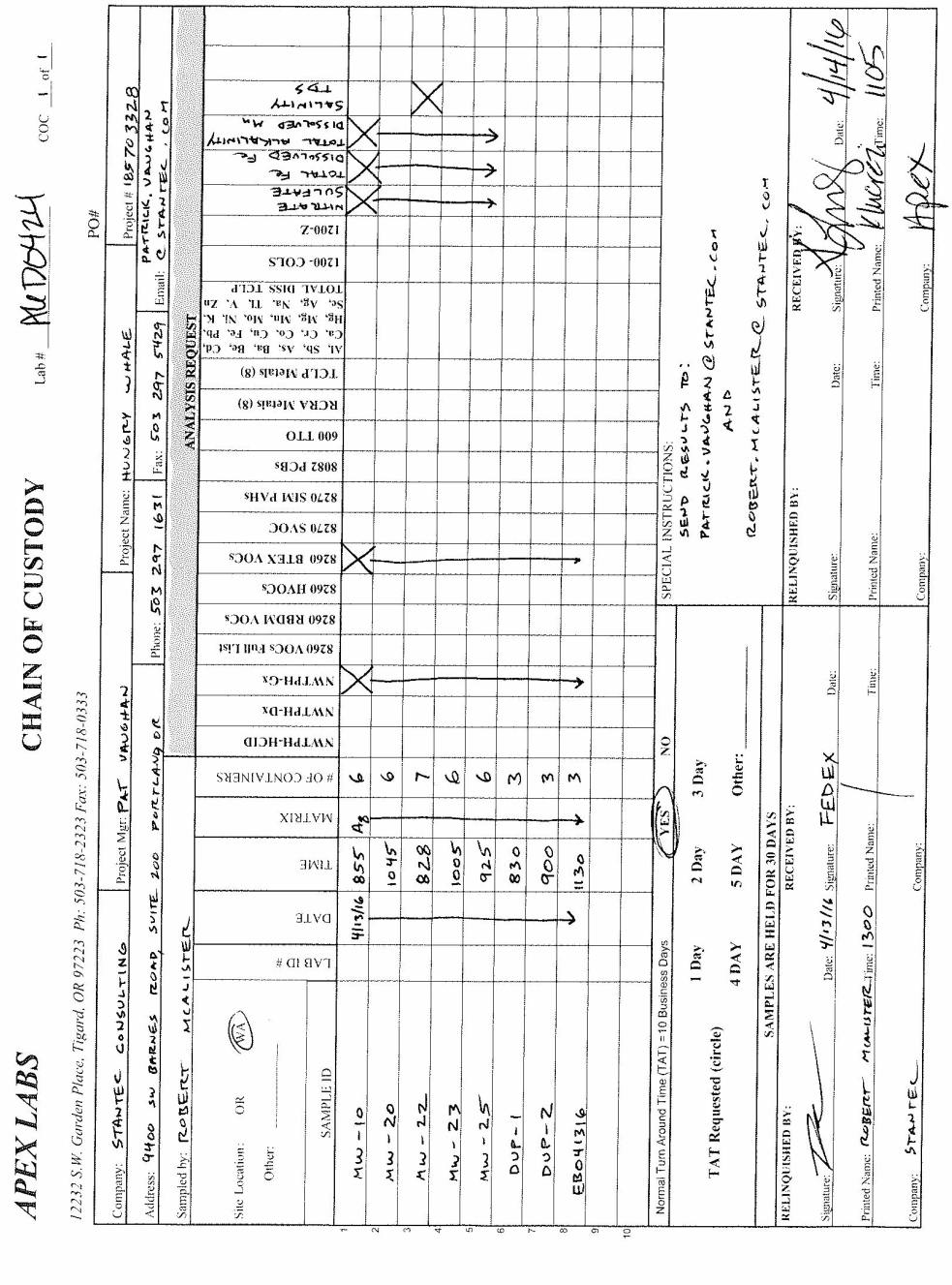
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01



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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:01

APEX LABS COOLER RECEIPT FORM

Client: Stantec Consulting Element WO#: A6 D0424

Project/Project #: Hungry Whale

Delivery info:

Date/Time Received: 4/14/16 @ 1105 By: KMZ

Delivered by: Apex Courier___Client___FedEx X UPS___Swift___Senvoy ___SDS___Other_____

Cooler Inspection Inspected by: KMZ : 4/14/16 @ 1105

Chain of Custody Included? Yes X No ___

Signed/Dated by Client? Yes X No ___

Signed/Dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	2.6						
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)							
Ice Type: (Gel/Real/Other)							
Condition:	Good						

Cooler out of temp? (Y/N) Possible reason why:_____

If some coolers are in temp and some out, were green dot applied to out of temperature samples Yes/No/NA

Samples Inspection: Inspected by: KMZ : 4/14/16 @ 1130

All Samples Intact? Yes X No ___ Comments:_____

Bottle Labels/COCs agree? Yes X No ___ Comments: _____

Containers Appropriate for Analysis? Yes X No ___ Comments: _____

Do VOA Vials have Visible Headspace? Yes ___ No X NA ___

Comments MW-25 3/3 Sed

Water Samples: pH Checked and Appropriate (except VOAs): Yes X No___NA_____

Comments: _____

Additional Information: Custody Seal

Labeled by: KMZ Cooler Inspected by: KMZ See Project Contact Form: Y

Apex Laboratories

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

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Apex Labs

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Monday, May 9, 2016

Patrick Vaughan
Stantec Portland
9400 SW Barnes Rd Ste 200
Portland, OR 97225

RE: Hungry Whale / 185703328

Enclosed are the results of analyses for work order A6D0494, which was received by the laboratory on 4/15/2016 at 10:35:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-04	A6D0494-01	Water	04/14/16 11:30	04/15/16 10:35
MW-07	A6D0494-02	Water	04/14/16 10:50	04/15/16 10:35
MW-09	A6D0494-03	Water	04/14/16 08:40	04/15/16 10:35
MW-11	A6D0494-04	Water	04/14/16 09:05	04/15/16 10:35
MW-12	A6D0494-05	Water	04/14/16 10:15	04/15/16 10:35
MW-13 UR	A6D0494-06	Water	04/14/16 09:35	04/15/16 10:35
EB041416	A6D0494-07	Water	04/14/16 12:00	04/15/16 10:35

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	**106**	---	2.00	mg/L	20	04/18/16 00:04	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW-07 (A6D0494-02RE1)			**Matrix: Water**		**Batch: 6040469**			
Gasoline Range Organics	**214**	---	50.0	mg/L	500	04/18/16 16:39	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*105 %*	*Limits: 50-150 %*	"	"	"	
MW-09 (A6D0494-03RE1)			**Matrix: Water**		**Batch: 6040469**			
Gasoline Range Organics	**36.5**	---	10.0	mg/L	100	04/18/16 15:11	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 97 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW-11 (A6D0494-04)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/17/16 21:40	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
MW-12 (A6D0494-05RE1)			**Matrix: Water**		**Batch: 6040469**			
Gasoline Range Organics	**252**	---	10.0	mg/L	100	04/18/16 13:19	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 106 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*101 %*	*Limits: 50-150 %*	"	"	"	
MW-13 UR (A6D0494-06)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/17/16 22:09	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*111 %*	*Limits: 50-150 %*	"	"	"	
EB041416 (A6D0494-07)			**Matrix: Water**		**Batch: 6040463**			
Gasoline Range Organics	ND	---	0.100	mg/L	1	04/17/16 22:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*111 %*	*Limits: 50-150 %*	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**3170**	---	4.00	ug/L	20	04/18/16 00:04	EPA 8260B	
Toluene	**748**	---	20.0	"	"	"	"	
Ethylbenzene	**1740**	---	10.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 87 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
MW-04 (A6D0494-01RE1)			**Matrix: Water**		**Batch: 6040469**			
Xylenes, total	**9130**	---	375	ug/L	250	04/18/16 15:55	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
MW-07 (A6D0494-02)			**Matrix: Water**		**Batch: 6040463**			
Ethylbenzene	**2400**	---	10.0	ug/L	20	04/18/16 01:08	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 87 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
MW-07 (A6D0494-02RE1)			**Matrix: Water**		**Batch: 6040469**			
Benzene	**5730**	---	100	ug/L	500	04/18/16 16:39	EPA 8260B	
Toluene	**12500**	---	500	"	"	"	"	
Xylenes, total	**24900**	---	750	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 94 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*94 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*106 %*	*Limits: 80-120 %*	"	"	"	
MW-09 (A6D0494-03RE1)			**Matrix: Water**		**Batch: 6040469**			
Benzene	**4250**	---	20.0	ug/L	100	04/18/16 15:11	EPA 8260B	
Toluene	**1030**	---	100	"	"	"	"	
Ethylbenzene	**455**	---	50.0	"	"	"	"	
Xylenes, total	**2620**	---	150	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 89 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-09 (A6D0494-03RE1)			**Matrix: Water**		**Batch: 6040469**			
Surrogate: Toluene-d8 (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	
MW-11 (A6D0494-04)			**Matrix: Water**		**Batch: 6040463**			
Benzene	ND	---	0.200	ug/L	1	04/17/16 21:40	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
MW-12 (A6D0494-05RE1)			**Matrix: Water**		**Batch: 6040469**			
Benzene	**5020**	---	20.0	ug/L	100	04/18/16 13:19	EPA 8260B	
Toluene	**16300**	---	100	"	"	"	"	
Ethylbenzene	**2650**	---	50.0	"	"	"	"	
Xylenes, total	**29600**	---	150	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 88 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	
MW-13 UR (A6D0494-06)			**Matrix: Water**		**Batch: 6040463**			
Benzene	ND	---	0.200	ug/L	1	04/17/16 22:09	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
EB041416 (A6D0494-07)			**Matrix: Water**		**Batch: 6040463**			
Benzene	**0.426**	---	0.200	ug/L	1	04/17/16 22:37	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
EB041416 (A6D0494-07)			**Matrix: Water**		**Batch: 6040463**			
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 106 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 17:04	EPA 300.0	
Sulfate	ND	---	1.00	"	"	"	"	
MW-07 (A6D0494-02)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 18:09	EPA 300.0	
Sulfate	ND	---	1.00	"	"	"	"	
MW-09 (A6D0494-03)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 18:30	EPA 300.0	
Sulfate	ND	---	1.00	"	"	"	"	
MW-11 (A6D0494-04)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 19:35	EPA 300.0	
Sulfate	**5.05**	---	1.00	"	"	"	"	
Batch: 6040596								
Chloride	**19.2**	---	1.00	"	"	04/21/16 22:10	"	
MW-12 (A6D0494-05)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 19:57	EPA 300.0	
MW-12 (A6D0494-05RE1)			**Matrix: Water**					
Batch: 6040514								
Sulfate	**169**	---	10.0	mg/L	10	04/20/16 09:36	EPA 300.0	
MW-13 UR (A6D0494-06)			**Matrix: Water**					
Batch: 6040425								
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	04/15/16 20:18	EPA 300.0	
Sulfate	**1.75**	---	1.00	"	"	"	"	
Batch: 6040596								
Chloride	**8.64**	---	1.00	"	"	04/21/16 22:32	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**					
Batch: 6040856								
Iron	**45200**	---	100	ug/L	1	04/30/16 16:40	EPA 200.8	
MW-07 (A6D0494-02)			**Matrix: Water**					
Batch: 6040856								
Iron	**44200**	---	100	ug/L	1	04/30/16 16:43	EPA 200.8	
MW-09 (A6D0494-03)			**Matrix: Water**					
Batch: 6040856								
Iron	**63100**	---	1000	ug/L	10	04/30/16 16:46	EPA 200.8	
MW-11 (A6D0494-04)			**Matrix: Water**					
Batch: 6040817								
Iron	**140**	---	100	ug/L	1	04/28/16 19:45	EPA 200.8	
MW-12 (A6D0494-05)			**Matrix: Water**					
Batch: 6040817								
Iron	**46800**	---	100	ug/L	1	04/28/16 19:48	EPA 200.8	
MW-13 UR (A6D0494-06)			**Matrix: Water**					
Batch: 6040817								
Iron	**1680**	---	100	ug/L	1	04/28/16 19:51	EPA 200.8	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**					
Batch: 6040820								
Iron	**45100**	---	100	ug/L	1	04/30/16 17:21	EPA 200.8 (Diss)	
Manganese	**714**	---	1.00	"	"	"	"	
MW-07 (A6D0494-02)			**Matrix: Water**					
Batch: 6040820								
Iron	**45700**	---	100	ug/L	1	04/30/16 17:24	EPA 200.8 (Diss)	
Manganese	**743**	---	1.00	"	"	"	"	
MW-09 (A6D0494-03)			**Matrix: Water**					
Batch: 6040820								
Iron	**56800**	---	1000	ug/L	10	04/30/16 17:27	EPA 200.8 (Diss)	
Manganese	**1290**	---	10.0	"	"	"	"	
MW-11 (A6D0494-04)			**Matrix: Water**					
Batch: 6040820								
Iron	ND	---	100	ug/L	1	04/30/16 17:33	EPA 200.8 (Diss)	
Manganese	**1.12**	---	1.00	"	"	"	"	
MW-12 (A6D0494-05)			**Matrix: Water**					
Batch: 6040820								
Iron	**52100**	---	1000	ug/L	10	04/30/16 17:39	EPA 200.8 (Diss)	
Manganese	**2770**	---	10.0	"	"	"	"	
MW-13 UR (A6D0494-06)			**Matrix: Water**					
Batch: 6040820								
Iron	ND	---	100	ug/L	1	04/30/16 17:42	EPA 200.8 (Diss)	
Manganese	**1.24**	---	1.00	"	"	"	"	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-04 (A6D0494-01)			**Matrix: Water**					
Batch: 6040812								
Total Alkalinity	**112**	---	20.0	mg CaCO3/L	1	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	**112**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-07 (A6D0494-02)			**Matrix: Water**					
Batch: 6040812								
Total Alkalinity	**129**	---	20.0	mg CaCO3/L	1	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	**129**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-09 (A6D0494-03)			**Matrix: Water**					
Batch: 6040812								
Total Alkalinity	**228**	---	20.0	mg CaCO3/L	1	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	**228**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-11 (A6D0494-04)			**Matrix: Water**					
Batch: 6040491								
Total Dissolved Solids	**141**	---	10.0	mg/L	1	04/19/16 15:34	SM 2540 C	
Batch: 6040628								
Conductivity	**225**	---	2.50	umhos/cm	"	04/21/16 14:28	SM 2510 B	
Batch: 6040812								
Total Alkalinity	**78.0**	---	20.0	mg CaCO3/L	"	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	**78.0**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-12 (A6D0494-05)			**Matrix: Water**					
Batch: 6040812								
Total Alkalinity	**273**	---	20.0	mg CaCO3/L	1	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	**273**	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	
MW-13 UR (A6D0494-06)			**Matrix: Water**					
Batch: 6040491								

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW-13 UR (A6D0494-06)			**Matrix: Water**					
Total Dissolved Solids	**32.0**	---	10.0	mg/L	1	04/19/16 15:34	SM 2540 C	
Batch: 6040766								
Conductivity	**58.5**	---	2.50	umhos/cm	"	04/26/16 13:29	SM 2510 B	
Batch: 6040812								
Total Alkalinity	ND	---	20.0	mg CaCO3/L	"	04/27/16 13:10	SM 2320 B	
Bicarbonate Alkalinity	ND	---	20.0	"	"	"	"	
Carbonate Alkalinity	ND	---	20.0	"	"	"	"	
Hydroxide Alkalinity	ND	---	20.0	"	"	"	"	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040463 - EPA 5030B									Water			
Blank (6040463-BLK1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 16:28							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*112 %*	*50-150 %*			*"*					
LCS (6040463-BS2)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 15:55							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.546	---	0.100	mg/L	1	0.500	---	109	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 98 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*103 %*	*50-150 %*			*"*					
Duplicate (6040463-DUP2)					Prepared: 04/17/16 15:52 Analyzed: 04/18/16 00:36							
QC Source Sample: MW-04 (A6D0494-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**108**	---	2.00	mg/L	20	---	106	---	---	1	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 99 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*101 %*	*50-150 %*			*"*					
Batch 6040469 - EPA 5030B									Water			
Blank (6040469-BLK1)					Prepared: 04/18/16 08:31 Analyzed: 04/18/16 12:14							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*110 %*	*50-150 %*			*"*					
LCS (6040469-BS2)					Prepared: 04/18/16 08:31 Analyzed: 04/18/16 11:08							
NWTPH-Gx (MS)												
Gasoline Range Organics	0.521	---	0.100	mg/L	1	0.500	---	104	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 97 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*103 %*	*50-150 %*			*"*					

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040463 - EPA 5030B									**Water**			
Blank (6040463-BLK1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 16:28							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
LCS (6040463-BS1)					Prepared: 04/17/16 13:10 Analyzed: 04/17/16 15:22							
EPA 8260B												
Benzene	17.7	---	0.200	ug/L	1	20.0	---	89	70-130%	---	---	
Toluene	18.9	---	1.00	"	"	"	---	95	"	---	---	
Ethylbenzene	20.1	---	0.500	"	"	"	---	101	"	---	---	
Xylenes, total	62.6	---	1.50	"	"	60.0	---	104	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				
Duplicate (6040463-DUP2)					Prepared: 04/17/16 15:52 Analyzed: 04/18/16 00:36							
QC Source Sample: MW-04 (A6D0494-01)												
EPA 8260B												
Benzene	**3200**	---	4.00	ug/L	20	---	3170	---	---	1	30%	
Toluene	**773**	---	20.0	"	"	---	748	---	---	3	30%	
Ethylbenzene	**1800**	---	10.0	"	"	---	1740	---	---	3	30%	
Xylenes, total	**11100**	---	30.0	"	"	---	10800	---	---	3	30%	E
Surr: Dibromofluoromethane (Surr)			*Recovery: 88 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*91 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*			*"*				

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040469 - EPA 5030B									Water			
Blank (6040469-BLK1)					Prepared: 04/18/16 08:31 Analyzed: 04/18/16 12:14							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*99 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*101 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*105 %*		*80-120 %*			*"*				
LCS (6040469-BS1)					Prepared: 04/18/16 08:31 Analyzed: 04/18/16 10:34							
EPA 8260B												
Benzene	18.0	---	0.200	ug/L	1	20.0	---	90	70-130%	---	---	
Toluene	18.9	---	1.00	"	"	"	---	95	"	---	---	
Ethylbenzene	19.9	---	0.500	"	"	"	---	99	"	---	---	
Xylenes, total	63.2	---	1.50	"	"	60.0	---	105	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 90 %*		*Limits: 80-120 %*			*Dilution: 1x*				
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*			*"*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*			*"*				

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040425 - Method Prep: Aq								**Water**				
Blank (6040425-BLK1)					Prepared: 04/15/16 09:56		Analyzed: 04/15/16 11:41					
EPA 300.0												
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	---	---	---	---	---	---	
Sulfate	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040425-BS1)					Prepared: 04/15/16 09:56		Analyzed: 04/15/16 12:03					
EPA 300.0												
Nitrate-Nitrogen	2.01	---	0.250	mg/L	1	2.00	---	100	90-110%	---	---	
Sulfate	7.96	---	1.00	"	"	8.00	---	99	"	---	---	
Duplicate (6040425-DUP2)					Prepared: 04/15/16 14:37		Analyzed: 04/15/16 17:26					
QC Source Sample: MW-04 (A6D0494-01)												
EPA 300.0												
Nitrate-Nitrogen	ND	---	0.250	mg/L	1	---	ND	---	---	---	15%	
Sulfate	ND	---	1.00	"	"	---	ND	---	---	---	15%	
Matrix Spike (6040425-MS2)					Prepared: 04/15/16 14:37		Analyzed: 04/15/16 17:47					
QC Source Sample: MW-04 (A6D0494-01)												
EPA 300.0												
Nitrate-Nitrogen	2.47	---	0.312	mg/L	1	2.50	ND	99	80-120%	---	---	
Sulfate	10.2	---	1.25	"	"	10.0	ND	102	"	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040514 - Method Prep: Aq									Water			
Blank (6040514-BLK1)					Prepared: 04/19/16 09:54		Analyzed: 04/19/16 22:28					
EPA 300.0												
Sulfate	ND	---	1.00	mg/L	1	---	---	---	---	---	---	
LCS (6040514-BS1)					Prepared: 04/19/16 09:54		Analyzed: 04/19/16 22:49					
EPA 300.0												
Sulfate	7.76	---	1.00	mg/L	1	8.00	---	97	90-110%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by EPA 300.0/9056A (Ion Chromatography)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040596 - Method Prep: Aq									Water			
Blank (6040596-BLK1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:24					
EPA 300.0												
Chloride	ND	---	1.00	mg/L	1	---	---	---	---	---	---	
LCS (6040596-BS1)					Prepared: 04/21/16 09:04		Analyzed: 04/21/16 11:46					
EPA 300.0												
Chloride	8.02	---	1.00	mg/L	1	8.00	---	100	90-110%	---	---	

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040817 - EPA 3015A							**Water**					
Blank (6040817-BLK1)					Prepared: 04/27/16 11:24		Analyzed: 04/28/16 19:31					
EPA 200.8												
Iron	ND	---	100	ug/L	1	---	---	---	---	---	---	
LCS (6040817-BS1)					Prepared: 04/27/16 11:24		Analyzed: 04/28/16 19:34					
EPA 200.8												
Iron	5460	---	100	ug/L	1	5560	---	98	85-115%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040856 - EPA 3015A							**Water**					
Blank (6040856-BLK1)					Prepared: 04/28/16 10:32		Analyzed: 04/30/16 16:26					
EPA 200.8												
Iron	ND	---	100	ug/L	1	---	---	---	---	---	---	
LCS (6040856-BS1)					Prepared: 04/28/16 10:32		Analyzed: 04/30/16 16:29					
EPA 200.8												
Iron	5630	---	100	ug/L	1	5560	---	101	85-115%	---	---	
Duplicate (6040856-DUP1)					Prepared: 04/28/16 10:32		Analyzed: 04/30/16 16:49					
QC Source Sample: MW-09 (A6D0494-03)												
EPA 200.8												
Iron	**61400**	---	1000	ug/L	10	---	63100	---	---	3	20%	
Matrix Spike (6040856-MS1)					Prepared: 04/28/16 10:32		Analyzed: 04/30/16 16:52					
QC Source Sample: MW-09 (A6D0494-03)												
EPA 200.8												
Iron	67900	---	1000	ug/L	10	5560	63100	87	70-130%	---	---	

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Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040820 - Matrix Matched Direct Inject								**Water**				
Blank (6040820-BLK1)					Prepared: 04/27/16 12:20		Analyzed: 04/30/16 17:07					
EPA 200.8 (Diss)												
Iron	ND	---	100	ug/L	1	---	---	---	---	---	---	
Manganese	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (6040820-BS1)					Prepared: 04/27/16 12:20		Analyzed: 04/30/16 17:10					
EPA 200.8 (Diss)												
Iron	5530	---	100	ug/L	1	5560	---	99	85-115%	---	---	
Manganese	57.0	---	1.00	"	"	55.6	---	103	"	---	---	
Duplicate (6040820-DUP1)					Prepared: 04/27/16 12:20		Analyzed: 04/30/16 17:30					
QC Source Sample: MW-09 (A6D0494-03)												
EPA 200.8 (Diss)												
Iron	**54900**	---	1000	ug/L	10	---	56800	---	---	3	20%	
Manganese	**1240**	---	10.0	"	"	---	1290	---	---	4	20%	
Matrix Spike (6040820-MS1)					Prepared: 04/27/16 12:20		Analyzed: 04/30/16 17:36					
QC Source Sample: MW-11 (A6D0494-04)												
EPA 200.8 (Diss)												
Iron	5450	---	100	ug/L	1	5560	55.4	97	70-130%	---	---	
Manganese	56.3	---	1.00	"	"	55.6	1.12	99	"	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040491 - Total Dissolved Solids									Water			
Blank (6040491-BLK1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	ND	---	10.0	mg/L	1	---	---	---	---	---	---	
Duplicate (6040491-DUP1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
QC Source Sample: MW-11 (A6D0494-04)												
SM 2540 C												
Total Dissolved Solids	**140**	---	10.0	mg/L	1	---	141	---	---	0.7	10%	
Reference (6040491-SRM1)					Prepared: 04/18/16 14:09		Analyzed: 04/19/16 15:34					
SM 2540 C												
Total Dissolved Solids	997	---		mg/L	1	1000		100	75.1-120%	---	---	

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Lisa A Domenighini

Lisa Domenighini, Client Services Manager

Apex Labs

12232 S.W. Garden Place
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503-718-2323 Phone
503-718-0333 Fax

Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040628 - Method Prep: Aq									Water			
Blank (6040628-BLK1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	ND	---	2.50	umhos/cm	1	---	---	---	---	---	---	
Reference (6040628-SRM1)					Prepared: 04/21/16 13:46		Analyzed: 04/21/16 14:28					
SM 2510 B												
Conductivity	1410	---		umhos/cm	1	1410		100	95-105%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040766 - Method Prep: Aq									Water			
Blank (6040766-BLK1)					Prepared: 04/26/16 12:06		Analyzed: 04/26/16 13:29					
SM 2510 B												
Conductivity	ND	---	2.50	umhos/cm	1	---	---	---	---	---	---	
Reference (6040766-SRM1)					Prepared: 04/26/16 12:06		Analyzed: 04/26/16 13:29					
SM 2510 B												
Conductivity	1420	---		umhos/cm	1	1410		101	95-105%	---	---	

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6040812 - Method Prep: Aq								**Water**				
Blank (6040812-BLK1)					Prepared: 04/27/16 10:33		Analyzed: 04/27/16 13:10					
SM 2320 B												
Total Alkalinity	ND	---	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Bicarbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Carbonate Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	---	---	---	---	---	
LCS (6040812-BS1)					Prepared: 04/27/16 10:33		Analyzed: 04/27/16 13:10					
SM 2320 B												
Total Alkalinity	185	---	20.0	mg CaCO3/L	1	191	---	97	85-115%	---	---	
Duplicate (6040812-DUP1)					Prepared: 04/27/16 10:33		Analyzed: 04/27/16 13:10					
QC Source Sample: MW-04 (A6D0494-01)												
SM 2320 B												
Total Alkalinity	**112**	---	20.0	mg CaCO3/L	1	---	112	---	---	0.4	20%	
Bicarbonate Alkalinity	**112**	---	20.0	"	"	---	112	---	---	0.4	20%	
Carbonate Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	
Hydroxide Alkalinity	ND	---	20.0	"	"	---	ND	---	---	---	20%	

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040463							
A6D0494-01	Water	NWTPH-Gx (MS)	04/14/16 11:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-04	Water	NWTPH-Gx (MS)	04/14/16 09:05	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-06	Water	NWTPH-Gx (MS)	04/14/16 09:35	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-07	Water	NWTPH-Gx (MS)	04/14/16 12:00	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
Batch: 6040469							
A6D0494-02RE1	Water	NWTPH-Gx (MS)	04/14/16 10:50	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-03RE1	Water	NWTPH-Gx (MS)	04/14/16 08:40	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-05RE1	Water	NWTPH-Gx (MS)	04/14/16 10:15	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00

BTEX Compounds by EPA 8260B

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040463							
A6D0494-01	Water	EPA 8260B	04/14/16 11:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-02	Water	EPA 8260B	04/14/16 10:50	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-04	Water	EPA 8260B	04/14/16 09:05	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-06	Water	EPA 8260B	04/14/16 09:35	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-07	Water	EPA 8260B	04/14/16 12:00	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
Batch: 6040469							
A6D0494-01RE1	Water	EPA 8260B	04/14/16 11:30	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-02RE1	Water	EPA 8260B	04/14/16 10:50	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-03RE1	Water	EPA 8260B	04/14/16 08:40	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00
A6D0494-05RE1	Water	EPA 8260B	04/14/16 10:15	04/17/16 15:54	5mL/5mL	5mL/5mL	1.00

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040425							
A6D0494-01	Water	EPA 300.0	04/14/16 11:30	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00
A6D0494-02	Water	EPA 300.0	04/14/16 10:50	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00
A6D0494-03	Water	EPA 300.0	04/14/16 08:40	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00
A6D0494-04	Water	EPA 300.0	04/14/16 09:05	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

SAMPLE PREPARATION INFORMATION

Anions by EPA 300.0/9056A (Ion Chromatography)

Prep: Method Prep: Aq

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A6D0494-05	Water	EPA 300.0	04/14/16 10:15	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00
A6D0494-06	Water	EPA 300.0	04/14/16 09:35	04/15/16 14:37	10mL/10mL	10mL/10mL	1.00
Batch: 6040514							
A6D0494-05RE1	Water	EPA 300.0	04/14/16 10:15	04/19/16 09:54	10mL/10mL	10mL/10mL	1.00
Batch: 6040596							
A6D0494-04	Water	EPA 300.0	04/14/16 09:05	04/21/16 09:04	10mL/10mL	10mL/10mL	1.00
A6D0494-06	Water	EPA 300.0	04/14/16 09:35	04/21/16 09:04	10mL/10mL	10mL/10mL	1.00

Total Metals by EPA 200.8 (ICPMS)

Prep: EPA 3015A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040817							
A6D0494-04	Water	EPA 200.8	04/14/16 09:05	04/27/16 11:24	45mL/50mL	45mL/50mL	1.00
A6D0494-05	Water	EPA 200.8	04/14/16 10:15	04/27/16 11:24	45mL/50mL	45mL/50mL	1.00
A6D0494-06	Water	EPA 200.8	04/14/16 09:35	04/27/16 11:24	45mL/50mL	45mL/50mL	1.00
Batch: 6040856							
A6D0494-01	Water	EPA 200.8	04/14/16 11:30	04/28/16 10:32	45mL/50mL	45mL/50mL	1.00
A6D0494-02	Water	EPA 200.8	04/14/16 10:50	04/28/16 10:32	45mL/50mL	45mL/50mL	1.00
A6D0494-03	Water	EPA 200.8	04/14/16 08:40	04/28/16 10:32	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 200.8 (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6040820							
A6D0494-01	Water	EPA 200.8 (Diss)	04/14/16 11:30	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00
A6D0494-02	Water	EPA 200.8 (Diss)	04/14/16 10:50	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00
A6D0494-03	Water	EPA 200.8 (Diss)	04/14/16 08:40	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00
A6D0494-04	Water	EPA 200.8 (Diss)	04/14/16 09:05	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00
A6D0494-05	Water	EPA 200.8 (Diss)	04/14/16 10:15	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00
A6D0494-06	Water	EPA 200.8 (Diss)	04/14/16 09:35	04/27/16 12:20	45mL/50mL	45mL/50mL	1.00

Conventional Chemistry Parameters

Prep: Method Prep: Aq

Sample	Default	RL Prep

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Stantec Portland	Project: **Hungry Whale**	
9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

SAMPLE PREPARATION INFORMATION

Conventional Chemistry Parameters

Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 6040628							
A6D0494-04	Water	SM 2510 B	04/14/16 09:05	04/21/16 13:46	40mL/40mL	40mL/40mL	NA
Batch: 6040766							
A6D0494-06	Water	SM 2510 B	04/14/16 09:35	04/26/16 12:06	40mL/40mL	40mL/40mL	NA
Batch: 6040812							
A6D0494-01	Water	SM 2320 B	04/14/16 11:30	04/27/16 10:33	50mL/50mL	50mL/50mL	NA
A6D0494-02	Water	SM 2320 B	04/14/16 10:50	04/27/16 10:33	50mL/50mL	50mL/50mL	NA
A6D0494-03	Water	SM 2320 B	04/14/16 08:40	04/27/16 10:33	50mL/50mL	50mL/50mL	NA
A6D0494-04	Water	SM 2320 B	04/14/16 09:05	04/27/16 10:33	50mL/50mL	50mL/50mL	NA
A6D0494-05	Water	SM 2320 B	04/14/16 10:15	04/27/16 10:33	50mL/50mL	50mL/50mL	NA
A6D0494-06	Water	SM 2320 B	04/14/16 09:35	04/27/16 10:33	50mL/50mL	50mL/50mL	NA

Prep: Total Dissolved Solids					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 6040491							
A6D0494-04	Water	SM 2540 C	04/14/16 09:05	04/18/16 17:10	1N/A/1N/A	1N/A/1N/A	NA
A6D0494-06	Water	SM 2540 C	04/14/16 09:35	04/18/16 17:10	1N/A/1N/A	1N/A/1N/A	NA

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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
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Notes and Definitions

Qualifiers:

E	Estimated Value. The result is above the calibration range of the instrument.

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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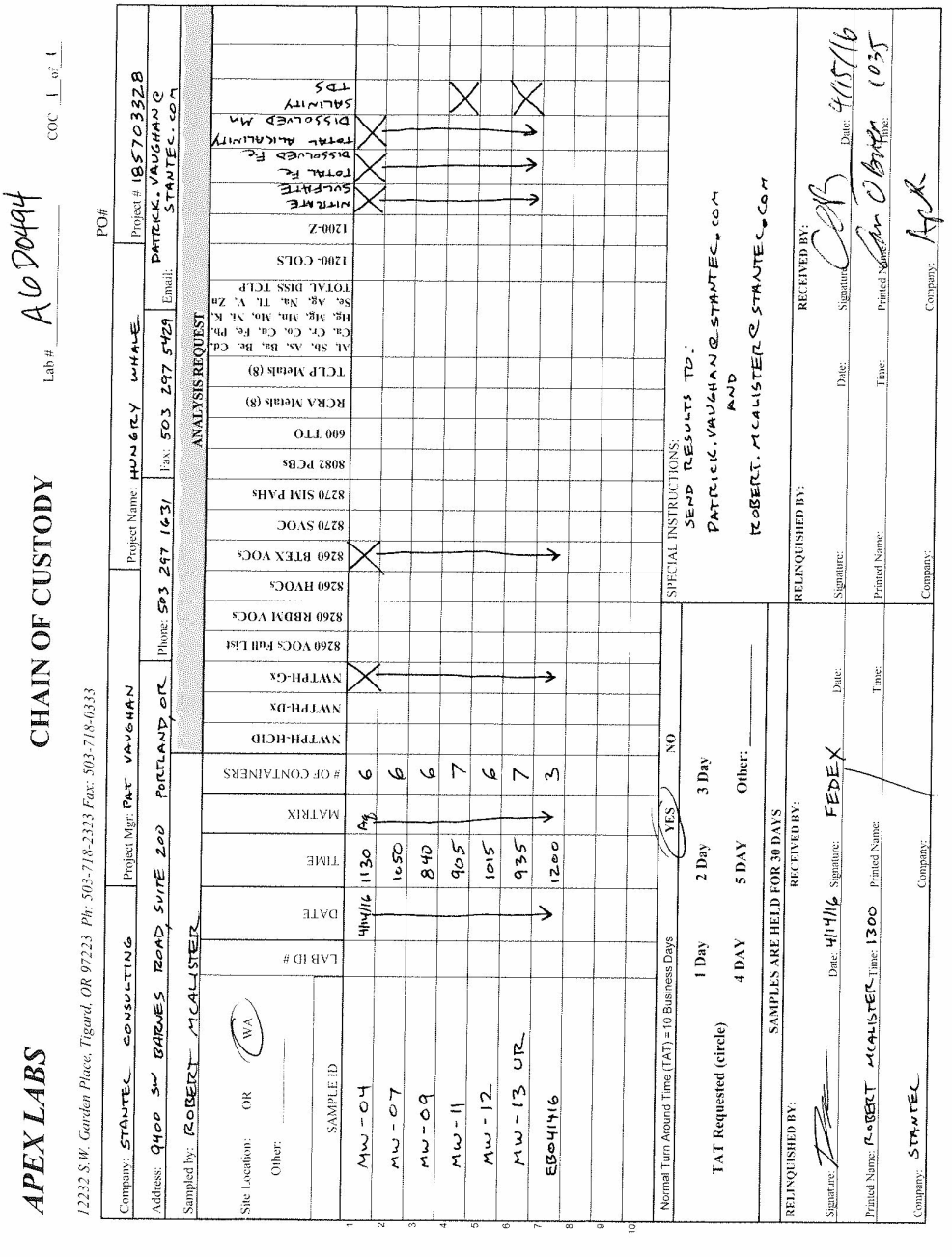
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21



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9400 SW Barnes Rd Ste 200	Project Number: 185703328	**Reported:**
Portland, OR 97225	Project Manager: Patrick Vaughan	05/09/16 10:21

APEX LABS COOLER RECEIPT FORM

Client: Stantec Element WO#: A6 D0494

Project/Project #: Hungry Whale / 185703328

Delivery info:

Date/Time Received: 4/15/16 @ 1035 By: CAB

Delivered by: Apex Courier___Client___FedEx X UPS___Swift____Senvoy ___SDS___Other_____

Cooler Inspection Inspected by: CAB : 4/15/16 @ 1035

Chain of Custody Included? Yes X No ___

Signed/Dated by Client? Yes X No ___

Signed/Dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (deg. C)	3.2						
Received on Ice? (Y/N)							
Temp. Blanks? (Y/N)							
Ice Type: (Gel/Real/Other)							
Condition:							

Cooler out of temp? (Y/N) Possible reason why:_____

If some coolers are in temp and some out, were green dot applied to out of temperature samples Yes/No/NA

Samples Inspection: Inspected by: CAB : 4/15/16 @ 1215

All Samples Intact? Yes X No ___ Comments:_____

Bottle Labels/COCs agree? Yes ___ No ___ Comments: No time on FF Nitric for MW-09

Containers Appropriate for Analysis? Yes ___ No ___ Comments: _____

Do VOA Vials have Visible Headspace? Yes ___ No X NA ___

Comments_____

Water Samples: pH Checked and Appropriate (except VOAs): Yes ___ No___NA_____

Comments: _____

Additional Information: _____

Labeled by: CAB Cooler Inspected by: CAB See Project Contact Form: Y

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info@fremontanalytical.com

Stantec Consulting Corporation
Greg McCormick
11130 NE 33rd Pl, Suite 200
Bellevue, WA 98004

RE: The Hungry Whale
Lab ID: 1605306

May 27, 2016

Attention Greg McCormick:

Fremont Analytical, Inc. received 4 sample(s) on 5/23/2016 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

Date: *05/27/2016*

CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale
Lab Order: 1605306

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1605306-001	Drum #1	05/20/2016 12:00 AM	05/23/2016 11:54 AM
1605306-002	Drum #2	05/20/2016 12:00 AM	05/23/2016 11:54 AM
1605306-003	MW-25	05/20/2016 12:00 AM	05/23/2016 11:54 AM
1605306-004	Trip Blank	05/18/2016 10:14 AM	05/23/2016 11:54 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1605306**

Date: **5/27/2016**

CLIENT: Stantec Consulting Corporation

Project: The Hungry Whale

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers & Acronyms

WO#: **1605306**
Date Reported: **5/27/2016**

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

WO#: **1605306**

Date Reported: **5/27/2016**

Client: Stantec Consulting Corporation

Collection Date: 5/20/2016

Project: The Hungry Whale

Lab ID: 1605306-001

Matrix: Water

Client Sample ID: Drum #1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: R29600		Analyst: EM
Gasoline	ND	50.0		µg/L	1	5/25/2016 10:19:14 AM
Surr: 4-Bromofluorobenzene	99.3	65-135		%Rec	1	5/25/2016 10:19:14 AM
Surr: Toluene-d8	98.1	65-135		%Rec	1	5/25/2016 10:19:14 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: R29599		Analyst: EM
Benzene	ND	1.00		µg/L	1	5/25/2016 10:19:14 AM
Toluene	ND	1.00		µg/L	1	5/25/2016 10:19:14 AM
Ethylbenzene	ND	1.00		µg/L	1	5/25/2016 10:19:14 AM
m,p-Xylene	ND	1.00		µg/L	1	5/25/2016 10:19:14 AM
o-Xylene	ND	1.00		µg/L	1	5/25/2016 10:19:14 AM
Surr: Dibromofluoromethane	99.2	45.4-152		%Rec	1	5/25/2016 10:19:14 AM
Surr: Toluene-d8	96.3	40.1-139		%Rec	1	5/25/2016 10:19:14 AM
Surr: 1-Bromo-4-fluorobenzene	96.3	64.2-128		%Rec	1	5/25/2016 10:19:14 AM

Analytical Report

WO#: **1605306**

Date Reported: **5/27/2016**

Client: Stantec Consulting Corporation

Collection Date: 5/20/2016

Project: The Hungry Whale

Lab ID: 1605306-002

Matrix: Water

Client Sample ID: Drum #2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: R29600		Analyst: EM
Gasoline	ND	50.0		µg/L	1	5/25/2016 4:56:12 PM
Surr: 4-Bromofluorobenzene	98.1	65-135		%Rec	1	5/25/2016 4:56:12 PM
Surr: Toluene-d8	97.7	65-135		%Rec	1	5/25/2016 4:56:12 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: R29599		Analyst: EM
Benzene	ND	1.00		µg/L	1	5/25/2016 4:56:12 PM
Toluene	ND	1.00		µg/L	1	5/25/2016 4:56:12 PM
Ethylbenzene	ND	1.00		µg/L	1	5/25/2016 4:56:12 PM
m,p-Xylene	ND	1.00		µg/L	1	5/25/2016 4:56:12 PM
o-Xylene	ND	1.00		µg/L	1	5/25/2016 4:56:12 PM
Surr: Dibromofluoromethane	100	45.4-152		%Rec	1	5/25/2016 4:56:12 PM
Surr: Toluene-d8	96.0	40.1-139		%Rec	1	5/25/2016 4:56:12 PM
Surr: 1-Bromo-4-fluorobenzene	95.4	64.2-128		%Rec	1	5/25/2016 4:56:12 PM

Analytical Report

WO#: **1605306**

Date Reported: **5/27/2016**

Client: Stantec Consulting Corporation

Collection Date: 5/20/2016

Project: The Hungry Whale

Lab ID: 1605306-003

Matrix: Water

Client Sample ID: MW-25

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: R29600		Analyst: EM
Gasoline	94.4	50.0		µg/L	1	5/25/2016 11:50:14 AM
Surr: 4-Bromofluorobenzene	101	65-135		%Rec	1	5/25/2016 11:50:14 AM
Surr: Toluene-d8	98.1	65-135		%Rec	1	5/25/2016 11:50:14 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: R29599		Analyst: EM
Benzene	ND	1.00		µg/L	1	5/25/2016 11:50:14 AM
Toluene	ND	1.00		µg/L	1	5/25/2016 11:50:14 AM
Ethylbenzene	1.10	1.00		µg/L	1	5/25/2016 11:50:14 AM
m,p-Xylene	ND	1.00		µg/L	1	5/25/2016 11:50:14 AM
o-Xylene	1.08	1.00		µg/L	1	5/25/2016 11:50:14 AM
Surr: Dibromofluoromethane	97.4	45.4-152		%Rec	1	5/25/2016 11:50:14 AM
Surr: Toluene-d8	95.7	40.1-139		%Rec	1	5/25/2016 11:50:14 AM
Surr: 1-Bromo-4-fluorobenzene	98.6	64.2-128		%Rec	1	5/25/2016 11:50:14 AM

Date: *5/27/2016*

Work Order: 1605306
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-R29600**	SampType: **LCS**	Units: **µg/L**	Prep Date: **5/25/2016**	RunNo: **29600**
Client ID: **LCSW**	Batch ID: **R29600**		Analysis Date: **5/25/2016**	SeqNo: **558530**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	458	50.0	500.0	0	91.5	65	135				
Surr: 4-Bromofluorobenzene	25.6		25.00		102	65	135				
Surr: Toluene-d8	24.4		25.00		97.6	65	135				

Sample ID: **MB-R29600**	SampType: **MBLK**	Units: **µg/L**	Prep Date: **5/25/2016**	RunNo: **29600**
Client ID: **MBLKW**	Batch ID: **R29600**		Analysis Date: **5/25/2016**	SeqNo: **558531**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: 4-Bromofluorobenzene	24.9		25.00		99.4	65	135				
Surr: Toluene-d8	24.3		25.00		97.3	65	135				

Sample ID: **1605245-001ADUP**	SampType: **DUP**	Units: **µg/L**	Prep Date: **5/25/2016**	RunNo: **29600**
Client ID: **BATCH**	Batch ID: **R29600**		Analysis Date: **5/25/2016**	SeqNo: **558517**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: 4-Bromofluorobenzene	24.5		25.00		98.2	65	135		0	0	
Surr: Toluene-d8	24.6		25.00		98.6	65	135		0	0	

Sample ID: **1605306-003AMS**	SampType: **MS**	Units: **µg/L**	Prep Date: **5/25/2016**	RunNo: **29600**
Client ID: **MW-25**	Batch ID: **R29600**		Analysis Date: **5/25/2016**	SeqNo: **558522**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	589	50.0	500.0	94.45	99.0	65	135				
Surr: 4-Bromofluorobenzene	25.5		25.00		102	65	135				
Surr: Toluene-d8	24.5		25.00		98.0	65	135				

Date: *5/27/2016*

Work Order: 1605306
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **1605306-003AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29600**
Client ID: **MW-25** Batch ID: **R29600** Analysis Date: **5/25/2016** SeqNo: **558523**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	582	50.0	500.0	94.45	97.4	65	135	589.3	1.31	30	
Surr: 4-Bromofluorobenzene	25.7		25.00		103	65	135		0	0	
Surr: Toluene-d8	24.4		25.00		97.8	65	135		0	0	

Sample ID: **1605323-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29600**
Client ID: **BATCH** Batch ID: **R29600** Analysis Date: **5/25/2016** SeqNo: **558526**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: 4-Bromofluorobenzene	24.9		25.00		99.8	65	135		0	0	
Surr: Toluene-d8	24.6		25.00		98.4	65	135		0	0	

Date: *5/27/2016*

Work Order: 1605306
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID: **LCS-R29599** SampType: **LCS** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **LCSW** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558513**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.0	1.00	20.00	0	94.8	69.3	132				
Ethylbenzene	19.5	1.00	20.00	0	97.5	72	130				
m,p-Xylene	36.5	1.00	40.00	0	91.2	70.3	134				
o-Xylene	22.0	1.00	20.00	0	110	72.1	131				
Toluene	19.9	1.00	20.00	0	99.4	61.3	145				
Surr: 1-Bromo-4-fluorobenzene	25.3		25.00		101	64.2	128				
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	25.1		25.00		100	40.1	139				

Sample ID: **MB-R29599** SampType: **MBLK** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **MBLKW** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558514**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Toluene	ND	1.00									
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.8	64.2	128				
Surr: Dibromofluoromethane	24.2		25.00		96.8	45.4	152				
Surr: Toluene-d8	23.8		25.00		95.1	40.1	139				

Sample ID: **1605245-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **BATCH** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558495**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	

Date: *5/27/2016*

Work Order: 1605306
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID: **1605245-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **BATCH** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558495**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	ND	1.00						0		30	
Surr: 1-Bromo-4-fluorobenzene	23.9		25.00		95.5	64.2	128		0		
Surr: Dibromofluoromethane	24.4		25.00		97.6	45.4	152		0		
Surr: Toluene-d8	24.1		25.00		96.6	40.1	139		0		

Sample ID: **1605306-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **Drum #1** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558504**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.8	1.00	20.00	0	99.0	65.4	138				
Ethylbenzene	20.6	1.00	20.00	0	103	64.5	136				
m,p-Xylene	38.5	1.00	40.00	0	96.4	63.3	135				
o-Xylene	22.5	1.00	20.00	0	112	65.4	134				
Toluene	20.6	1.00	20.00	0	103	64	139				
Surr: 1-Bromo-4-fluorobenzene	25.4		25.00		102	64.2	128				
Surr: Dibromofluoromethane	25.6		25.00		102	45.4	152				
Surr: Toluene-d8	24.9		25.00		99.5	40.1	139				

Sample ID: **1605306-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **Drum #1** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558505**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.2	1.00	20.00	0	101	65.4	138	19.80	1.85	30	
Ethylbenzene	20.9	1.00	20.00	0	105	64.5	136	20.61	1.54	30	
m,p-Xylene	38.8	1.00	40.00	0	97.1	63.3	135	38.54	0.801	30	
o-Xylene	22.9	1.00	20.00	0	115	65.4	134	22.46	2.07	30	
Toluene	21.0	1.00	20.00	0	105	64	139	20.60	1.73	30	
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.7	64.2	128		0	0	
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152		0	0	
Surr: Toluene-d8	25.0		25.00		99.9	40.1	139		0	0	

Date: *5/27/2016*

Work Order: 1605306
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID: **1605306-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **Drum #1** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558505**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: **1605323-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **5/25/2016** RunNo: **29599**
Client ID: **BATCH** Batch ID: **R29599** Analysis Date: **5/25/2016** SeqNo: **558509**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
Surr: 1-Bromo-4-fluorobenzene	24.1		25.00		96.4	64.2	128		0		
Surr: Dibromofluoromethane	24.3		25.00		97.2	45.4	152		0		
Surr: Toluene-d8	23.5		25.00		94.0	40.1	139		0		

Sample Log-In Check List

Client Name:	**STANTEC**	Work Order Number:	**1605306**
Logged by:	**Erica Silva**	Date Received:	**5/23/2016 11:54:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Courier		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☑	No ☐	Not Required ☐
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	1.1
Sample	1.8
Temp Blank	2.8

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical

Chain of Custody Record

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Laboratory Project No (internal): 1605306

Date: 5/23/16

Page: 1 of: 1

Client: Stantec Consulting, Inc
Address: 11130 NE 33rd Place #200
City, State, Zip: Bellevue, WA
Telephone: (425) 922-6392 Fax: (425) 869-9448

Project Name: The Hungry Whale
Project No: 185703328 Collected by: GMC
Location: 1680 North Montesano St. Westport
Report To (PM): Greg McCormick
PM Email: greg.mccormick@stantec.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	Drum #1	5/20/16		W		X												
2	Drum #2	↓		W		X												
3	MW-25	↓		W		X												
4																		
5																		
6																		
7																		
8																		
9																		
10																		

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☑ Disposal by Lab (A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks: Please hold samples for possible additional analyses

Relinquished	Date/Time	Received	Date/Time
x [signature]	5/23/16	x [signature]	5/23/16 1154
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Stantec Consulting Corporation
Greg McCormick
11130 NE 33rd Pl, Suite 200
Bellevue, WA 98004

RE: The Hungry Whale
Work Order Number: 1801132

January 12, 2018

Attention Greg McCormick:

Fremont Analytical, Inc. received 5 sample(s) on 1/10/2018 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Total Dissolved Solids (TDS) by SM 2540C
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

Date: *01/12/2018*

CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale
Work Order: 1801132

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1801132-001	MW-10	01/09/2018 3:10 PM	01/10/2018 4:10 PM
1801132-002	MW-21	01/09/2018 4:10 PM	01/10/2018 4:10 PM
1801132-003	MW-22	01/09/2018 2:35 PM	01/10/2018 4:10 PM
1801132-004	MW-25	01/09/2018 5:00 PM	01/10/2018 4:10 PM
1801132-005	Trip Blank	01/08/2018 4:35 PM	01/10/2018 4:10 PM

Case Narrative

WO#: **1801132**

Date: **1/12/2018**

CLIENT: Stantec Consulting Corporation

Project: The Hungry Whale

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

Lab ID: 1801132-001 **Collection Date:** 1/9/2018 3:10:00 PM
Client Sample ID: **MW-10** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Dissolved Solids (TDS) by SM 2540C				Batch ID: R40992		Analyst: MW
Total Dissolved Solids	183	5.00		mg/L	1	1/10/2018 3:10:00 PM

Lab ID: 1801132-002 **Collection Date:** 1/9/2018 4:10:00 PM
Client Sample ID: **MW-21** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Dissolved Solids (TDS) by SM 2540C				Batch ID: R40992		Analyst: MW
Total Dissolved Solids	75.0	5.00		mg/L	1	1/10/2018 3:12:00 PM

Lab ID: 1801132-003 **Collection Date:** 1/9/2018 2:35:00 PM
Client Sample ID: **MW-22** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Total Dissolved Solids (TDS) by SM 2540C				Batch ID: R40992		Analyst: MW
Total Dissolved Solids	346	5.00		mg/L	1	1/10/2018 3:14:00 PM

Analytical Report

Work Order: **1801132**
Date Reported: **1/12/2018**

CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

Lab ID: 1801132-004 **Collection Date:** 1/9/2018 5:00:00 PM
Client Sample ID: **MW-25** **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 19470		Analyst: NG
Gasoline	123	50.0		µg/L	1	1/11/2018 12:47:24 PM
Surr: Toluene-d8	99.7	65 - 135		%Rec	1	1/11/2018 12:47:24 PM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	1/11/2018 12:47:24 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 19470		Analyst: NG
Benzene	2.14	1.00		µg/L	1	1/11/2018 12:47:00 PM
Toluene	ND	1.00		µg/L	1	1/11/2018 12:47:00 PM
Ethylbenzene	ND	1.00		µg/L	1	1/11/2018 12:47:00 PM
m,p-Xylene	14.7	1.00		µg/L	1	1/11/2018 12:47:00 PM
o-Xylene	19.0	1.00		µg/L	1	1/11/2018 12:47:00 PM
Surr: Dibromofluoromethane	106	45.4 - 152		%Rec	1	1/11/2018 12:47:00 PM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	1/11/2018 12:47:00 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	1/11/2018 12:47:00 PM
Total Dissolved Solids (TDS) by SM 2540C				Batch ID: R40992		Analyst: MW
Total Dissolved Solids	220	5.00		mg/L	1	1/10/2018 3:16:00 PM

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID **LCS-19470** SampType: **LCS** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41044**
Client ID: **LCSW** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790787**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	547	50.0	500.0	0	109	65	135				
Surr: Toluene-d8	25.2		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	25.6		25.00		102	65	135				

Sample ID **MB-19470** SampType: **MBLK** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41044**
Client ID: **MBLKW** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790788**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: Toluene-d8	25.0		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	24.2		25.00		96.6	65	135				

Sample ID **1801132-004BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41044**
Client ID: **MW-25** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790777**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	119	50.0						122.9	3.08	30	
Surr: Toluene-d8	25.1		25.00		100	65	135		0		
Surr: 4-Bromofluorobenzene	26.0		25.00		104	65	135		0		

Sample ID **1801138-002AMS** SampType: **MS** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41044**
Client ID: **BATCH** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790780**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	510	50.0	500.0	0	102	65	135				
Surr: Toluene-d8	25.2		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	25.9		25.00		104	65	135				

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID **1801138-002AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41044**
Client ID: **BATCH** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	573	50.0	500.0	0	115	65	135	510.4	11.5	30	
Surr: Toluene-d8	25.1		25.00		100	65	135		0		
Surr: 4-Bromofluorobenzene	26.0		25.00		104	65	135		0		

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Total Dissolved Solids (TDS) by SM 2540C

Sample ID	**MB-R40992**	SampType:	**MBLK**		Units:	**mg/L**	Prep Date:	**1/10/2018**	RunNo:	**40992**
Client ID:	**MBLKW**	Batch ID:	**R40992**				Analysis Date:	**1/10/2018**	SeqNo:	**789831**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	5.00									

Sample ID	**LCS-R40992**	SampType:	**LCS**		Units:	**mg/L**	Prep Date:	**1/10/2018**	RunNo:	**40992**
Client ID:	**LCSW**	Batch ID:	**R40992**				Analysis Date:	**1/10/2018**	SeqNo:	**789832**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	360	10.0	300.0	0	120	65	135				

Sample ID	**1801045-001BDUP**	SampType:	**DUP**		Units:	**mg/L**	Prep Date:	**1/10/2018**	RunNo:	**40992**
Client ID:	**BATCH**	Batch ID:	**R40992**				Analysis Date:	**1/10/2018**	SeqNo:	**789834**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	113	5.00						115.0	1.75	30	

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-19470** SampType: **LCS** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **LCSW** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790433**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.2	1.00	20.00	0	101	69.3	132				
Toluene	20.2	1.00	20.00	0	101	61.3	145				
Ethylbenzene	18.9	1.00	20.00	0	94.4	72	130				
m,p-Xylene	37.4	1.00	40.00	0	93.6	70.3	134				
o-Xylene	18.6	1.00	20.00	0	92.9	72.1	131				
Surr: Dibromofluoromethane	26.8		25.00		107	45.4	152				
Surr: Toluene-d8	25.5		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	64.2	128				

Sample ID **MB-19470** SampType: **MBLK** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **MBLKW** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790434**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Toluene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Surr: Dibromofluoromethane	26.3		25.00		105	45.4	152				
Surr: Toluene-d8	25.5		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.6		25.00		94.3	64.2	128				

Sample ID **1801132-004BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **MW-25** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790874**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.19	1.00						2.143	2.19	30	
Toluene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	14.9	1.00						14.73	1.08	30	

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1801132-004BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **MW-25** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790874**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	19.7	1.00						19.02	3.69	30	
Surr: Dibromofluoromethane	26.2		25.00		105	45.4	152		0		
Surr: Toluene-d8	25.4		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.2		25.00		101	64.2	128		0		

Sample ID **1801138-003AMS** SampType: **MS** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **BATCH** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790870**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	27.6	1.00	20.00	5.705	109	65.4	138				
Toluene	74.0	1.00	20.00	50.32	119	52	147				E
Ethylbenzene	36.9	1.00	20.00	14.88	110	64.5	136				
m,p-Xylene	120	1.00	40.00	73.73	115	63.3	135				E
o-Xylene	59.2	1.00	20.00	36.37	114	64.8	150				E
Surr: Dibromofluoromethane	26.9		25.00		107	45.4	152				
Surr: Toluene-d8	25.7		25.00		103	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.7		25.00		107	64.2	128				

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1801138-003AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **BATCH** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790871**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	26.3	1.00	20.00	5.705	103	65.4	138	27.56	4.68	30	
Toluene	68.6	1.00	20.00	50.32	91.4	52	147	74.03	7.61	30	E
Ethylbenzene	34.5	1.00	20.00	14.88	98.0	64.5	136	36.85	6.64	30	
m,p-Xylene	110	1.00	40.00	73.73	91.1	63.3	135	119.9	8.45	30	E
o-Xylene	54.5	1.00	20.00	36.37	90.7	64.8	150	59.19	8.24	30	E
Surr: Dibromofluoromethane	26.6		25.00		106	45.4	152		0		
Surr: Toluene-d8	25.1		25.00		100	40.1	139		0		

Work Order: 1801132
CLIENT: Stantec Consulting Corporation
Project: The Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1801138-003AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **1/11/2018** RunNo: **41023**
Client ID: **BATCH** Batch ID: **19470** Analysis Date: **1/11/2018** SeqNo: **790871**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	26.1		25.00		105	64.2	128		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample Log-In Check List

Client Name:	**STANTEC**	Work Order Number:	**1801132**
Logged by:	**Brianna Barnes**	Date Received:	**1/10/2018 4:10:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	0.1
Sample	0.0
Temp Blank	1.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 1/10/18 Page: 1 of: 1

Laboratory Project No (internal): 1901132

Project Name: The Hungry Whale

Special Remarks:

Project No: 185703328

Client: Stantec Consulting

Collected by: Greg McCormick

Address: 11130 NE 33rd Pl Suite 200

Location: Westport, WA

City, State, Zip: Bellevue, WA

Report To (PM): Greg McCormick

Telephone: 425-922-6392

Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 30 days)

Fax:

PM Email: greg.mccormick@stantec.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Total Diss Solids			Comments
1	MW-10	1/9/18	1510	W													X				TDS
2	MW-21	1/9/18	1610	W													X				TDS
3	MW-22	1/9/18	1435	W													X				TDS
4	MW-25	1/9/18	1700	W			XX										X				TDS + TPH-Gx/BTEX
5																					
6																					
7																					
8																					
9																					
10																					

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	1/10/18 3:45	x [signature]	1/10/18 16:10
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Stantec Consulting Corporation
Marc Sauze
11130 NE 33rd Pl, Suite 200
Bellevue, WA 98004

RE: Hungry Whale
Work Order Number: 1906294

July 01, 2019

Attention Marc Sauze:

Fremont Analytical, Inc. received 19 sample(s) on 6/24/2019 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *07/01/2019*

CLIENT: Stantec Consulting Corporation
Project: Hungry Whale
Work Order: 1906294

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1906294-001	MW-01UR	06/19/2019 3:25 PM	06/24/2019 9:27 AM
1906294-002	MW-02UR	06/20/2019 2:00 PM	06/24/2019 9:27 AM
1906294-003	MW-04	06/20/2019 12:30 PM	06/24/2019 9:27 AM
1906294-004	MW-05	06/20/2019 3:40 PM	06/24/2019 9:27 AM
1906294-005	MW-07	06/20/2019 11:15 AM	06/24/2019 9:27 AM
1906294-006	MW-09	06/20/2019 10:30 AM	06/24/2019 9:27 AM
1906294-007	MW-10	06/21/2019 11:45 AM	06/24/2019 9:27 AM
1906294-008	MW-11	06/20/2019 10:55 AM	06/24/2019 9:27 AM
1906294-009	MW-12	06/19/2019 2:20 PM	06/24/2019 9:27 AM
1906294-010	MW-13UR	06/19/2019 1:45 PM	06/24/2019 9:27 AM
1906294-011	MW-14UR	06/19/2019 1:10 PM	06/24/2019 9:27 AM
1906294-012	MW-20	06/20/2019 11:45 AM	06/24/2019 9:27 AM
1906294-013	MW-21	06/19/2019 3:00 PM	06/24/2019 9:27 AM
1906294-014	MW-22	06/21/2019 10:50 AM	06/24/2019 9:27 AM
1906294-015	MW-23	06/20/2019 2:55 PM	06/24/2019 9:27 AM
1906294-016	MW-25	06/19/2019 4:45 PM	06/24/2019 9:27 AM
1906294-017	Dup 1	06/19/2019 12:00 AM	06/24/2019 9:27 AM
1906294-018	Dup 2	06/19/2019 12:00 AM	06/24/2019 9:27 AM
1906294-019	Trip Blank	06/11/2019 8:35 AM	06/24/2019 9:27 AM

Case Narrative

WO#: **1906294**

Date: **7/1/2019**

CLIENT: Stantec Consulting Corporation

Project: Hungry Whale

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 3:25:00 PM
Project: Hungry Whale
Lab ID: 1906294-001
Matrix: Water
Client Sample ID: **MW-01UR**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/27/2019 2:10:54 PM
Surr: Toluene-d8	95.8	65 - 135		%Rec	1	6/27/2019 2:10:54 PM
Surr: 4-Bromofluorobenzene	90.5	65 - 135		%Rec	1	6/27/2019 2:10:54 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/27/2019 2:10:54 PM
Toluene	ND	1.00		µg/L	1	6/27/2019 2:10:54 PM
Ethylbenzene	ND	1.00		µg/L	1	6/27/2019 2:10:54 PM
m,p-Xylene	ND	1.00		µg/L	1	6/27/2019 2:10:54 PM
o-Xylene	ND	1.00		µg/L	1	6/27/2019 2:10:54 PM
Surr: Dibromofluoromethane	95.2	45.4 - 152		%Rec	1	6/27/2019 2:10:54 PM
Surr: Toluene-d8	91.2	40.1 - 139		%Rec	1	6/27/2019 2:10:54 PM
Surr: 1-Bromo-4-fluorobenzene	91.4	64.2 - 128		%Rec	1	6/27/2019 2:10:54 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 2:00:00 PM
Project: Hungry Whale
Lab ID: 1906294-002
Matrix: Water
Client Sample ID: **MW-02UR**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	10,600	1,000	D	µg/L	20	6/28/2019 10:19:00 AM
Surr: Toluene-d8	95.2	65 - 135	D	%Rec	20	6/28/2019 10:19:00 AM
Surr: 4-Bromofluorobenzene	95.0	65 - 135	D	%Rec	20	6/28/2019 10:19:00 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	1,160	50.0	D	µg/L	50	7/1/2019 1:51:12 PM
Toluene	474	20.0	D	µg/L	20	6/28/2019 10:19:00 AM
Ethylbenzene	410	20.0	D	µg/L	20	6/28/2019 10:19:00 AM
m,p-Xylene	848	20.0	D	µg/L	20	6/28/2019 10:19:00 AM
o-Xylene	253	20.0	D	µg/L	20	6/28/2019 10:19:00 AM
Surr: Dibromofluoromethane	89.2	45.4 - 152	D	%Rec	20	6/28/2019 10:19:00 AM
Surr: Toluene-d8	86.9	40.1 - 139	D	%Rec	20	6/28/2019 10:19:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.6	64.2 - 128	D	%Rec	20	6/28/2019 10:19:00 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 12:30:00 PM
Project: Hungry Whale
Lab ID: 1906294-003
Matrix: Water
Client Sample ID: **MW-04**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	66,000	2,500	D	µg/L	50	6/28/2019 12:49:54 PM
Surr: Toluene-d8	93.5	65 - 135	D	%Rec	50	6/28/2019 12:49:54 PM
Surr: 4-Bromofluorobenzene	92.8	65 - 135	D	%Rec	50	6/28/2019 12:49:54 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	8,310	500	D	µg/L	500	7/1/2019 12:19:44 PM
Toluene	5,910	500	D	µg/L	500	7/1/2019 12:19:44 PM
Ethylbenzene	1,620	500	D	µg/L	500	7/1/2019 12:19:44 PM
m,p-Xylene	5,140	500	D	µg/L	500	7/1/2019 12:19:44 PM
o-Xylene	1,750	500	D	µg/L	500	7/1/2019 12:19:44 PM
Surr: Dibromofluoromethane	103	45.4 - 152	D	%Rec	500	7/1/2019 12:19:44 PM
Surr: Toluene-d8	102	40.1 - 139	D	%Rec	500	7/1/2019 12:19:44 PM
Surr: 1-Bromo-4-fluorobenzene	95.5	64.2 - 128	D	%Rec	500	7/1/2019 12:19:44 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 3:40:00 PM
Project: Hungry Whale
Lab ID: 1906294-004
Matrix: Water
Client Sample ID: **MW-05**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	64.7	50.0		µg/L	1	6/27/2019 2:41:14 PM
Surr: Toluene-d8	96.1	65 - 135		%Rec	1	6/27/2019 2:41:14 PM
Surr: 4-Bromofluorobenzene	93.0	65 - 135		%Rec	1	6/27/2019 2:41:14 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/27/2019 2:41:14 PM
Toluene	3.63	1.00		µg/L	1	6/27/2019 2:41:14 PM
Ethylbenzene	3.56	1.00		µg/L	1	6/27/2019 2:41:14 PM
m,p-Xylene	16.4	1.00		µg/L	1	6/27/2019 2:41:14 PM
o-Xylene	4.87	1.00		µg/L	1	6/27/2019 2:41:14 PM
Surr: Dibromofluoromethane	94.3	45.4 - 152		%Rec	1	6/27/2019 2:41:14 PM
Surr: Toluene-d8	91.2	40.1 - 139		%Rec	1	6/27/2019 2:41:14 PM
Surr: 1-Bromo-4-fluorobenzene	93.8	64.2 - 128		%Rec	1	6/27/2019 2:41:14 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 11:15:00 AM
Project: Hungry Whale
Lab ID: 1906294-005
Matrix: Water
Client Sample ID: **MW-07**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	105,000	5,000	D	µg/L	100	6/28/2019 1:20:09 PM
Surr: Toluene-d8	93.5	65 - 135	D	%Rec	100	6/28/2019 1:20:09 PM
Surr: 4-Bromofluorobenzene	93.1	65 - 135	D	%Rec	100	6/28/2019 1:20:09 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	8,440	1,000	D	µg/L	1000	7/1/2019 9:48:46 AM
Toluene	8,820	1,000	D	µg/L	1000	7/1/2019 9:48:46 AM
Ethylbenzene	2,160	100	D	µg/L	100	6/28/2019 1:20:09 PM
m,p-Xylene	10,800	1,000	D	µg/L	1000	7/1/2019 9:48:46 AM
o-Xylene	4,670	1,000	D	µg/L	1000	7/1/2019 9:48:46 AM
Surr: Dibromofluoromethane	89.1	45.4 - 152	D	%Rec	100	6/28/2019 1:20:09 PM
Surr: Toluene-d8	89.1	40.1 - 139	D	%Rec	100	6/28/2019 1:20:09 PM
Surr: 1-Bromo-4-fluorobenzene	94.0	64.2 - 128	D	%Rec	100	6/28/2019 1:20:09 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 10:30:00 AM
Project: Hungry Whale
Lab ID: 1906294-006
Matrix: Water
Client Sample ID: **MW-09**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	16,500	1,000	D	µg/L	20	6/28/2019 10:49:06 AM
Surr: Toluene-d8	96.2	65 - 135	D	%Rec	20	6/28/2019 10:49:06 AM
Surr: 4-Bromofluorobenzene	93.5	65 - 135	D	%Rec	20	6/28/2019 10:49:06 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	4,390	200	D	µg/L	200	7/1/2019 12:50:11 PM
Toluene	60.5	20.0	D	µg/L	20	6/28/2019 10:49:06 AM
Ethylbenzene	436	20.0	D	µg/L	20	6/28/2019 10:49:06 AM
m,p-Xylene	691	20.0	D	µg/L	20	6/28/2019 10:49:06 AM
o-Xylene	87.8	20.0	D	µg/L	20	6/28/2019 10:49:06 AM
Surr: Dibromofluoromethane	89.9	45.4 - 152	D	%Rec	20	6/28/2019 10:49:06 AM
Surr: Toluene-d8	88.6	40.1 - 139	D	%Rec	20	6/28/2019 10:49:06 AM
Surr: 1-Bromo-4-fluorobenzene	94.2	64.2 - 128	D	%Rec	20	6/28/2019 10:49:06 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/21/2019 11:45:00 AM
Project: Hungry Whale
Lab ID: 1906294-007
Matrix: Water
Client Sample ID: **MW-10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	5,640	1,000	D	µg/L	20	6/28/2019 11:19:18 AM
Surr: Toluene-d8	94.8	65 - 135	D	%Rec	20	6/28/2019 11:19:18 AM
Surr: 4-Bromofluorobenzene	92.4	65 - 135	D	%Rec	20	6/28/2019 11:19:18 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	296	20.0	D	µg/L	20	7/1/2019 2:21:48 PM
Toluene	11.4	1.00		µg/L	1	6/27/2019 3:41:57 PM
Ethylbenzene	312	20.0	D	µg/L	20	7/1/2019 2:21:48 PM
m,p-Xylene	265	20.0	D	µg/L	20	7/1/2019 2:21:48 PM
o-Xylene	28.6	1.00		µg/L	1	6/27/2019 3:41:57 PM
Surr: Dibromofluoromethane	87.0	45.4 - 152		%Rec	1	6/27/2019 3:41:57 PM
Surr: Toluene-d8	90.0	40.1 - 139		%Rec	1	6/27/2019 3:41:57 PM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	6/27/2019 3:41:57 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 10:55:00 AM
Project: Hungry Whale
Lab ID: 1906294-008
Matrix: Water
Client Sample ID: **MW-11**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/28/2019 8:18:44 AM
Surr: Toluene-d8	95.4	65 - 135		%Rec	1	6/28/2019 8:18:44 AM
Surr: 4-Bromofluorobenzene	93.7	65 - 135		%Rec	1	6/28/2019 8:18:44 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/28/2019 8:18:44 AM
Toluene	ND	1.00		µg/L	1	6/28/2019 8:18:44 AM
Ethylbenzene	ND	1.00		µg/L	1	6/28/2019 8:18:44 AM
m,p-Xylene	2.50	1.00		µg/L	1	6/28/2019 8:18:44 AM
o-Xylene	ND	1.00		µg/L	1	6/28/2019 8:18:44 AM
Surr: Dibromofluoromethane	89.3	45.4 - 152		%Rec	1	6/28/2019 8:18:44 AM
Surr: Toluene-d8	84.7	40.1 - 139		%Rec	1	6/28/2019 8:18:44 AM
Surr: 1-Bromo-4-fluorobenzene	95.0	64.2 - 128		%Rec	1	6/28/2019 8:18:44 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 2:20:00 PM
Project: Hungry Whale
Lab ID: 1906294-009
Matrix: Water
Client Sample ID: **MW-12**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	98,900	5,000	D	µg/L	100	6/28/2019 1:50:30 PM
Surr: Toluene-d8	93.3	65 - 135	D	%Rec	100	6/28/2019 1:50:30 PM
Surr: 4-Bromofluorobenzene	93.2	65 - 135	D	%Rec	100	6/28/2019 1:50:30 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	3,360	100	D	µg/L	100	6/28/2019 1:50:30 PM
Toluene	10,800	1,000	D	µg/L	1000	7/1/2019 10:18:52 AM
Ethylbenzene	2,470	100	D	µg/L	100	6/28/2019 1:50:30 PM
m,p-Xylene	12,300	1,000	D	µg/L	1000	7/1/2019 10:18:52 AM
o-Xylene	5,590	1,000	D	µg/L	1000	7/1/2019 10:18:52 AM
Surr: Dibromofluoromethane	87.7	45.4 - 152	D	%Rec	100	6/28/2019 1:50:30 PM
Surr: Toluene-d8	88.0	40.1 - 139	D	%Rec	100	6/28/2019 1:50:30 PM
Surr: 1-Bromo-4-fluorobenzene	94.0	64.2 - 128	D	%Rec	100	6/28/2019 1:50:30 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 1:45:00 PM
Project: Hungry Whale
Lab ID: 1906294-010
Matrix: Water
Client Sample ID: **MW-13UR**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/28/2019 8:48:40 AM
Surr: Toluene-d8	94.4	65 - 135		%Rec	1	6/28/2019 8:48:40 AM
Surr: 4-Bromofluorobenzene	94.3	65 - 135		%Rec	1	6/28/2019 8:48:40 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/28/2019 8:48:40 AM
Toluene	ND	1.00		µg/L	1	6/28/2019 8:48:40 AM
Ethylbenzene	ND	1.00		µg/L	1	6/28/2019 8:48:40 AM
m,p-Xylene	1.44	1.00		µg/L	1	6/28/2019 8:48:40 AM
o-Xylene	ND	1.00		µg/L	1	6/28/2019 8:48:40 AM
Surr: Dibromofluoromethane	91.9	45.4 - 152		%Rec	1	6/28/2019 8:48:40 AM
Surr: Toluene-d8	86.3	40.1 - 139		%Rec	1	6/28/2019 8:48:40 AM
Surr: 1-Bromo-4-fluorobenzene	95.5	64.2 - 128		%Rec	1	6/28/2019 8:48:40 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 1:10:00 PM
Project: Hungry Whale
Lab ID: 1906294-011
Matrix: Water
Client Sample ID: **MW-14UR**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/27/2019 11:46:37 PM
Surr: Toluene-d8	95.8	65 - 135		%Rec	1	6/27/2019 11:46:37 PM
Surr: 4-Bromofluorobenzene	92.2	65 - 135		%Rec	1	6/27/2019 11:46:37 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/27/2019 11:46:37 PM
Toluene	ND	1.00		µg/L	1	6/27/2019 11:46:37 PM
Ethylbenzene	ND	1.00		µg/L	1	6/27/2019 11:46:37 PM
m,p-Xylene	ND	1.00		µg/L	1	6/27/2019 11:46:37 PM
o-Xylene	ND	1.00		µg/L	1	6/27/2019 11:46:37 PM
Surr: Dibromofluoromethane	91.7	45.4 - 152		%Rec	1	6/27/2019 11:46:37 PM
Surr: Toluene-d8	87.2	40.1 - 139		%Rec	1	6/27/2019 11:46:37 PM
Surr: 1-Bromo-4-fluorobenzene	93.4	64.2 - 128		%Rec	1	6/27/2019 11:46:37 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 11:45:00 AM
Project: Hungry Whale
Lab ID: 1906294-012
Matrix: Water
Client Sample ID: **MW-20**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	88,400	5,000	D	µg/L	100	6/28/2019 2:20:47 PM
Surr: Toluene-d8	93.8	65 - 135	D	%Rec	100	6/28/2019 2:20:47 PM
Surr: 4-Bromofluorobenzene	92.2	65 - 135	D	%Rec	100	6/28/2019 2:20:47 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	7,550	1,000	D	µg/L	1000	7/1/2019 10:49:00 AM
Toluene	9,040	1,000	D	µg/L	1000	7/1/2019 10:49:00 AM
Ethylbenzene	3,440	100	D	µg/L	100	6/28/2019 2:20:47 PM
m,p-Xylene	7,690	1,000	D	µg/L	1000	7/1/2019 10:49:00 AM
o-Xylene	3,770	100	D	µg/L	100	6/28/2019 2:20:47 PM
Surr: Dibromofluoromethane	88.4	45.4 - 152	D	%Rec	100	6/28/2019 2:20:47 PM
Surr: Toluene-d8	88.2	40.1 - 139	D	%Rec	100	6/28/2019 2:20:47 PM
Surr: 1-Bromo-4-fluorobenzene	93.0	64.2 - 128	D	%Rec	100	6/28/2019 2:20:47 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 3:00:00 PM
Project: Hungry Whale
Lab ID: 1906294-013
Matrix: Water
Client Sample ID: **MW-21**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/28/2019 12:16:50 AM
Surr: Toluene-d8	96.1	65 - 135		%Rec	1	6/28/2019 12:16:50 AM
Surr: 4-Bromofluorobenzene	93.2	65 - 135		%Rec	1	6/28/2019 12:16:50 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/28/2019 12:16:50 AM
Toluene	ND	1.00		µg/L	1	6/28/2019 12:16:50 AM
Ethylbenzene	ND	1.00		µg/L	1	6/28/2019 12:16:50 AM
m,p-Xylene	ND	1.00		µg/L	1	6/28/2019 12:16:50 AM
o-Xylene	ND	1.00		µg/L	1	6/28/2019 12:16:50 AM
Surr: Dibromofluoromethane	90.6	45.4 - 152		%Rec	1	6/28/2019 12:16:50 AM
Surr: Toluene-d8	86.8	40.1 - 139		%Rec	1	6/28/2019 12:16:50 AM
Surr: 1-Bromo-4-fluorobenzene	94.5	64.2 - 128		%Rec	1	6/28/2019 12:16:50 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/21/2019 10:50:00 AM
Project: Hungry Whale
Lab ID: 1906294-014
Matrix: Water
Client Sample ID: **MW-22**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	1,490	50.0		µg/L	1	6/28/2019 9:18:48 AM
Surr: Toluene-d8	98.2	65 - 135		%Rec	1	6/28/2019 9:18:48 AM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	6/28/2019 9:18:48 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	1.78	1.00		µg/L	1	6/28/2019 9:18:48 AM
Toluene	1.87	1.00		µg/L	1	6/28/2019 9:18:48 AM
Ethylbenzene	15.3	1.00		µg/L	1	6/28/2019 9:18:48 AM
m,p-Xylene	44.6	1.00		µg/L	1	6/28/2019 9:18:48 AM
o-Xylene	3.18	1.00		µg/L	1	6/28/2019 9:18:48 AM
Surr: Dibromofluoromethane	87.9	45.4 - 152		%Rec	1	6/28/2019 9:18:48 AM
Surr: Toluene-d8	87.1	40.1 - 139		%Rec	1	6/28/2019 9:18:48 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	64.2 - 128		%Rec	1	6/28/2019 9:18:48 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/20/2019 2:55:00 PM
Project: Hungry Whale
Lab ID: 1906294-015
Matrix: Water
Client Sample ID: **MW-23**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	52,100	5,000	D	µg/L	100	6/28/2019 2:51:03 PM
Surr: Toluene-d8	93.5	65 - 135	D	%Rec	100	6/28/2019 2:51:03 PM
Surr: 4-Bromofluorobenzene	92.4	65 - 135	D	%Rec	100	6/28/2019 2:51:03 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	374	100	D	µg/L	100	6/28/2019 2:51:03 PM
Toluene	4,350	1,000	D	µg/L	1000	7/1/2019 11:19:10 AM
Ethylbenzene	1,840	100	D	µg/L	100	6/28/2019 2:51:03 PM
m,p-Xylene	7,810	100	D	µg/L	100	6/28/2019 2:51:03 PM
o-Xylene	2,640	100	D	µg/L	100	6/28/2019 2:51:03 PM
Surr: Dibromofluoromethane	89.2	45.4 - 152	D	%Rec	100	6/28/2019 2:51:03 PM
Surr: Toluene-d8	87.7	40.1 - 139	D	%Rec	100	6/28/2019 2:51:03 PM
Surr: 1-Bromo-4-fluorobenzene	93.1	64.2 - 128	D	%Rec	100	6/28/2019 2:51:03 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019 4:45:00 PM
Project: Hungry Whale
Lab ID: 1906294-016
Matrix: Water
Client Sample ID: **MW-25**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0		µg/L	1	6/28/2019 9:48:53 AM
Surr: Toluene-d8	94.9	65 - 135		%Rec	1	6/28/2019 9:48:53 AM
Surr: 4-Bromofluorobenzene	91.5	65 - 135		%Rec	1	6/28/2019 9:48:53 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00		µg/L	1	6/28/2019 9:48:53 AM
Toluene	ND	1.00		µg/L	1	6/28/2019 9:48:53 AM
Ethylbenzene	ND	1.00		µg/L	1	6/28/2019 9:48:53 AM
m,p-Xylene	1.60	1.00		µg/L	1	6/28/2019 9:48:53 AM
o-Xylene	ND	1.00		µg/L	1	6/28/2019 9:48:53 AM
Surr: Dibromofluoromethane	90.6	45.4 - 152		%Rec	1	6/28/2019 9:48:53 AM
Surr: Toluene-d8	86.3	40.1 - 139		%Rec	1	6/28/2019 9:48:53 AM
Surr: 1-Bromo-4-fluorobenzene	92.5	64.2 - 128		%Rec	1	6/28/2019 9:48:53 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019
Project: Hungry Whale
Lab ID: 1906294-017
Matrix: Water
Client Sample ID: **Dup 1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	109,000	5,000	D	µg/L	100	6/28/2019 3:21:30 PM
Surr: Toluene-d8	92.0	65 - 135	D	%Rec	100	6/28/2019 3:21:30 PM
Surr: 4-Bromofluorobenzene	91.4	65 - 135	D	%Rec	100	6/28/2019 3:21:30 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	3,440	100	D	µg/L	100	6/28/2019 3:21:30 PM
Toluene	13,200	1,000	D	µg/L	1000	7/1/2019 11:49:22 AM
Ethylbenzene	2,600	100	D	µg/L	100	6/28/2019 3:21:30 PM
m,p-Xylene	13,200	1,000	D	µg/L	1000	7/1/2019 11:49:22 AM
o-Xylene	6,040	1,000	D	µg/L	1000	7/1/2019 11:49:22 AM
Surr: Dibromofluoromethane	88.6	45.4 - 152	D	%Rec	100	6/28/2019 3:21:30 PM
Surr: Toluene-d8	88.3	40.1 - 139	D	%Rec	100	6/28/2019 3:21:30 PM
Surr: 1-Bromo-4-fluorobenzene	92.0	64.2 - 128	D	%Rec	100	6/28/2019 3:21:30 PM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/19/2019
Project: Hungry Whale
Lab ID: 1906294-018
Matrix: Water
Client Sample ID: **Dup 2**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	12,100	1,000	D	µg/L	20	6/28/2019 11:49:30 AM
Surr: Toluene-d8	94.3	65 - 135	D	%Rec	20	6/28/2019 11:49:30 AM
Surr: 4-Bromofluorobenzene	93.5	65 - 135	D	%Rec	20	6/28/2019 11:49:30 AM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	1,370	100	D	µg/L	100	7/1/2019 1:20:40 PM
Toluene	627	20.0	D	µg/L	20	6/28/2019 11:49:30 AM
Ethylbenzene	452	20.0	D	µg/L	20	6/28/2019 11:49:30 AM
m,p-Xylene	986	20.0	D	µg/L	20	6/28/2019 11:49:30 AM
o-Xylene	297	20.0	D	µg/L	20	6/28/2019 11:49:30 AM
Surr: Dibromofluoromethane	89.6	45.4 - 152	D	%Rec	20	6/28/2019 11:49:30 AM
Surr: Toluene-d8	87.7	40.1 - 139	D	%Rec	20	6/28/2019 11:49:30 AM
Surr: 1-Bromo-4-fluorobenzene	93.9	64.2 - 128	D	%Rec	20	6/28/2019 11:49:30 AM

Analytical Report

Work Order: **1906294**
Date Reported: **7/1/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/11/2019 8:35:00 AM
Project: Hungry Whale
Lab ID: 1906294-019
Matrix: Water
Client Sample ID: **Trip Blank**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25051		Analyst: CR
Gasoline	ND	50.0	H	µg/L	1	6/27/2019 1:40:32 PM
Surr: Toluene-d8	97.0	65 - 135	H	%Rec	1	6/27/2019 1:40:32 PM
Surr: 4-Bromofluorobenzene	91.6	65 - 135	H	%Rec	1	6/27/2019 1:40:32 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25051		Analyst: CR
Benzene	ND	1.00	H	µg/L	1	6/27/2019 1:40:32 PM
Toluene	ND	1.00	H	µg/L	1	6/27/2019 1:40:32 PM
Ethylbenzene	ND	1.00	H	µg/L	1	6/27/2019 1:40:32 PM
m,p-Xylene	ND	1.00	H	µg/L	1	6/27/2019 1:40:32 PM
o-Xylene	ND	1.00	H	µg/L	1	6/27/2019 1:40:32 PM
Surr: Dibromofluoromethane	94.4	45.4 - 152	H	%Rec	1	6/27/2019 1:40:32 PM
Surr: Toluene-d8	90.5	40.1 - 139	H	%Rec	1	6/27/2019 1:40:32 PM
Surr: 1-Bromo-4-fluorobenzene	92.7	64.2 - 128	H	%Rec	1	6/27/2019 1:40:32 PM

Work Order: 1906294
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID	**LCS-25051**	SampType: **LCS**			Units: **µg/L**		Prep Date: **6/27/2019**		RunNo: **52419**		
Client ID:	**LCSW**	Batch ID: **25051**					Analysis Date: **6/27/2019**		SeqNo: **1035366**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	368	50.0	500.0	0	73.6	65	135				
Surr: Toluene-d8	24.1		25.00		96.4	65	135				
Surr: 4-Bromofluorobenzene	23.5		25.00		94.1	65	135				

Sample ID	**MB-25051**	SampType: **MBLK**			Units: **µg/L**		Prep Date: **6/27/2019**		RunNo: **52419**		
Client ID:	**MBLKW**	Batch ID: **25051**					Analysis Date: **6/27/2019**		SeqNo: **1035367**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: Toluene-d8	23.9		25.00		95.4	65	135				
Surr: 4-Bromofluorobenzene	22.6		25.00		90.2	65	135				

Sample ID	**1906294-007AMS**	SampType: **MS**			Units: **µg/L**		Prep Date: **6/27/2019**		RunNo: **52419**		
Client ID:	**MW-10**	Batch ID: **25051**					Analysis Date: **6/27/2019**		SeqNo: **1035328**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	6,650	50.0	500.0	6,212	87.8	65	135				E
Surr: Toluene-d8	25.4		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	27.6		25.00		110	65	135				

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	**1906294-007AMSD**	SampType: **MSD**			Units: **µg/L**		Prep Date: **6/27/2019**		RunNo: **52419**		
Client ID:	**MW-10**	Batch ID: **25051**					Analysis Date: **6/27/2019**		SeqNo: **1035329**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	6,830	50.0	500.0	6,212	123	65	135	6,651	2.60	30	E
Surr: Toluene-d8	25.5		25.00		102	65	135		0		
Surr: 4-Bromofluorobenzene	27.7		25.00		111	65	135		0		

Work Order: 1906294
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID **1906294-007AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52419**
Client ID: **MW-10** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035329**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1906294-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52419**
Client ID: **Dup 2** Batch ID: **25051** Analysis Date: **6/28/2019** SeqNo: **1035360**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	9,890	50.0						9,914	0.255	30	E
Surr: Toluene-d8	24.3		25.00		97.2	65	135		0		
Surr: 4-Bromofluorobenzene	29.4		25.00		117	65	135		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1906294-012ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52419**
Client ID: **MW-20** Batch ID: **25051** Analysis Date: **6/28/2019** SeqNo: **1035348**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	28,900	50.0						28,940	0.0860	30	E
Surr: Toluene-d8	23.2		25.00		92.7	65	135		0		
Surr: 4-Bromofluorobenzene	29.1		25.00		116	65	135		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1906294
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID **LCS-25051** SampType: **LCS** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **LCSW** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035221**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	17.7	1.00	20.00	0	88.4	69.3	132				
Toluene	18.0	1.00	20.00	0	90.2	61.3	145				
Ethylbenzene	18.0	1.00	20.00	0	90.1	72	130				
m,p-Xylene	39.1	1.00	40.00	0	97.9	70.3	134				
o-Xylene	19.2	1.00	20.00	0	96.2	62	125				
Surr: Dibromofluoromethane	23.9		25.00		95.7	45.4	152				
Surr: Toluene-d8	23.1		25.00		92.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	64.2	128				

Sample ID **MB-25051** SampType: **MBLK** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **MBLKW** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035222**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Toluene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Surr: Dibromofluoromethane	23.6		25.00		94.4	45.4	152				
Surr: Toluene-d8	22.8		25.00		91.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.8		25.00		91.3	64.2	128				

Sample ID **1906294-006AMS** SampType: **MS** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **MW-09** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035190**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	327	1.00	20.00	379.6	-263	65.4	138				SE
Toluene	70.0	1.00	20.00	54.89	75.3	52	147				E
Ethylbenzene	159	1.00	20.00	169.7	-55.1	64.5	136				SE
m,p-Xylene	382	1.00	40.00	392.1	-24.5	63.3	135				SE

Work Order: 1906294
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID **1906294-006AMS** SampType: **MS** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **MW-09** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035190**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	121	1.00	20.00	91.11	147	64.8	150				E
Surr: Dibromofluoromethane	18.3		25.00		73.3	45.4	152				
Surr: Toluene-d8	19.8		25.00		79.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	27.8		25.00		111	64.2	128				

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1906294-006AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **MW-09** Batch ID: **25051** Analysis Date: **6/27/2019** SeqNo: **1035191**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	323	1.00	20.00	379.6	-284	65.4	138	327.0	1.27	30	SE
Toluene	103	1.00	20.00	54.89	241	52	147	69.95	38.3	30	RSE
Ethylbenzene	160	1.00	20.00	169.7	-47.8	64.5	136	158.6	0.920	30	SE
m,p-Xylene	427	1.00	40.00	392.1	88.3	63.3	135	382.3	11.1	30	E
o-Xylene	197	1.00	20.00	91.11	531	64.8	150	120.6	48.3	30	RSE
Surr: Dibromofluoromethane	18.6		25.00		74.3	45.4	152		0		
Surr: Toluene-d8	19.6		25.00		78.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	28.3		25.00		113	64.2	128		0		

NOTES:
S - Analyte concentration was too high for accurate spike recovery(ies).
R - High RPD observed. The method is in control as indicated by the LCS.
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1906294-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **Dup 2** Batch ID: **25051** Analysis Date: **6/28/2019** SeqNo: **1035215**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	252	1.00						236.0	6.44	30	E
Toluene	248	1.00						224.8	9.78	30	E
Ethylbenzene	169	1.00						159.1	5.89	30	E

Work Order: 1906294
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID **1906294-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **Dup 2** Batch ID: **25051** Analysis Date: **6/28/2019** SeqNo: **1035215**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
m,p-Xylene	420	1.00						394.7	6.10	30	E
o-Xylene	293	1.00						277.8	5.19	30	E
Surr: Dibromofluoromethane	20.9		25.00		83.5	45.4	152		0		
Surr: Toluene-d8	20.5		25.00		82.0	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	27.7		25.00		111	64.2	128		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID **1906294-012ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/27/2019** RunNo: **52418**
Client ID: **MW-20** Batch ID: **25051** Analysis Date: **6/28/2019** SeqNo: **1035203**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	507	1.00						527.1	3.93	30	E
Toluene	506	1.00						541.8	6.86	30	E
Ethylbenzene	>40ppb	1.00						0		30	E
m,p-Xylene	673	1.00						692.8	2.88	30	E
o-Xylene	539	1.00						556.2	3.11	30	E
Surr: Dibromofluoromethane	17.1		25.00		68.4	45.4	152		0		
Surr: Toluene-d8	18.9		25.00		75.5	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	31.3		25.00		125	64.2	128		0		

NOTES:
E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample Log-In Check List

Client Name:	**STANTEC**	Work Order Number:	**1906294**
Logged by:	**Carissa True**	Date Received:	**6/24/2019 9:27:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	7.8
Sample 1	7.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 6/24/19 Page: 1 of: 2

Laboratory Project No (internal): 1906294

Project Name: Hungry Whale

Special Remarks:

Client: Stantec Consulting

Project No: 185751054

Address: 11130 NE 33rd Place

Collected by: Greg McCormick

City, State, Zip: Bellevue, WA

Location: Westport, WA

Telephone: 425-922-6392

Report To (PM): Marc Sauze

Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 30 days)

Fax: —

PM Email:

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	MW-01UR	6/19	1525	W		X											
2	MW-02UR	6/20	1400	W		X											
3	MW-04	6/20	1230	W		X											
4	MW-05	6/20	1540	W		X											
5	MW-07	6/20	1115	W		X											
6	MW-09	6/20	1030	W		X											
7	MW-10	6/21	1145	W		X											5 VOAs
8	MW-11	6/20	1055	W		X											
9	MW-12	6/19	1420	W		X											5 VOAs
10	MW-13UR	6/19	1345	W		X											

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- ☑ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day ____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x [signature]	6/24/19 Stantec	x [signature]	6-24-19 0927
Relinquished	Date/Time	Received	Date/Time
x		x	

Chain of Custody Record & Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 6/24/19 Page: 2 of: 2

Laboratory Project No (internal): 1906294

Project Name: Hungry Whale

Special Remarks:

Project No: 185751054

Client: Stantec Consulting

Collected by: Greg McCormick

Address: 11130 NE 33rd Place

Location: Westport, WA

City, State, Zip: Bellevue, WA

Report To (PM): Marc Souze

Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 30 days)

Telephone: 425-922-6392

PM Email: marc.souze@stantec.com

Fax:

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	MW-14UR	6/19	1310	W		X												
2	MW-20	6/20	1145	W		X												
3	MW-21	6/19	1500	W		X												
4	MW-22	6/21	1050	W		X												
5	MW-23	6/20	1455	W		X												
6	MW-25	6/19	1645	W		X												
7	Dup 1	—	—	W		X												
8	Dup 2	—	—	W		X												
9	Trip Blank	—	—	W		X												
10																		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:

- ☑ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x MLemil	6/24/19 Stantec	x Paula Acuña	6-24-19 0927
Relinquished	Date/Time	Received	Date/Time
x		x	

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Stantec Consulting Corporation
Marc Sauze
11130 NE 33rd Pl, Suite 200
Bellevue, WA 98004

RE: Hungry Whale (2)
Work Order Number: 1906353

July 05, 2019

Attention Marc Sauze:

Fremont Analytical, Inc. received 2 sample(s) on 6/27/2019 for the analyses presented in the following report.

Gasoline by NWTPH-Gx
Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *07/05/2019*

CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)
Work Order: 1906353

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1906353-001	MW-03UR	06/26/2019 3:00 PM	06/27/2019 10:03 AM
1906353-002	MW-24	06/26/2019 4:00 PM	06/27/2019 10:03 AM

Case Narrative

WO#: **1906353**

Date: **7/5/2019**

CLIENT: Stantec Consulting Corporation

Project: Hungry Whale (2)

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1906353**
Date Reported: **7/5/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/26/2019 3:00:00 PM
Project: Hungry Whale (2)
Lab ID: 1906353-001
Matrix: Water
Client Sample ID: **MW-03UR**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25105		Analyst: CR
Gasoline	ND	50.0		µg/L	1	7/2/2019 9:32:45 PM
Surr: Toluene-d8	105	65 - 135		%Rec	1	7/2/2019 9:32:45 PM
Surr: 4-Bromofluorobenzene	91.9	65 - 135		%Rec	1	7/2/2019 9:32:45 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25105		Analyst: CR
Benzene	ND	1.00		µg/L	1	7/2/2019 9:32:45 PM
Toluene	ND	1.00		µg/L	1	7/2/2019 9:32:45 PM
Ethylbenzene	ND	1.00		µg/L	1	7/2/2019 9:32:45 PM
m,p-Xylene	ND	1.00		µg/L	1	7/2/2019 9:32:45 PM
o-Xylene	ND	1.00		µg/L	1	7/2/2019 9:32:45 PM
Surr: Dibromofluoromethane	100	45.4 - 152		%Rec	1	7/2/2019 9:32:45 PM
Surr: Toluene-d8	108	40.1 - 139		%Rec	1	7/2/2019 9:32:45 PM
Surr: 1-Bromo-4-fluorobenzene	87.0	64.2 - 128		%Rec	1	7/2/2019 9:32:45 PM

Analytical Report

Work Order: **1906353**
Date Reported: **7/5/2019**

Client: Stantec Consulting Corporation
Collection Date: 6/26/2019 4:00:00 PM
Project: Hungry Whale (2)
Lab ID: 1906353-002
Matrix: Water
Client Sample ID: **MW-24**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Gasoline by NWTPH-Gx				Batch ID: 25105		Analyst: CR
Gasoline	ND	50.0		µg/L	1	7/2/2019 10:03:53 PM
Surr: Toluene-d8	106	65 - 135		%Rec	1	7/2/2019 10:03:53 PM
Surr: 4-Bromofluorobenzene	92.0	65 - 135		%Rec	1	7/2/2019 10:03:53 PM
Volatile Organic Compounds by EPA Method 8260D				Batch ID: 25105		Analyst: CR
Benzene	ND	1.00		µg/L	1	7/2/2019 10:03:53 PM
Toluene	ND	1.00		µg/L	1	7/2/2019 10:03:53 PM
Ethylbenzene	ND	1.00		µg/L	1	7/2/2019 10:03:53 PM
m,p-Xylene	ND	1.00		µg/L	1	7/2/2019 10:03:53 PM
o-Xylene	ND	1.00		µg/L	1	7/2/2019 10:03:53 PM
Surr: Dibromofluoromethane	101	45.4 - 152		%Rec	1	7/2/2019 10:03:53 PM
Surr: Toluene-d8	109	40.1 - 139		%Rec	1	7/2/2019 10:03:53 PM
Surr: 1-Bromo-4-fluorobenzene	87.3	64.2 - 128		%Rec	1	7/2/2019 10:03:53 PM

Work Order: 1906353
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-25105** SampType: **LCS** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52482**
Client ID: **LCSW** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036738**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	452	50.0	500.0	0	90.4	65	135				
Surr: Toluene-d8	25.2		25.00		101	65	135				
Surr: 4-Bromofluorobenzene	26.2		25.00		105	65	135				

Sample ID: **LCSD-25105** SampType: **LCSD** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52482**
Client ID: **LCSW02** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036739**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	405	50.0	500.0	0	80.9	65	135	452.1	11.1	20	
Surr: Toluene-d8	25.0		25.00		100	65	135		0		
Surr: 4-Bromofluorobenzene	26.0		25.00		104	65	135		0		

Sample ID: **MB-25105** SampType: **MBLK** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52482**
Client ID: **MBLKW** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036740**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0									
Surr: Toluene-d8	25.8		25.00		103	65	135				
Surr: 4-Bromofluorobenzene	23.1		25.00		92.3	65	135				

Sample ID: **1906357-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52482**
Client ID: **BATCH** Batch ID: **25105** Analysis Date: **7/3/2019** SeqNo: **1036718**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	25.9		25.00		104	65	135		0		
Surr: 4-Bromofluorobenzene	23.1		25.00		92.3	65	135		0		

Work Order: 1906353
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **1906363-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52482**
Client ID: **BATCH** Batch ID: **25105** Analysis Date: **7/3/2019** SeqNo: **1036725**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	25.2		25.00		101	65	135		0		
Surr: 4-Bromofluorobenzene	22.9		25.00		91.8	65	135		0		

Work Order: 1906353
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **LCS-25105** SampType: **LCS** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **LCSW** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036591**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.3	1.00	20.00	0	106	69.3	132				
Toluene	21.8	1.00	20.00	0	109	61.3	145				
Ethylbenzene	20.5	1.00	20.00	0	102	72	130				
m,p-Xylene	41.8	1.00	40.00	0	104	70.3	134				
o-Xylene	20.6	1.00	20.00	0	103	62	125				
Surr: Dibromofluoromethane	25.7		25.00		103	45.4	152				
Surr: Toluene-d8	27.2		25.00		109	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.8		25.00		107	64.2	128				

Sample ID: **LCSD-25105** SampType: **LCSD** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **LCSW02** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036592**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.0	1.00	20.00	0	105	69.3	132	21.25	1.41	20	
Toluene	21.5	1.00	20.00	0	107	61.3	145	21.84	1.71	20	
Ethylbenzene	20.1	1.00	20.00	0	100	72	130	20.49	1.97	20	
m,p-Xylene	40.5	1.00	40.00	0	101	70.3	134	41.77	3.07	20	
o-Xylene	20.0	1.00	20.00	0	100	62	125	20.65	3.20	20	
Surr: Dibromofluoromethane	25.4		25.00		102	45.4	152		0		
Surr: Toluene-d8	27.1		25.00		108	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	64.2	128		0		

Sample ID: **MB-25105** SampType: **MBLK** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **MBLKW** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036593**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00									
Toluene	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									

Work Order: 1906353
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **MB-25105** SampType: **MBLK** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **MBLKW** Batch ID: **25105** Analysis Date: **7/2/2019** SeqNo: **1036593**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	1.00									
Surr: Dibromofluoromethane	25.3		25.00		101	45.4	152				
Surr: Toluene-d8	27.1		25.00		108	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	21.9		25.00		87.4	64.2	128				

Sample ID: **1906357-003ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **BATCH** Batch ID: **25105** Analysis Date: **7/3/2019** SeqNo: **1036576**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Surr: Dibromofluoromethane	25.0		25.00		100	45.4	152		0		
Surr: Toluene-d8	27.1		25.00		108	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	21.9		25.00		87.5	64.2	128		0		

Sample ID: **1906363-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **BATCH** Batch ID: **25105** Analysis Date: **7/3/2019** SeqNo: **1036803**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Surr: Dibromofluoromethane	25.2		25.00		101	45.4	152		0		
Surr: Toluene-d8	26.5		25.00		106	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	21.8		25.00		87.0	64.2	128		0		

Work Order: 1906353
CLIENT: Stantec Consulting Corporation
Project: Hungry Whale (2)

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: **1906363-018ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **7/2/2019** RunNo: **52481**
Client ID: **BATCH** Batch ID: **25105** Analysis Date: **7/3/2019** SeqNo: **1036803**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample Log-In Check List

Client Name:	**STANTEC**	Work Order Number:	**1906353**
Logged by:	**Carissa True**	Date Received:	**6/27/2019 10:03:00 AM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C *	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler 1	5.8
Sample 1	4.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 6/26/19 | Page: 1 of: 1
Project Name: Hungry Whale (2)
Project No: 185451054
Collected by: Greg McCormick
Location: Hungry Whale - Westport, WA
Report To (PM): Marc Sauze
PM Email: marc.sauze@stantec.com

Client: Stantec Consulting
Address: 11130 NE 33rd Place
City, State, Zip: Bellevue, WA
Telephone: 425-922-6392
Fax:

Laboratory Project No (internal): 1906353
Special Remarks:
Sample Disposal: ☐ Return to client ☑ Disposal by lab (after 30 days)

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	MW-03UR	6/26/19	3:00	W		X												
2	MW-24	6/26/19	4:00	W		X												
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Turn-around Time:
☑ Standard
☐ 3 Day
☐ 2 Day
☐ Next Day
Same Day ____ (specify)

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement. 10:03

Relinquished	Date/Time	Received	Date/Time
x	6/27/19 Stantec	x	6/27/19 1003
Relinquished	Date/Time	Received	Date/Time
x		x	

APPENDIX C

Groundwater Monitoring Well Professional Survey – April 2016

BERGLUND, SCHMIDT & ASSOCIATES, INC.
professional engineers & land surveyors

2323 Bay Avenue
Hoquiam, WA 98550
(360) 532-7630
Fax: 1-877-419-9683
info@berglundschmidt.com

16.042 Stantec
Monitoring well elevations at The Hungry Whale, Westport, WA.
Berglund, Schmidt & Associates field survey conducted April 11, 2016 and April 12, 2016.
Source benchmark is TIDAL 2 1952 RESET, elevation 15.26' NAVD88.

Monitoring well ID	Top of pipe elevation (NAVD88)	Location of elevation
MW01UR	13.72	West (marked)
MW02UR	13.69	Southeast (marked)
MW03UR	14.07	Northeast
MW04	12.85	Northeast
MW05UR	13.30	Southwest (marked)
MW07	13.38	Northeast
MW07	13.41	Northwest (high point on pipe)
MW09	12.69	Northeast
MW10	12.86	Northeast
MW11	12.77	Northeast
MW12	13.86	Northeast
MW12	13.87	Southeast (high point on pipe)
MW13UR	12.36	Northwest (marked)
MW14UR	13.24	Northwest (marked)
MW20	13.66	Northeast
MW21	13.57	Northeast
MW22	13.77	Northeast
MW23	13.23	Northeast
MW24	11.61	Northeast
MW25	12.41	Northwest (marked)

Note: Elevations taken on top of pipes without a mark were shot at the Northeast point which corresponds to the alignment of North Wilson Avenue.

APPENDIX D

Boring Logs and Well Construction Details

SOIL SAMPLING SERVICE, INC.

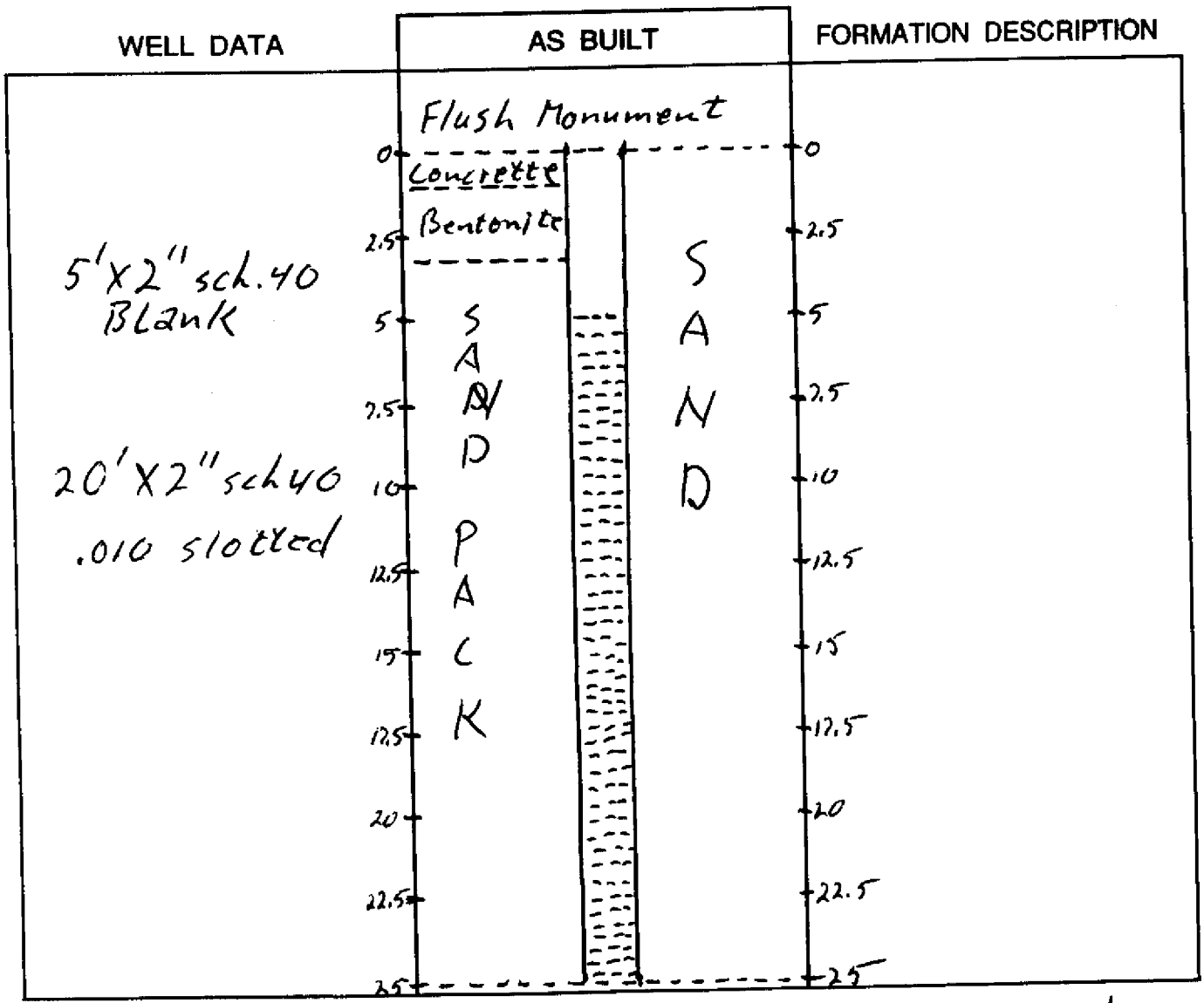
1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO
Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: _____
WELL IDENTIFICATION NO.: MW6
DRILLING METHOD: 4" Auger
DRILLER: Norman L. Paulson
SIGNATURE: Norman L. Paulson
CONSULTING FIRM: SAIC
REPRESENTATIVE: _____

JOB #: W3077 START CARD NO.: 084128
COUNTY: Grays Harbor CITY: West Port
LOCATION: NE 1/4 SE 1/4 _____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: _____
WATER LEVEL ELEVATION: 8'
INSTALLED: 11-14-91
DEVELOPED: _____



SCALE: 1" = 5'

PAGE 1 OF 1

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

2603294

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number: E006812

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays harbor

Unique Ecology Well IDTag No. BB

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

Long Deg _____ Min _____ Sec _____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature _____

Driller or Trainee License No. T2877

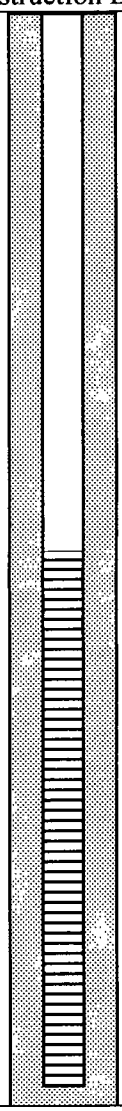
Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

If trainee, licensed driller's Signature and License Number: Linda Harnden 2508

Construction Design	Well Data	Formation Description
	Drove a retractable ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 12' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-12' SAND

SCALE: 1"= ____ PAGE 8 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

2603295

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number: E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. BT

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number: Chris Harnden 2508

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

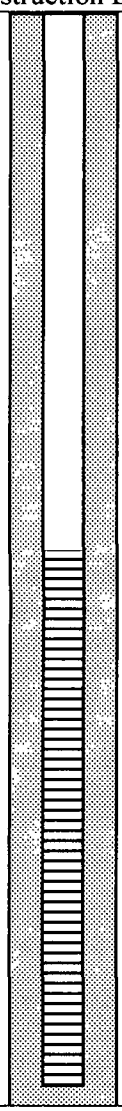
Long Deg ____ Min ____ Sec ____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a retractable ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 8' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-8' SAND

SCALE: 1"= ____ PAGE 2 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

263294

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. BLO

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number: Louise Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

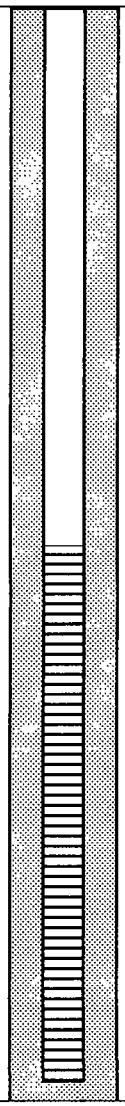
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5.5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 12' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-12' SAND

SCALE: 1"= ____ PAGE 6 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

2603293

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. BB

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number: Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

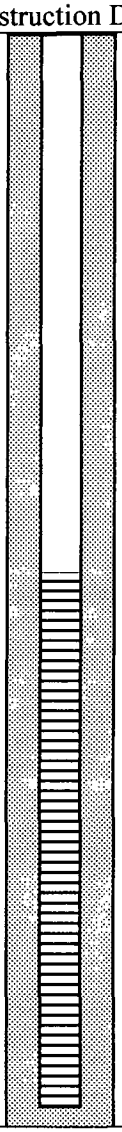
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 12' Screen: 3-5' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-2' SAND

SCALE: 1"= ____ PAGE 5 OF 8

ECY 050-12 (Rev. 7/06)

Ecology is an Equal Opportunity Employe

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 2632912

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. BY

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number:

Jamie Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

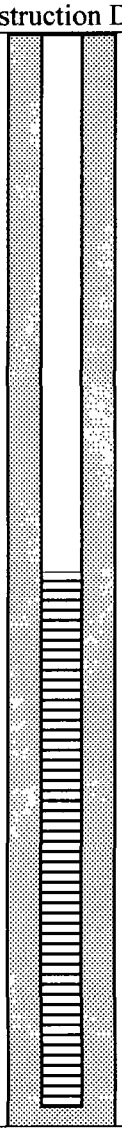
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a retractable ~~stainless steel~~ / PVC screen down to depth and collected a water sample. Boring Depth: 16' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-16' SAND

SCALE: 1"= ____ PAGE 4 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

263291

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No: B3

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

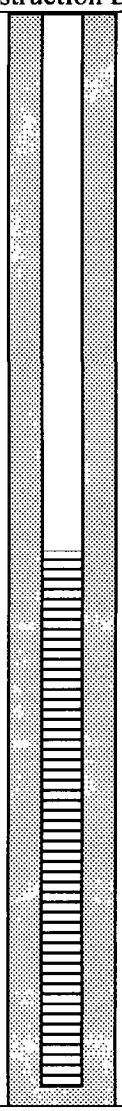
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ ***stainless steel / PVC*** screen down ~~to depth~~ and collected a water sample. Boring Depth: 12' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-12' Sand

SCALE: 1"= ____ PAGE 8 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

263290

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B2

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature [signature]

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

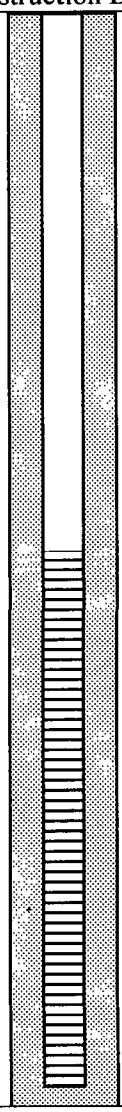
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove ~~a retractable~~ ***stainless steel / PVC*** screen down ~~to depth and~~ collected a water sample. Boring Depth: 12' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-12' SAND

SCALE: 1"= ____ PAGE 2 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A082049

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission

263289

ORIGINAL INSTALLATION Notice of Intent Number:

E006812

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. BI

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Gogan, Scott

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2877

If trainee, licensed driller's Signature and License Number:

Amos Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

'07 MAY 29 10:14

Site Address 1680 N Montesano

City Westport County Grays harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

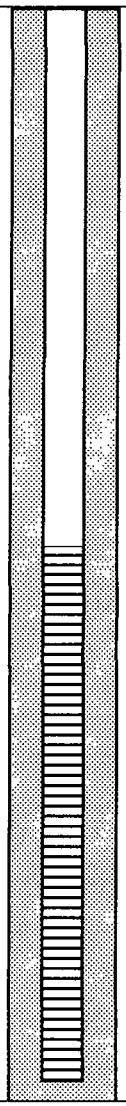
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 6116120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 4/26/07

Work/Decommission Completed Date 4/26/07

Construction Design	Well Data	Formation Description
	Drove a retractable ~~stainless steel~~ / PVC screen down to depth and collected a water sample. Boring Depth: 16' Screen: 5-8' Slot Size: .010 Type: STAINLESS Removed all rods and casing from boring and backfilled with bentonite.	0-16' SAND RECEIVED MAY 31 2007 DEPARTMENT OF ECOLOGY WELL DRILLING UNIT

SCALE: 1"= ____ PAGE 1 OF 8

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129860

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 269831

ORIGINAL INSTALLATION Notice of Intent Number:

E007216

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-7

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 N Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 1-1/4" Static Level 8'

Work/Decommission Start Date 6/13/07

Work/Decommission Completed Date 6/13/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature [signature]

Driller or Trainee License No. T2872

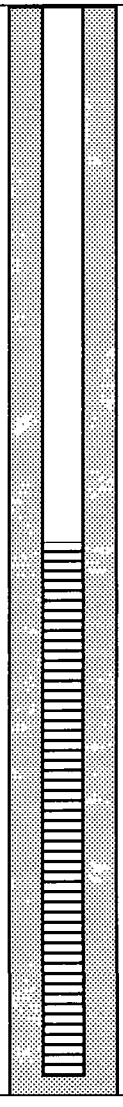
If trainee, licensed driller's Signature and License Number:

Omar Hasnden 2508

RECEIVED

AUG 0 8 2007

DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Construction Design	Well Data	Formation Description
	Drove a retractable ***stainless steel*** / (**PVC**) screen down to depth and collected a water sample. Boring Depth: 12' Screen: 0'-10' Slot Size: 0.010" Type: 1/2" sch 40 PVC Removed all rods and casing from boring and backfilled with bentonite.	gray fine sand

'07 AUG -6 A9:30
DEPT. OF ECOLOGY
FISCAL & BUDGET

SCALE: 1"= ____ PAGE 1 OF 1

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction 274193

☒ Decommission

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. B-10

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

Tax Parcel No. 616120132001

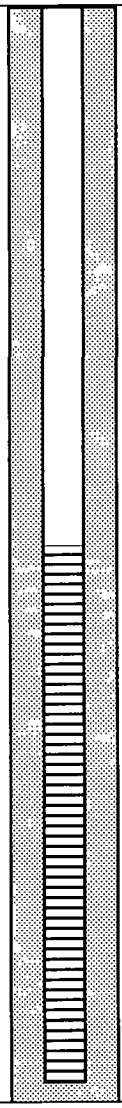
Cased or Uncased Diameter 2" Static Level 7'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

If trainee, licensed driller's Signature and License Number:

Dwight Harndin 2508

Construction Design	Well Data	Formation Description
	Drove ~~a retractable~~ ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 10' Screen: 7'-10' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BRN SAND W/ GRAVEL 4'-10' BRN SAND

SCALE: 1"= ____ PAGE 7 OF 7

ECY 050-12 (Rev. 7/06)

Ecology is an Equal Opportunity Employe

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274/92

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-9

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number: Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

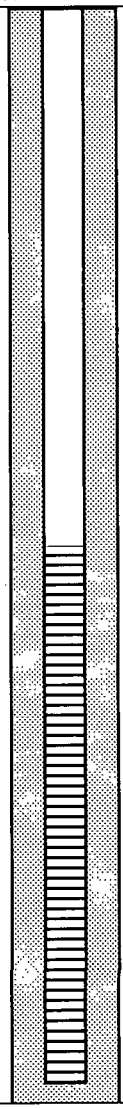
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 6'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	Drove ~~a retractable~~ ***stainless steel*** / ***PVC*** screen down to depth and collected a water sample. Boring Depth: 9' Screen: 6'-9' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	Ø - 4' BLK SAND W/GRAVEL 4'-9' BLK SAND

SCALE: 1"= ____ PAGE 6 OF 7

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274191

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-8

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

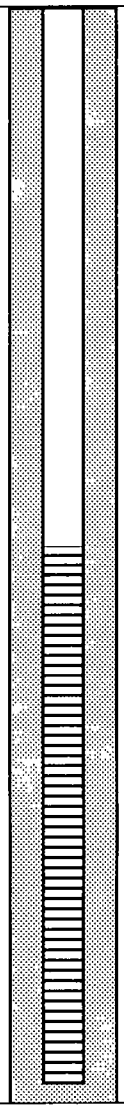
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 6'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	Drove ~~a retractable~~ ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 8' Screen: 5'-8' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BLK SAND W/GRAVEL 4'-8' BLK SAND

SCALE: 1"= ____ PAGE 5 OF 7

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274190

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-7

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature [signature]

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number:

Amin Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

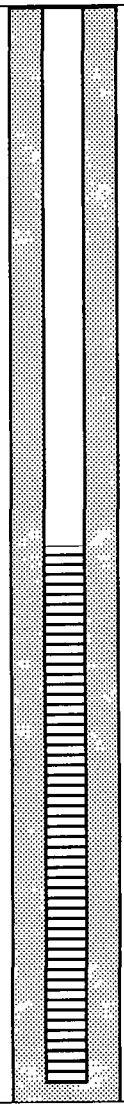
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 5'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ **stainless steel / PVC** screen down to depth and collected a water sample. Boring Depth: 10' Screen: 4'-7' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BLK SAND W/ GRAVEL 4'-10' BLK SAND

SCALE: 1"= ____ PAGE 4 OF 7

ECY 050-12 (Rev. 7/06)

Ecology is an Equal Opportunity Employe

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274189

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-4

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number: Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

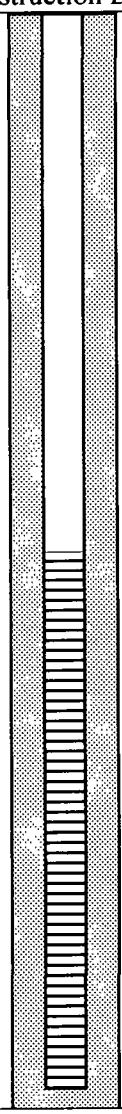
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 7'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ **stainless steel / PVC** screen down to depth and collected a water sample. Boring Depth: 10' Screen: 7'-10' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BLK SAND W/GRAVEL 4'-10' BLK SAND

SCALE: 1"= ____ PAGE 3 OF 7

ECY 050-12 (Rev. 7/06)

Ecology is an Equal Opportunity Employe

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274188

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-3

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number:

Jamie Haun 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

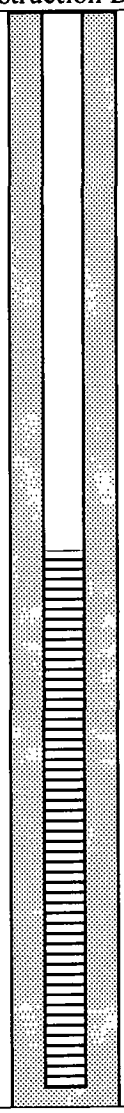
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 7'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	Drove a ~~retractable~~ ***stainless steel / PVC*** screen down to depth and collected a water sample. Boring Depth: 10' Screen: 7'-10' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BLK SAND w/GRAVEL 4'-10' BLK SAND

SCALE: 1"= ____ PAGE 2 OF 7

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. A129287

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☐ Construction

☒ Decommission 274187

ORIGINAL INSTALLATION Notice of Intent Number:

E008012

Consulting Firm Sound Environmental Strategies

Unique Ecology Well IDTag No. B-1

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Haun, Marty

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2827

If trainee, licensed driller's Signature and License Number: Anna Harnden 2508

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port of Grays Harbor

Site Address 1680 Montesano

City Westport County Grays Harbor

Location NE1/4-1/4 SE1/4 Sec 01 Twn 16N R 12W

EWM ☐ or WWM ☒

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

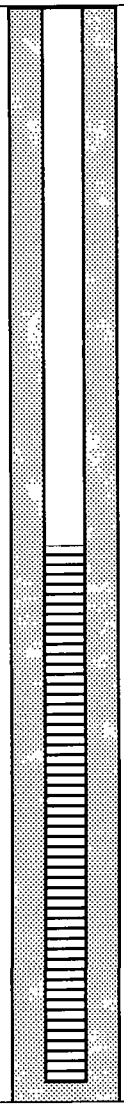
Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

Cased or Uncased Diameter 2" Static Level 7'

Work/Decommission Start Date 10/2/07

Work/Decommission Completed Date 10/2/07

Construction Design	Well Data	Formation Description
	~~Drove~~ a retractable ***stainless steel / PVC*** screen down ~~to depth and~~ collected a water sample. Boring Depth: 10' Screen: 7'-10' Slot Size: .010 Type: STAINLESS STEEL Removed all rods and casing from boring and backfilled with bentonite.	0-4' BLK SAND W/ GRAVEL 4'-10' BLK SAND

OCT 11 '07 08:12 DEPT OF ECOLOGY FISCAL OFFICE

RECEIVED

OCT 15 2007

DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

SCALE: 1"= ____ PAGE 1 OF 7

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains

Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

(206) 927-3173

TELEX: 466762

FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE

WELL IDENTIFICATION NO.: B MW1 MW2 MW3

DRILLING METHOD: 4" HOLLOW STEM AUGER

DRILLER: JASON PEDERSON

SIGNATURE: [signature]

CONSULTING FIRM: SAIC

REPRESENTATIVE: DAVE

JOB #: W 3166 BB START CARD NO.: L42943

COUNTY: GRAYS HARBOR CITY: WESTPORT

LOCATION: 1 1/4 NE 1/4 SE 1/4

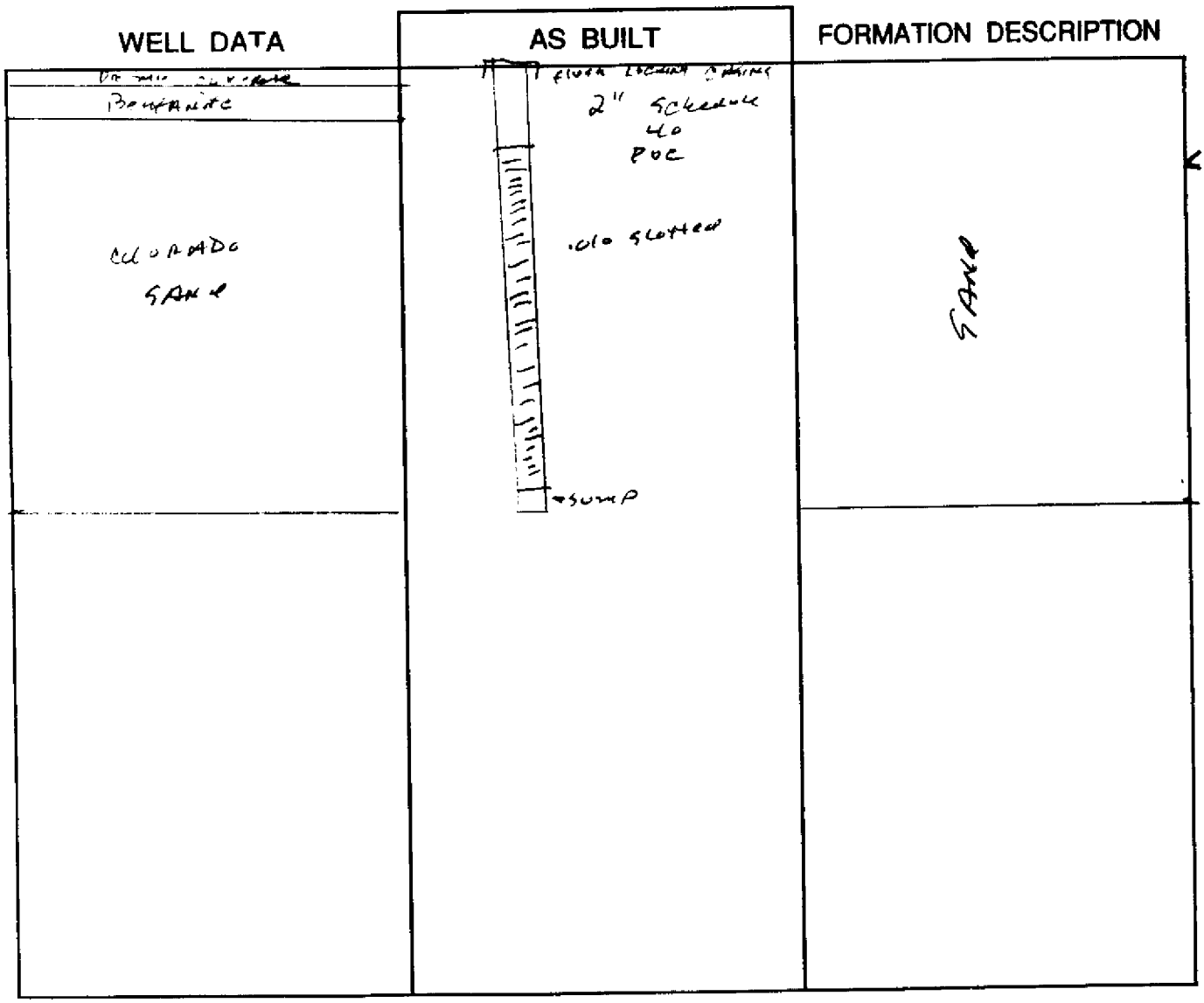
SEC.: 1 TOWN: 16N RANGE: 12W

DATUM:

WATER LEVEL ELEVATION:

INSTALLED: 3-28-92

DEVELOPED: 3-28-92



SCALE: 1" = 10'

PAGE _____ OF _____

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains

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(206) 927-3173

TELEX: 466762

FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: Hungry Whale

WELL IDENTIFICATION NO.: MW-13,14,15,16,17,18,19

DRILLING METHOD: 6" Auger

DRILLER: Norman Paulson

SIGNATURE: Norman L. Paulson

CONSULTING FIRM: Hollis Environmental

REPRESENTATIVE:

JOB #: [illegible] START CARD NO.: R08874

COUNTY: Grays Harbor CITY: West Port

LOCATION: NE 1/4 SE 1/4 1/4

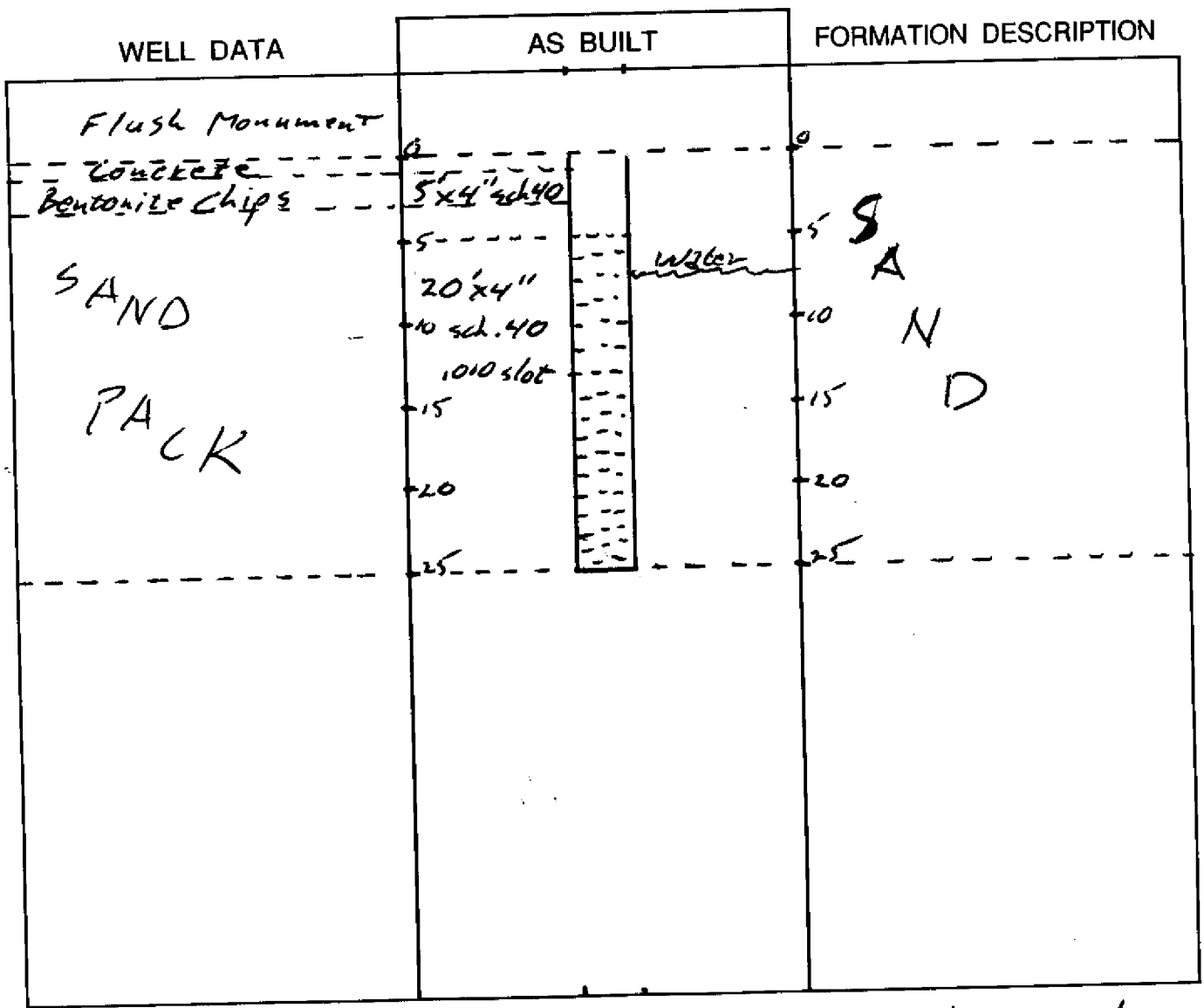
SEC.: 01 TOWN: 16 N RANGE: 12 WWM

DATUM:

WATER LEVEL ELEVATION: 7'

INSTALLED: 8-1-95

DEVELOPED: No



SCALE: 1" = 10'

PAGE 1 OF 1

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
WELL IDENTIFICATION NO.: MW-2
DRILLING METHOD:
DRILLER: WAYNE LINDHOLM

SIGNATURE: Wayne Lindholm
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WEST PORT
LOCATION: NE 1/4 SE 1/4 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM:
WATER LEVEL ELEVATION:
INSTALLED: ABANDED 4-6-93
DEVELOPED:

WELL DATA	AS BUILT	FORMATION DESCRIPTION
TRIMMIE CEMENT BENTONITE SLURRY TO 16' + PRESURE GROUT TO GROUD SURFACE CEMENT + BENTONITE 16'	16'	

SCALE: 1" = 10'

PAGE 7 OF

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO
Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
WELL IDENTIFICATION NO.: BH-12
DRILLING METHOD: 4" HSA
DRILLER: WAYNE LINDHOLM

SIGNATURE: Wayne Lindholm 1553
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WESTPORT
LOCATION: NE 1/4 SE 1/4 ____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: ____
WATER LEVEL ELEVATION: ____
INSTALLED: 4-7-93
DEVELOPED: ____

WELL DATA	AS BUILT	FORMATION DESCRIPTION
	50% HOLE PLUG 50% CUTTINGS	SAND
	26.5'	26.5'

SCALE: 1" = 10'

PAGE 6 OF 6

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO
Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

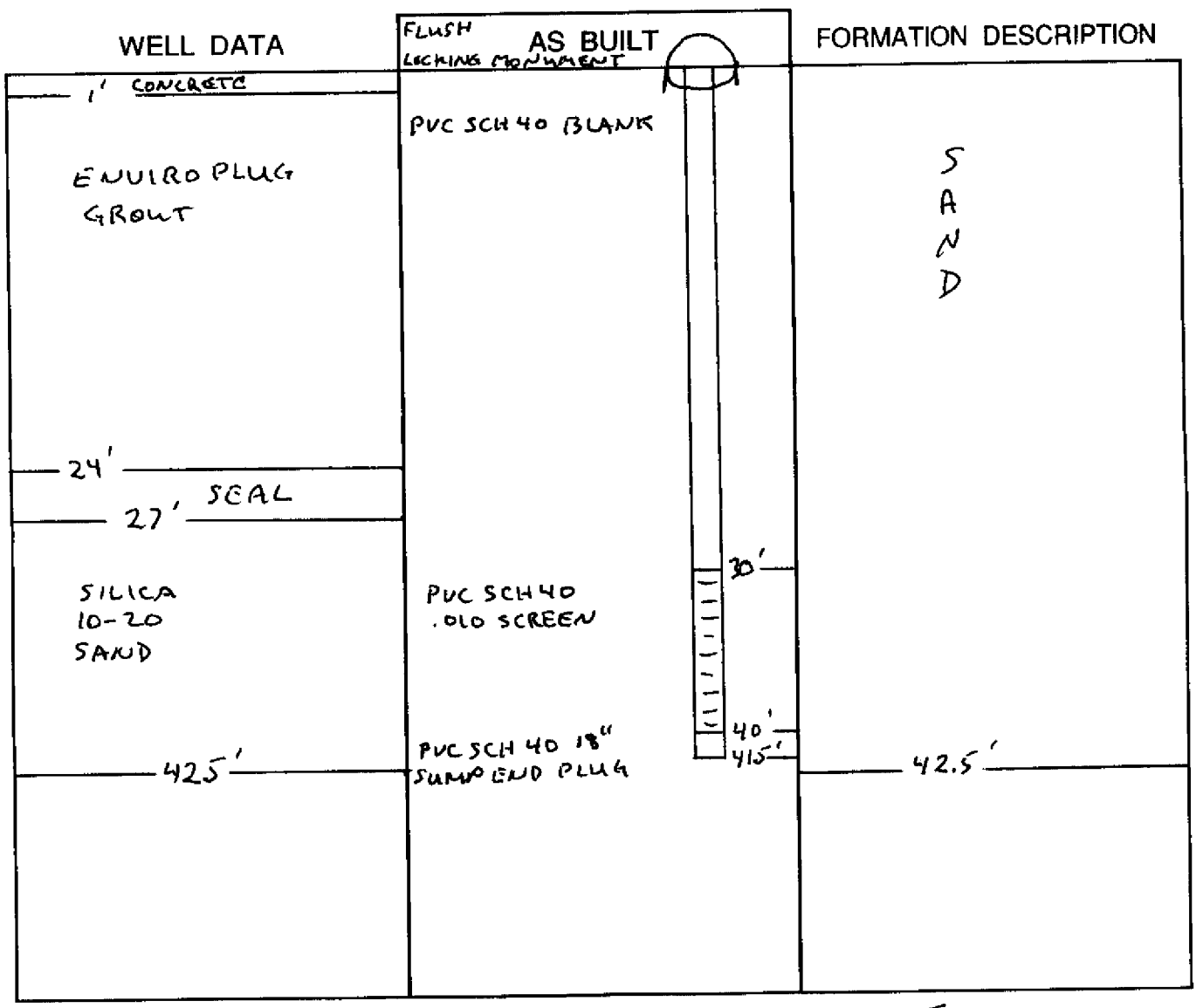
(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
WELL IDENTIFICATION NO.: MW-11
DRILLING METHOD: 4" HSA
DRILLER: WAYNE LINDHOLM 1553

SIGNATURE: Wayne Lindholm
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WEST PORT
LOCATION: NE 1/4 SE 1/4 ____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: ____
WATER LEVEL ELEVATION: ____
INSTALLED: 4-7-93
DEVELOPED: 4-7-93



SCALE: 1" = 10'

PAGE 5 OF ____

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO
Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

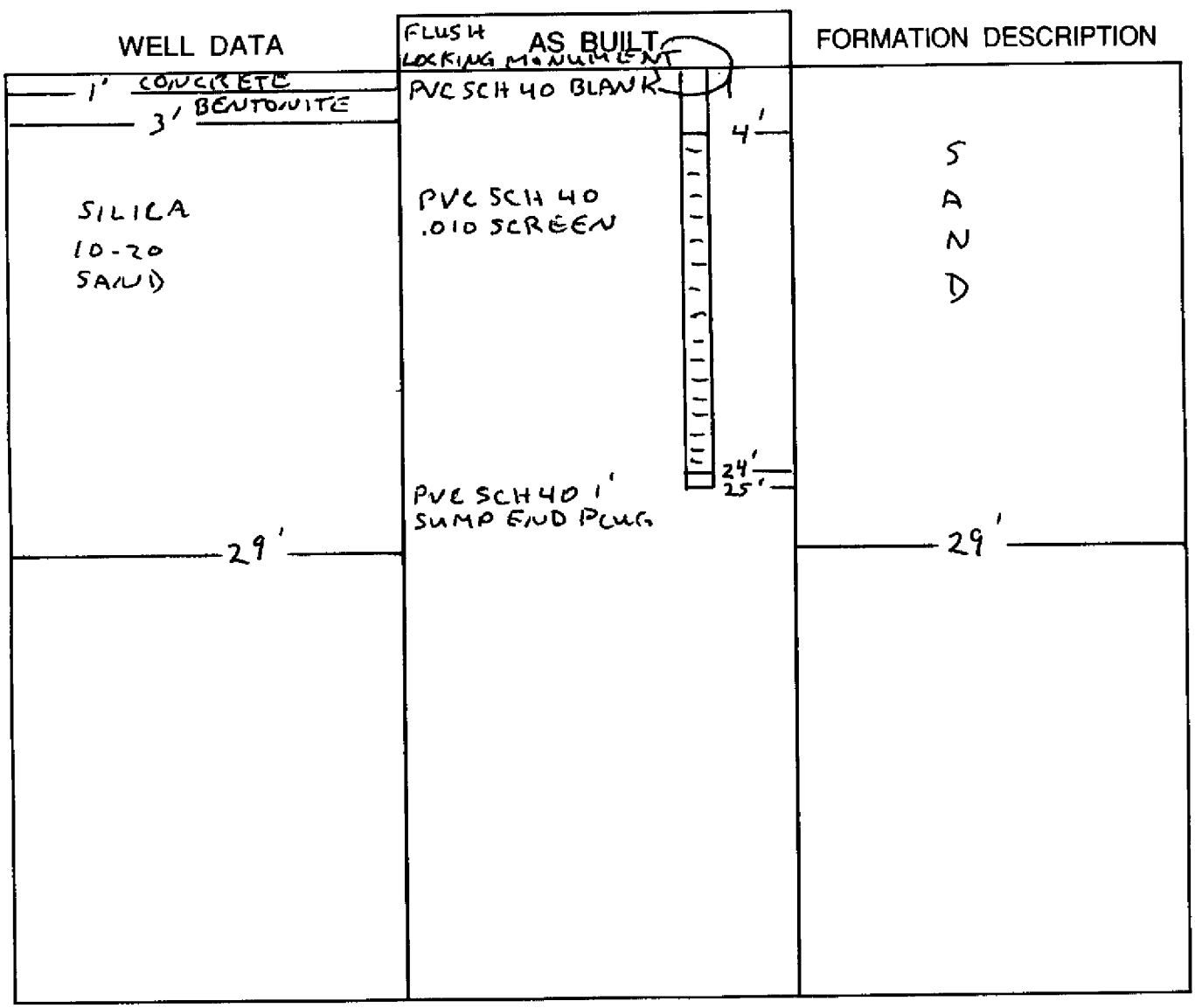
(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
WELL IDENTIFICATION NO.: MW-10
DRILLING METHOD: 4" HSA 1553
DRILLER: WAYNE LINDHOLM

SIGNATURE: Wayne Lindholm
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WESTPORT
LOCATION: NE 1/4 SE 1/4 ____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: ____
WATER LEVEL ELEVATION: ____
INSTALLED: 4-5-93
DEVELOPED: 4-6-93



SCALE: 1" = 10'

PAGE 4 OF 6

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
~~WELL~~ IDENTIFICATION NO.: BH-B
DRILLING METHOD: 4" HSA
DRILLER: WAYNE LINDHOLM 1553

SIGNATURE: [signature]
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WESTPORT
LOCATION: NE 1/4 SE 1/4 ____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: ____
WATER LEVEL ELEVATION: ____
INSTALLED: 4-2-93
DEVELOPED: ____

WELL DATA	AS BUILT	FORMATION DESCRIPTION
HOLE PLUG 6.5'		SAND 6.5'

SCALE: 1" = ____

PAGE 3 OF ____

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399
FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO
Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
~~WELL~~ IDENTIFICATION NO.: BH-A
DRILLING METHOD: 4" HSA
DRILLER: WAYNE LINDHOLM

SIGNATURE: [signature] 1553
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 20974
COUNTY: GRAYS HARBOR CITY: WESTPORT
LOCATION: NE 1/4 SE 1/4 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM:
WATER LEVEL ELEVATION:
INSTALLED: 4-2-93
DEVELOPED:

WELL DATA	AS BUILT	FORMATION DESCRIPTION
HOLE PLUG 6.5'		SAND 6.5'

SCALE: 1" = 10'

PAGE 2 OF 2

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains

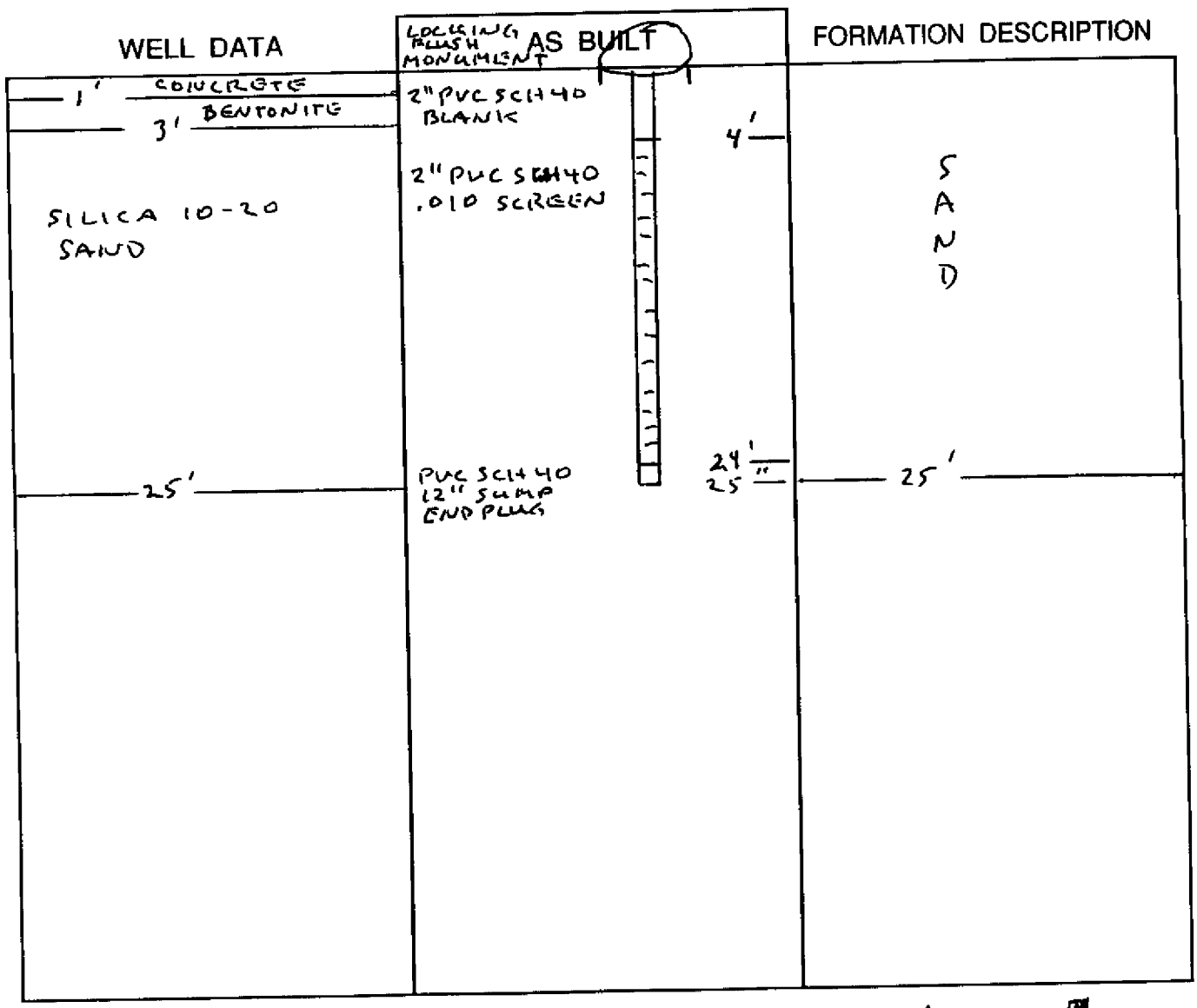
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: HUNGRY WHALE STORE
WELL IDENTIFICATION NO.: 2B
DRILLING METHOD: 4" HSA
DRILLER: WAYNE LINDHOLM 1553

SIGNATURE: Wayne Lindholm
CONSULTING FIRM: S.A.I.C.
REPRESENTATIVE: DOUG KELLY

JOB #: W3262 START CARD NO.: 209794
COUNTY: GRAYS HARBOR CITY: WEST PORT
LOCATION: NE 1/4 SE 1/4 ____ 1/4
SEC.: 1 TOWN: 16N RANGE: 12W
DATUM: ____
WATER LEVEL ELEVATION: ____
INSTALLED: 4-2-93
DEVELOPED: ____



SCALE: 1" = 10'

PAGE 1 OF 1

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction
☐ Decommission

2699837

Type of Well *("x in box)*

☒ Resource Protection
☐ Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. APF-853

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2872

Tax Parcel No. 616120132001

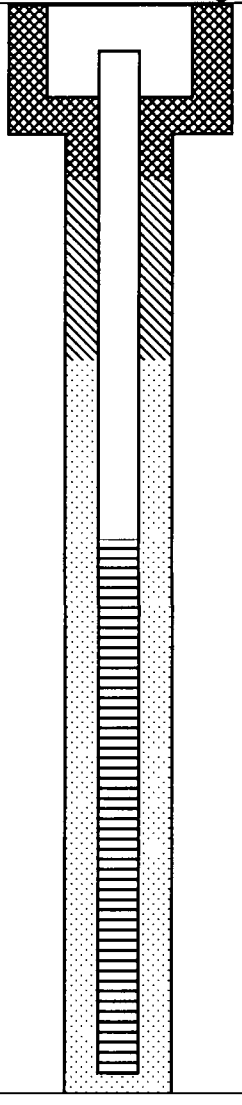
Cased or Uncased Diameter 9" Static Level 7'

Work/Decommission Start Date 6-13-07

Work/Decommission Completed Date 6-13-07

If trainee, licensed driller's Signature and License Number:

Anna Harnden 2508

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: 8" flush mount CONCRETE SURFACE SEAL: 0'-2' ANNULAR SPACE: 6"x6' BACKFILL: 2'-4' TYPE: 3/8" bentonite chips PVC BLANK: 0'-5' SCREEN: 5'-15' SLOT SIZE: 0.010" TYPE: 2" sch 40 PVC SAND PACK: 4'-15' MATERIAL: 10/20 silica DRILLING METHOD: H.S.A. WELL DEPTH: 15' BORING DIAMETER: 9"	gray fine sand

SCALE: 1"= ____ PAGE 6 OF 6

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction
☐ Decommission

2698346

Type of Well *("x in box)*

☒ Resource Protection
☐ Geotech Soil Boring

ORIGINAL INSTALLATION Notice of Intent Number:

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. APF-852

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

Long Deg _____ Min _____ Sec _____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature _____

Driller or Trainee License No. T2872

Tax Parcel No. 616120132001

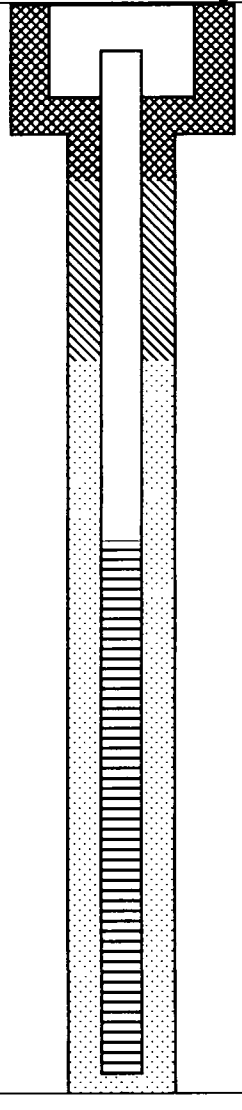
Cased or Uncased Diameter 9" Static Level 7'

Work/Decommission Start Date 6-13-07

Work/Decommission Completed Date 6-13-07

If trainee, licensed driller's Signature and License Number:

Owen Harnden 2508

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: 8" flush mount CONCRETE SURFACE SEAL: 0'-2' ANNULAR SPACE: 6"x6' BACKFILL: 2'-4' TYPE: 3/8" bentonite chips PVC BLANK: 0'-5' SCREEN: 5'-15' SLOT SIZE: 0.010" TYPE: 2" sch 40 PVC SAND PACK: 4'-15' MATERIAL: 10/20 silica sand DRILLING METHOD: H.S.A. WELL DEPTH: 15' BORING DIAMETER: 9"	gray fine sand

SCALE: 1"= ____ PAGE 5 OF 6

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction
☐ Decommission

269835

ORIGINAL INSTALLATION Notice of Intent Number:

Type of Well *("x in box)*

☒ Resource Protection
☐ Geotech Soil Boring

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. APF851

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

Long Deg _____ Min _____ Sec _____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2872

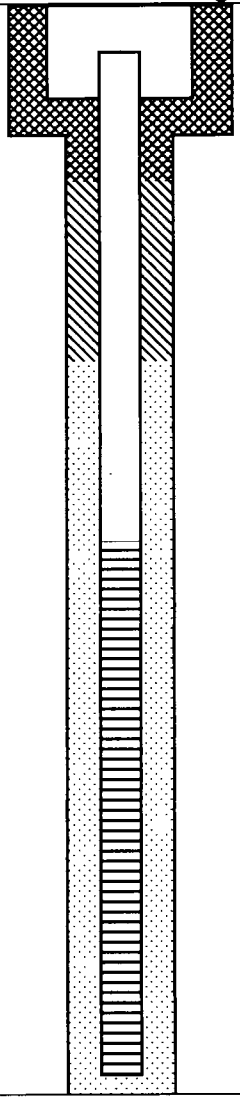
Tax Parcel No. 616120132001

Cased or Uncased Diameter 9" Static Level 6'

Work/Decommission Start Date 6-12-07

Work/Decommission Completed Date 6-12-07

If trainee, licensed driller's Signature and License Number:
Chris Harsden 2508

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: 8" flush mount CONCRETE SURFACE SEAL: 0'-2' ANNULAR SPACE: 6" x 6' BACKFILL: 2'-4' TYPE: 3/8" bentonite chips PVC BLANK: 0'-5' SCREEN: 5'-15' SLOT SIZE: 0.010" TYPE: 2" sch 40 PVC SAND PACK: 4'-15' MATERIAL: 10/20 silica DRILLING METHOD: H.S.A. WELL DEPTH: 15' BORING DIAMETER: 9"	gray fine sand

SCALE: 1"= ____ PAGE 4 OF 6

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction 269834

☐ Decommission

ORIGINAL INSTALLATION Notice of Intent Number:

Type of Well *("x in box)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. ALN-595

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2872

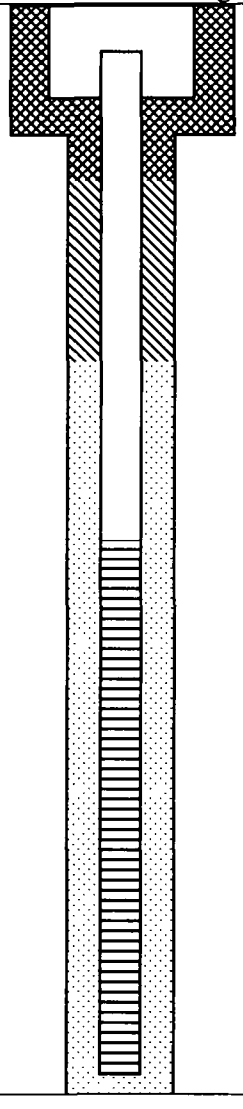
Tax Parcel No. 616120132001

Cased or Uncased Diameter 9" Static Level 6'

Work/Decommission Start Date 6-12-07

Work/Decommission Completed Date 6-12-07

If trainee, licensed driller's Signature and License Number:

Construction Design	Well Data	Formation Description
	MONUMENT TYPE: 8" flush mount CONCRETE SURFACE SEAL: 0'-2' ANNULAR SPACE: 6"x6' BACKFILL: 2'-4' TYPE: 3/8" bentonite chips PVC BLANK: 0'-5' SCREEN: 5'-15' SLOT SIZE: 0.010" TYPE: 2" sch 40 PVC SAND PACK: 4'-15' MATERIAL: 10/20 silica sand DRILLING METHOD: H.S.A. WELL DEPTH: 15' BORING DIAMETER: 9"	gray fine sand

SCALE: 1"= ____ PAGE 3 OF 6

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction
☐ Decommission

269833

ORIGINAL INSTALLATION Notice of Intent Number:

Type of Well *("x in box)*

☒ Resource Protection
☐ Geotech Soil Boring

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. ALN-594

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Min ____ Sec ____

Long Deg ____ Min ____ Sec ____

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2872

Tax Parcel No. 616120132001

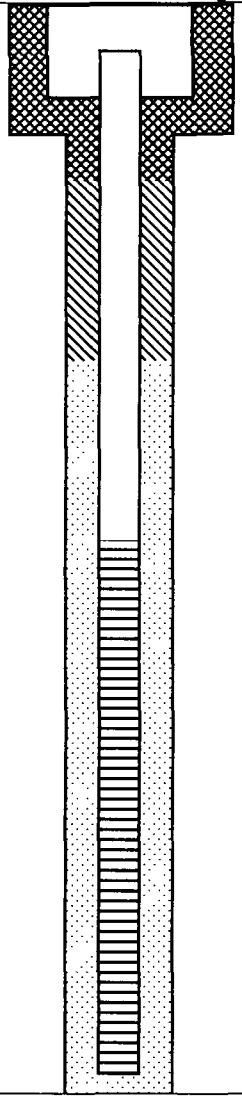
Cased or Uncased Diameter 9" Static Level 7'

Work/Decommission Start Date 6-12-07

Work/Decommission Completed Date 6-12-07

If trainee, licensed driller's Signature and License Number: Amos Harndon 2508

Construction Design



Well Data

MONUMENT TYPE: 8" flush mount

CONCRETE SURFACE SEAL: 0'-2'

ANNULAR SPACE: 6"x6'

BACKFILL: 2'-4'

TYPE: 3/8" bentonite chips

PVC BLANK: 0'-5'

SCREEN: 5'-15'

SLOT SIZE: 0.010"

TYPE: 2" sch 40 PVC

SAND PACK: 4'-15'

MATERIAL: 10/20 silica

DRILLING METHOD: H.S.A.

WELL DEPTH: 15'

BORING DIAMETER: 9"

Formation Description

gray fine sand

SCALE: 1"= ____ PAGE 2 OF 6

Please print, sign and return to the Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. R65242

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in box)*

☒ Construction
☐ Decommission

269832

ORIGINAL INSTALLATION Notice of Intent Number:

Type of Well *("x in box)*

☒ Resource Protection
☐ Geotech Soil Boring

Property Owner Port Of grays Harbor

Site Address 1680 N Montesano

Consulting Firm Sound Environmental Strategies

City Westport County Grays Harbor

Unique Ecology Well IDTag No. ALP-950

Location NE1/4-1/4 SE1/4 Sec 1 Twn 16N R 12W

EWM ☐ or WWM ☒

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Min _____ Sec _____

Long Deg _____ Min _____ Sec _____

Tax Parcel No. 616120132001

☐ Driller ☐ Engineer ☒ Trainee

Name (Print Last, First Name) Knopf, Noel

Driller/Engineer /Trainee Signature

Driller or Trainee License No. T2872

Cased or Uncased Diameter 9" Static Level 6'

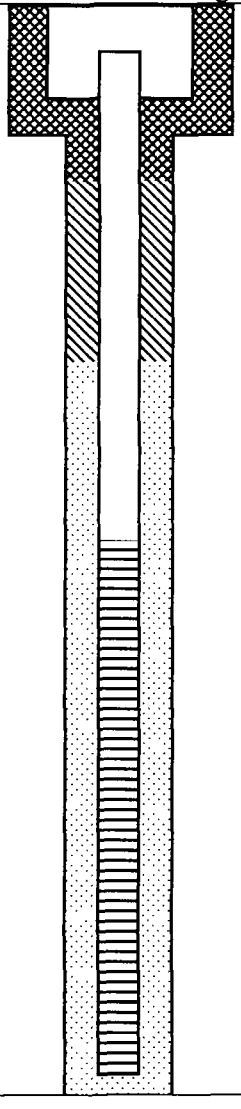
Work/Decommission Start Date 6-11-07

Work/Decommission Completed Date 6-11-07

If trainee, licensed driller's Signature and License Number:

Linda Harnden 2508

Construction Design



Well Data

MONUMENT TYPE: 8" flush mount

CONCRETE SURFACE SEAL: 0'-1'

ANNULAR SPACE: 6"x6'

BACKFILL: 1'-2' / 15'-24'

TYPE: slow release bent. pellets

PVC BLANK: 0'-3' / 13'-25'

SCREEN: 3'-13' / 25'-30'

SLOT SIZE: 0.010"

TYPE: 2" sch 40 PVC

SAND PACK: 2'-15' / 24'-30'

MATERIAL: 10/20 silica

DRILLING METHOD: H.S.A.

WELL DEPTH: 30'

BORING DIAMETER: 9"

Formation Description

gray fine sand

RECEIVED
AUG 0 8 2007
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

'07 AUG -6 A9:01
DEPT. OF ECOLOGY
FISCAL & BUDGET

SCALE: 1"= ____ PAGE 1 OF 6

Log of Exploratory Boring:

Notes
Skipped sample interval 14' to 15.5' bgs due to difficulty with heaving sand; begin sampling at 4-foot intervals. At 20' bgs sampling technique switches to direct push.

Drilling Co./Driller:	ESN
Drilling Method:	HSA / Direct Push
Location:	87.5' S and 30' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	30
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1										
2										
3	1 1 2	2,980	66		B-20-03		Fill	Damp, loose, fine- to medium-grained SAND, trace fine gravel, trace silt, light brown, moderate petroleum odor, 50% sheen.		
4										
5	1 1 2	1,690	66					Moist, loose, fine- to medium-grained SAND with intermittent silt layers, moderate hydrocarbon odor, 100% sheen.		
6										
7	1 1 1	1,677	66		B-20-07			Moist to very moist, loose, fine- to medium-grained SAND with silt, grayish-brown, moderate hydrocarbon odor, 80% sheen.	▽	
8										
9	1	2,502	33					Saturated, loose, fine- to medium-grained SAND with silt, grayish-brown, moderate hydrocarbon odor, sheen visible on core, 80% sheen.		
10										
11	1 3 2	483	33					Saturated, loose, fine- to medium-grained SAND with silt, grayish-brown, slight hydrocarbon odor, 0% sheen.		
12										
13	1 3 3	527	33				SP-SM	Saturated, loose, fine- to medium-grained SAND with silt, grayish-brown, slight hydrocarbon odor, 5% sheen.		
14										
15										
16										
17	2 3 3	100	33		B-20-17			Saturated, loose, fine- to medium-grained SAND with silt, grayish-brown, no hydrocarbon odor, 0% sheen.		
18										
19										
20										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/11/2007
Date Finished: 6/11/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
B20

Log of Exploratory Boring:

Notes
Skipped sample interval 14' to 15.5' bgs due to difficulty with heaving sand; begin sampling at 4-foot intervals. At 20' bgs sampling technique switches to direct push.

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Drilling Co./Driller:	ESN
Drilling Method:	HSA / Direct Push
Location:	87.5' S and 30' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	30
First GW Depth:	7.5

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
20–30		147	40				SP-SM	Moist to very moist, loose, fine- to medium-grained SAND with silt, grayish-brown, moderate hydrocarbon odor, 80% sheen. Saturated, loose, fine- to medium-grained SAND with silt, grayish-brown, no hydrocarbon odor, 0% sheen.		
25–30		49.9	50		B-20-28.5		SP	Saturated, loose, medium-grained SAND with trace silt, some coarse sand and fine gravel, trace organics, grayish-brown, no hydrocarbon odor, 0% sheen.		
30–40								Boring terminated at 30 feet below ground surface. 2-inch diameter monitoring well MW-20 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 3' - 13' and 25' - 30' bgs.		

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	HSA / Direct Push
Location:	77.5' S and 110 'E of north corner of building
Surface Condition:	Grass/gravel
Total Depth:	15
First GW Depth:	8

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1		1.9						Damp, loose, silty fine- to medium-grained SAND with trace fine gravel, reddish-brown, no hydrocarbon odor, 0% sheen.		
2			87.5							
3		1.6					Fill			
4								Glass fragments.		
5		2.0						Trace iron precipitation.		
6			100							
7								Moist to very moist, loose, fine- to medium-grained SAND, grayish-brown, no hydrocarbon odor.		
8		2.1			B-21-07.5			Saturated.	▽	
9										
10			75				SP-SM			
11										
12		1.3								
13										
14			100							
15		0.5						Boring terminated at 15 feet below ground surface. 2-inch diameter monitoring well MW-21 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 5' - 15' bgs.		
16										
17										
18										
19										
20										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/11/2007
Date Finished: 6/12/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
B21

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	12.5' S and 20' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	16
First GW Depth:	6

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Asphalt	Crushed asphalt and subbase.		
1		19.4						Damp to moist, loose, silty fine- to medium-grained SAND with intermittent silt layers, trace fine gravel, brown to reddish-brown, no hydrocarbon odor, 0% sheen.		
2			75							
3		20.8								
4							Fill	Moist to very moist, loose, fine- to medium-grained SAND with some silt and gravel, brown, no hydrocarbon odor, 0% sheen.		
5		6.8			B-22-05			Slight hydrocarbon odor.		
6			75					Wet, loose, fine- to medium-grained SAND with some silt, trace organics, grayish-brown, moderate hydrocarbon odor, 0% sheen.	▽	
7										
8		782						Wet, loose, fine- to medium-grained SAND with trace silt, grayish-brown, moderate hydrocarbon odor diminishing with depth, 0% sheen.		
9		764			B-22-09					
10			100							
11										
12		83.1			B-22-12		SP	Drillers had difficulty extricating liner from steel rod; poor sample integrity. Soil appears to be consistent with soil described above.		
13										
14		279	0							
15					B-22-15.5					
16		28.7	100					Saturated, loose, fine- to medium-grained SAND, no hydrocarbon odor, 0% sheen.		
17								Boring terminated at 16 feet below ground surface. 2-inch diameter monitoring well MW-22 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 5' - 15' bgs.		
18										
19										
20										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/12/2007
Date Finished: 6/12/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
B22

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	20' N and 15' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	15
First GW Depth:	4.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Asphalt	Crushed asphalt and subbase.		
1		5.4						Damp, loose, silty fine- to medium-grained SAND with trace fine gravel, reddish-brown, no hydrocarbon odor.		
2			75					Silt layer overlying wood debris. Damp, loose, fine- to medium-grained SAND, light brown, no hydrocarbon odor, 0% sheen.		
3		0.0					Fill			
4										
5		2.2			B-23-04.5			Moist to wet, loose, fine- to medium-grained SAND, slight petroleum odor. Black staining.	▽	
6			90					Very moist, soft, cohesive, SILT with trace clay, black, slight hydrocarbon odor.		
7								Wet, loose, fine- to medium-grained SAND with trace organics, grayish-brown, moderate hydrocarbon odor, 30% sheen.		
8		2,442			B-23-07.5					
9		2,338						Moderate hydrocarbon odor diminishing with depth.		
10			100				SP	0% sheen.		
11		63.0			B-23-11					
12								No hydrocarbon odor.		
13										
14			17							
15		8.6			B-23-15					
16								Boring terminated at 15 feet below ground surface. 2-inch diameter monitoring well MW-23 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 5' - 15' bgs.		
17										
18										
19										
20										

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/12/2007
Date Finished: 6/12/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
B23

Log of Exploratory Boring:

Notes
Inadvertently mis-labeled samples and wasn't able to sample bottom of boring.

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	62.5' S and 145' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	15
First GW Depth:	5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0–4		4.1	37.5				SP-SM	Damp, loose, fine- to medium-grained SAND with some silt, trace fine gravel, trace organics, brown, no hydrocarbon odor.		
4–5		2.4			B-24-04.5		SP	Moist to wet, loose, fine- to medium-grained SAND, trace iron precipitation, no hydrocarbon odor.	▽	
6			100					Wet to saturated, loose, fine- to medium-grained SAND, abundant iron precipitation, grayish-brown, no hydrocarbon odor.		
7								One-inch silt layer.		
8		0.4						Saturated.		
10			100							
12		0.2								
13–14			100							
15–20								Boring terminated at 15 feet below ground surface. 2-inch diameter monitoring well MW-24 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 5' - 15' bgs.		

SOUND ENVIRONMENTAL STRATEGIES
www.soundenvironmental.com

The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/12/2007
Date Finished: 6/13/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
B24

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	217.5' S and 7.5' E of north corner of building
Surface Condition:	Grass
Total Depth:	15
First GW Depth:	6.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Damp to moist, loose, fine- to medium-grained SAND, trace organics, brown, no hydrocarbon odor.		
1										
2			50							
3		0.8					Fill			
4					B-25-06			Moist to very moist, loose, fine- to medium-grained SAND, trace iron precipitation, brown to grayish-brown, no hydrocarbon odor.		
5								One-inch silt layer.		
6		0.3	75						▽	
7								One-inch silt layer.		
8							SP	Wet, loose, fine- to medium-grained SAND, grayish-brown,		
9								Saturated, loose, fine- to medium-grained SAND with some silt, brown, no hydrocarbon odor.		
10		1.1	100				SP-SM	Gray.		
11								Saturated, loose, fine- to medium-grained SAND, trace organics, gray, no hydrocarbon odor.		
12										
13			90				SP			
14										
15		1.7						Boring terminated at 15 feet below ground surface. 2-inch diameter monitoring well MW-25 installed as illustrated above-right, using 2-inch diameter PVC, 0.010 slot screen, 10-20 Colorado silica sand, bentonite chips, and concrete seal. Slot screen from 5' - 15' bgs.		
16										
17										
18										
19										
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 6/13/2007
Date Finished: 6/13/2007
Logged By: DMB
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SES Project No.: 0461-001-02
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BORING LOG
B25

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	21' from SE corner of building and 35' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	16
First GW Depth:	6.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Asphalt	Asphalt		
1								Moist FILL, hydrocarbon odor. Hydrocarbon staining.		
2			80							
		80			P01-02.5			Moist, fine- to medium-grained SAND, dark gray, hydrocarbon odor.		
3										
		118			P01-03.5		Fill			
4										
5										
6		216	75		P01-06					
7								Moist SILT with clay, dark gray, hydrocarbon odor, 10% sheen test at 6' bgs.	▽	
								Wet, fine- to medium-grained SAND, gray, hydrocarbon odor, rootlets.		
8										
								Becomes with silt trace gravel, dark gray to dark brown, hydrocarbon odor.		
9		2,874						Becomes dark gray, hydrocarbon odor becoming more organic with depth, 90% sheen at 9' bgs.		
10			100							
11							SP			
		357			P01-12					
12										
13										
14			0							
15										
		251								
16								Boring terminated at 16 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P01-20070426 collected from temporary screen at 5' to 8' bgs.		
17										
18										
19										
20										

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1680 North Montesano Street
Westport, Washington

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BORING LOG
P01

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	25' from SE corner of building and 34' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	6.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Asphalt		
1								Moist FILL, brown, hydrocarbon odor.		
2		209	85		P02-01.5			Moist, fine- to medium-grained SAND, dark gray, hydrocarbon odor, 0% sheen.		
3										
4		3,347					Fill			
5										
6			75							
7		1,660			P02-06.5			Wet, clayey SILT, dark gray, medium plasticity, hydrocarbon odor, 100% sheen.	▽	
8							SP	Wet, fine- to medium-grained SAND, dark gray, hydrocarbon odor.		
9		2,896						Wet, silty SAND with clay, dark gray, fine- to medium-grained, low plasticity, hydrocarbon odor.		
10			100				SM			
11										
12		281	75		P02-12					
13								Boring terminated at 12 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P02-20070426 collected from temporary screen set at 5' to 8' bgs.		
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P02

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	47' from SE corner of building and 38' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	6.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Asphalt		
1		77.3						Damp FILL, brown to dark brown, hydrocarbon odor, 0% sheen.		
2			75							
3		4,001			P03-03		Fill	Damp, silty SAND, gray, with gravel, hydrocarbon odor.		
4										
5										
6		4,484	75		P03-06			Moist, silty SAND with gravel, brown, hydrocarbon odor. Moist, fine- to medium-grained SAND, gray to dark gray, hydrocarbon odor.	▽	
7								Becomes wet, hydrocarbon odor becoming less dominant with depth.		
8										
9							SP			
10			100							
11										
12					P03-12					
13								Boring terminated at 12 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P03-20070426 collected from temporary screen set at 5' to 8' bgs.		
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P03

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	67' from SE corner of building and 28' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	16
First GW Depth:	6.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Asphalt		
1		979			P04-01			Moist FILL, brown, hydrocarbon odor.		
2			75							
3								Moist, SAND, gray, fine to medium grained, hydrocarbon odor.		
4		>4,600			P04-04		Fill			
5										
6		766	85		P04-06			Moist, clayey SILT, dark gray, medium plasticity, hydrocarbon odor, 0% sheen at 6' bgs.	▽	
7								Same as above, wet, trace gravel, sheen observed from 9' to 11' bgs, 100% sheen at 10' bgs.		
8		3,535								
9										
10		3,047	100							
11								Becomes black, hydrocarbon odor, less than 10% sheen at 10' bgs.		
12		230			P04-12			Limited recovery, liner blew in sampler, slight hydrocarbon odor.		
13										
14			5							
15										
16		136			P04-16					
17								Boring terminated at 16 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P04-20070426 collected from temporary screen set at 5' to 8' bgs.		
18										
19										
20										

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BORING LOG
P04

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	44' from SE corner of building and 11' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	5.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Asphalt		
1								Moist FILL, brown, slight hydrocarbon odor.		
2		1,141	95					Moist, fine- to medium-grained SAND, gray, hydrocarbon odor, 0% sheen at 2' bgs.	Mst	
3		3,516			P05-03		Fill			
4								Same as above, hydrocarbon odor, 100% sheen at 5' bgs.		
5		3,055							▽	
6			100					Moist, fine- to medium-grained SAND, dark gray, hydrocarbon odor, 90% sheen at 8' bgs.		
7										
8		3,333								
9					P05-09		SP			
10			100						Wet	
11								Becomes black, hydrocarbon odor, 0% sheen at 12' bgs.		
12		473			P05-12				Wet	
13								Boring terminated at 12 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P05-20070426 collected from temporary screen set at 5' to 8' bgs.		
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P05

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	91' from SE corner of building and 36' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	5.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0								Asphalt		
1		794						Moist FILL, brown, hydrocarbon odor, 0% sheen at 1' bgs.		
2			75					Moist, fine- to medium-grained SAND, gray, hydrocarbon odor, 60% sheen at 3' bgs.		
3		3,479			P06-03					
4							Fill	Same as above, 100% sheen at 6' bgs.		
5									▽	
6		3,046	90		P06-06					
7										
8		488			P06-08			Wet CLAY with silt, dark gray, medium plasticity, hydrocarbon odor, 10% sheen at 8' bgs.		
9		3,003			P06-09			Wet SAND, grey to dark gray, hydrocarbon odor, high organic content, 100% sheen at 9' bgs, 10% sheen at 12' bgs.		
10			95				SP			
11										
12		240			P06-12					
13								Boring terminated at 12 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P06-20070426 collected from temporary screen set at 5' to 8' bgs.		
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P06

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	19' from MW-14 and 48' from MW-13.
Surface Condition:	Unimproved Soil
Total Depth:	8
First GW Depth:	4.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Fill	Moist, fine- to medium-grained silty SAND, brown to dark brown, trace gravel, no hydrocarbon odor, organics material.		
1										
2		7.6	80		P07-02			Moist, fine- to medium-grained SAND, brown, no hydrocarbon odor.		
3										
4		8.1			P07-04		SP	Becomes gray to dark gray, hydrocarbon odor.	▽	
5										
6			90							
7										
8		35.9			P07-08					
9								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface. Groundwater sample P07-20070426 collected from temporary screen set at 4.5' to 7.5' bgs.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P07

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	15' from SE corner of building and 70' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	6

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Asphalt	Asphalt		
1								Moist FILL, dark brown, no hydrocarbon odor.		
2			75					Moist, fine- to medium-grained SAND, brown, no hydrocarbon odor.		
3		4.8			P08-03		Fill			
4								Same as above, hydrocarbon odor.		
5										
6		26.8	80		P08-05.5				▽	
7								Wet SILT with clay, dark gray, medium plasticity, hydrocarbon odor. Wet, fine- to medium-grained SAND gray, hydrocarbon odor, 100% sheen at 8' bgs.		
8		2,552								
9		2,607			P08-09		SP	Same as above, hydrocarbon odor less significant with depth, 60% sheen at 9' bgs, 0% sheen at 12' bgs, slight hydrocarbon odor at 12' bgs.		
10			100							
11										
12		99.7			P08-12					
13								Boring terminated at 12 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P08-20070426 collected from temporary screen set at 5' to 8' bgs.		
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P08

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	83' from SE corner of building and 67' from N corner of UST pad.
Surface Condition:	Asphalt
Total Depth:	8
First GW Depth:	5.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							Asphalt	Asphalt		
1							FILL	Moist FILL, brown, hydrocarbon odor.		
2			80		P09-02.5			Moist, fine- to medium-grained SAND, gray, hydrocarbon odor.		
3										
4										
5		2,732			P09-05		SP		▽	
6			85					Becomes wet, hydrocarbon odor.		
7										
8		2,708			P09-08					
9										
10								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater was not sampled due to time constraints.		
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P09

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	52.5' N and 5' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	12
First GW Depth:	7

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1								Damp gravelly SAND and SILT, reddish-brown, no hydrocarbon odor (FILL).		
2			62.5				Fill	Damp, fine- to medium-grained SAND, light brown, with trace coarse-grained sand, trace fine gravel, no hydrocarbon odor.		
3		0.0								
4										
5								Moist to very moist, fine- to medium-grained SAND, light-brown to reddish-brown, no hydrocarbon odor.		
6			75							
7		5.4			P-10-07				▽	
8					P-10-10		SP	Becomes wet, gray, slight hydrocarbon odor.		
9								Saturated, slight hydrocarbon odor diminishing with depth.		
10		50.9	75							
11										
12		5.0			P-10-12					
13								Boring terminated at 12 feet bgs. A temporary well screen was installed and removed. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
14										
15										
16										
17										
18										
19										
20										

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1680 North Montesano Street
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BORING LOG
P10

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	202.5' S and 45' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	10
First GW Depth:	10

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							Fill	Moist GRAVEL and SAND with some silt, brown, no hydrocarbon odor (FILL).		
2			87.5					Moist, fine-grained SAND, light brown, moderate hydrocarbon odor.		
3										
4		1,990			P11-04			Very moist, grayish-brown, strong hydrocarbon odor.		
5										
6			100				SP	Silt lens.		
7		911			P11-07					
8										
9			100							
10		37.3			P11-10			Becomes wet.	▽	
11								Boring terminated at 10 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P11-20071002 collected from temporary screen set at 7' to 10' bgs.		
12										
13										
14										
15										
16										
17										
18										
19										
20										

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BORING LOG
P11

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	160' S and 7.5' E of north corner of building
Surface Condition:	Asphalt
Total Depth:	8
First GW Depth:	None encountered

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							FILL	Moist GRAVEL and SAND with some silt, dark brown, moderate hydrocarbon odor (FILL).		
2			75					Moist, loose, fine-grained SAND, light brown, strong hydrocarbon odor.		
3		2,449			P12-03					
4					P12-06					
5							SP			
6		>2,500	75							
7								Silt lens.		
8		1,872			P12-08					
9								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P12

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	110' S and 37.5' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	10
First GW Depth:	9

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							FILL	Moist GRAVEL and SAND with some silt, dark brown, slight hydrocarbon odor (FILL).		
2			75					Moist, loose, fine-grained SAND, grayish-brown, strong hydrocarbon odor.		
3		1,774			P13-03					
4					P13-06					
5										
6		2,131	87.5				SP			
7										
8										
9			100					Moist to wet, moderate hydrocarbon odor.	▽	
10		79.2			P13-10					
11								Boring terminated at 10 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
12										
13										
14										
15										
16										
17										
18										
19										
20										

SOUND ENVIRONMENTAL STRATEGIES
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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P13

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	155' S and 22.5' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	10
First GW Depth:	8

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							FILL	Damp GRAVEL and SAND with some silt, light brown, no hydrocarbon odor (FILL).		
2			100					Damp, loose, very fine-grained SAND, light brown, no hydrocarbon odor.		
3										
4		0.8								
5								Damp to moist, very fine- to fine-grained SAND, grayish-brown, slight hydrocarbon odor.		
6			100				SP			
7		16.9			P14-07					
8									▽	
9			100					Becomes wet, fine-grained, slight hydrocarbon odor.		
10		34.3								
11								Boring terminated at 10 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P14-20071002 collected from temporary screen set at 7' to 10' bgs.		
12										
13										
14										
15										
16										
17										
18										
19										
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P14

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	65' S and 75' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	8
First GW Depth:	None encountered

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							FILL	Moist GRAVEL and SAND with some silt, light brown, moderate hydrocarbon odor (FILL).		
1								Black staining.		
2			87.5					Damp, loose, very fine- to fine-grained SAND, trace fine gravel, light brown, moderate to strong hydrocarbon odor.		
3		2,194			P15-03					
4					P15-06					
5							SP			
6		>2,500	100							
7										
8		112			P15-08			Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
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SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P15

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	22.5' S and 75' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	8
First GW Depth:	None encountered

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							FILL	Moist GRAVEL and SAND with some silt, light to dark brown, no hydrocarbon odor (FILL).		
2			87.5							
3		14.7			P16-03			Damp, loose, fine-grained SAND with some very fine-grained sand, light grayish-brown, moderate hydrocarbon odor.		
4					P16-06			Silt lens, strong hydrocarbon odor.		
5							SP	Becomes moist, fine-grained, strong hydrocarbon odor.		
6		2,050	87.5							
7										
8		200			P16-08					
9								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P16

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	12.5' N and 47.5' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	10
First GW Depth:	

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							FILL	Moist GRAVEL and SAND with some silt, bright brown to reddish-brown, no hydrocarbon odor (FILL).		
2			87.5					Damp, loose, fine-grained SAND with some very fine-grained sand, brown, no hydrocarbon odor.		
3		0.0								
4								Becomes very moist, no hydrocarbon odor.		
6			100				SP	Silt lens and trace rootlets, gray, slight hydrocarbon odor.		
7		47.4			P17-07					
8								No hydrocarbon odor.		
9			100							
10		0.0						Boring terminated at 10 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P17

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	50' N and 20' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	8
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0							FILL	Moist GRAVEL and SAND with some silt, light brown to reddish-brown, no hydrocarbon odor (FILL).		
1										
2			87.5					Damp, loose, fine-grained SAND, light brown, no hydrocarbon odor.		
3		0.0								
4							SP	Becomes moist, brown, no hydrocarbon odor.		
5		0.0								
6			87.5							
7									▽	
8		0.0			P18-08			Becomes wet, gray, slight hydrocarbon odor.		
9								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P18-20071002 collected from temporary screen set at 5' to 8' bgs.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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SES Project No.: 0461-001-02
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BORING LOG
P18

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	7.5' S and 87.5' W of north corner of building
Surface Condition:	Asphalt
Total Depth:	9
First GW Depth:	7.5

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0–1							FILL	Moist GRAVEL and SAND with some silt, brown, no hydrocarbon odor (FILL).		
2			87.5					Damp, loose, fine-grained SAND, light brown, no hydrocarbon odor.		
3		1.8			P19-03			Silt lenses, becoming gray, slight hydrocarbon odor.		
4					P19-06			Becomes moist, gray, very slight hydrocarbon odor.		
5							SP			
6		0.0	87.5							
7									▽	
8								Becomes wet, no hydrocarbon odor.		
9		0.0	100							
10								Boring terminated at 9 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P19-20071002 collected from temporary screen set at 6' to 9' bgs.		
11–20										

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SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P19

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	17.5' N and 100' E of north corner of building
Surface Condition:	Gravel
Total Depth:	10
First GW Depth:	8

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1							FILL	Moist silty SAND with gravel, reddish-brown, no hydrocarbon odor (FILL).		
2			87.5					Moist, loose, fine-grained SAND, brown, no hydrocarbon odor.		
3		0.0								
4										
5										
6			100				SP			
7		0.0			P20-07			Becomes wet, silt lens, no hydrocarbon odor.		
8									▽	
9			100							
10		0.0						Boring terminated at 10 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal. Groundwater sample P20-20071002 collected from temporary screen set at 7' to 10' bgs.		
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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The Hungry Whale
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P20

Log of Exploratory Boring:

Notes

Drilling Co./Driller:	ESN
Drilling Method:	Geoprobe
Location:	115' S and 100' E of north corner of building
Surface Condition:	Gravel
Total Depth:	8
First GW Depth:	

Moisture Content:
Dry = Dry, Dp = Damp, Mst = Moist, Wet = Wet

Hydrocarbon Odor: NO = no odor, VFO = very faint odor
WO = weak odor, MO = moderate odor, SO = strong odor

Water Levels
▼ After Completion
▽ During Drilling

Depth (feet)	Blow Count	PID	Sample Recovery	Sample Interval	Sample ID	Lithography	USCS Class	Description	Moisture Content	Well Detail
0										
1								Moist, loose, fine-grained SAND with some very fine-grained sand, brown, no hydrocarbon odor.		
2			75							
3		0.0								
4					P21-06		SP			
5								Same as above, no hydrocarbon odor.		
6		0.0	87.5							
7										
8		0.0								
9								Boring terminated at 8 feet bgs. Boring backfilled with bentonite and completed flush to surface with an asphalt seal.		
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

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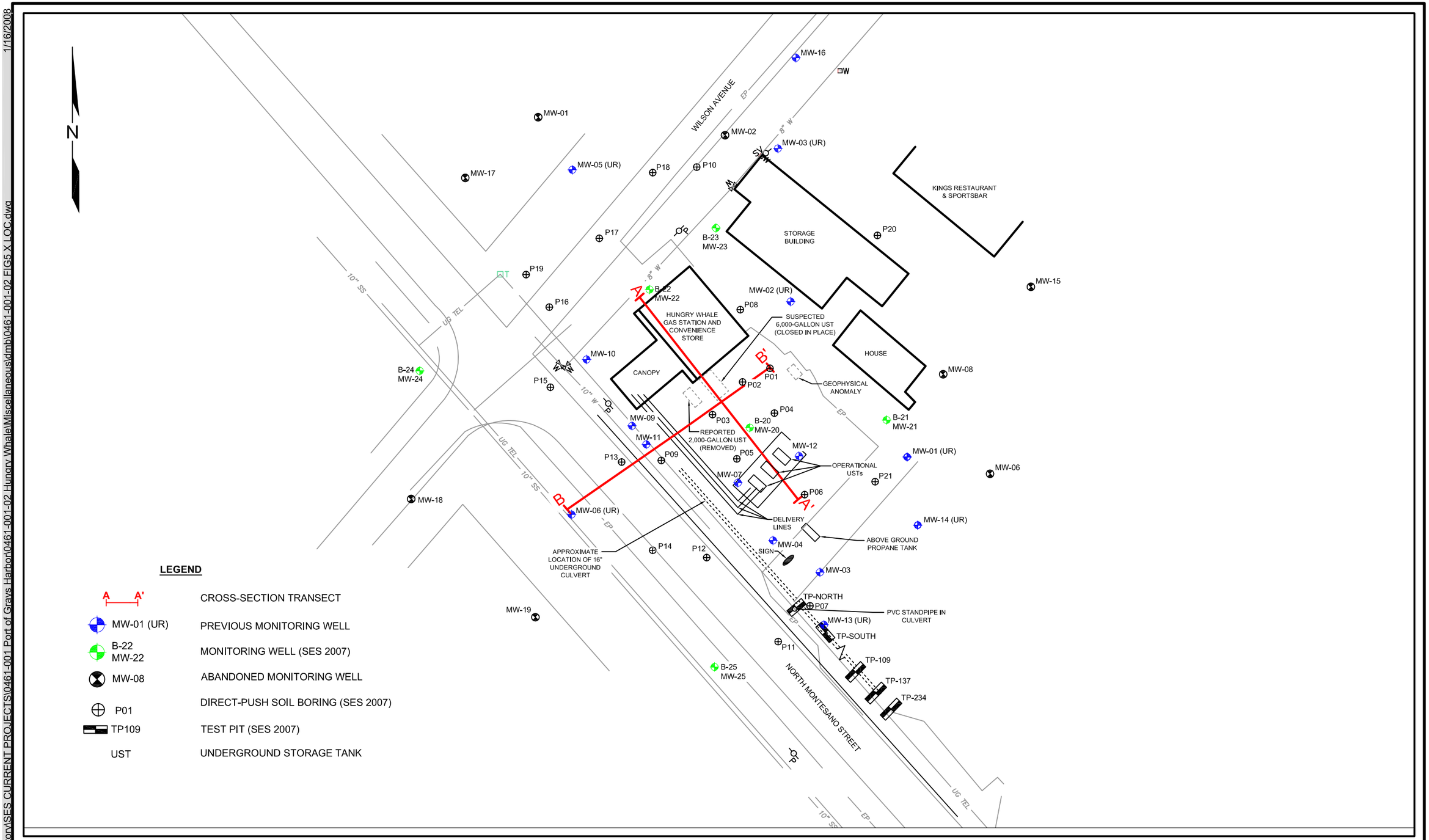
1680 North Montesano Street
Westport, Washington

Date Started: 10/2/2007
Date Finished: 10/2/2007
Logged By: DMB
Chk By: RKB
SES Project No.: 0461-001-02
File ID.: F:\SES GINT\PROJECTS\0461-001-02 HUNGRY WHALE.GPJ

BORING LOG
P21

APPENDIX E

Geologic Cross-Sections



LEGEND

A — A'	CROSS-SECTION TRANSECT
MW-01 (UR)	PREVIOUS MONITORING WELL
B-22 MW-22	MONITORING WELL (SES 2007)
MW-08	ABANDONED MONITORING WELL
P01	DIRECT-PUSH SOIL BORING (SES 2007)
TP109	TEST PIT (SES 2007)
UST	UNDERGROUND STORAGE TANK

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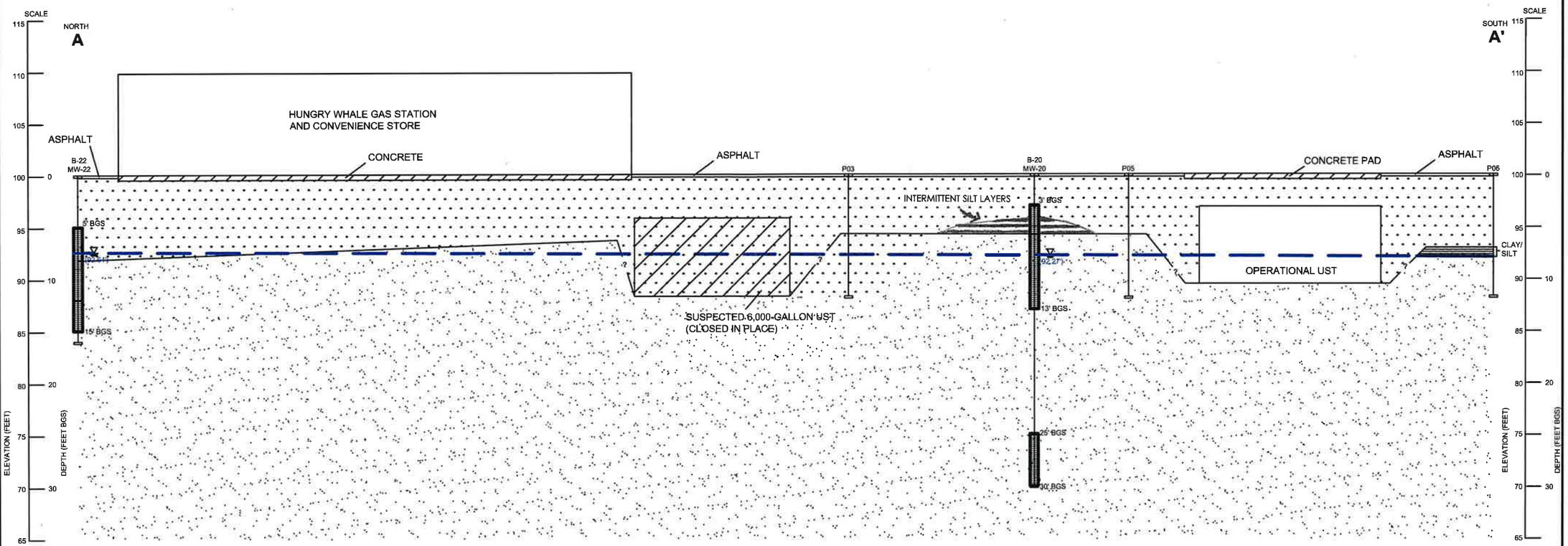
DATE: 01/08/08
DRAWN BY: BLR
CHECKED BY: RKB
CAD FILE: 0461-001-02 FIG5 X LOC

PROJECT NAME: THE HUNGRY WHALE
SES PROJECT NUMBER: 0461-001-02
STREET ADDRESS: 1680 NORTH MONTESANO STREET
CITY, STATE: WESTPORT, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET 1" = 50'

FIGURE 5
CROSS-SECTION LOCATION MAP



LEGEND

- 5' BGS / 15' BGS — SCREENED INTERVAL
- (92.64') — WATER TABLE ELEVATION (JUNE 27, 2007)
- FILL UNIT: GENERALLY CONSISTS OF LIGHT TO DARK BROWN OR REDDISH-BROWN FINE- TO MEDIUM-GRAINED SAND WITH VARIABLE AMOUNTS OF GRAVEL AND SILT.
- INTERMITTENT SILT OR CLAYEY SILT LAYERS (INTERPRETED TO BE DREDGED MARSH/TIDAL DEPOSITS) FREQUENTLY OBSERVED NEAR THE BASE OF THE FILL UNIT AT ON-PROPERTY LOCATIONS.
- NATIVE SAND: GENERALLY CONSISTS OF POORLY GRADED FINE- TO MEDIUM-GRAINED SAND WITH AN ESTIMATED SILT CONTENT OF 5 TO 15% BY VOLUME.

UST — UNDERGROUND STORAGE TANK

BGS — BELOW GROUND SURFACE

NOTE: ELEVATIONS PRESENTED ARE BASED ON AN ON-PROPERTY DATUM ASSIGNED AN ARBITRARY ELEVATION OF 100.00 FEET.

B-20 / MW-20 — SOIL BORING AND MONITORING WELL

P03 — DIRECT-PUSH SOIL BORING

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DATE: 01/09/08
DRAWN BY: BLR
CHECKED BY: RKB
CAD FILE: 0461-001-02 FIG6 XAA

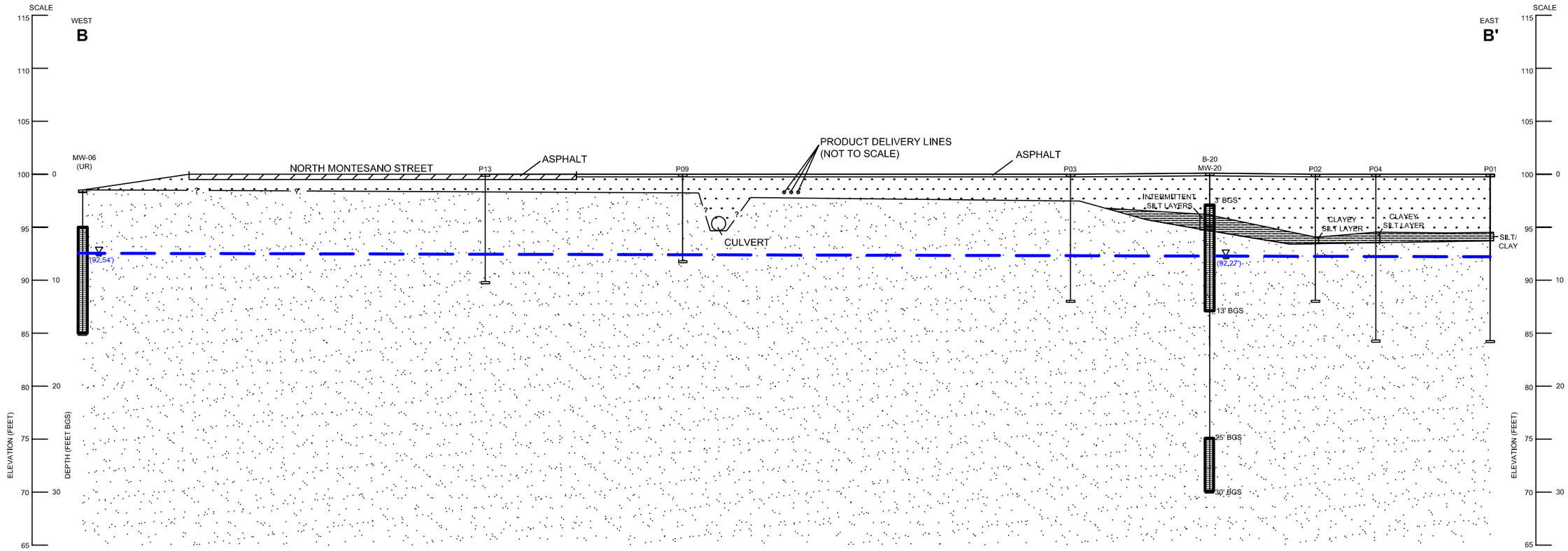
PROJECT NAME: THE HUNGRY WHALE
SES PROJECT NUMBER: 0461-001-02
STREET ADDRESS: 1680 NORTH MONTESANO STREET
CITY, STATE: WESTPORT, WASHINGTON

REGION:

0 5 10 20
APPROXIMATE SCALE IN FEET 1" = 10'

FIGURE 6
CROSS-SECTION A - A'

\\Sound-doises\director\SES CURRENT PROJECTS\0461-001 Port of Grays Harbor\0461-001-02 Hungry Whale\Miscellaneous\dmb\0461-001-02 FIG6 XAA.dwg 1/16/2008



LEGEND

25' BGS / 30' BGS — SCREENED INTERVAL

(92.54') — WATER TABLE ELEVATION (JUNE 27, 2007)

FILL UNIT: GENERALLY CONSISTS OF LIGHT TO DARK BROWN OR REDDISH-BROWN FINE- TO MEDIUM-GRAINED SAND WITH VARIABLE AMOUNTS OF GRAVEL AND SILT.

INTERMITTENT SILT OR CLAYEY SILT LAYERS (INTERPRETED TO BE DREDGED MARSH/TIDAL DEPOSITS) FREQUENTLY OBSERVED NEAR THE BASE OF THE FILL UNIT AT ON-PROPERTY LOCATIONS.

NATIVE SAND: GENERALLY CONSISTS OF POORLY GRADED FINE-TO-MEDIUM-GRAINED SAND WITH AN ESTIMATED SILT CONTENT OF 5 TO 15% BY VOLUME.

BGS — BELOW GROUND SURFACE

NOTE: ELEVATIONS PRESENTED ARE BASED ON AN ON-PROPERTY DATUM ASSIGNED AN ARBITRARY ELEVATION OF 100.00 FEET.

B-20 / MW-20 — SOIL BORING AND MONITORING WELL

P03 — DIRECT-PUSH SOIL BORING

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DATE: 01/09/2008
DRAWN BY: JQC
CHECKED BY: RKB
CAD FILE: 0461-001-02 FIG7 XBB

PROJECT NAME: THE HUNGRY WHALE
SES PROJECT NUMBER: 0461-001-02
STREET ADDRESS: 1680 NORTH MONTESANO STREET
CITY, STATE: WESTPORT, WASHINGTON

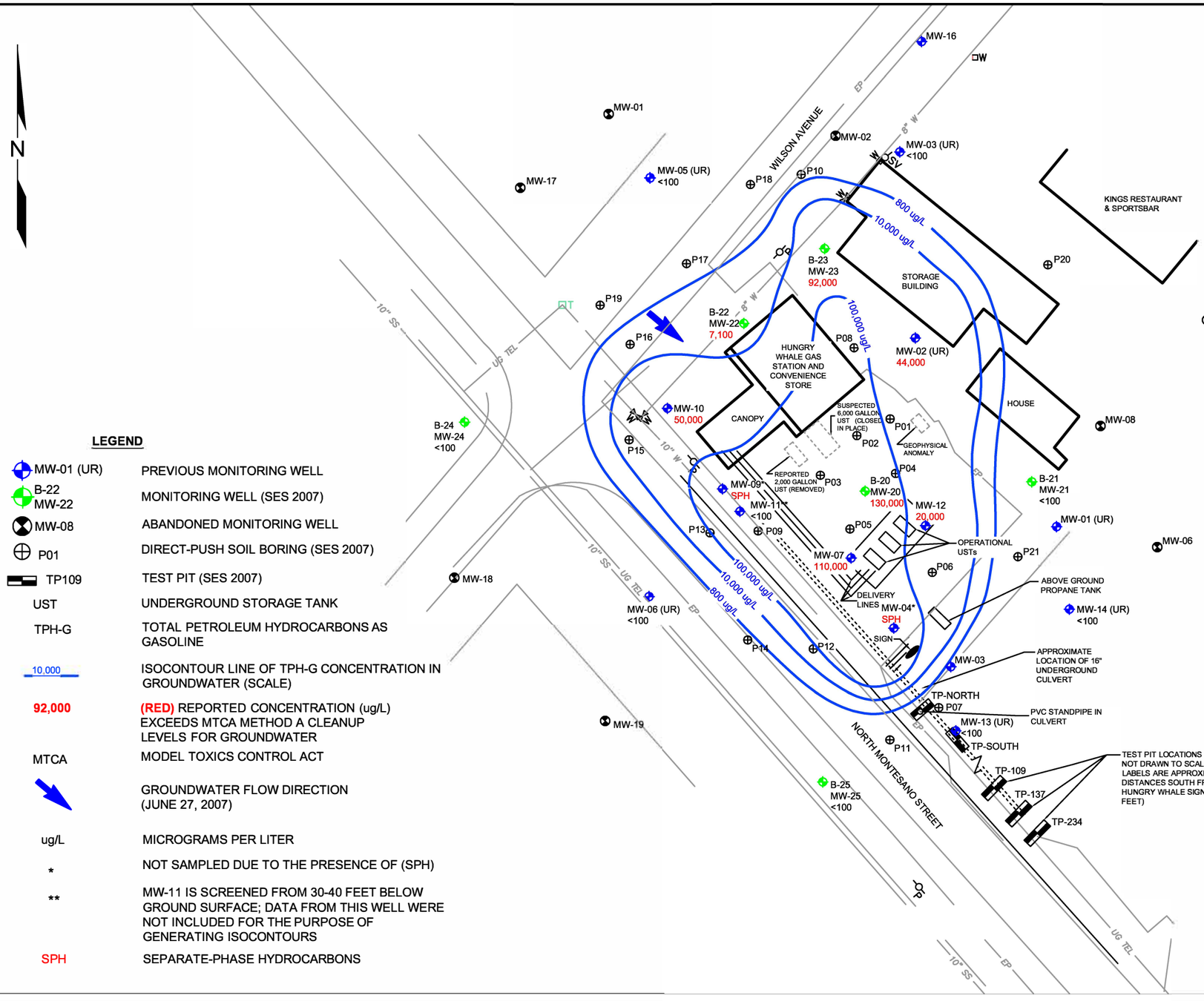
REGION:

0 5 10 20
APPROXIMATE SCALE IN FEET 1" = 10'

FIGURE 7
CROSS-SECTION B - B'

APPENDIX F

Groundwater Isoconcentration Maps



LEGEND

MW-01 (UR)	PREVIOUS MONITORING WELL
B-22 MW-22	MONITORING WELL (SES 2007)
MW-08	ABANDONED MONITORING WELL
P01	DIRECT-PUSH SOIL BORING (SES 2007)
TP109	TEST PIT (SES 2007)
UST	UNDERGROUND STORAGE TANK
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
10,000	ISOCONTOUR LINE OF TPH-G CONCENTRATION IN GROUNDWATER (SCALE)
92,000	**(RED)** REPORTED CONCENTRATION (ug/L) EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER
MTCA	MODEL TOXICS CONTROL ACT
	GROUNDWATER FLOW DIRECTION (JUNE 27, 2007)
ug/L	MICROGRAMS PER LITER
*	NOT SAMPLED DUE TO THE PRESENCE OF (SPH)
**	MW-11 IS SCREENED FROM 30-40 FEET BELOW GROUND SURFACE; DATA FROM THIS WELL WERE NOT INCLUDED FOR THE PURPOSE OF GENERATING ISOCONTOURS
SPH	SEPARATE-PHASE HYDROCARBONS

Well ID	Sample Date	TPH-G
MW-01(UR)	Not located	--
MW-02(UR)	06/27/07	**44,000**
MW-03	06/27/07	<100
MW-04	06/27/07	**SPH**
MW-05(UR)	06/27/07	<100
MW-06(UR)	06/27/07	<100
MW-07	06/27/07	**110,000**
MW-09	06/27/07	**SPH**
MW-10	06/27/07	**50,000**
MW-11	06/27/07	<100
MW-12	06/27/07	**20,000**
MW-13(UR)	06/27/07	<100
MW-14(UR)	06/27/07	<100
MW-16	Not located	--
MW-20	06/27/07	**130,000**
MW-21	06/27/07	<100
MW-22	06/27/07	**7,100**
MW-23	06/27/07	**92,000**
MW-24	06/27/07	<100
MW-25	06/27/07	<100
MTCA Method A Cleanup Levels		1,000/800

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DATE: 01/08/08
DRAWN BY: .....BLR
CHECKED BY: .....RKB
CAD FILE: .....0461-001-02 FIG14 GD TPHG

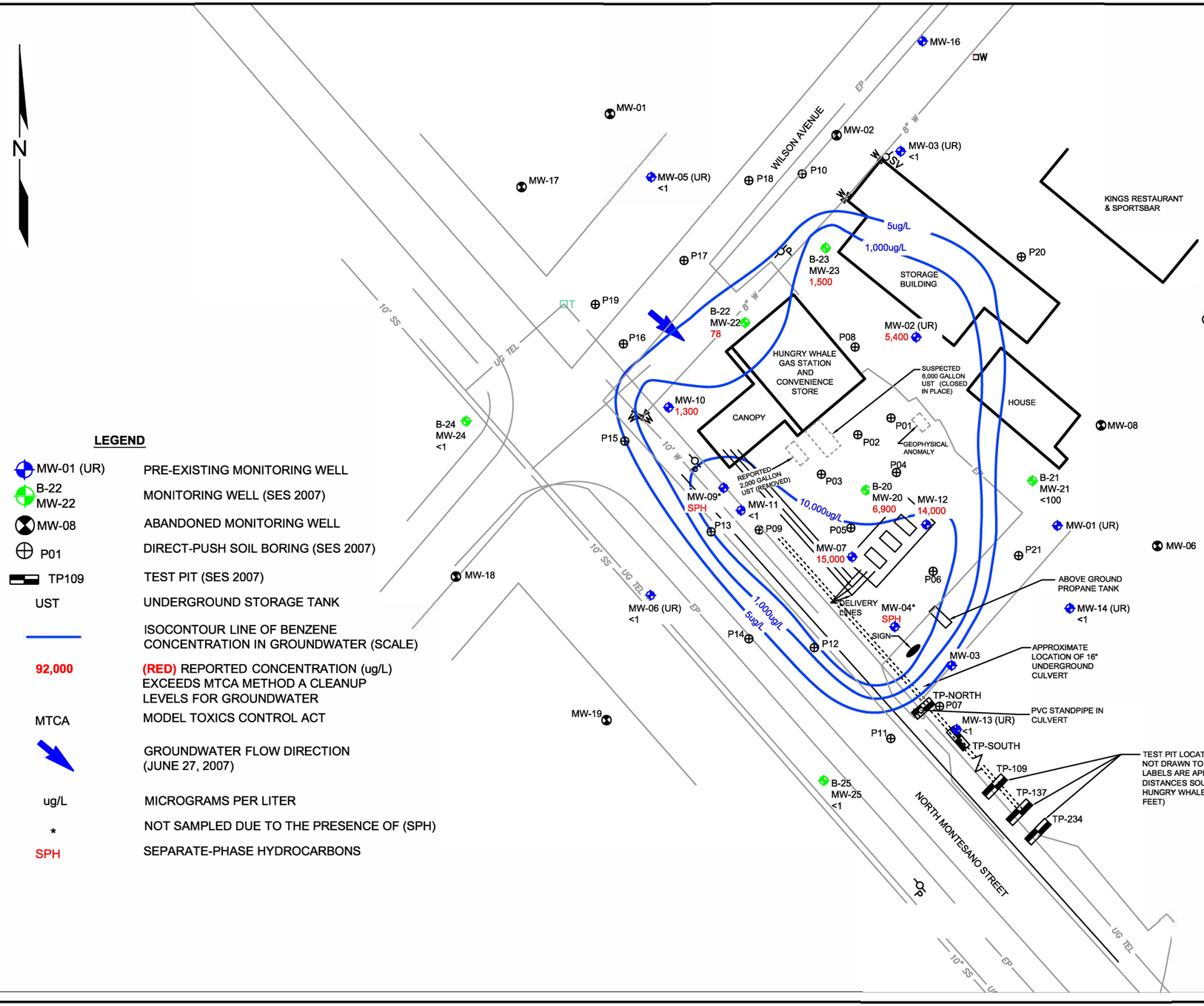
PROJECT NAME: .....THE HUNGRY WHALE
SES PROJECT NUMBER:.....0461-001-02
STREET ADDRESS:.....1680 NORTH MONTESANO STREET
CITY, STATE:.....WESTPORT, WASHINGTON

REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET 1" = 50'

FIGURE F1
ISOCONCENTRATION MAP FOR TPH-G IN GROUNDWATER WELLS (SES' JUNE 2008 RIFS FIGURE 14)

\\Sound-dc\sesdirectory\SES CURRENT PROJECTS\0461-001 Port of Grays Harbor\0461-001-02 Hungry Whale\Miscellaneous\dmb\0461-001-02 FIG14 GD TPHG.dwg 1/16/2008



LEGEND

MW-01 (UR)	PRE-EXISTING MONITORING WELL
B-22 MW-22	MONITORING WELL (SES 2007)
MW-08	ABANDONED MONITORING WELL
P01	DIRECT-PUSH SOIL BORING (SES 2007)
TP109	TEST PIT (SES 2007)
UST	UNDERGROUND STORAGE TANK
	ISOCONTOUR LINE OF BENZENE CONCENTRATION IN GROUNDWATER (SCALE)
92,000	**(RED)** REPORTED CONCENTRATION (ug/L) EXCEEDS MTCA METHOD A CLEANUP LEVELS FOR GROUNDWATER
MTCA	MODEL TOXICS CONTROL ACT
	GROUNDWATER FLOW DIRECTION (JUNE 27, 2007)
ug/L	MICROGRAMS PER LITER
*	NOT SAMPLED DUE TO THE PRESENCE OF (SPH)
SPH	SEPARATE-PHASE HYDROCARBONS

Well ID	Sample Date	Benzene
MW-01(UR)	Not located	--
MW-02(UR)	06/27/07	**5,400**
MW-03	06/27/07	<1
MW-04	06/27/07	**SPH**
MW-05(UR)	06/27/07	<1
MW-06(UR)	06/27/07	<1
MW-07	06/27/07	**15,000**
MW-09	06/27/07	**SPH**
MW-10	06/27/07	**1,300**
MW-11	06/27/07	<1
MW-12	06/27/07	**14,000**
MW-13(UR)	06/27/07	<1
MW-14(UR)	06/27/07	<1
MW-16	Not located	--
MW-20	06/27/07	**6,900**
MW-21	06/27/07	<1
MW-22	06/27/07	**78**
MW-23	06/27/07	**1,500**
MW-24	06/27/07	<1
MW-25	06/27/07	<1
MTCA Method A Cleanup Levels		5

SOUND ENVIRONMENTAL STRATEGIES
SOUNDENVIRONMENTAL.COM

DATE: 05/05/08
DRAWN BY: .....BLR/NAC
CHECKED BY: .....RKB
CAD FILE: .....0461-001-02 FIG15 GD BENZ

PROJECT NAME: .....THE HUNGRY WHALE
SES PROJECT NUMBER: 0461-001-02
STREET ADDRESS: .....1680 NORTH MONTESANO STREET
CITY, STATE: .....WESTPORT, WASHINGTON

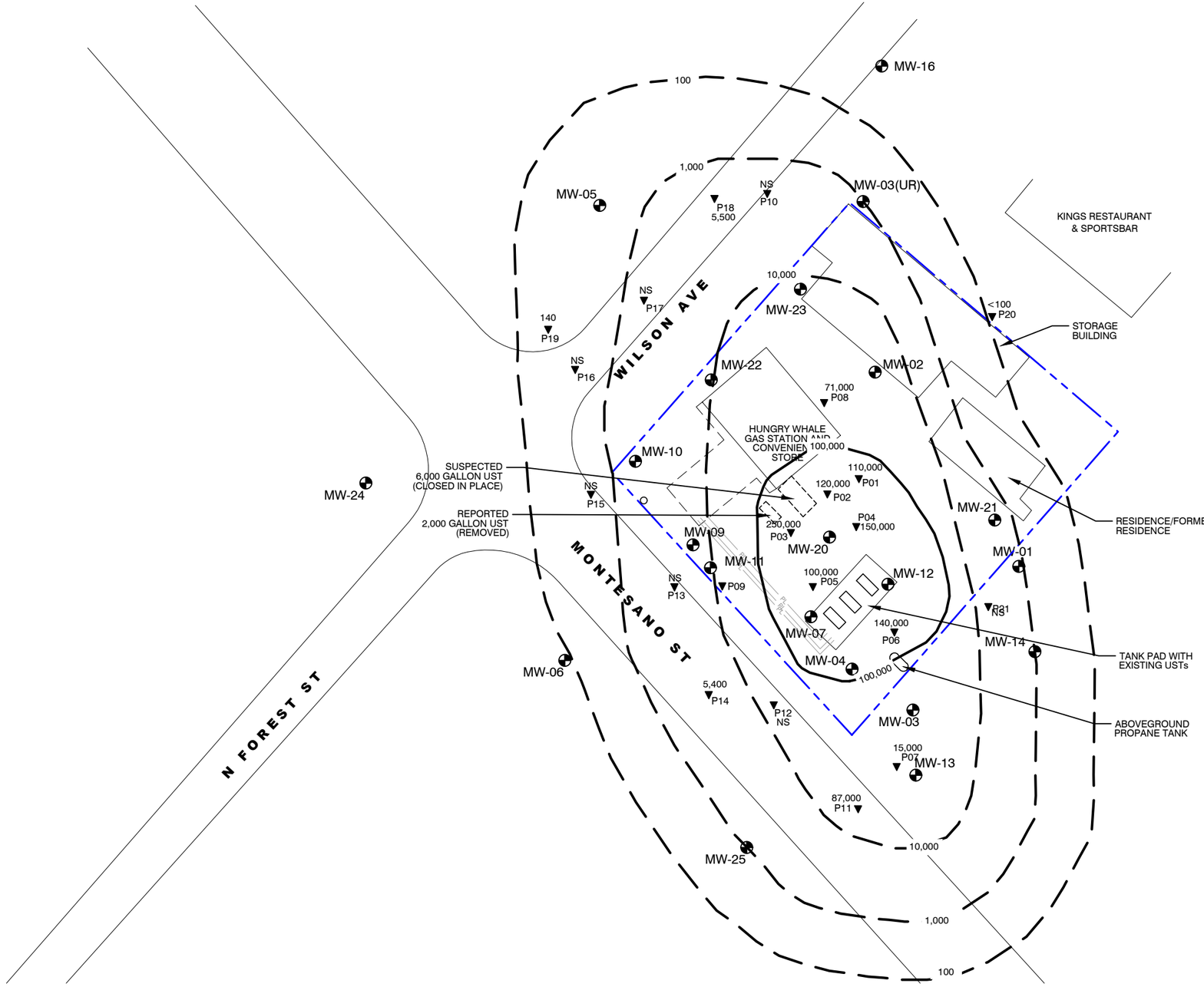
REGION:

0 25 50 100
APPROXIMATE SCALE IN FEET 1" = 50'

FIGURE F2
ISOCONCENTRATION MAP FOR BENZENE IN GROUNDWATER WELLS (SES' JUNE 2008 RIFS FIGURE 15)

P:\0461-001 Port of Grays Harbor\0461-001-02 Hungry Whale\Miscellaneous\dmb\0461-001-02 FIG15 GD BENZ.dwg 5/7/2008

SOUNDENVIRONMENTAL.COM



LEGEND

- MW-1 ⊕ — MONITORING WELL/BORING EXISTING IN (2007)
- P01 ▼ — SOIL BORING (DIRECT PUSH, 2007)
- LEASEHOLD BOUNDARY
- PL — STATION FUEL/PRODUCT LINE
- 10,000 — TPH-G ISOCONCENTRATION CONTOUR; DATA IN MICROGRAMS PER LITER (µg/L), "GRAB" SAMPLES FROM P01 TO P21
- NS — NOT SAMPLED (@ P09, P10, P12, P13, P15 P16, P17 + P21)

N

0 50 100

APPROXIMATE SCALE IN FEET

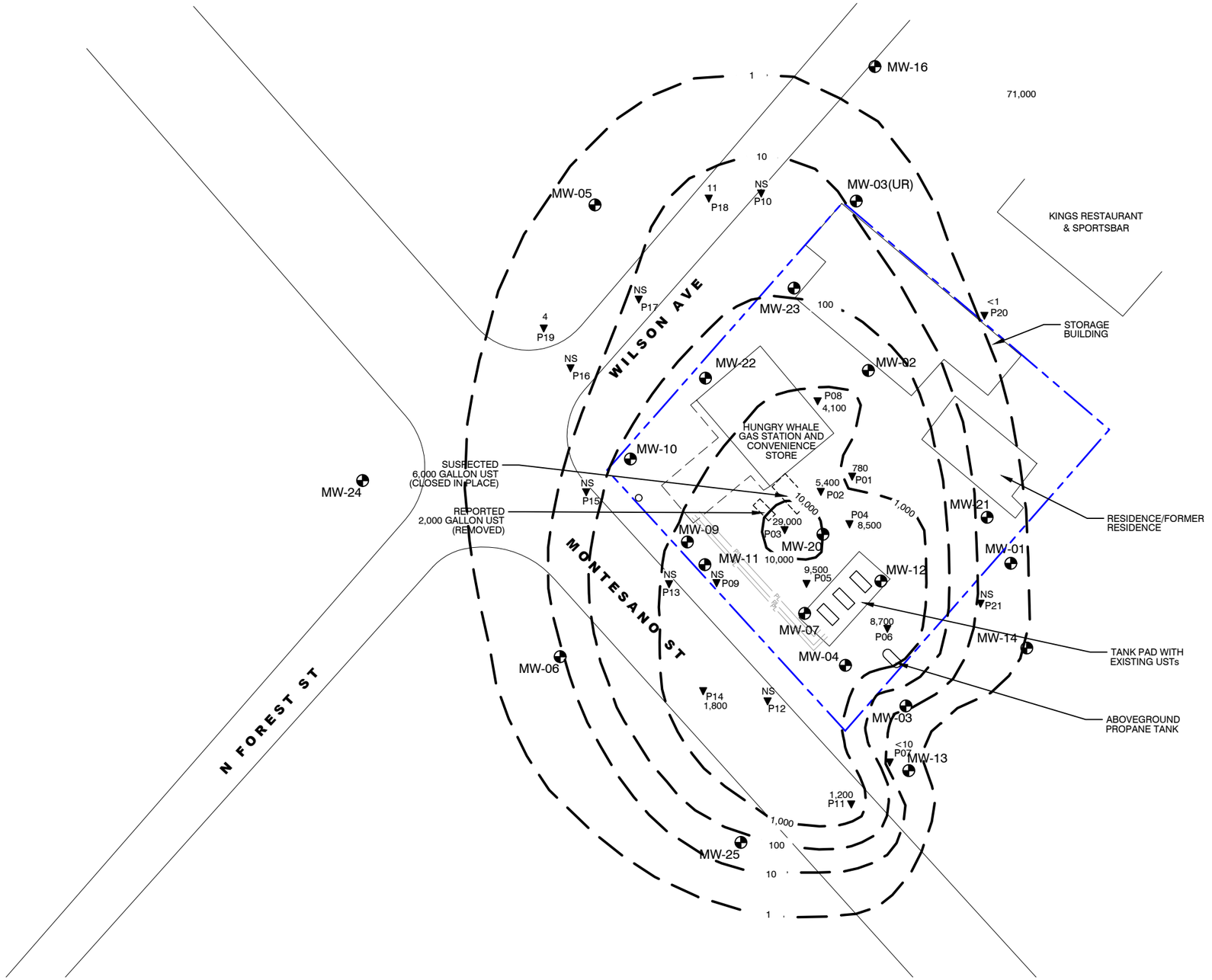
Stantec
11130 NE 33RD PLACE, SUITE 200
BELLEVUE, WASHINGTON
PHONE: (425) 869-9448 FAX: (425) 869-1190

FOR:
THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

TPH-G IN GROUNDWATER "GRAB" SAMPLES: APRIL 2007 AND OCT. 2007

FIGURE: **F3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	SCL	CBS	MS	OCT 2018



LEGEND

MW-1 ⊕	MONITORING WELL/BORING EXISTING IN (2007)
P01 ▼	SOIL BORING (DIRECT PUSH, 2007)
— — —	LEASEHOLD BOUNDARY
PL	STATION FUEL/PRODUCT LINE
100	BENZENE ISOCONCENTRATION CONTOUR DATA IN MICROGRAMS PER LITER (µg/L), "GRAB" SAMPLES FROM P01 TO P21
NS	NOT SAMPLED (@ P09, P10, P12, P13, P15 P16, P17 + P21)

Stantec
11130 NE 33RD PLACE, SUITE 200
BELLEVUE, WASHINGTON
PHONE: (425) 869-9448 FAX: (425) 869-1190

FOR:
THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

BENZENE IN GROUNDWATER "GRAB" SAMPLES: APRIL 2007 AND OCT. 2007

FIGURE: **F4**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	SCL	CBS	MS	OCT 2018

FILEPATH:D:\2018_US\Hungry Whale\Input\NOV\HungryWhale-2017.dwg | Layout Tab: FIG-3 BENZENE | Drafter: slokhande | Nov 14, 2018 at 19:18

APPENDIX G

Terrestrial Ecological Evaluation (TEE)

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation.

Step 1: IDENTIFY HAZARDOUS WASTE SITE	
Please identify below the hazardous waste site for which you are documenting an evaluation.	
Facility/Site Name: Hungry Whale Grocery	
Facility/Site Address: 1680 North Montesano Street, Westport, WA 98595	
Facility/Site No: 1127	VCP Project No.:

Step 2: IDENTIFY EVALUATOR		
Please identify below the person who conducted the evaluation and their contact information.		
Name: Kristi Rettmann		Title: Project Scientist
Organization: Stantec Consulting Services Inc.		
Mailing address: 11130 NE 33rd Place, Suite 200		
City: Bellevue	State: WA	Zip code: 98004-1465
Phone: (425)289-7338	Fax: (425)869-1190	E-mail: kristi.rettmann@stantec.com

Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

A. Exclusion from further evaluation.

1. Does the Site qualify for an exclusion from further evaluation?

☑ Yes *If you answered **"YES,"** then answer **Question 2**.*

☐ No or Unknown *If you answered **"NO" or "UNKNOWN,"** then skip to **Step 3B** of this form.*

2. What is the basis for the exclusion? *Check all that apply. Then skip to **Step 4** of this form.*

Point of Compliance: WAC 173-340-7491(1)(a)

☐ All soil contamination is, or will be,* at least 15 feet below the surface.

☑ All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

☑ All contaminated soil, is or will be,* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

☐ There is less than 0.25 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.

☐ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous[#] undeveloped[±] land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

[±] "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

[#] "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

B. Simplified evaluation.

1. Does the Site qualify for a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No or Unknown *If you answered **"NO"** or **"UNKNOWN,"** then skip to **Step 3C** of this form.*

2. Did you conduct a simplified evaluation?

☐ Yes *If you answered **"YES,"** then answer **Question 3** below.*

☐ No *If you answered **"NO,"** then skip to **Step 3C** of this form.*

3. Was further evaluation necessary?

☐ Yes *If you answered **"YES,"** then answer **Question 4** below.*

☐ No *If you answered **"NO,"** then answer **Question 5** below.*

4. If further evaluation was necessary, what did you do?

☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*

☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

5. If no further evaluation was necessary, what was the reason? *Check all that apply. Then skip to **Step 4** of this form.*

Exposure Analysis: WAC 173-340-7492(2)(a)

☐ Area of soil contamination at the Site is not more than 350 square feet.

☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

Pathway Analysis: WAC 173-340-7492(2)(b)

☐ No potential exposure pathways from soil contamination to ecological receptors.

Contaminant Analysis: WAC 173-340-7492(2)(c)

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.

☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

C. Site-specific evaluation. A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. *See* WAC 173-340-7493(1)(c).

1. Was there a problem? *See* WAC 173-340-7493(2).

☐ Yes *If you answered **"YES,"** then answer **Question 2** below.*

☐ No *If you answered **"NO,"** then identify the reason here and then skip to **Question 5** below:*

- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

2. What did you do to resolve the problem? *See* WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

3. If you conducted further site-specific evaluations, what methods did you use?
Check all that apply. See WAC 173-340-7493(3).

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

4. What was the result of those evaluations?

- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

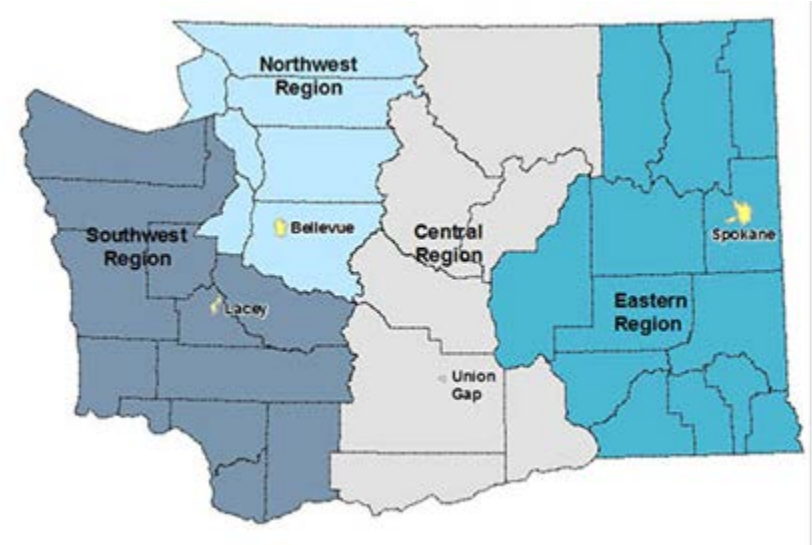
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ Yes If so, please identify the Ecology staff who approved those steps:

☐ No

Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.

Subject: FW: TEE for Hungry Whale Site - Westport
Attachments: Hungry Whale TEE form_20190415.pdf

From: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Sent: Friday, May 03, 2019 10:52 AM
To: Sauze, Marc <Marc.Sauze@stantec.com>
Cc: Randy Lewis <rlewis@portgrays.org>
Subject: RE: TEE for Hungry Whale Site - Westport

Marc,
Based on your preferred Alternative for cleanup and your explanation below, I am ok with the TEE exclusion for this site.
Andy

From: Sauze, Marc <Marc.Sauze@stantec.com>
Sent: Tuesday, April 30, 2019 9:01 AM
To: Smith, Andrew (ECY) <ansm461@ECY.WA.GOV>
Cc: Randy Lewis <rlewis@portgrays.org>
Subject: TEE for Hungry Whale Site - Westport

Hello Andrew,

As discussed yesterday, we're finalizing our revised Draft RI/FS for the Hungry Whale site. The initial DRAFT RI/FS was submitted to Ecology in May 2017 and Ecology provided a Feasibility Study Letter dated November 16, 2017 containing comments on the initial draft.

Ecology's comment on the TEE asked how the site met the basis for exclusion. In our initial submission we had left question 2 unanswered. We'd like to clear up the TEE question before submitting the DRAFT RI/FS to Ecology so that the document does not get hung up on the TEE.

Based on our completion of Question 2 in the TEE form (attached), we assert that the Site does qualify for an exclusion. Further details supporting the argument that the site qualifies for an exclusion are provided below:

Explanation of Basis of Applicable Exclusions from further Terrestrial Ecological Evaluation for the Hungry Whale Site:

Per Washington Administrative Code (WAC 173-340-7491), the following exclusions from further TEE are applicable for the Hungry Whale Site and are explained below. Specifically, the project's anticipated future remediation activities, as described in the Final Remedial Investigation and Feasibility Study meet two criteria for exclusion provided in WAC 173-340-7491 (a) and (b) and in the Terrestrial Ecological Evaluation Form, and described as follows:

1. *Basis of exclusion through Point of Compliance: WAC 173-340-7491(1)(a): All soil contamination is or will be at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.*

   Rationale for qualification of exclusion: The horizontal extent of the excavation of impacted soils on the property for the preferred Alternative (Alternative 4) is shown in Figure F1 (see attached). Additionally, Figure 6 and Figure 7 from the RI/FS (see attached) show the extent of soil impacts of TPH-G (gasoline) and benzene,

respectively. Impacted soils (exceeding MTCA A Cleanup Levels) within the property boundary will be excavated to a depth of approximately 8 feet below the surface. Additional explanation of how soil and groundwater will be remediated is described in the RI/FS.

2. *Basis of exclusion through Barriers to Exposure: WAC 173-340-7491(1)(b): All contaminated soil, is or will be covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.*

   Rationale for qualification of exclusion: As part of Alternative 4 (the preferred remedy), soils on the property will be excavated. Immediately following all remediation and excavation activities, the property will be backfilled with clean, ½" crushed fill, of approximately 95% compaction. Although some residual soil and groundwater contamination is anticipated to be left in place, the entire area of clean fill will be completely paved. This clean fill to a depth of approximately 8 feet coupled with the paving of the entire excavated area will prevent any complete exposure pathways, to the contamination 8 feet below ground surface, to plants and wildlife in the immediate vicinity of the property. Additionally, the institutional controls, described in the RI/FS, will remain as a restrictive covenant, in perpetuity, for the property.

Marc Sauze PE
BCSL

Direct: 425 289-7372
Mobile: 425 894-2329

Marc.Sauze@stantec.com

Stantec
11130 NE 33rd Place Suite 200
Bellevue WA 98004-1465

APPENDIX H

Cleanup Level and Remediation Level Calculation Tables

CAS No.	Analyte	organic	VP	B(unitless)	τ_{event}(hr)	FA	t*(hr)	K_p(cm/hr)	vol	tevent (hr/event)	DA	Assumed Cw (ug/L)	IN Dermal **cancer** (mg/kg-day)	IN Dermal **non-cancer** (mg/kg-day)	EC Inhalation **cancer** (ug/m3)	EC Inhalation **non-cancer** (mg/m3)
108-88-3	Toluene	yes	28.4	0.11482	0.34502	1	0.8280474	0.0311	V	2	0.0796919	1	1.78E-08	1.34E-06	9.89E-05	2.08E-05
1330-20-7	Xylenes	yes	7.99	0.198152	0.413429	1	0.9922292	0.05	V	2	0.1327729	1	2.97E-08	2.23E-06	ntv	2.08E-05
71-43-2	Benzene		94.8	0.05065	0.287934	1	0.6910413	0.0149	V	2	0.0298	1	6.67E-09	5.00E-07	9.89E-05	2.08E-05
100-41-4	Ethylbenzene		9.6	0.195378	0.413429	1	0.9922292	0.0493	V	2	0.0986	1	2.21E-08	1.66E-06	9.89E-05	2.08E-05

nv: not volatile

Intake (IN)	Dermal contact	cancer non-cancer	mg/kg-day mg/kg-day	DAevent x EV x EF x ED x SA x VCF x UCF2/BW x AT, DAevent = DA x Cw
Exposure concentration (EC)	Inhalation of particulates and volatiles	cancer non-cancer	ug/m3 mg/m3	Cw x VF x ET x EF x ED x UCF1/AT Cw x VF x ET x EF x ED x UCF1 x UCF2/AT

$$Organic, if\ t_{event} \le t^*, then\ DA_{event} = 2FA \times K_p \times C_w \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$DA = 2FA \times K_p \sqrt{\frac{6\tau_{event} \times t_{event}}{\pi}}$$

$$Organic, if\ t_{event} > t^*, then\ DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

$$DA = FA \times K_p \left[\frac{t_{event}}{1+B} + 2\tau_{event}\left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

$$Inorganic, DA_{event} = C_w \times K_p \times t_{event}$$

$$DA = K_p \times t_{event}$$

Parameter	Unit	Name	Value	Source
EC	ug/cm3	exposure concentration		
IN	mg/kg-day	intake dose		
C_w	ug/L	chemical concentration in ground water	Assumed to be 1 ug/L	
VCF	L/cm3	volume conversion factor	1.00E-03	
EV	events/day	frequency of groundwater cotact	2	site-specific
ET	hrs/day	exposure time	2	(1)
EF	days/year	exposure freqency	65	(1)
ED	years	exposure duration	1	(1)
t_{event}	hr/event	event duration	2	site-specific
AT	days	averaging time: cancer	27375	
		averaging time: non-cancer, dermal	365	
		averaging time: non-cancer, inhalation	130	(1)
UCF1	day/hr	unit conversion factor	1/24	
UCF2	mg/ug	unit conversion factor	1.00E-03	
VF	L/m3	volatilization factor; Andelman constant based on tap wate	0.5	EPA, 1991
SA	cm2	skin surface contact area	3300	EPA, 2002; EPA, 2011 (2)
BW	kg	body weight	70	
K_p	cm/hr	dermal permeability coefficient of compound in water		
τ_{event}	hr/event	lag time per event		
t*	hr	time to reach steady-state; 2.4τ_{event}	chemical specific	EPA, 2016
FA	unitless	fraction absorbed water		
B	unitless	dimesionless ratio of the permeability coefficient of a comp		

(1) Professional judgement. The construction worker was assumed to be working 5 days per week for 6 months (26 weeks x 5 days/week), and and a construction worker may be exposed to groundwater during half that time (65 days)
(2) Represents exposure to the face, forearms, and hands. The average of the male and female body parts for the 95th percentile were used to calculate the surface area. EPA, 2002 also recommends using 3,300 cm^2

EPA, 2011. EPA Exposure Factors Handbook: 2011 Edition. September 2011.
EPA, 1991. Risk Assessment Guidance for Superfund: Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)
EPA, 2016. EPA Regional Screening Level Table. May 2016.

CAS No.	Analyte	SFO (mg/kg-day)$^{-1}$	IUR (ug/m^3)$^{-1}$	RfD_o (mg/kg-day)	RfC_i (mg/m^3)	vol	CULw Dermal **cancer** (ug/L)	CULw Dermal **non-cancer** (ug/L)	CULw Inhalation **cancer** (ug/L)	CULw Inhalation **non-cancer** (ug/L)	CULw **cancer** (ug/L)	CULw **non-cancer** (ug/L)	MTCA method A (ug/L)	Kd	Koc	Hcc	Soil to GW (mg/kg) MTCA 3-PHASE model	
108-88-3	Toluene			0.08	5	V	ntv	5.98E+04	ntv	240000	ntv	4.79E+04			233.9	0.2714636	437.88	nc
1330-20-7	Xylenes			0.2	0.1	V	ntv	8.97E+04	ntv	4800	ntv	4.56E+03			382.9	0.2710548	55.26	nc
71-43-2	Benzene	0.055	0.0000078	0.004	0.03	V	2.73E+03	7.99E+03	1.30E+03	1440	878.26	1.22E+03			145.8	0.2269011	6.42	c
100-41-4	Ethylbenzene	0.011	0.0000025	0.1	1	V	4.12E+03	6.04E+04	4.04E+03	48000	2040.19	2.67E+04			446.1	0.3221586	27.50	c
	gasoline												800					
	diesel												500					

nv: not volatile
ntv: no toxicity value

boxed values are selected for groundwater CULs

Parameter	Unit	Name	Value		Source
EC	ug/cm3	exposure concentration	See 'GW IN&EC' tab		
IN	mg/kg-day	intake			
HQ	unitless	hazard quotient	1		
RISK	unitless	risk	1.00E-06		
IUR	m3/ug	Inhalation Unit Risk			
SFO	kg-day/mg	oral cancer potency factor	chem specific		EPA, 2016
RfDo	mg/kg-day	reference dose oral			
RfCi	mg/m3	reference concentration inhalation			
CULw	ug/L	groundwater cleanup level	to be calculated given risk is 1e-6 or HQ is 1		
θw	ml/ml	water-filled soil porosity	0.3	unsaturated	MTCA, 2007
			0.43	saturated	
θa	ml/ml	air-filled soil porosity	0.13	unsaturated	
			0	saturated	
DF		dilution factor	20	unsaturated	
			1	saturated	
ρb	kg/L	dry soil bulk density	1.5		
UCF	mg/ug	unit conversion factor	1.00E-03		
Hcc	unitless	Henry's law constant			EPA, 2016
Kd	L/kg	distribution coefficient	chem specific		
Koc	ml/g	soil organic carbon-water partitioning coefficient			
foc	g/g	soil fraction of organic carbon	0.001		

EPA, 2016. EPA Regional Screening Level Table. May 2016.

CAS No.	Analyte	ABS	VFs (m3/kg)	Assumed Cs (mg/kg)	IN direct contact **cancer** (mg/kg-day)	IN direct contact **non-cancer** (mg/kg-day)	IN dermal **cancer** (mg/kg-day)	IN dermal **non-cancer** (mg/kg-day)	EC inhalation **cancer** (ug/m3)	EC inhalation **non-cancer** (mg/m3)
71-43-2	Benzene		3540	1	2.24E-08	1.68E-06	6.72E-08	5.04E-06	1.78E-06	3.75E-07
100-41-4	Ethylbenzene		5670	1	2.24E-08	1.68E-06	6.72E-08	5.04E-06	1.78E-06	3.75E-07
1330-20-7	Xylenes		5740	1	ntv	1.68E-06	ntv	5.04E-06	ntv	6.57E-05
108-88-3	Toluene		4290	1	ntv	1.68E-06	ntv	5.04E-06	ntv	8.78E-05

ntv: no toxicity value

Intake (IN)	Direct contact	cancer	mg/kg-day	Cs x IR-S x FI x UCF x EF x ED / BW x AT
		non-cancer	mg/kg-day	
	Dermal contact	cancer	mg/kg-day	Cs x SA x AF x ABS x UCF x EF x ED / BW x AT
		non-cancer	mg/kg-day	
Exposure concentration (EC)	Inhalation of particulates and volatiles	cancer	ug/m3	Cs x ET x ED x EF x ((1/PEF) + (1/VF)) x UCF1 x UCF3/AT
		non-cancer	mg/m3	Cs x ET x ED x EF x ((1/PEF) + (1/VF)) x UCF1/AT

Parameter	Unit	Name			Value	Source
EC	ug/cm3	exposure concentration				
IN	mg/kg-day	intake dose				
C_s	mg/kg	chemical concentration in soil			assumed to be 1 mg/kg	
ET	hrs/day	exposure time			9	**(1)**
EF	days/year	exposure freqency			130	**(1)**
ED	years	exposure duration			1	**(1)**
AT	days	average time	all pathways	caner	27375	
			direct contact and dermal	non-cancer	365	
			inhalation		130	
UCF	kg/mg	unit conversion factor			1.00E-06	
UCF1	day/hr	unit conversion factor			1/24	
UCF2	mg/ug	unit conversion factor			1.00E-03	
UCF3	ug/mg	unit conversion factor			1.00E+03	
SA	cm2	skin surface contact area			3300	EPA, 2002; EPA, 2011 **(2)**
BW	kg	body weight			70	MTCA, 2007
IR-S	mg/day	soil ingestion rate			330	EPA, 2002
AF	mg/cm2-day	adherence factor			0.3	EPA, 2002
PEF	m3/kg	particulate-emission factor			1.00E+06	DTSC, 2014
1/PEF	kg/m3	1/particulate-emission factor			1.00E-06	
VF	m3/kg	volatilization factor			chemical specifi	EPA, 2016
ABS	unitless	dermal absorption fraction			chemical specifi	
FI	unitless	fraction ingested			1	

(1) Professional judgement. The construction worker was assumed to be working 5 days per week for 6 months (26 weeks x 5 days/week).

(2) Represents exposure to the face, forearms, and hands. The average of the male and female body parts for the 95th percentile were used to calculate the surface area. EPA, 2002 also recommends using 3,300 cm^2

EPA, 2016. EPA Regional Screening Level Table. May 2016.

EPA, 2002: Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. OSWER 9355.4-24. December 2002.

EPA, 2011. EPA Exposure Factors Handbook: 2011 Edition. September 2011.

MTCA, 2007. Model Toxics Control Act Statute and Regulation. Chapter 173-340 WAC

EPA, 2002: Supplemental Guidance For Developing Soil Screening Levels For Superfund Sites. OSWER 9355.4-24. December 2002.

DTSC, 2014. California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note Number 1. September 30, 2014.

CAS No.	Analyte	SFO (mg/kg-day)$^{-1}$	IUR (ug/m^3)$^{-1}$	RfD$_o$ (mg/kg-day)	RfC$_i$ (mg/m^3)	SFD (mg/kg-day)$^{-1}$	RfD$_d$ (mg/kg-day)	GIABS	RELs direct contact **cancer** (mg/kg)	RELs direct contact **non-cancer** (mg/kg)	RELs dermal **cancer** (mg/kg)	RELs dermal **non-cancer** (mg/kg)	RELs inhalation **cancer** (mg/kg)	RELs inhalation **non-cancer** (mg/kg)	RELs **cancer** (mg/kg)	RELs **non-cancer** (mg/kg)	MCTA METHOD A (mg/kg)	Soil to GW (mg/kg) MTCA 3-PHASE model	
71-43-2	Benzene	0.055	0.0000078	4.00E-03	3.00E-02	0.055	ntv	1	812	ntv	271	ntv	71992	ntv	202.5	ntv		1.6	c
100-41-4	Ethylbenzene	0.011	0.0000025	0.1	1	0.011	0.1	1	4061	59557	1354	19852	224615	2666666.67	1010.6	14806.6		869.5	c
1330-20-7	Xylenes	ntv		0.2	0.1	ntv	0.2	1	ntv	119114	ntv	39705	ntv	1521.93	ntv	1447.9		4.9	nc
108-88-3	Toluene			0.08	5.00E+00	8.00E-02	0.08	1	ntv	47646	ntv	15882	ntv	56955.66	ntv	9851.2		437.9	nc
	lead																250		
	gasoline																30		
	diesel																2000		

ntv: no toxicity value

boxed values are selected for soil RELs

Parameter	Unit	Name	Value	Source
EC	ug/cm3	exposure concentration	See 'Soil IN&EC' tab	
IN	mg/kg-day	intake		
HQ	unitless	hazard quotient	1	
RISK	unitless	risk	1.00E-06	
IUR	m3/ug	Inhalation Unit Risk		
SFO	kg-day/mg	oral cancer potency factor	chem specific	EPA, 2016
RfDo	mg/kg-day	oral reference dose		
RfCi	mg/m3	inhalation reference concentration		
SFD	kg-day/mg	dermal cancer potency factor	SFO/GIABS	
RfDd	mg/kg-day	dermal reference concentration	RfDo x GIABS	
GIABS	unitless	gastrointestinal absorption conversion factor		EPA, 2016
HQ	unitless	hazard quotient	1	
RISK	unitless	risk	1.00E-06	
RELs	mg/kg	remediation level for soil	to be calculated given risk is 1e-6 or HQ is 1	

EPA, 2016. EPA Regional Screening Level Table. May 2016.

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	#	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
30560-19-1	8.7E-03	I			4.0E-03	I						1	0.1		Acephate	30560-19-1	6.2E+01	c**	2.6E+02	c*					8.9E+00	c**		2.0E-03	c**	
75-07-0			2.2E-06	I			9.0E-03	I	V			1		1.1E+05	Acetaldehyde	75-07-0	1.1E+01	c**	4.9E+01	c**	1.3E+00	c**	5.6E+00	c**	2.6E+00	c**		5.2E-04	c**	
34256-82-1					2.0E-02	I						1	0.1		Acetochlor	34256-82-1	1.3E+03	n	1.6E+04	n					3.5E+02	n		2.8E-01	n	
67-64-1					9.0E-01	I	3.1E+01	A	V			1		1.1E+05	Acetone	67-64-1	6.1E+04	n	6.7E+05	nms	3.2E+04	n	1.4E+05	n	1.4E+04	n		2.9E+00	n	
75-86-5							2.0E-03	X				1	0.1		Acetone Cyanohydrin	75-86-5	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n							
75-05-8							6.0E-02	I	V			1		1.3E+05	Acetonitrile	75-05-8	8.1E+02	n	3.4E+03	n	6.3E+01	n	2.6E+02	n	1.3E+02	n		2.6E-02	n	
98-86-2					1.0E-01	I			V			1		2.5E+03	Acetophenone	98-86-2	7.8E+03	ns	1.2E+05	nms					1.9E+03	n		5.8E-01	n	
53-96-3	3.8E+00	C	1.3E-03	C								1	0.1		Acetylaminofluorene, 2-	53-96-3	1.4E-01	c	6.0E-01	c	2.2E-03	c	9.4E-03	c	1.6E-02	c		7.2E-05	c	
107-02-8					5.0E-04	I	2.0E-05	I	V			1		2.3E+04	Acrolein	107-02-8	1.4E-01	n	6.0E-01	n	2.1E-02	n	8.8E-02	n	4.2E-02	n		8.4E-06	n	
79-06-1	5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M		1	0.1		Acrylamide	79-06-1	2.4E-01	c	4.6E+00	c	1.0E-02	c	1.2E-01	c	5.0E-02	c		1.1E-05	c	
79-10-7					5.0E-01	I	1.0E-03	I	V			1		1.1E+05	Acrylic Acid	79-10-7	9.9E+01	n	4.2E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n	
107-13-1	5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V			1		1.1E+04	Acrylonitrile	107-13-1	2.5E-01	c*	1.1E+00	c*	4.1E-02	c*	1.8E-01	c*	5.2E-02	c*		1.1E-05	c*	
111-69-3							6.0E-03	P				1	0.1		Adiponitrile	111-69-3	8.5E+06	nm	3.6E+07	nm	6.3E+00	n	2.6E+01	n							
15972-60-8	5.6E-02	C			1.0E-02	I						1	0.1		Alachlor	15972-60-8	9.7E+00	c*	4.1E+01	c					1.1E+00	c	2.0E+00	8.7E-04	c	1.6E-03
116-06-3					1.0E-03	I						1	0.1		Aldicarb	116-06-3	6.3E+01	n	8.2E+02	n					2.0E+01	n	3.0E+00	4.9E-03	n	7.5E-04
1646-88-4					1.0E-03	I						1	0.1		Aldicarb Sulfone	1646-88-4	6.3E+01	n	8.2E+02	n					2.0E+01	n	2.0E+00	4.4E-03	n	4.4E-04
1646-87-3												1	0.1		Aldicarb sulfoxide	1646-87-3											4.0E+00			8.8E-04
309-00-2	1.7E+01	I	4.9E-03	I	3.0E-05	I			V			1			Aldrin	309-00-2	3.9E-02	c*	1.8E-01	c	5.7E-04	c	2.5E-03	c	9.2E-04	c		1.5E-04	c	
107-18-6					5.0E-03	I	1.0E-04	X	V			1		1.1E+05	Allyl Alcohol	107-18-6	3.5E+00	n	1.5E+01	n	1.0E-01	n	4.4E-01	n	2.1E-01	n		4.2E-05	n	
107-05-1	2.1E-02	C	6.0E-06	C			1.0E-03	I	V			1		1.4E+03	Allyl Chloride	107-05-1	7.2E-01	c**	3.2E+00	c**	4.70E-01	c**	2.00E+00	c**	7.3E-01	c**		2.3E-04	c**	
7429-90-5					1.0E+00	P	5.0E-03	P				1			Aluminum	7429-90-5	7.7E+04	n	1.1E+06	nm	5.2E+00	n	2.2E+01	n	2.0E+04	n		3.0E+04	n	
20859-73-8					4.0E-04	I						1			Aluminum Phosphide	20859-73-8	3.1E+01	n	4.7E+02	n					8.0E+00	n			n	
834-12-8					9.0E-03	I						1	0.1		Ametryn	834-12-8	5.7E+02	n	7.4E+03	n					1.5E+02	n		1.6E-01	n	
92-67-1	2.1E+01	C	6.0E-03	C								1	0.1		Aminobiphenyl, 4-	92-67-1	2.6E-02	c	1.1E-01	c	4.7E-04	c	2.0E-03	c	3.0E-03	c		1.5E-05	c	
591-27-5					8.0E-02	P						1	0.1		Aminophenol, m-	591-27-5	5.1E+03	n	6.6E+04	n					1.6E+03	n		6.1E-01	n	
123-30-8					2.0E-02	P						1	0.1		Aminophenol, p-	123-30-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.5E-01	n	
33089-61-1					2.5E-03	I						1	0.1		Amitraz	33089-61-1	1.6E+02	n	2.1E+03	n					8.2E+00	n		4.2E+00	n	
7664-41-7							1.0E-01	I	V			1			Ammonia	7664-41-7					1.0E+02	n	4.4E+02	n						
7773-06-0					2.0E-01	I						1			Ammonium Sulfamate	7773-06-0	1.6E+04	n	2.3E+05	nm					4.0E+03	n			n	
75-85-4							3.0E-03	X	V			1		1.4E+04	Amyl Alcohol, tert-	75-85-4	8.2E+01	n	3.4E+02	n	3.1E+00	n	1.3E+01	n	6.3E+00	n		1.3E-03	n	
62-53-3	5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03					1	0.1		Aniline	62-53-3	9.5E+01	c**	4.0E+02	c*	1.0E+00	n	4.4E+00	n	1.3E+01	c*		4.6E-03	c*	
84-65-1	4.0E-02	P			2.0E-03	X						1	0.1		Anthraquinone, 9,10-	84-65-1	1.4E+01	c**	5.7E+01	c*					1.4E+00	c*		1.4E-02	c*	
7440-36-0					4.0E-04	I						0.15			Antimony (metallic)	7440-36-0	3.1E+01	n	4.7E+02	n					7.8E+00	n	6.0E+00	3.5E-01	n	2.7E-01
1314-60-9					5.0E-04	H						0.15			Antimony Pentoxide	1314-60-9	3.9E+01	n	5.8E+02	n					9.7E+00	n			n	
1332-81-6					4.0E-04	H						0.15			Antimony Tetroxide	1332-81-6	3.1E+01	n	4.7E+02	n					7.8E+00	n			n	
1309-64-4							2.0E-04	I				0.15			Antimony Trioxide	1309-64-4	2.8E+05	nm	1.2E+06	nm	2.1E-01	n	8.8E-01	n						
7440-38-2	1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1	0.03		Arsenic, Inorganic	7440-38-2	6.8E-01	c*R	3.0E+00	cR	6.5E-04	c*	2.9E-03	c*	5.2E-02	c	1.0E+01	1.5E-03	c	2.9E-01
7784-42-1					3.5E-06	C	5.0E-05	A				1			Arsine	7784-42-1	2.7E-01	n	4.1E+00	n	5.2E-02	n	2.2E-01	n	7.0E-02	n			n	
3337-71-1					5.0E-02	I						1	0.1		Asulam	3337-71-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.6E-01	n	
1912-24-9	2.3E-01	C			3.5E-02	I						1	0.1		Atrazine	1912-24-9	2.4E+00	c	1.0E+01	c					3.0E-01	c	3.0E+00	2.0E-04	c	1.9E-03
492-80-8	8.8E-01	C	2.5E-04	C								1	0.1		Auramine	492-80-8	6.2E-01	c	2.6E+00	c	1.1E-02	c	4.9E-02	c	6.7E-02	c		6.1E-04	c	
65195-55-3					4.0E-04	I						1	0.1		Avermectin B1	65195-55-3	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.4E+01	n	
86-50-0					3.0E-03	A	1.0E-02	A				1	0.1		Azinphos-methyl	86-50-0	1.9E+02	n	2.5E+03	n	1.0E+01	n	4.4E+01	n	5.6E+01	n		1.7E-02	n	
103-33-3	1.1E-01	I	3.1E-05	I					V			1			Azobenzene	103-33-3	5.6E+00	c	2.6E+01	c	9.1E-02	c	4.0E-01	c	1.2E-01	c		9.3E-04	c	
123-77-3					1.0E+00	P	7.0E-06	P				1	0.1		Azodicarbonamide	123-77-3	8.6E+03	n	4.0E+04	n	7.3E-03	n	3.1E-02	n	2.0E+04	n		6.8E+00	n	
7440-39-3					2.0E-01	I	5.0E-04	H				0.07			Barium	7440-39-3	1.5E+04	n	2.2E+05	nm	5.2E-01	n	2.2E+00	n	3.8E+03	n	2.0E+03	1.6E+02	n	8.2E+01
10294-40-3	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025			Barium Chromate	10294-40-3	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
1861-40-1					3.0E-01	I			V			1			Benfluralin	1861-40-1	2.3E+04	n	3.5E+05	nm					1.7E+03	n		5.6E+01	n	
17804-35-2					5.0E-02	I						1	0.1		Benomyl	17804-35-2	3.2E+03	n	4.1E+04	n					9.7E+02	n		8.5E-01	n	
83055-99-6					2.0E-01	I						1	0.1		Bensulfuron-methyl	83055-99-6	1.3E+04	n	1.6E+05	nm					3.9E+03	n		1.0E+00	n	
25057-89-0					3.0E-02	I						1	0.1		Bentazon	25057-89-0	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.2E-01	n	
100-52-7	4.0E-03	P			1.0E-01	I			V			1		1.2E+03	Benzaldehyde	100-52-7	1.7E+02	c*	8.2E+02	c					1.9E+01	c		4.1E-03	c	
71-43-2	5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V			1		1.8E+03	Benzene	71-43-2	1.2E+00	c*	5.1E+00	c*	3.6E-01	c*	1.6E+00	c*	4.6E-01	c*	5.0E+00	2.3E-04	c*	2.6E-03
6369-59-1	1.0E-01	X			3.0E-04	X						1	0.1		Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**		2.2E-04	c**	
108-98-5					1.0E-03	P			V			1		1.3E+03	Benzenethiol	108-98-5	7.8E+01	n	1.2E+03	n					1.7E+01	n		1.1E-02	n	
92-87-5	2.3E+02	I	6.7E-02	I	3.0E-03	I				M		1	0.1		Benzidine	92-87-5	5.3E-04	c	1.0E-02	c	1.5E-05	c	1.8E-04	c	1.1E-04	c		2.8E-07	c	
65-85-0					4.0E+00	I						1	0.1		Benzoic Acid	65-85-0	2.5E+05	nm	3.3E+06	nm					7.5E+04	n		1.5E+01	n	
98-07-7	1.3E+01	I							V			1		3.2E+02	Benzotrichloride	98-07-7	5.3E-02	c	2.5E-01	c					3.0E-03	c		6.6E-06	c	
100-51-6					1.0E-01	P						1	0.1		Benzyl Alcohol	100-51-6	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n	
100-44-7	1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V			1		1.5E+03	Benzyl Chloride	100-44-7	1.1E+00	c*	4.8E+00	c*	5.7E-02	c*	2.5E-01	c*	8.9E-02	c*		9.8E-05	c*	
7440-41-7			2.4E-03	I	2.0E-03	I	2.0E-05	I				0.007			Beryllium and compounds	7440-41-7	1.6E+02	n	2.3E+03	n	1.2E-03	c*	5.1E-03	c*	2.5E+01	n	4.0E+00	1.9E+01	n	3.2E+00
42576-02-3					9.0E-03	P						1	0.1		Bifenox	42576-02-3	5.7E+02	n	7.4E+03	n					1.0E+02	n		7.6E-01	n	
82657-04-3					1.5E-02	I						1	0.1		Biphenthrin	82657-04-3	9.5E+02	n	1.2E+04	n					3.0E+02	n		1.4E+03	n	
92-52-4	8.0E-03	I			5.0E-01	I	4.0E-04	X	V			1			Biphenyl, 1,1'-	92-52-4	4.7E+01	n	2.0E+02	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		8.7E-03	n	
108-60-1					4.0E-02	I			V			1		1.0E+03	Bis(2-chloro-1-methylethyl) ether	108-60-1	3.1E+03	ns	4.7E+04	ns					7.1E+02	n		2.6E-01	n	
111-91-1					3.0E-03	P						1	0.1		Bis(2-chloroethoxy)methane	111-91-1	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n	
111-44-4	1.1E+00	I	3.3E-04	I					V			1		5.1E+03	Bis(2-chloroethyl)ether	111-44-4	2.3E-01	c	1.0E+00	c	8.5E-03	c	3.7E-02	c	1.4E-02	c		3.6E-06	c	
542-88-1	2.2E+02	I	6.2E-02	I					V			1		4.2E+03	Bis(chloromethyl)ether	542-88-1	8.3E-05	c	3.6E-04	c	4.5E-05	c	2.0E-04	c	7.2E-05	c		1.7E-08	c	
80-05-7					5.0E-02	I						1	0.1		Bisphenol A	80-05-7	3.2E+03	n	4.1E+04	n					7.7E+02	n		5.8E+01	n	
7440-42-8					2.0E-01	I	2.0E-02	H				1			Boron And Borates Only	7440-42-8	1.6E+04	n	2.3E+05	nm	2.1E+01	n	8.8E+01	n	4.0E+03	n		1.3E+01	n	
10294-34-5					2.0E+00	P	2.0E-02	P	V			1			Boron Trichloride	10294-34-5	1.6E+05	nm	2.3E+06	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n	
7637-07-2					4.0E-02	C	1.3E-02	C	V			1			Boron Trifluoride	7637-07-2	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	2.6E+01	n			n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
15541-45-4	7.0E-01	I			4.0E-03	I					1			Bromate	15541-45-4	9.9E-01	c	4.7E+00	c					1.1E-01	c	1.0E+01	8.5E-04	c	7.7E-02
107-04-0	2.0E+00	X	6.0E-04	X					V		1		2.4E+03	Bromo-2-chloroethane, 1-	107-04-0	2.6E-02	c	1.1E-01	c	4.7E-03	c	2.0E-02	c	7.4E-03	c		2.1E-06	c	
108-86-1					8.0E-03	I	6.0E-02	I	V		1		6.8E+02	Bromobenzene	108-86-1	2.9E+02	n	1.8E+03	ns	6.3E+01	n	2.6E+02	n	6.2E+01	n		4.2E-02	n	
74-97-5							4.0E-02	X	V		1		4.0E+03	Bromochloromethane	74-97-5	1.5E+02	n	6.3E+02	n	4.2E+01	n	1.8E+02	n	8.3E+01	n		2.1E-02	n	
75-27-4	6.2E-02	I	3.7E-05	C	2.0E-02	I			V		1		9.3E+02	Bromodichloromethane	75-27-4	2.9E-01	c	1.3E+00	c	7.6E-02	c	3.3E-01	c	1.3E-01	c	8.0E+01(F)	3.6E-05	c	2.2E-02
75-25-2	7.9E-03	I	1.1E-06	I	2.0E-02	I			V		1		9.2E+02	Bromoform	75-25-2	1.9E+01	c*	8.6E+01	c	2.6E+00	c	1.1E+01	c	3.3E+00	c	8.0E+01(F)	8.7E-04	c	2.1E-02
74-83-9					1.4E-03	I	5.0E-03	I	V		1		3.6E+03	Bromomethane	74-83-9	6.8E+00	n	3.0E+01	n	5.2E+00	n	2.2E+01	n	7.5E+00	n		1.9E-03	n	
2104-96-3					5.0E-03	H			V		1			Bromophos	2104-96-3	3.9E+02	n	5.8E+03	n					3.5E+01	n		1.5E-01	n	
1689-84-5					2.0E-02	I					1	0.1		Bromoxynil	1689-84-5	1.3E+03	n	1.6E+04	n					3.3E+02	n		2.8E-01	n	
1689-99-2					2.0E-02	I			V		1			Bromoxynil Octanoate	1689-99-2	1.6E+03	n	2.3E+04	n					1.4E+02	n		1.2E+00	n	
106-99-0	3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1		6.7E+02	Butadiene, 1,3-	106-99-0	5.8E-02	c*	2.6E-01	c*	9.4E-02	c*	4.1E-01	c*	1.8E-02	c		9.9E-06	c	
71-36-3					1.0E-01	I			V		1		7.6E+03	Butanol, N-	71-36-3	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		4.1E-01	n	
78-92-2					2.0E+00	P	3.0E+01	P	V		1		2.1E+04	Butyl alcohol, sec-	78-92-2	1.3E+05	nms	1.5E+06	nms	3.1E+04	n	1.3E+05	n	2.4E+04	n		5.0E+00	n	
2008-41-5					5.0E-02	I			V		1			Butylate	2008-41-5	3.9E+03	n	5.8E+04	n					4.6E+02	n		4.5E-01	n	
25013-16-5	2.0E-04	C	5.7E-08	C							1	0.1		Butylated hydroxyanisole	25013-16-5	2.7E+03	c	1.1E+04	c	4.9E+01	c	2.2E+02	c	1.5E+02	c		2.9E-01	c	
128-37-0	3.6E-03	P			3.0E-01	P					1	0.1		Butylated hydroxytoluene	128-37-0	1.5E+02	c	6.4E+02	c					3.4E+00	c		1.0E-01	c	
104-51-8					5.0E-02	P			V		1		1.1E+02	Butylbenzene, n-	104-51-8	3.9E+03	ns	5.8E+04	ns					1.0E+03	n		3.2E+00	n	
135-98-8					1.0E-01	X			V		1		1.5E+02	Butylbenzene, sec-	135-98-8	7.8E+03	ns	1.2E+05	nms					2.0E+03	n		5.9E+00	n	
98-06-6					1.0E-01	X			V		1		1.8E+02	Butylbenzene, tert-	98-06-6	7.8E+03	ns	1.2E+05	nms					6.9E+02	n		1.6E+00	n	
75-60-5					2.0E-02	A					1	0.1		Cacodylic Acid	75-60-5	1.3E+03	n	1.6E+04	n					4.0E+02	n		1.1E-01	n	
7440-43-9			1.8E-03	I	1.0E-03	I	1.0E-05	A			0.025	0.001		Cadmium (Diet)	7440-43-9	7.1E+01	n	9.8E+02	n										
7440-43-9			1.8E-03	I	5.0E-04	I	1.0E-05	A			0.05	0.001		Cadmium (Water)	7440-43-9					1.6E-03	c**	6.8E-03	c**	9.2E+00	n	5.0E+00	6.9E-01	n	3.8E-01
13765-19-0	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Calcium Chromate	13765-19-0	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
105-60-2					5.0E-01	I	2.2E-03	C			1	0.1		Caprolactam	105-60-2	3.1E+04	n	4.0E+05	nm	2.3E+00	n	9.6E+00	n	9.9E+03	n		2.5E+00	n	
2425-06-1	1.5E-01	C	4.3E-05	C	2.0E-03	I					1	0.1		Captafol	2425-06-1	3.6E+00	c*	1.5E+01	c	6.5E-02	c	2.9E-01	c	4.0E-01	c*		7.1E-04	c*	
133-06-2	2.3E-03	C	6.6E-07	C	1.3E-01	I					1	0.1		Captan	133-06-2	2.4E+02	c*	1.0E+03	c	4.3E+00	c	1.9E+01	c	3.1E+01	c*		2.2E-02	c*	
63-25-2					1.0E-01	I					1	0.1		Carbaryl	63-25-2	6.3E+03	n	8.2E+04	n					1.8E+03	n		1.7E+00	n	
1563-66-2					5.0E-03	I					1	0.1		Carbofuran	1563-66-2	3.2E+02	n	4.1E+03	n					9.4E+01	n	4.0E+01	3.7E-02	n	1.6E-02
75-15-0					1.0E-01	I	7.0E-01	I	V		1		7.4E+02	Carbon Disulfide	75-15-0	7.7E+02	ns	3.5E+03	ns	7.3E+02	n	3.1E+03	n	8.1E+02	n		2.4E-01	n	
56-23-5	7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		1		4.6E+02	Carbon Tetrachloride	56-23-5	6.5E-01	c	2.9E+00	c	4.7E-01	c	2.0E+00	c	4.6E-01	c	5.0E+00	1.8E-04	c	1.9E-03
463-58-1							1.0E-01	P	V		1		5.9E+03	Carbonyl Sulfide	463-58-1	6.7E+01	n	2.8E+02	n	1.0E+02	n	4.4E+02	n	2.1E+02	n		5.1E-01	n	
55285-14-8					1.0E-02	I					1	0.1		Carbosulfan	55285-14-8	6.3E+02	n	8.2E+03	n					5.1E+01	n		1.2E+00	n	
5234-68-4					1.0E-01	I					1	0.1		Carboxin	5234-68-4	6.3E+03	n	8.2E+04	n					1.9E+03	n		1.0E+00	n	
1306-38-3							9.0E-04	I			1			Ceric oxide	1306-38-3	1.3E+06	nm	5.4E+06	nm	9.4E-01	n	3.9E+00	n						
302-17-0					1.0E-01	I			V		1			Chloral Hydrate	302-17-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n		4.0E-01	n	
133-90-4					1.5E-02	I					1	0.1		Chloramben	133-90-4	9.5E+02	n	1.2E+04	n					2.9E+02	n		7.0E-02	n	
118-75-2	4.0E-01	H									1	0.1		Chloranil	118-75-2	1.3E+00	c	5.7E+00	c					1.8E-01	c		1.5E-04	c	
12789-03-6	3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		1	0.04		Chlordane	12789-03-6	1.7E+00	c*	7.7E+00	c*	2.8E-02	c*	1.2E-01	c*	2.0E-02	c*	2.0E+00	2.7E-03	c*	2.7E-01
143-50-0	1.0E+01	I	4.6E-03	C	3.0E-04	I					1	0.1		Chlordecone (Kepone)	143-50-0	5.4E-02	c	2.3E-01	c	6.1E-04	c	2.7E-03	c	3.5E-03	c		1.2E-04	c	
470-90-6					7.0E-04	A					1	0.1		Chlorfenvinphos	470-90-6	4.4E+01	n	5.7E+02	n					1.1E+01	n		3.1E-02	n	
90982-32-4					2.0E-02	I					1	0.1		Chlorimuron, Ethyl-	90982-32-4	1.3E+03	n	1.6E+04	n					3.9E+02	n		1.3E-01	n	
7782-50-5					1.0E-01	I	1.5E-04	A	V		1		2.8E+03	Chlorine	7782-50-5	1.8E-01	n	7.8E-01	n	1.5E-01	n	6.4E-01	n	3.0E-01	n		1.4E-04	n	
10049-04-4					3.0E-02	I	2.0E-04	I	V		1			Chlorine Dioxide	10049-04-4	2.3E+03	n	3.4E+04	n	2.1E-01	n	8.8E-01	n	4.2E-01	n			n	
7758-19-2					3.0E-02	I					1			Chlorite (Sodium Salt)	7758-19-2	2.3E+03	n	3.5E+04	n					6.0E+02	n	1.0E+03		n	
75-68-3							5.0E+01	I	V		1		1.2E+03	Chloro-1,1-difluoroethane, 1-	75-68-3	5.4E+04	ns	2.3E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		5.2E+01	n	
126-99-8			3.0E-04	I	2.0E-02	H	2.0E-02	I	V		1		7.9E+02	Chloro-1,3-butadiene, 2-	126-99-8	1.0E-02	c	4.4E-02	c	9.4E-03	c	4.1E-02	c	1.9E-02	c		9.8E-06	c	
3165-93-3	4.6E-01	H									1	0.1		Chloro-2-methylaniline HCl, 4-	3165-93-3	1.2E+00	c	5.0E+00	c					1.7E-01	c		1.5E-04	c	
95-69-2	1.0E-01	P	7.7E-05	C	3.0E-03	X					1	0.1		Chloro-2-methylaniline, 4-	95-69-2	5.4E+00	c*	2.3E+01	c	3.6E-02	c	1.6E-01	c	7.0E-01	c*		4.0E-04	c*	
107-20-0	2.7E-01	X							V		1		1.2E+04	Chloroacetaldehyde, 2-	107-20-0	2.6E+00	c	1.2E+01	c					2.9E-01	c		5.8E-05	c	
79-11-8											1	0.1		Chloroacetic Acid	79-11-8											6.0E+01			1.2E-02
532-27-4							3.0E-05	I			1	0.1		Chloroacetophenone, 2-	532-27-4	4.3E+04	n	1.8E+05	nm	3.1E-02	n	1.3E-01	n						
106-47-8	2.0E-01	P			4.0E-03	I					1	0.1		Chloroaniline, p-	106-47-8	2.7E+00	c*	1.1E+01	c					3.7E-01	c		1.6E-04	c	
108-90-7					2.0E-02	I	5.0E-02	P	V		1		7.6E+02	Chlorobenzene	108-90-7	2.8E+02	n	1.3E+03	ns	5.2E+01	n	2.2E+02	n	7.8E+01	n	1.0E+02	5.3E-02	n	6.8E-02
510-15-6	1.1E-01	C	3.1E-05	C	2.0E-02	I					1	0.1		Chlorobenzilate	510-15-6	4.9E+00	c	2.1E+01	c	9.1E-02	c	4.0E-01	c	3.1E-01	c		1.0E-03	c	
74-11-3					3.0E-02	X					1	0.1		Chlorobenzoic Acid, p-	74-11-3	1.9E+03	n	2.5E+04	n					5.1E+02	n		1.3E-01	n	
98-56-6					3.0E-03	P	3.0E-01	P	V		1		2.9E+02	Chlorobenzotrifluoride, 4-	98-56-6	2.1E+02	n	2.5E+03	ns	3.1E+02	n	1.3E+03	n	3.5E+01	n		1.2E-01	n	
109-69-3					4.0E-02	P			V		1		7.3E+02	Chlorobutane, 1-	109-69-3	3.1E+03	ns	4.7E+04	ns					6.4E+02	n		2.6E-01	n	
75-45-6							5.0E+01	I	V		1		1.7E+03	Chlorodifluoromethane	75-45-6	4.9E+04	ns	2.1E+05	nms	5.2E+04	n	2.2E+05	n	1.0E+05	n		4.3E+01	n	
107-07-3					2.0E-02	P			V		1		1.1E+05	Chloroethanol, 2-	107-07-3	1.6E+03	n	2.3E+04	n					4.0E+02	n		8.1E-02	n	
67-66-3	3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		1		2.5E+03	Chloroform	67-66-3	3.2E-01	c	1.4E+00	c	1.2E-01	c	5.3E-01	c	2.2E-01	c	8.0E+01(F)	6.1E-05	c	2.2E-02
74-87-3							9.0E-02	I	V		1		1.3E+03	Chloromethane	74-87-3	1.1E+02	n	4.6E+02	n	9.4E+01	n	3.9E+02	n	1.9E+02	n		4.9E-02	n	
107-30-2	2.4E+00	C	6.9E-04	C					V		1		9.3E+03	Chloromethyl Methyl Ether	107-30-2	2.0E-02	c	8.9E-02	c	4.1E-03	c	1.8E-02	c	6.5E-03	c		1.4E-06	c	
88-73-3	3.0E-01	P			3.0E-03	P	1.0E-05	X			1	0.1		Chloronitrobenzene, o-	88-73-3	1.8E+00	c	7.7E+00	c	1.0E-02	n	4.4E-02	n	2.4E-01	c		2.2E-04	c	
100-00-5	6.0E-02	P			7.0E-04	P	2.0E-03	P			1	0.1		Chloronitrobenzene, p-	100-00-5	9.0E+00	c**	3.8E+01	c*	2.1E+00	n	8.8E+00	n	1.2E+00	c*		1.1E-03	c*	
95-57-8					5.0E-03	I			V		1		2.7E+04	Chlorophenol, 2-	95-57-8	3.9E+02	n	5.8E+03	n					9.1E+01	n		8.9E-02	n	
76-06-2							4.0E-04	C	V		1		6.2E+02	Chloropicrin	76-06-2	2.0E+00	n	8.2E+00	n	4.2E-01	n	1.8E+00	n	8.3E-01	n		2.5E-04	n	
1897-45-6	3.1E-03	C	8.9E-07	C	1.5E-02	I					1	0.1		Chlorothalonil	1897-45-6	1.8E+02	c**	7.4E+02	c*	3.2E+00	c	1.4E+01	c	2.2E+01	c*		5.0E-02	c*	
95-49-8					2.0E-02	I			V		1		9.1E+02	Chlorotoluene, o-	95-49-8	1.6E+03	ns	2.3E+04	ns					2.4E+02	n		2.3E-01	n	
106-43-4					2.0E-02	X			V		1		2.5E+02	Chlorotoluene, p-	106-43-4	1.6E+03	ns	2.3E+04	ns					2.5E+02	n		2.4E-01	n	
54749-90-5	2.4E+02	C	6.9E-02	C							1	0.1		Chlorozotocin	54749-90-5	2.3E-03	c	9.6E-03	c	4.1E-05	c	1.8E-04	c	3.2E-04	c		7.1E-08	c	
101-21-3					2.0E-01	I					1	0.1		Chlorpropham	101-21-3	1.3E+04	n	1.6E+05	nm					2.8E+03	n		2.6E+00	n	
2921-88-2					1.0E-03	A					1	0.1		Chlorpyrifos	2921-88-2	6.3E+01	n	8.2E+02	n					8.4E+00	n		1.2E-01	n	
5598-13-0					1.0E-02	H					1	0.1		Chlorpyrifos Methyl	5598-13-0	6.3E+02	n	8.2E+03	n					1.2E+02	n		5.4E-01	n	
64902-72-3					5.0E-02	I					1	0.1		Chlorsulfuron	64902-72-3	3.2E+03	n	4.1E+04	n					9.9E+02	n		8.3E-01	n	
1861-32-1					1.0E-02	I					1	0.1		Chlorthal-dimethyl	1861-32-1	6.3E+02	n	8.2E+03	n					1.2E+02	n		1.5E-01	n	
60238-56-4					8.0E-04	H					1	0.1		Chlorthiophos	60238-56-4	5.1E+01	n	6.6E+02	n					2.8E+00	n		7.3E-02	n	
16065-83-1					1.5E+00	I					0.013			Chromium(III), Insoluble Salts	16065-83-1	1.2E+05	nm	1.8E+06	nm					2.2E+04	n		4.0E+07	n	
18540-29-9	5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M	0.025			Chromium(VI)	18540-29-9	3.0E-01	c	6.3E+00	c	1.2E-05	c	1.5E-04	c	3.5E-02	c		6.7E-04	c	
7440-47-3											0.013			Chromium, Total	7440-47-3											1.0E+02			1.8E+05
74115-24-5					1.3E-02	I					1	0.1		Clofentezine	74115-24-5	8.2E+02	n	1.1E+04	n					2.3E+02	n		1.4E+01	n	
7440-48-4			9.0E-03	P	3.0E-04	P	6.0E-06	P			1			Cobalt	7440-48-4	2.3E+01	n	3.5E+02	n	3.1E-04	c*	1.4E-03	c*	6.0E+00	n		2.7E-01	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
8007-45-2			6.2E-04	I					V	M	1			Coke Oven Emissions	8007-45-2					1.6E-03	c	2.0E-02	c						
7440-50-8					4.0E-02	H					1			Copper	7440-50-8	3.1E+03	n	4.7E+04	n					8.0E+02	n	1.3E+03	2.8E+01	n	4.6E+01
108-39-4					5.0E-02	I	6.0E-01	C			1	0.1		Cresol, m-	108-39-4	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.4E-01	n	
95-48-7					5.0E-02	I	6.0E-01	C			1	0.1		Cresol, o-	95-48-7	3.2E+03	n	4.1E+04	n	6.3E+02	n	2.6E+03	n	9.3E+02	n		7.5E-01	n	
106-44-5					1.0E-01	A	6.0E-01	C			1	0.1		Cresol, p-	106-44-5	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.9E+03	n		1.5E+00	n	
59-50-7					1.0E-01	A					1	0.1		Cresol, p-chloro-m-	59-50-7	6.3E+03	n	8.2E+04	n					1.4E+03	n		1.7E+00	n	
1319-77-3					1.0E-01	A	6.0E-01	C			1	0.1		Cresols	1319-77-3	6.3E+03	n	8.2E+04	n	6.3E+02	n	2.6E+03	n	1.5E+03	n		1.3E+00	n	
123-73-9	1.9E+00	H			1.0E-03	P			V		1		1.7E+04	Crotonaldehyde, trans-	123-73-9	3.7E-01	c	1.7E+00	c					4.0E-02	c		8.2E-06	c	
98-82-8					1.0E-01	I	4.0E-01	I	V		1		2.7E+02	Cumene	98-82-8	1.9E+03	ns	9.9E+03	ns	4.2E+02	n	1.8E+03	n	4.5E+02	n		7.4E-01	n	
135-20-6	2.2E-01	C	6.3E-05	C							1	0.1		Cupferron	135-20-6	2.5E+00	c	1.0E+01	c	4.5E-02	c	1.9E-01	c	3.5E-01	c		6.1E-04	c	
21725-46-2	8.4E-01	H			2.0E-03	H					1	0.1		Cyanazine	21725-46-2	6.5E-01	c	2.7E+00	c					8.8E-02	c		4.1E-05	c	
														Cyanides															
592-01-8					1.0E-03	I					1			~Calcium Cyanide	592-01-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
544-92-3					5.0E-03	I					1			~Copper Cyanide	544-92-3	3.9E+02	n	5.8E+03	n					1.0E+02	n			n	
57-12-5					6.0E-04	I	8.0E-04	S	V		1		9.5E+05	~Cyanide (CN-)	57-12-5	2.3E+01	n	1.5E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n	2.0E+02	1.5E-02	n	2.0E+00
460-19-5					1.0E-03	I			V		1			~Cyanogen	460-19-5	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
506-68-3					9.0E-02	I			V		1			~Cyanogen Bromide	506-68-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n			n	
506-77-4					5.0E-02	I			V		1			~Cyanogen Chloride	506-77-4	3.9E+03	n	5.8E+04	n					1.0E+03	n			n	
74-90-8					6.0E-04	I	8.0E-04	I	V		1		1.0E+07	~Hydrogen Cyanide	74-90-8	2.3E+01	n	1.5E+02	n	8.3E-01	n	3.5E+00	n	1.5E+00	n		1.5E-02	n	
151-50-8					2.0E-03	I					1			~Potassium Cyanide	151-50-8	1.6E+02	n	2.3E+03	n					4.0E+01	n			n	
506-61-6					5.0E-03	I					0.04			~Potassium Silver Cyanide	506-61-6	3.9E+02	n	5.8E+03	n					8.2E+01	n			n	
506-64-9					1.0E-01	I					0.04			~Silver Cyanide	506-64-9	7.8E+03	n	1.2E+05	nm					1.8E+03	n			n	
143-33-9					1.0E-03	I					1			~Sodium Cyanide	143-33-9	7.8E+01	n	1.2E+03	n					2.0E+01	n	2.0E+02		n	
NA					2.0E-04	P					1			~Thiocyanates	NA	1.6E+01	n	2.3E+02	n					4.0E+00	n			n	
463-56-9					2.0E-04	X			V		1			~Thiocyanic Acid	463-56-9	1.6E+01	n	2.3E+02	n					4.0E+00	n			n	
557-21-1					5.0E-02	I					1			~Zinc Cyanide	557-21-1	3.9E+03	n	5.8E+04	n					1.0E+03	n			n	
110-82-7							6.0E+00	I	V		1		1.2E+02	Cyclohexane	110-82-7	6.5E+03	ns	2.7E+04	ns	6.3E+03	n	2.6E+04	n	1.3E+04	n		1.3E+01	n	
87-84-3	2.3E-02	H									1	0.1		Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	2.4E+01	c	1.0E+02	c					2.4E+00	c		1.4E-02	c	
108-94-1					5.0E+00	I	7.0E-01	P	V		1		5.1E+03	Cyclohexanone	108-94-1	2.8E+04	ns	1.3E+05	nms	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.4E-01	n	
110-83-8					5.0E-03	P	1.0E+00	X	V		1		2.8E+02	Cyclohexene	110-83-8	3.1E+02	ns	3.1E+03	ns	1.0E+03	n	4.4E+03	n	7.0E+01	n		4.6E-02	n	
108-91-8					2.0E-01	I			V		1		2.9E+05	Cyclohexylamine	108-91-8	1.6E+04	n	2.3E+05	nm					3.8E+03	n		1.0E+00	n	
68359-37-5					2.5E-02	I					1	0.1		Cyfluthrin	68359-37-5	1.6E+03	n	2.1E+04	n					1.2E+02	n		3.1E+01	n	
68085-85-8					5.0E-03	I					1	0.1		Cyhalothrin	68085-85-8	3.2E+02	n	4.1E+03	n					1.0E+02	n		6.8E+01	n	
52315-07-8					1.0E-02	I					1	0.1		Cypermethrin	52315-07-8	6.3E+02	n	8.2E+03	n					2.0E+02	n		3.2E+01	n	
66215-27-8					7.5E-03	I					1	0.1		Cyromazine	66215-27-8	4.7E+02	n	6.2E+03	n					1.5E+02	n		3.8E-02	n	
72-54-8	2.4E-01	I	6.9E-05	C							1	0.1		DDD	72-54-8	2.3E+00	c	9.6E+00	c	4.1E-02	c	1.8E-01	c	3.2E-02	c		7.5E-03	c	
72-55-9	3.4E-01	I	9.7E-05	C					V		1			DDE, p,p'-	72-55-9	2.0E+00	c	9.3E+00	c	2.9E-02	c	1.3E-01	c	4.6E-02	c		1.1E-02	c	
50-29-3	3.4E-01	I	9.7E-05	I	5.0E-04	I					1	0.03		DDT	50-29-3	1.9E+00	c*	8.5E+00	c*	2.9E-02	c	1.3E-01	c	2.3E-01	c*		7.7E-02	c*	
75-99-0					3.0E-02	I					1	0.1		Dalapon	75-99-0	1.9E+03	n	2.5E+04	n					6.0E+02	n	2.0E+02	1.2E-01	n	4.1E-02
1596-84-5	1.8E-02	C	5.1E-06	C	1.5E-01	I					1	0.1		Daminozide	1596-84-5	3.0E+01	c	1.3E+02	c	5.5E-01	c	2.4E+00	c	4.3E+00	c		9.5E-04	c	
1163-19-5	7.0E-04	I			7.0E-03	I					1	0.1		Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	4.4E+02	n	3.3E+03	c**					1.1E+02	c**		6.2E+01	c**	
8065-48-3					4.0E-05	I					1	0.1		Demeton	8065-48-3	2.5E+00	n	3.3E+01	n					4.2E-01	n			n	
103-23-1	1.2E-03	I			6.0E-01	I					1	0.1		Di(2-ethylhexyl)adipate	103-23-1	4.5E+02	c*	1.9E+03	c					6.5E+01	c	4.0E+02	4.7E+00	c	2.9E+01
2303-16-4	6.1E-02	H									1	0.1		Diallate	2303-16-4	8.9E+00	c	3.8E+01	c					5.4E-01	c		8.0E-04	c	
333-41-5					7.0E-04	A					1	0.1		Diazinon	333-41-5	4.4E+01	n	5.7E+02	n					1.0E+01	n		6.5E-02	n	
132-65-0					1.0E-02	X			V		1			Dibenzothiophene	132-65-0	7.8E+02	n	1.2E+04	n					6.5E+01	n		1.2E+00	n	
96-12-8	8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	1		9.8E+02	Dibromo-3-chloropropane, 1,2-	96-12-8	5.3E-03	c	6.4E-02	c	1.7E-04	c	2.0E-03	c	3.3E-04	c	2.0E-01	1.4E-07	c	8.6E-05
108-36-1					4.0E-04	X			V		1		1.6E+02	Dibromobenzene, 1,3-	108-36-1	3.1E+01	n	4.7E+02	ns					5.3E+00	n		5.1E-03	n	
106-37-6					1.0E-02	I			V		1			Dibromobenzene, 1,4-	106-37-6	7.8E+02	n	1.2E+04	n					1.2E+02	n		1.2E-01	n	
124-48-1	8.4E-02	I			2.0E-02	I			V		1		8.0E+02	Dibromochloromethane	124-48-1	8.3E+00	c	3.9E+01	c					8.7E-01	c	8.0E+01(F)	2.3E-04	c	2.1E-02
106-93-4	2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1		1.3E+03	Dibromoethane, 1,2-	106-93-4	3.6E-02	c	1.6E-01	c	4.7E-03	c	2.0E-02	c	7.5E-03	c	5.0E-02	2.1E-06	c	1.4E-05
74-95-3							4.0E-03	X	V		1		2.8E+03	Dibromomethane (Methylene Bromide)	74-95-3	2.4E+01	n	9.9E+01	n	4.2E+00	n	1.8E+01	n	8.3E+00	n		2.1E-03	n	
NA					3.0E-04	P					1	0.1		Dibutyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n			n	
1918-00-9					3.0E-02	I					1	0.1		Dicamba	1918-00-9	1.9E+03	n	2.5E+04	n					5.7E+02	n		1.5E-01	n	
764-41-0			4.2E-03	P					V		1		5.5E+02	Dichloro-2-butene, 1,4-	764-41-0	2.1E-03	c	9.4E-03	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.6E-07	c	
1476-11-5			4.2E-03	P					V		1		5.2E+02	Dichloro-2-butene, cis-1,4-	1476-11-5	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
110-57-6			4.2E-03	P					V		1		7.6E+02	Dichloro-2-butene, trans-1,4-	110-57-6	7.4E-03	c	3.2E-02	c	6.7E-04	c	2.9E-03	c	1.3E-03	c		6.2E-07	c	
79-43-6	5.0E-02	I			4.0E-03	I					1	0.1		Dichloroacetic Acid	79-43-6	1.1E+01	c*	4.6E+01	c*					1.5E+00	c*	6.0E+01	3.1E-04	c*	1.2E-02
95-50-1					9.0E-02	I	2.0E-01	H	V		1		3.8E+02	Dichlorobenzene, 1,2-	95-50-1	1.8E+03	ns	9.3E+03	ns	2.1E+02	n	8.8E+02	n	3.0E+02	n	6.0E+02	3.0E-01	n	5.8E-01
106-46-7	5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		1			Dichlorobenzene, 1,4-	106-46-7	2.6E+00	c	1.1E+01	c	2.6E-01	c	1.1E+00	c	4.8E-01	c	7.5E+01	4.6E-04	c	7.2E-02
91-94-1	4.5E-01	I	3.4E-04	C							1	0.1		Dichlorobenzidine, 3,3'-	91-94-1	1.2E+00	c	5.1E+00	c	8.3E-03	c	3.6E-02	c	1.3E-01	c		8.2E-04	c	
90-98-2					9.0E-03	X					1	0.1		Dichlorobenzophenone, 4,4'-	90-98-2	5.7E+02	n	7.4E+03	n					7.8E+01	n		4.7E-01	n	
75-71-8					2.0E-01	I	1.0E-01	X	V		1		8.5E+02	Dichlorodifluoromethane	75-71-8	8.7E+01	n	3.7E+02	n	1.0E+02	n	4.4E+02	n	2.0E+02	n		3.0E-01	n	
75-34-3	5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1		1.7E+03	Dichloroethane, 1,1-	75-34-3	3.6E+00	c	1.6E+01	c	1.8E+00	c	7.7E+00	c	2.8E+00	c		7.8E-04	c	
107-06-2	9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1		3.0E+03	Dichloroethane, 1,2-	107-06-2	4.6E-01	c*	2.0E+00	c*	1.1E-01	c*	4.7E-01	c*	1.7E-01	c*	5.0E+00	4.8E-05	c*	1.4E-03
75-35-4					5.0E-02	I	2.0E-01	I	V		1		1.2E+03	Dichloroethylene, 1,1-	75-35-4	2.3E+02	n	1.0E+03	n	2.1E+02	n	8.8E+02	n	2.8E+02	n	7.0E+00	1.0E-01	n	2.5E-03
156-59-2					2.0E-03	I			V		1		2.4E+03	Dichloroethylene, 1,2-cis-	156-59-2	1.6E+02	n	2.3E+03	n					3.6E+01	n	7.0E+01	1.1E-02	n	2.1E-02
156-60-5					2.0E-02	I			V		1		1.9E+03	Dichloroethylene, 1,2-trans-	156-60-5	1.6E+03	n	2.3E+04	ns					3.6E+02	n	1.0E+02	1.1E-01	n	3.1E-02
120-83-2					3.0E-03	I					1	0.1		Dichlorophenol, 2,4-	120-83-2	1.9E+02	n	2.5E+03	n					4.6E+01	n		2.3E-02	n	
94-75-7					1.0E-02	I					1	0.05		Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	7.0E+02	n	9.6E+03	n					1.7E+02	n	7.0E+01	4.5E-02	n	1.8E-02
94-82-6					8.0E-03	I					1	0.1		Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	5.1E+02	n	6.6E+03	n					1.2E+02	n		1.1E-01	n	
78-87-5	3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1		1.4E+03	Dichloropropane, 1,2-	78-87-5	1.0E+00	c*	4.4E+00	c*	2.8E-01	c*	1.2E+00	c*	4.4E-01	c*	5.0E+00	1.5E-04	c*	1.7E-03
142-28-9					2.0E-02	P			V		1		1.5E+03	Dichloropropane, 1,3-	142-28-9	1.6E+03	ns	2.3E+04	ns					3.7E+02	n		1.3E-01	n	
616-23-9					3.0E-03	I					1	0.1		Dichloropropanol, 2,3-	616-23-9	1.9E+02	n	2.5E+03	n					5.9E+01	n		1.3E-02	n	
542-75-6	1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1		1.6E+03	Dichloropropene, 1,3-	542-75-6	1.8E+00	c*	8.2E+00	c*	7.0E-01	c*	3.1E+00	c*	4.7E-01	c*		1.7E-04	c*	
62-73-7	2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1	0.1		Dichlorvos	62-73-7	1.9E+00	c*	7.9E+00	c*	3.4E-02	c*	1.5E-01	c*	2.6E-01	c*		8.1E-05	c*	
141-66-2					1.0E-04	I					1	0.1		Dicrotophos	141-66-2	6.3E+00	n	8.2E+01	n					2.0E+00	n		4.7E-04	n	
77-73-6					8.0E-02	P	3.0E-04	X	V		1		2.6E+02	Dicyclopentadiene	77-73-6	1.3E+00	n	5.4E+00	n	3.1E-01	n	1.3E+00	n	6.3E-01	n		2.2E-03	n	
60-57-1	1.6E+01	I	4.6E-03	I	5.0E-05	I					1	0.1		Dieldrin	60-57-1	3.4E-02	c*	1.4E-01	c	6.1E-04	c	2.7E-03	c	1.8E-03	c		7.1E-05	c	
NA			3.0E-04	C			5.0E-03	I			1	0.1		Diesel Engine Exhaust	NA					9.4E-03	c	4.1E-02	c						
111-42-2					2.0E-03	P	2.0E-04	P			1	0.1		Diethanolamine	111-42-2	1.3E+02	n	1.6E+03	n	2.1E-01	n	8.8E-01	n	4.0E+01	n		8.1E-03	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

1	2	3	4	5	6	7	8	9	#	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Toxicity and Chemical-specific Information													Contaminant		Screening Levels											Protection of Ground Water SSLs		
CAS No.	SFO $(mg/kg\text{-}day)^{-1}$	key	IUR $(ug/m^3)^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
112-34-5					3.0E-02	P	1.0E-04	P			1	0.1		Diethylene Glycol Monobutyl Ether	112-34-5	1.9E+03	n	2.4E+04	n	1.0E-01	n	4.4E-01	n	6.0E+02	n		1.3E-01	n	
111-90-0					6.0E-02	P	3.0E-04	P			1	0.1		Diethylene Glycol Monoethyl Ether	111-90-0	3.8E+03	n	4.8E+04	n	3.1E-01	n	1.3E+00	n	1.2E+03	n		2.4E-01	n	
617-84-5					1.0E-03	P			V		1		1.1E+05	Diethylformamide	617-84-5	7.8E+01	n	1.2E+03	n					2.0E+01	n		4.1E-03	n	
56-53-1	3.5E+02	C	1.0E-01	C							1	0.1		Diethylstilbestrol	56-53-1	1.6E-03	c	6.6E-03	c	2.8E-05	c	1.2E-04	c	5.1E-05	c		2.8E-05	c	
43222-48-6					8.0E-02	I					1	0.1		Difenzoquat	43222-48-6	5.1E+03	n	6.6E+04	n					1.6E+03	n		2.5E+02	n	
35367-38-5					2.0E-02	I					1	0.1		Diflubenzuron	35367-38-5	1.3E+03	n	1.6E+04	n					2.9E+02	n		3.3E-01	n	
75-37-6							4.0E+01	I	V		1		1.4E+03	Difluoroethane, 1,1-	75-37-6	4.8E+04	ns	2.0E+05	nms	4.2E+04	n	1.8E+05	n	8.3E+04	n		2.8E+01	n	
94-58-6	4.4E-02	C	1.3E-05	C					V		1			Dihydrosafrole	94-58-6	9.9E+00	c	4.5E+01	c	2.2E-01	c	9.4E-01	c	3.0E-01	c		1.9E-04	c	
108-20-3							7.0E-01	P	V		1		2.3E+03	Diisopropyl Ether	108-20-3	2.2E+03	n	9.4E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		3.7E-01	n	
1445-75-6					8.0E-02	I			V		1		5.3E+02	Diisopropyl Methylphosphonate	1445-75-6	6.3E+03	ns	9.3E+04	ns					1.6E+03	n		4.5E-01	n	
55290-64-7					2.0E-02	I					1	0.1		Dimethipin	55290-64-7	1.3E+03	n	1.6E+04	n					4.0E+02	n		8.8E-02	n	
60-51-5					2.0E-04	I					1	0.1		Dimethoate	60-51-5	1.3E+01	n	1.6E+02	n					4.0E+00	n		9.0E-04	n	
119-90-4	1.6E+00	P									1	0.1		Dimethoxybenzidine, 3,3'-	119-90-4	3.4E-01	c	1.4E+00	c					4.7E-02	c		5.8E-05	c	
756-79-6	1.7E-03	P			6.0E-02	P					1	0.1		Dimethyl methylphosphonate	756-79-6	3.2E+02	c*	1.4E+03	c*					4.6E+01	c*		9.6E-03	c*	
60-11-7	4.6E+00	C	1.3E-03	C							1	0.1		Dimethylamino azobenzene [p-]	60-11-7	1.2E-01	c	5.0E-01	c	2.2E-03	c	9.4E-03	c	5.0E-03	c		2.1E-05	c	
21436-96-4	5.8E-01	H									1	0.1		Dimethylaniline HCl, 2,4-	21436-96-4	9.4E-01	c	4.0E+00	c					1.3E-01	c		1.2E-04	c	
95-68-1	2.0E-01	P			2.0E-03	X					1	0.1		Dimethylaniline, 2,4-	95-68-1	2.7E+00	c*	1.1E+01	c					3.7E-01	c		2.1E-04	c	
121-69-7					2.0E-03	I			V		1		8.3E+02	Dimethylaniline, N,N-	121-69-7	1.6E+02	n	2.3E+03	ns					3.5E+01	n		1.3E-02	n	
119-93-7	1.1E+01	P									1	0.1		Dimethylbenzidine, 3,3'-	119-93-7	4.9E-02	c	2.1E-01	c					6.5E-03	c		4.3E-05	c	
68-12-2					1.0E-01	P	3.0E-02	I	V		1		1.1E+05	Dimethylformamide	68-12-2	2.6E+03	n	1.5E+04	n	3.1E+01	n	1.3E+02	n	6.1E+01	n		1.2E-02	n	
57-14-7					1.0E-04	X	2.0E-06	X	V		1		1.7E+05	Dimethylhydrazine, 1,1-	57-14-7	5.7E-02	n	2.4E-01	n	2.1E-03	n	8.8E-03	n	4.2E-03	n		9.3E-07	n	
540-73-8	5.5E+02	C	1.6E-01	C					V		1		1.9E+05	Dimethylhydrazine, 1,2-	540-73-8	8.8E-04	c	4.1E-03	c	1.8E-05	c	7.7E-05	c	2.8E-05	c		6.5E-09	c	
105-67-9					2.0E-02	I					1	0.1		Dimethylphenol, 2,4-	105-67-9	1.3E+03	n	1.6E+04	n					3.6E+02	n		4.2E-01	n	
576-26-1					6.0E-04	I					1	0.1		Dimethylphenol, 2,6-	576-26-1	3.8E+01	n	4.9E+02	n					1.1E+01	n		1.3E-02	n	
95-65-8					1.0E-03	I					1	0.1		Dimethylphenol, 3,4-	95-65-8	6.3E+01	n	8.2E+02	n					1.8E+01	n		2.1E-02	n	
513-37-1	4.5E-02	C	1.3E-05	C					V		1		4.7E+02	Dimethylvinylchloride	513-37-1	1.1E+00	c	4.8E+00	c	2.2E-01	c	9.4E-01	c	3.3E-01	c		1.1E-04	c	
534-52-1					8.0E-05	X					1	0.1		Dinitro-o-cresol, 4,6-	534-52-1	5.1E+00	n	6.6E+01	n					1.5E+00	n		2.6E-03	n	
131-89-5					2.0E-03	I					1	0.1		Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	1.3E+02	n	1.6E+03	n					2.3E+01	n		7.7E-01	n	
528-29-0					1.0E-04	P					1	0.1		Dinitrobenzene, 1,2-	528-29-0	6.3E+00	n	8.2E+01	n					1.9E+00	n		1.8E-03	n	
99-65-0					1.0E-04	I					1	0.1		Dinitrobenzene, 1,3-	99-65-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
100-25-4					1.0E-04	P					1	0.1		Dinitrobenzene, 1,4-	100-25-4	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.8E-03	n	
51-28-5					2.0E-03	I					1	0.1		Dinitrophenol, 2,4-	51-28-5	1.3E+02	n	1.6E+03	n					3.9E+01	n		4.4E-02	n	
NA	6.8E-01	I									1	0.1		Dinitrotoluene Mixture, 2,4/2,6-	NA	8.0E-01	c	3.4E+00	c					1.1E-01	c		1.5E-04	c	
121-14-2	3.1E-01	C	8.9E-05	C	2.0E-03	I					1	0.102		Dinitrotoluene, 2,4-	121-14-2	1.7E+00	c*	7.4E+00	c	3.2E-02	c	1.4E-01	c	2.4E-01	c		3.2E-04	c	
606-20-2	1.5E+00	P			3.0E-04	X					1	0.099		Dinitrotoluene, 2,6-	606-20-2	3.6E-01	c*	1.5E+00	c					4.9E-02	c		6.7E-05	c	
35572-78-2					2.0E-03	S					1	0.006		Dinitrotoluene, 2-Amino-4,6-	35572-78-2	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
19406-51-0					2.0E-03	S					1	0.009		Dinitrotoluene, 4-Amino-2,6-	19406-51-0	1.5E+02	n	2.3E+03	n					3.9E+01	n		3.0E-02	n	
25321-14-6	4.5E-01	X			9.0E-04	X					1	0.1		Dinitrotoluene, Technical grade	25321-14-6	1.2E+00	c*	5.1E+00	c					1.0E-01	c		1.4E-04	c	
88-85-7					1.0E-03	I					1	0.1		Dinoseb	88-85-7	6.3E+01	n	8.2E+02	n					1.5E+01	n	7.0E+00	1.3E-01	n	6.2E-02
123-91-1	1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1		1.2E+05	Dioxane, 1,4-	123-91-1	5.3E+00	c	2.4E+01	c	5.6E-01	c*	2.5E+00	c*	4.6E-01	c		9.4E-05	c	
														Dioxins															
NA	6.2E+03	I	1.3E+00	I							1	0.03		~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.0E-04	c	4.7E-04	c	2.2E-06	c	9.4E-06	c	1.3E-05	c		1.7E-05	c	
1746-01-6	1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		1	0.03		~TCDD, 2,3,7,8-	1746-01-6	4.8E-06	c*	2.2E-05	c*	7.4E-08	c	3.2E-07	c	1.2E-07	c	3.0E-05	5.9E-08	c	1.5E-05
957-51-7					3.0E-02	I					1	0.1		Diphenamid	957-51-7	1.9E+03	n	2.5E+04	n					5.3E+02	n		5.2E+00	n	
127-63-9					8.0E-04	X					1	0.1		Diphenyl Sulfone	127-63-9	5.1E+01	n	6.6E+02	n					1.5E+01	n		3.6E-02	n	
122-39-4					2.5E-02	I					1	0.1		Diphenylamine	122-39-4	1.6E+03	n	2.1E+04	n					3.1E+02	n		5.8E-01	n	
122-66-7	8.0E-01	I	2.2E-04	I							1	0.1		Diphenylhydrazine, 1,2-	122-66-7	6.8E-01	c	2.9E+00	c	1.3E-02	c	5.6E-02	c	7.8E-02	c		2.5E-04	c	
85-00-7					2.2E-03	I					1	0.1		Diquat	85-00-7	1.4E+02	n	1.8E+03	n					4.4E+01	n	2.0E+01	8.3E-01	n	3.7E-01
1937-37-7	7.1E+00	C	1.4E-01	C							1	0.1		Direct Black 38	1937-37-7	7.6E-02	c	3.2E-01	c	2.0E-05	c	8.8E-05	c	1.1E-02	c		5.3E+00	c	
2602-46-2	7.4E+00	C	1.4E-01	C							1	0.1		Direct Blue 6	2602-46-2	7.3E-02	c	3.1E-01	c	2.0E-05	c	8.8E-05	c	1.1E-02	c		1.7E+01	c	
16071-86-6	6.7E+00	C	1.4E-01	C							1	0.1		Direct Brown 95	16071-86-6	8.1E-02	c	3.4E-01	c	2.0E-05	c	8.8E-05	c	1.2E-02	c		1.6E-01	c	
298-04-4					4.0E-05	I					1	0.1		Disulfoton	298-04-4	2.5E+00	n	3.3E+01	n					5.0E-01	n		9.4E-04	n	
505-29-3					1.0E-02	I			V		1			Dithiane, 1,4-	505-29-3	7.8E+02	n	1.2E+04	n					2.0E+02	n		9.7E-02	n	
330-54-1					2.0E-03	I					1	0.1		Diuron	330-54-1	1.3E+02	n	1.6E+03	n					3.6E+01	n		1.5E-02	n	
2439-10-3					4.0E-03	I					1	0.1		Dodine	2439-10-3	2.5E+02	n	3.3E+03	n					8.0E+01	n		4.1E-01	n	
759-94-4					2.5E-02	I			V		1			EPTC	759-94-4	2.0E+03	n	2.9E+04	n					3.8E+02	n		2.0E-01	n	
115-29-7					6.0E-03	I			V		1			Endosulfan	115-29-7	4.7E+02	n	7.0E+03	n					1.0E+02	n		1.4E+00	n	
145-73-3					2.0E-02	I					1	0.1		Endothall	145-73-3	1.3E+03	n	1.6E+04	n					3.8E+02	n	1.0E+02	9.1E-02	n	2.4E-02
72-20-8					3.0E-04	I					1	0.1		Endrin	72-20-8	1.9E+01	n	2.5E+02	n					2.3E+00	n	2.0E+00	9.2E-02	n	8.1E-02
106-89-8	9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1		1.1E+04	Epichlorohydrin	106-89-8	1.9E+01	n	8.2E+01	n	1.0E+00	n	4.4E+00	n	2.0E+00	n		4.5E-04	n	
106-88-7							2.0E-02	I	V		1		1.5E+04	Epoxybutane, 1,2-	106-88-7	1.6E+02	n	6.7E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		9.2E-03	n	
111-77-3					4.0E-02	P					1	0.1		Ethanol, 2-(2-methoxyethoxy)-	111-77-3	2.5E+03	n	3.3E+04	n					8.0E+02	n		1.6E-01	n	
16672-87-0					5.0E-03	I					1	0.1		Ethephon	16672-87-0	3.2E+02	n	4.1E+03	n					1.0E+02	n		2.1E-02	n	
563-12-2					5.0E-04	I					1	0.1		Ethion	563-12-2	3.2E+01	n	4.1E+02	n					4.3E+00	n		8.5E-03	n	
111-15-9					1.0E-01	P	6.0E-02	P	V		1		2.4E+04	Ethoxyethanol Acetate, 2-	111-15-9	2.6E+03	n	1.4E+04	n	6.3E+01	n	2.6E+02	n	1.2E+02	n		2.5E-02	n	
110-80-5					9.0E-02	P	2.0E-01	I	V		1		1.1E+05	Ethoxyethanol, 2-	110-80-5	5.2E+03	n	4.7E+04	n	2.1E+02	n	8.8E+02	n	3.4E+02	n		6.8E-02	n	
141-78-6					9.0E-01	I	7.0E-02	P	V		1		1.1E+04	Ethyl Acetate	141-78-6	6.2E+02	n	2.6E+03	n	7.3E+01	n	3.1E+02	n	1.4E+02	n		3.1E-02	n	
140-88-5					5.0E-03	P	8.0E-03	P	V		1		2.5E+03	Ethyl Acrylate	140-88-5	4.7E+01	n	2.1E+02	n	8.3E+00	n	3.5E+01	n	1.4E+01	n		3.2E-03	n	
75-00-3							1.0E+01	I	V		1		2.1E+03	Ethyl Chloride (Chloroethane)	75-00-3	1.4E+04	ns	5.7E+04	ns	1.0E+04	n	4.4E+04	n	2.1E+04	n		5.9E+00	n	
60-29-7					2.0E-01	I			V		1		1.0E+04	Ethyl Ether	60-29-7	1.6E+04	ns	2.3E+05	nms					3.9E+03	n		8.8E-01	n	
97-63-2							3.0E-01	P	V		1		1.1E+03	Ethyl Methacrylate	97-63-2	1.8E+03	ns	7.6E+03	ns	3.1E+02	n	1.3E+03	n	6.3E+02	n		1.5E-01	n	
2104-64-5					1.0E-05	I					1	0.1		Ethyl-p-nitrophenyl Phosphonate	2104-64-5	6.3E-01	n	8.2E+00	n					8.9E-02	n		2.8E-03	n	
100-41-4	1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		1		4.8E+02	Ethylbenzene	100-41-4	5.8E+00	c	2.5E+01	c	1.1E+00	c	4.9E+00	c	1.5E+00	c	7.0E+02	1.7E-03	c	7.8E-01
109-78-4					7.0E-02	P					1	0.1		Ethylene Cyanohydrin	109-78-4	4.4E+03	n	5.7E+04	n					1.4E+03	n		2.8E-01	n	
107-15-3					9.0E-02	P			V		1		1.9E+05	Ethylene Diamine	107-15-3	7.0E+03	n	1.1E+05	nm					1.8E+03	n		4.1E-01	n	
107-21-1					2.0E+00	I	4.0E-01	C			1	0.1		Ethylene Glycol	107-21-1	1.3E+05	nm	1.6E+06	nm	4.2E+02	n	1.8E+03	n	4.0E+04	n		8.1E+00	n	
111-76-2					1.0E-01	I	1.6E+00	I			1	0.1		Ethylene Glycol Monobutyl Ether	111-76-2	6.3E+03	n	8.2E+04	n	1.7E+03	n	7.0E+03	n	2.0E+03	n		4.1E-01	n	
75-21-8	3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1		1.2E+05	Ethylene Oxide	75-21-8	1.8E-01	c	7.9E-01	c	3.2E-02	c	1.4E-01	c	5.1E-02	c		1.1E-05	c	
96-45-7	4.5E-02	C	1.3E-05	C	8.0E-05	I					1	0.1		Ethylene Thiourea	96-45-7	5.1E+00	n	5.1E+01	c**	2.2E-01	c	9.4E-01	c	1.6E+00	n		3.6E-04	n	
151-56-4	6.5E+01	C	1.9E-02	C					V		1		1.5E+05	Ethyleneimine	151-56-4	2.7E-03	c	1.2E-02	c	1.5E-04	c	6.5E-04	c	2.4E-04	c		5.2E-08	c	
84-72-0					3.0E+00	I					1	0.1		Ethylphthalyl Ethyl Glycolate	84-72-0	1.9E+05	nm	2.5E+06	nm					5.8E+04	n		1.3E+02	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information														Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
22224-92-6					2.5E-04	I					1	0.1		Fenamiphos	22224-92-6	1.6E+01	n	2.1E+02	n					4.4E+00	n		4.3E-03	n	
39515-41-8					2.5E-02	I					1	0.1		Fenpropathrin	39515-41-8	1.6E+03	n	2.1E+04	n					6.4E+01	n		2.9E+00	n	
51630-58-1					2.5E-02	I					1	0.1		Fenvalerate	51630-58-1	1.6E+03	n	2.1E+04	n					5.0E+02	n		3.2E+02	n	
2164-17-2					1.3E-02	I					1	0.1		Fluometuron	2164-17-2	8.2E+02	n	1.1E+04	n					2.4E+02	n		1.9E-01	n	
16984-48-8					4.0E-02	C	1.3E-02	C			1			Fluoride	16984-48-8	3.1E+03	n	4.7E+04	n	1.4E+01	n	5.7E+01	n	8.0E+02	n		1.2E+02	n	
7782-41-4					6.0E-02	I	1.3E-02	C			1			Fluorine (Soluble Fluoride)	7782-41-4	4.7E+03	n	7.0E+04	n	1.4E+01	n	5.7E+01	n	1.2E+03	n	4.0E+03	1.8E+02	n	6.0E+02
59756-60-4					8.0E-02	I					1	0.1		Fluridone	59756-60-4	5.1E+03	n	6.6E+04	n					1.4E+03	n		1.6E+02	n	
56425-91-3					2.0E-02	I					1	0.1		Flurprimidol	56425-91-3	1.3E+03	n	1.6E+04	n					3.4E+02	n		1.6E+00	n	
85509-19-9					7.0E-04	I					1	0.1		Flusilazole	85509-19-9	4.4E+01	n	5.7E+02	n					1.1E+01	n		1.8E+00	n	
66332-96-5					6.0E-02	I					1	0.1		Flutolanil	66332-96-5	3.8E+03	n	4.9E+04	n					9.5E+02	n		5.0E+00	n	
69409-94-5					1.0E-02	I					1	0.1		Fluvalinate	69409-94-5	6.3E+02	n	8.2E+03	n					2.0E+02	n		2.9E+02	n	
133-07-3	3.5E-03	I			1.0E-01	I					1	0.1		Folpet	133-07-3	1.6E+02	c*	6.6E+02	c					2.0E+01	c*		4.7E-03	c*	
72178-02-0	1.9E-01	I									1	0.1		Fomesafen	72178-02-0	2.9E+00	c	1.2E+01	c					3.9E-01	c		1.3E-03	c	
944-22-9					2.0E-03	I					1	0.1		Fonofos	944-22-9	1.3E+02	n	1.6E+03	n					2.4E+01	n		4.7E-02	n	
50-00-0			1.3E-05	I	2.0E-01	I	9.8E-03	A	V		1		4.2E+04	Formaldehyde	50-00-0	1.7E+01	c*	7.3E+01	c*	2.2E-01	c*	9.4E-01	c*	4.3E-01	c*		8.7E-05	c*	
64-18-6					9.0E-01	P	3.0E-04	X	V		1		1.1E+05	Formic Acid	64-18-6	2.9E+01	n	1.2E+02	n	3.1E-01	n	1.3E+00	n	6.3E-01	n		1.3E-04	n	
39148-24-8					3.0E+00	I					1	0.1		Fosetyl-AL	39148-24-8	1.9E+05	nm	2.5E+06	nm					6.0E+04	n		7.9E+02	n	
														Furans																	
132-64-9					1.0E-03	X			V		1	0.03		~Dibenzofuran	132-64-9	7.3E+01	n	1.0E+03	n					7.9E+00	n		1.5E-01	n	
110-00-9					1.0E-03	I			V		1	0.03	6.2E+03	~Furan	110-00-9	7.3E+01	n	1.0E+03	n					1.9E+01	n		7.3E-03	n	
109-99-9					9.0E-01	I	2.0E+00	I	V		1	0.03	1.7E+05	~Tetrahydrofuran	109-99-9	1.8E+04	n	9.4E+04	n	2.1E+03	n	8.8E+03	n	3.4E+03	n		7.5E-01	n	
67-45-8	3.8E+00	H									1	0.1		Furazolidone	67-45-8	1.4E-01	c	6.0E-01	c					2.0E-02	c		3.9E-05	c	
98-01-1					3.0E-03	I	5.0E-02	H	V		1		1.0E+04	Furfural	98-01-1	2.1E+02	n	2.6E+03	n	5.2E+01	n	2.2E+02	n	3.8E+01	n		8.1E-03	n	
531-82-8	1.5E+00	C	4.3E-04	C							1	0.1		Furium	531-82-8	3.6E-01	c	1.5E+00	c	6.5E-03	c	2.9E-02	c	5.1E-02	c		6.8E-05	c	
60568-05-0	3.0E-02	I	8.6E-06	C							1	0.1		Furmecyclox	60568-05-0	1.8E+01	c	7.7E+01	c	3.3E-01	c	1.4E+00	c	1.1E+00	c		1.2E-03	c	
77182-82-2					4.0E-04	I					1	0.1		Glufosinate, Ammonium	77182-82-2	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
111-30-8							8.0E-05	C			1	0.1		Glutaraldehyde	111-30-8	1.1E+05	nm	4.8E+05	nm	8.3E-02	n	3.5E-01	n							
765-34-4					4.0E-04	I	1.0E-03	H	V		1		1.1E+05	Glycidyl	765-34-4	2.3E+01	n	2.1E+02	n	1.0E+00	n	4.4E+00	n	1.7E+00	n		3.3E-04	n	
1071-83-6					1.0E-01	I					1	0.1		Glyphosate	1071-83-6	6.3E+03	n	8.2E+04	n					2.0E+03	n	7.0E+02	8.8E+00	n	3.1E+00
113-00-8					1.0E-02	X			V		1			Guanidine	113-00-8	7.8E+02	n	1.2E+04	n					2.0E+02	n		4.5E-02	n	
50-01-1					2.0E-02	R					1	0.1		Guanidine Chloride	50-01-1	1.3E+03	n	1.6E+04	n					4.0E+02	n			n	
69806-40-2					5.0E-05	I					1	0.1		Haloxyfop, Methyl	69806-40-2	3.2E+00	n	4.1E+01	n					7.6E-01	n		8.4E-03	n	
76-44-8	4.5E+00	I	1.3E-03	I	5.0E-04	I			V		1			Heptachlor	76-44-8	1.3E-01	c	6.3E-01	c	2.2E-03	c	9.4E-03	c	1.4E-03	c	4.0E-01	1.2E-04	c	3.3E-02
1024-57-3	9.1E+00	I	2.6E-03	I	1.3E-05	I			V		1			Heptachlor Epoxide	1024-57-3	7.0E-02	c*	3.3E-01	c*	1.1E-03	c	4.7E-03	c	1.4E-03	c*	2.0E-01	2.8E-05	c*	4.1E-03
87-82-1					2.0E-03	I			V		1			Hexabromobenzene	87-82-1	1.6E+02	n	2.3E+03	n					4.0E+01	n		2.3E-01	n	
68631-49-2					2.0E-04	I					1	0.1		Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	1.3E+01	n	1.6E+02	n					4.0E+00	n			n	
118-74-1	1.6E+00	I	4.6E-04	I	8.0E-04	I			V		1			Hexachlorobenzene	118-74-1	2.1E-01	c	9.6E-01	c	6.1E-03	c	2.7E-02	c	9.8E-03	c	1.0E+00	1.2E-04	c	1.3E-02
87-68-3	7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1		1.7E+01	Hexachlorobutadiene	87-68-3	1.2E+00	c*	5.3E+00	c	1.3E-01	c	5.6E-01	c	1.4E-01	c*		2.7E-04	c*	
319-84-6	6.3E+00	I	1.8E-03	I	8.0E-03	A					1	0.1		Hexachlorocyclohexane, Alpha-	319-84-6	8.6E-02	c	3.6E-01	c	1.6E-03	c	6.8E-03	c	7.2E-03	c		4.2E-05	c	
319-85-7	1.8E+00	I	5.3E-04	I							1	0.1		Hexachlorocyclohexane, Beta-	319-85-7	3.0E-01	c	1.3E+00	c	5.3E-03	c	2.3E-02	c	2.5E-02	c		1.5E-04	c	
58-89-9	1.1E+00	C	3.1E-04	C	3.0E-04	I					1	0.04		Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	5.7E-01	c*	2.5E+00	c	9.1E-03	c	4.0E-02	c	4.2E-02	c*	2.0E-01	2.4E-04	c*	1.2E-03
608-73-1	1.8E+00	I	5.1E-04	I							1	0.1		Hexachlorocyclohexane, Technical	608-73-1	3.0E-01	c	1.3E+00	c	5.5E-03	c	2.4E-02	c	2.5E-02	c		1.5E-04	c	
77-47-4					6.0E-03	I	2.0E-04	I	V		1		1.6E+01	Hexachlorocyclopentadiene	77-47-4	1.8E+00	n	7.5E+00	n	2.1E-01	n	8.8E-01	n	4.1E-01	n	5.0E+01	1.3E-03	n	1.6E-01
67-72-1	4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		1			Hexachloroethane	67-72-1	1.8E+00	c*	8.0E+00	c*	2.6E-01	c	1.1E+00	c	3.3E-01	c*		2.0E-04	c*	
70-30-4					3.0E-04	I					1	0.1		Hexachlorophene	70-30-4	1.9E+01	n	2.5E+02	n					6.0E+00	n		8.0E+00	n	
121-82-4	1.1E-01	I			3.0E-03	I					1	0.015		Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.1E+00	c*	2.8E+01	c					7.0E-01	c*		2.7E-04	c*	
822-06-0							1.0E-05	I	V		1		3.4E+03	Hexamethylene Diisocyanate, 1,6-	822-06-0	3.1E+00	n	1.3E+01	n	1.0E-02	n	4.4E-02	n	2.1E-02	n		2.1E-04	n	
680-31-9					4.0E-04	P					1	0.1		Hexamethylphosphoramide	680-31-9	2.5E+01	n	3.3E+02	n					8.0E+00	n		1.8E-03	n	
110-54-3							7.0E-01	I	V		1		1.4E+02	Hexane, N-	110-54-3	6.1E+02	ns	2.5E+03	ns	7.3E+02	n	3.1E+03	n	1.5E+03	n		1.0E+01	n	
124-04-9					2.0E+00	P					1	0.1		Hexanedioic Acid	124-04-9	1.3E+05	nm	1.6E+06	nm					4.0E+04	n		9.9E+00	n	
591-78-6					5.0E-03	I	3.0E-02	I	V		1		3.3E+03	Hexanone, 2-	591-78-6	2.0E+02	n	1.3E+03	n	3.1E+01	n	1.3E+02	n	3.8E+01	n		8.8E-03	n	
51235-04-2					3.3E-02	I					1	0.1		Hexazinone	51235-04-2	2.1E+03	n	2.7E+04	n					6.4E+02	n		3.0E-01	n	
78587-05-0					2.5E-02	I					1	0.1		Hexythiazox	78587-05-0	1.6E+03	n	2.1E+04	n					1.1E+02	n		5.0E-01	n	
67485-29-4					3.0E-04	I					1	0.1		Hydramethylnon	67485-29-4	1.9E+01	n	2.5E+02	n					5.9E+00	n		2.1E+03	n	
302-01-2	3.0E+00	I	4.9E-03	I			3.0E-05	P	V		1			Hydrazine	302-01-2	2.3E-01	c	1.1E+00	c	5.7E-04	c*	2.5E-03	c*	1.1E-03	c*			c*	
10034-93-2	3.0E+00	I	4.9E-03	I							1			Hydrazine Sulfate	10034-93-2	2.3E-01	c	1.1E+00	c	5.7E-04	c	2.5E-03	c	2.6E-02	c			c	
7647-01-0							2.0E-02	I	V		1			Hydrogen Chloride	7647-01-0	2.8E+07	nm	1.2E+08	nm	2.1E+01	n	8.8E+01	n	4.2E+01	n			n	
7664-39-3					4.0E-02	C	1.4E-02	C	V		1			Hydrogen Fluoride	7664-39-3	3.1E+03	n	4.7E+04	n	1.5E+01	n	6.1E+01	n	2.8E+01	n			n	
7783-06-4							2.0E-03	I	V		1			Hydrogen Sulfide	7783-06-4	2.8E+06	nm	1.2E+07	nm	2.1E+00	n	8.8E+00	n	4.2E+00	n			n	
123-31-9	6.0E-02	P			4.0E-02	P					1	0.1		Hydroquinone	123-31-9	9.0E+00	c	3.8E+01	c					1.3E+00	c		8.7E-04	c	
35554-44-0					1.3E-02	I					1	0.1		Imazalil	35554-44-0	8.2E+02	n	1.1E+04	n					1.9E+02	n		3.2E+00	n	
81335-37-7					2.5E-01	I					1	0.1		Imazaquin	81335-37-7	1.6E+04	n	2.1E+05	nm					4.9E+03	n		2.4E+01	n	
81335-77-5					2.5E-01	I					1	0.1		Imazethapyr	81335-77-5	1.6E+04	n	2.1E+05	nm					4.7E+03	n		4.1E+00	n	
7553-56-2					1.0E-02	A					1			Iodine	7553-56-2	7.8E+02	n	1.2E+04	n					2.0E+02	n		1.2E+01	n	
36734-19-7					4.0E-02	I					1	0.1		Iprodione	36734-19-7	2.5E+03	n	3.3E+04	n					7.4E+02	n		2.2E-01	n	
7439-89-6					7.0E-01	P					1			Iron	7439-89-6	5.5E+04	n	8.2E+05	nm					1.4E+04	n		3.5E+02	n	
78-83-1					3.0E-01	I			V		1		1.0E+04	Isobutyl Alcohol	78-83-1	2.3E+04	ns	3.5E+05	nms					5.9E+03	n		1.2E+00	n	
78-59-1	9.5E-04	I			2.0E-01	I	2.0E+00	C			1	0.1		Isophorone	78-59-1	5.7E+02	c*	2.4E+03	c*	2.1E+03	n	8.8E+03	n	7.8E+01	c*		2.6E-02	c*	
33820-53-0					1.5E-02	I			V		1			Isopropalin	33820-53-0	1.2E+03	n	1.8E+04	n					4.0E+01	n		9.2E-01	n	
67-63-0					2.0E+00	P	2.0E-01	P	V		1		1.1E+05	Isopropanol	67-63-0	5.6E+03	n	2.4E+04	n	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.4E-02	n	
1832-54-8					1.0E-01	I					1	0.1		Isopropyl Methyl Phosphonic Acid	1832-54-8	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.3E-01	n	
82558-50-7					5.0E-02	I					1	0.1		Isoxaben	82558-50-7	3.2E+03	n	4.1E+04	n					7.3E+02	n		2.0E+00	n	
NA							3.0E-01	A	V		1			JP-7	NA	4.3E+08	nm	1.8E+09	nm	3.1E+02	n	1.3E+03	n	6.3E+02	n			n	
77501-63-4					2.0E-03	I					1	0.1		Lactofen	77501-63-4	1.3E+02	n	1.6E+03	n					2.5E+01	n		1.2E+00	n	
														Lead Compounds																	
7758-97-6	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			~Lead Chromate	7758-97-6	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
7446-27-7	8.5E-03	C	1.2E-05	C							1			~Lead Phosphate	7446-27-7	8.2E+01	c	3.8E+02	c	2.3E-01	c	1.0E+00	c	9.1E+00	c			c	
301-04-2	8.5E-03	C	1.2E-05	C							1	0.1		~Lead acetate	301-04-2	6.4E+01	c	2.7E+02	c	2.3E-01	c	1.0E+00	c	9.2E+00	c		1.8E-03	c	
7439-92-1											1			~Lead and Compounds	7439-92-1	4.0E+02	L	8.0E+02	L	1.5E-01	L			1.5E+01	L	1.5E+01		L	1.4E+01
1335-32-6	8.5E-03	C	1.2E-05	C							1	0.1		~Lead subacetate	1335-32-6	6.4E+01	c	2.7E+02	c	2.3E-01	c	1.0E+00	c	9.2E+00	c		2.0E-03	c	
78-00-2					1.0E-07	I			V		1		2.4E+00	~Tetraethyl Lead	78-00-2	7.8E-03	n	1.2E-01	n					1.3E-03	n		4.7E-06	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
541-25-3					5.0E-06	P			V		1		3.8E+02	Lewisite	541-25-3	3.9E-01	n	5.8E+00	n					9.0E-02	n		3.8E-05	n	
330-55-2					2.0E-03	I					1	0.1		Linuron	330-55-2	1.3E+02	n	1.6E+03	n					3.3E+01	n		2.9E-02	n	
7439-93-2					2.0E-03	P					1			Lithium	7439-93-2	1.6E+02	n	2.3E+03	n					4.0E+01	n		1.2E+01	n	
94-74-6					5.0E-04	I					1	0.1		MCPA	94-74-6	3.2E+01	n	4.1E+02	n					7.5E+00	n		2.0E-03	n	
94-81-5					1.0E-02	I					1	0.1		MCPB	94-81-5	6.3E+02	n	8.2E+03	n					1.5E+02	n		5.8E-02	n	
93-65-2					1.0E-03	I					1	0.1		MCPP	93-65-2	6.3E+01	n	8.2E+02	n					1.6E+01	n		4.7E-03	n	
121-75-5					2.0E-02	I					1	0.1		Malathion	121-75-5	1.3E+03	n	1.6E+04	n					3.9E+02	n		1.0E-01	n	
108-31-6					1.0E-01	I	7.0E-04	C			1	0.1		Maleic Anhydride	108-31-6	6.3E+03	n	8.0E+04	n	7.3E-01	n	3.1E+00	n	1.9E+03	n		3.8E-01	n	
123-33-1					5.0E-01	I					1	0.1		Maleic Hydrazide	123-33-1	3.2E+04	n	4.1E+05	nm					1.0E+04	n		2.1E+00	n	
109-77-3					1.0E-04	P					1	0.1		Malononitrile	109-77-3	6.3E+00	n	8.2E+01	n					2.0E+00	n		4.1E-04	n	
8018-01-7					3.0E-02	H					1	0.1		Mancozeb	8018-01-7	1.9E+03	n	2.5E+04	n					5.4E+02	n		7.6E-01	n	
12427-38-2					5.0E-03	I					1	0.1		Maneb	12427-38-2	3.2E+02	n	4.1E+03	n					9.8E+01	n		1.4E-01	n	
7439-96-5					1.4E-01	I	5.0E-05	I			1			Manganese (Diet)	7439-96-5															
7439-96-5					2.4E-02	S	5.0E-05	I			0.04			Manganese (Non-diet)	7439-96-5	1.8E+03	n	2.6E+04	n	5.2E-02	n	2.2E-01	n	4.3E+02	n		2.8E+01	n	
950-10-7					9.0E-05	H					1	0.1		Mephosfolan	950-10-7	5.7E+00	n	7.4E+01	n					1.8E+00	n		2.6E-03	n	
24307-26-4					3.0E-02	I					1	0.1		Mepiquat Chloride	24307-26-4	1.9E+03	n	2.5E+04	n					6.0E+02	n		2.0E-01	n	
														Mercury Compounds																
7487-94-7					3.0E-04	I	3.0E-04	S			0.07			~Mercuric Chloride (and other Mercury salts)	7487-94-7	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E+00	n	2.0E+00		n	
7439-97-6							3.0E-04	I	V		1		3.1E+00	~Mercury (elemental)	7439-97-6	1.1E+01	ns	4.6E+01	ns	3.1E-01	n	1.3E+00	n	6.3E-01	n	2.0E+00	3.3E-02	n	1.0E-01
22967-92-6					1.0E-04	I					1			~Methyl Mercury	22967-92-6	7.8E+00	n	1.2E+02	n					2.0E+00	n			n	
62-38-4					8.0E-05	I					1	0.1		~Phenylmercuric Acetate	62-38-4	5.1E+00	n	6.6E+01	n					1.6E+00	n		5.0E-04	n	
150-50-5					3.0E-05	I			V		1			Merphos	150-50-5	2.3E+00	n	3.5E+01	n					6.0E-01	n		5.9E-02	n	
78-48-8					3.0E-05	I					1	0.1		Merphos Oxide	78-48-8	1.9E+00	n	2.5E+01	n					8.5E-02	n		4.2E-04	n	
57837-19-1					6.0E-02	I					1	0.1		Metalaxyl	57837-19-1	3.8E+03	n	4.9E+04	n					1.2E+03	n		3.3E-01	n	
126-98-7					1.0E-04	I	3.0E-02	P	V		1		4.6E+03	Methacrylonitrile	126-98-7	7.5E+00	n	1.0E+02	n	3.1E+01	n	1.3E+02	n	1.9E+00	n		4.3E-04	n	
10265-92-6					5.0E-05	I					1	0.1		Methamidophos	10265-92-6	3.2E+00	n	4.1E+01	n					1.0E+00	n		2.1E-04	n	
67-56-1					2.0E+00	I	2.0E+01	I	V		1		1.1E+05	Methanol	67-56-1	1.2E+05	nms	1.2E+06	nms	2.1E+04	n	8.8E+04	n	2.0E+04	n		4.1E+00	n	
950-37-8					1.0E-03						1	0.1		Methidathion	950-37-8	6.3E+01	n	8.2E+02	n					1.9E+01	n		4.7E-03	n	
16752-77-5					2.5E-02	I					1	0.1		Methomyl	16752-77-5	1.6E+03	n	2.1E+04	n					5.0E+02	n		1.1E-01	n	
99-59-2	4.9E-02	C	1.4E-05	C							1	0.1		Methoxy-5-nitroaniline, 2-	99-59-2	1.1E+01	c	4.7E+01	c	2.0E-01	c	8.8E-01	c	1.5E+00	c		5.3E-04	c	
72-43-5					5.0E-03	I					1	0.1		Methoxychlor	72-43-5	3.2E+02	n	4.1E+03	n					3.7E+01	n	4.0E+01	2.0E+00	n	2.2E+00
110-49-6					8.0E-03	P	1.0E-03	P	V		1		1.2E+05	Methoxyethanol Acetate, 2-	110-49-6	1.1E+02	n	5.1E+02	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		4.2E-04	n	
109-86-4					5.0E-03	P	2.0E-02	I	V		1		1.1E+05	Methoxyethanol, 2-	109-86-4	3.3E+02	n	3.5E+03	n	2.1E+01	n	8.8E+01	n	2.9E+01	n		5.9E-03	n	
79-20-9					1.0E+00	X			V		1		2.9E+04	Methyl Acetate	79-20-9	7.8E+04	ns	1.2E+06	nms					2.0E+04	n		4.1E+00	n	
96-33-3							2.0E-02	P	V		1		6.8E+03	Methyl Acrylate	96-33-3	1.5E+02	n	6.1E+02	n	2.1E+01	n	8.8E+01	n	4.2E+01	n		8.9E-03	n	
78-93-3					6.0E-01	I	5.0E+00	I	V		1		2.8E+04	Methyl Ethyl Ketone (2-Butanone)	78-93-3	2.7E+04	n	1.9E+05	nms	5.2E+03	n	2.2E+04	n	5.6E+03	n		1.2E+00	n	
60-34-4			1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1		1.8E+05	Methyl Hydrazine	60-34-4	1.4E-01	c**	6.2E-01	c**	2.8E-03	c**	1.2E-02	c**	5.6E-03	c**		1.3E-06	c**	
108-10-1							3.0E+00	I	V		1		3.4E+03	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3.3E+04	ns	1.4E+05	nms	3.1E+03	n	1.3E+04	n	6.3E+03	n		1.4E+00	n	
624-83-9							1.0E-03	C	V		1		1.0E+04	Methyl Isocyanate	624-83-9	4.6E+00	n	1.9E+01	n	1.0E+00	n	4.4E+00	n	2.1E+00	n		5.9E-04	n	
80-62-6					1.4E+00	I	7.0E-01	I	V		1		2.4E+03	Methyl Methacrylate	80-62-6	4.4E+03	ns	1.9E+04	ns	7.3E+02	n	3.1E+03	n	1.4E+03	n		3.0E-01	n	
298-00-0					2.5E-04	I					1	0.1		Methyl Parathion	298-00-0	1.6E+01	n	2.1E+02	n					4.5E+00	n		7.4E-03	n	
993-13-5					6.0E-02	X					1	0.1		Methyl Phosphonic Acid	993-13-5	3.8E+03	n	4.9E+04	n					1.2E+03	n		2.4E-01	n	
25013-15-4					6.0E-03	H	4.0E-02	H	V		1		3.9E+02	Methyl Styrene (Mixed Isomers)	25013-15-4	3.2E+02	n	2.6E+03	ns	4.2E+01	n	1.8E+02	n	2.3E+01	n		3.8E-02	n	
66-27-3	9.9E-02	C	2.8E-05	C							1	0.1		Methyl methanesulfonate	66-27-3	5.5E+00	c	2.3E+01	c	1.0E-01	c	4.4E-01	c	7.9E-01	c		1.6E-04	c	
1634-04-4	1.8E-03	C	2.6E-07	C			3.0E+00	I	V		1		8.9E+03	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.7E+01	c	2.1E+02	c	1.1E+01	c	4.7E+01	c	1.4E+01	c		3.2E-03	c	
615-45-2					3.0E-04	X					1	0.1		Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	1.9E+01	n	2.5E+02	n					6.0E+00	n		3.6E-03	n	
99-55-8	9.0E-03	P			2.0E-02	X					1	0.1		Methyl-5-Nitroaniline, 2-	99-55-8	6.0E+01	c*	2.6E+02	c*					8.2E+00	c*		4.6E-03	c*	
70-25-7	8.3E+00	C	2.4E-03	C							1	0.1		Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	6.5E-02	c	2.8E-01	c	1.2E-03	c	5.1E-03	c	9.4E-03	c		3.2E-06	c	
636-21-5	1.3E-01	C	3.7E-05	C							1	0.1		Methylaniline Hydrochloride, 2-	636-21-5	4.2E+00	c	1.8E+01	c	7.6E-02	c	3.3E-01	c	6.0E-01	c		2.6E-04	c	
124-58-3					1.0E-02	A					1	0.1		Methylarsonic acid	124-58-3	6.3E+02	n	8.2E+03	n					2.0E+02	n		5.8E-02	n	
74612-12-7					2.0E-04	X					1	0.1		Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.3E+01	n	1.6E+02	n					4.0E+00	n			n	
615-50-9	1.0E-01	X			3.0E-04	X					1	0.1		Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	5.4E+00	c**	2.3E+01	c*					7.8E-01	c**			c**	
56-49-5	2.2E+01	C	6.3E-03	C						M	1	0.1		Methylcholanthrene, 3-	56-49-5	5.5E-03	c	1.0E-01	c	1.6E-04	c	1.9E-03	c	1.1E-03	c		2.2E-03	c	
75-09-2	2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1		3.3E+03	Methylene Chloride	75-09-2	5.7E+01	c**	1.0E+03	c**	1.0E+02	c**	1.2E+03	c**	1.1E+01	c**	5.0E+00	2.9E-03	c**	1.3E-03
101-14-4	1.0E-01	P	4.3E-04	C	2.0E-03	P				M	1	0.1		Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.2E+00	c	2.3E+01	c*	2.4E-03	c	2.9E-02	c	1.6E-01	c		1.8E-03	c	
101-61-1	4.6E-02	I	1.3E-05	C							1	0.1		Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.2E+01	c	5.0E+01	c	2.2E-01	c	9.4E-01	c	4.8E-01	c		2.6E-03	c	
101-77-9	1.6E+00	C	4.6E-04	C			2.0E-02	C			1	0.1		Methylenebisbenzenamine, 4,4'-	101-77-9	3.4E-01	c	1.4E+00	c	6.1E-03	c	2.7E-02	c	4.7E-02	c		2.1E-04	c	
101-68-8					6.0E-04	I					1	0.1		Methylenediphenyl Diisocyanate	101-68-8	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n						
98-83-9					7.0E-02	H			V		1		5.0E+02	Methylstyrene, Alpha-	98-83-9	5.5E+03	ns	8.2E+04	ns					7.8E+02	n		1.2E+00	n	
51218-45-2					1.5E-01	I					1	0.1		Metolachlor	51218-45-2	9.5E+03	n	1.2E+05	nm					2.7E+03	n		3.2E+00	n	
21087-64-9					2.5E-02	I					1	0.1		Metribuzin	21087-64-9	1.6E+03	n	2.1E+04	n					4.9E+02	n		1.5E-01	n	
74223-64-6					2.5E-01	I					1	0.1		Metsulfuron-methyl	74223-64-6	1.6E+04	n	2.1E+05	nm					4.9E+03	n		1.9E+00	n	
8012-95-1					3.0E+00	P			V		1		3.4E-01	Mineral oils	8012-95-1	2.3E+05	nms	3.5E+06	nms					6.0E+04	n		2.4E+03	n	
2385-85-5	1.8E+01	C	5.1E-03	C	2.0E-04	I			V		1			Mirex	2385-85-5	3.6E-02	c	1.7E-01	c	5.5E-04	c	2.4E-03	c	8.8E-04	c		6.3E-04	c	
2212-67-1					2.0E-03	I					1	0.1		Molinate	2212-67-1	1.3E+02	n	1.6E+03	n					3.0E+01	n		1.7E-02	n	
7439-98-7					5.0E-03	I					1			Molybdenum	7439-98-7	3.9E+02	n	5.8E+03	n					1.0E+02	n		2.0E+00	n	
10599-90-3					1.0E-01	I					1			Monochloramine	10599-90-3	7.8E+03	n	1.2E+05	nm					2.0E+03	n	4.0E+03		n	
100-61-8					2.0E-03	P					1	0.1		Monomethylaniline	100-61-8	1.3E+02	n	1.6E+03	n					3.8E+01	n		1.4E-02	n	
88671-89-0					2.5E-02	I					1	0.1		Myclobutanil	88671-89-0	1.6E+03	n	2.1E+04	n					4.5E+02	n		5.6E+00	n	
74-31-7					3.0E-04	X					1	0.1		N,N'-Diphenyl-1,4-benzenediamine	74-31-7	1.9E+01	n	2.5E+02	n					3.6E+00	n		3.7E-01	n	
300-76-5					2.0E-03	I			V		1			Naled	300-76-5	1.6E+02	n	2.3E+03	n					4.0E+01	n		1.8E-02	n	
64742-95-6					3.0E-02	X	1.0E-01	P	V		1			Naphtha, High Flash Aromatic (HFAN)	64742-95-6	2.3E+03	n	3.5E+04	n	1.0E+02	n	4.4E+02	n	1.5E+02	n			n	
91-59-8	1.8E+00	C	0.0E+00	C							1	0.1		Naphthylamine, 2-	91-59-8	3.0E-01	c	1.3E+00	c					3.9E-02	c		2.0E-04	c	
15299-99-7					1.0E-01	I					1	0.1		Napropamide	15299-99-7	6.3E+03	n	8.2E+04	n					1.6E+03	n		1.1E+01	n	
373-02-4			2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickel Acetate	373-02-4	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n		4.5E-02	n	
3333-67-3			2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickel Carbonate	3333-67-3	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n	
13463-39-3			2.6E-04	C	1.1E-02	C	1.4E-05	C	V		1			Nickel Carbonyl	13463-39-3	8.2E+02	n	1.1E+04	n	1.1E-02	c**	4.7E-02	c**	2.2E-02	c**			c**	
12054-48-7			2.6E-04	C	1.1E-02	C	1.4E-05	C			0.04			Nickel Hydroxide	12054-48-7	8.2E+02	n	1.1E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n	
1313-99-1			2.6E-04	C	1.1E-02	C	2.0E-05	C			0.04			Nickel Oxide	1313-99-1	8.4E+02	n	1.2E+04	n	1.1E-02	c**	4.7E-02	c**	2.0E+02	n			n	
NA			2.4E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Refinery Dust	NA	8.2E+02	n	1.1E+04	n	1.2E-02	c**	5.1E-02	c**	2.2E+02	n		3.2E+01	n	
7440-02-0			2.6E-04	C	2.0E-02	I	9.0E-05	A			0.04			Nickel Soluble Salts	7440-02-0	1.5E+03	n	2.2E+04	n	1.1E-02	c**	4.7E-02	c**	3.9E+02	n		2.6E+01	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information												Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
12035-72-2	1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C			0.04			Nickel Subsulfide	12035-72-2	4.1E-01	c	1.9E+00	c	5.8E-03	c**	2.6E-02	c**	4.5E-02	c			c	
1271-28-9			2.6E-04	C	1.1E-02	C	1.4E-05	C			1	0.1		Nickelocene	1271-28-9	6.7E+02	n	8.1E+03	n	1.1E-02	c**	4.7E-02	c**	2.2E+02	n			n	
14797-55-8					1.6E+00	I					1			Nitrate	14797-55-8	1.3E+05	nm	1.9E+06	nm					3.2E+04	n	1.0E+04		n	
NA											1			Nitrate + Nitrite (as N)	NA											1.0E+04			
14797-65-0					1.0E-01	I					1			Nitrite	14797-65-0	7.8E+03	n	1.2E+05	nm					2.0E+03	n	1.0E+03		n	
88-74-4					1.0E-02	X	5.0E-05	X			1	0.1		Nitroaniline, 2-	88-74-4	6.3E+02	n	8.0E+03	n	5.2E-02	n	2.2E-01	n	1.9E+02	n		8.0E-02	n	
100-01-6	2.0E-02	P			4.0E-03	P	6.0E-03	P			1	0.1		Nitroaniline, 4-	100-01-6	2.7E+01	c**	1.1E+02	c*	6.3E+00	n	2.6E+01	n	3.8E+00	c*		1.6E-03	c*	
98-95-3			4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1		3.1E+03	Nitrobenzene	98-95-3	5.1E+00	c*	2.2E+01	c*	7.0E-02	c	3.1E-01	c	1.4E-01	c*		9.2E-05	c*	
9004-70-0					3.0E+03	P					1	0.1		Nitrocellulose	9004-70-0	1.9E+08	nm	2.5E+09	nm					6.0E+07	n		1.3E+04	n	
67-20-9					7.0E-02	H					1	0.1		Nitrofurantoin	67-20-9	4.4E+03	n	5.7E+04	n					1.4E+03	n		6.1E-01	n	
59-87-0	1.3E+00	C	3.7E-04	C							1	0.1		Nitrofurazone	59-87-0	4.2E-01	c	1.8E+00	c	7.6E-03	c	3.3E-02	c	6.0E-02	c		5.4E-05	c	
55-63-0	1.7E-02	P			1.0E-04	P					1	0.1		Nitroglycerin	55-63-0	6.3E+00	n	8.2E+01	n					2.0E+00	n		8.5E-04	n	
556-88-7					1.0E-01	I					1	0.1		Nitroguanidine	556-88-7	6.3E+03	n	8.2E+04	n					2.0E+03	n		4.8E-01	n	
75-52-5			8.8E-06	P			5.0E-03	P	V		1		1.8E+04	Nitromethane	75-52-5	5.4E+00	c*	2.4E+01	c*	3.2E-01	c*	1.4E+00	c*	6.4E-01	c*		1.4E-04	c*	
79-46-9			2.7E-03	H			2.0E-02	I	V		1		4.9E+03	Nitropropane, 2-	79-46-9	1.4E-02	c	6.0E-02	c	1.0E-03	c	4.5E-03	c	2.1E-03	c		5.4E-07	c	
759-73-9	2.7E+01	O	7.7E-03	C						M	1	0.1		Nitroso-N-ethylurea, N-	759-73-9	4.5E-03	c	8.5E-02	c	1.3E-04	c	1.6E-03	c	9.2E-04	c		2.2E-07	c	
684-93-5	1.2E+02	C	3.4E-02	C						M	1	0.1		Nitroso-N-methylurea, N-	684-93-5	1.0E-03	c	1.9E-02	c	3.0E-05	c	3.6E-04	c	2.1E-04	c		4.6E-08	c	
924-16-3	5.4E+00	I	1.6E-03	I					V		1			Nitroso-di-N-butylamine, N-	924-16-3	9.9E-02	c	4.6E-01	c	1.8E-03	c	7.7E-03	c	2.7E-03	c		5.5E-06	c	
621-64-7	7.0E+00	I	2.0E-03	C							1	0.1		Nitroso-di-N-propylamine, N-	621-64-7	7.8E-02	c	3.3E-01	c	1.4E-03	c	6.1E-03	c	1.1E-02	c		8.1E-06	c	
1116-54-7	2.8E+00	I	8.0E-04	C							1	0.1		Nitrosodiethanolamine, N-	1116-54-7	1.9E-01	c	8.2E-01	c	3.5E-03	c	1.5E-02	c	2.8E-02	c		5.6E-06	c	
55-18-5	1.5E+02	I	4.3E-02	I						M	1	0.1		Nitrosodiethylamine, N-	55-18-5	8.1E-04	c	1.5E-02	c	2.4E-05	c	2.9E-04	c	1.7E-04	c		6.1E-08	c	
62-75-9	5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	1		2.4E+05	Nitrosodimethylamine, N-	62-75-9	2.0E-03	c	3.4E-02	c	7.2E-05	c	8.8E-04	c	1.1E-04	c		2.7E-08	c	
86-30-6	4.9E-03	I	1.4E-06	C							1	0.1		Nitrosodiphenylamine, N-	86-30-6	1.1E+02	c	4.7E+02	c	1.1E+00	c	4.7E+00	c	1.2E+01	c		6.7E-02	c	
10595-95-6	2.2E+01	I	6.3E-03	C					V		1		1.1E+05	Nitrosomethylethylamine, N-	10595-95-6	2.0E-02	c	9.1E-02	c	4.5E-04	c	1.9E-03	c	7.1E-04	c		2.0E-07	c	
59-89-2	6.7E+00	C	1.9E-03	C							1	0.1		Nitrosomorpholine [N-]	59-89-2	8.1E-02	c	3.4E-01	c	1.5E-03	c	6.5E-03	c	1.2E-02	c		2.8E-06	c	
100-75-4	9.4E+00	C	2.7E-03	C							1	0.1		Nitrosopiperidine [N-]	100-75-4	5.8E-02	c	2.4E-01	c	1.0E-03	c	4.5E-03	c	8.2E-03	c		4.4E-06	c	
930-55-2	2.1E+00	I	6.1E-04	I							1	0.1		Nitrosopyrrolidine, N-	930-55-2	2.6E-01	c	1.1E+00	c	4.6E-03	c	2.0E-02	c	3.7E-02	c		1.4E-05	c	
99-08-1					1.0E-04	X					1	0.1		Nitrotoluene, m-	99-08-1	6.3E+00	n	8.2E+01	n					1.7E+00	n		1.6E-03	n	
88-72-2	2.2E-01	P			9.0E-04	P			V		1		1.5E+03	Nitrotoluene, o-	88-72-2	3.2E+00	c*	1.5E+01	c*					3.1E-01	c*		3.0E-04	c*	
99-99-0	1.6E-02	P			4.0E-03	P					1	0.1		Nitrotoluene, p-	99-99-0	3.4E+01	c**	1.4E+02	c*					4.3E+00	c*		4.0E-03	c*	
111-84-2					3.0E-04	X	2.0E-02	P	V		1		6.9E+00	Nonane, n-	111-84-2	1.1E+01	ns	7.2E+01	ns	2.1E+01	n	8.8E+01	n	5.3E+00	n		7.5E-02	n	
27314-13-2					4.0E-02	I					1	0.1		Norflurazon	27314-13-2	2.5E+03	n	3.3E+04	n					7.7E+02	n		5.0E+00	n	
32536-52-0					3.0E-03	I					1	0.1		Octabromodiphenyl Ether	32536-52-0	1.9E+02	n	2.5E+03	n					6.0E+01	n		1.2E+01	n	
2691-41-0					5.0E-02	I					1	0.006		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	3.9E+03	n	5.7E+04	n					1.0E+03	n		1.3E+00	n	
152-16-9					2.0E-03	H					1	0.1		Octamethylpyrophosphoramide	152-16-9	1.3E+02	n	1.6E+03	n					4.0E+01	n		9.6E-03	n	
19044-88-3					5.0E-02	I					1	0.1		Oryzalin	19044-88-3	3.2E+03	n	4.1E+04	n					8.1E+02	n		1.5E+00	n	
19666-30-9					5.0E-03	I					1	0.1		Oxadiazon	19666-30-9	3.2E+02	n	4.1E+03	n					4.7E+01	n		4.8E-01	n	
23135-22-0					2.5E-02	I					1	0.1		Oxamyl	23135-22-0	1.6E+03	n	2.1E+04	n					5.0E+02	n	2.0E+02	1.1E-01	n	4.4E-02
42874-03-3					3.0E-03	I					1	0.1		Oxyfluorfen	42874-03-3	1.9E+02	n	2.5E+03	n					3.2E+01	n		2.5E+00	n	
76738-62-0					1.3E-02	I					1	0.1		Paclobutrazol	76738-62-0	8.2E+02	n	1.1E+04	n					2.3E+02	n		4.6E-01	n	
1910-42-5					4.5E-03	I					1	0.1		Paraquat Dichloride	1910-42-5	2.8E+02	n	3.7E+03	n					9.0E+01	n		1.2E+00	n	
56-38-2					6.0E-03	H					1	0.1		Parathion	56-38-2	3.8E+02	n	4.9E+03	n					8.6E+01	n		4.3E-01	n	
1114-71-2					5.0E-02	H			V		1			Pebulate	1114-71-2	3.9E+03	n	5.8E+04	n					5.6E+02	n		4.5E-01	n	
40487-42-1					4.0E-02	I					1	0.1		Pendimethalin	40487-42-1	2.5E+03	n	3.3E+04	n					1.8E+02	n		2.1E+00	n	
32534-81-9					2.0E-03	I			V		1		3.1E-01	Pentabromodiphenyl Ether	32534-81-9	1.6E+02	ns	2.3E+03	ns					4.0E+01	n		1.7E+00	n	
60348-60-9					1.0E-04	I					1	0.1		Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	6.3E+00	n	8.2E+01	n					2.0E+00	n		8.7E-02	n	
608-93-5					8.0E-04	I			V		1			Pentachlorobenzene	608-93-5	6.3E+01	n	9.3E+02	n					3.2E+00	n		2.4E-02	n	
76-01-7	9.0E-02	P							V		1		4.6E+02	Pentachloroethane	76-01-7	7.7E+00	c	3.6E+01	c					6.5E-01	c		3.1E-04	c	
82-68-8	2.6E-01	H			3.0E-03	I			V		1			Pentachloronitrobenzene	82-68-8	2.7E+00	c*	1.3E+01	c					1.2E-01	c		1.5E-03	c	
87-86-5	4.0E-01	I	5.1E-06	C	5.0E-03	I					1	0.25		Pentachlorophenol	87-86-5	1.0E+00	c	4.0E+00	c	5.5E-01	c	2.4E+00	c	4.1E-02	c	1.0E+00	5.7E-05	c	1.4E-03
78-11-5	4.0E-03	X			2.0E-03	P					1	0.1		Pentaerythritol tetranitrate (PETN)	78-11-5	1.3E+02	n	5.7E+02	c**					1.9E+01	c**		2.8E-02	c**	
109-66-0							1.0E+00	P	V		1		3.9E+02	Pentane, n-	109-66-0	8.1E+02	ns	3.4E+03	ns	1.0E+03	n	4.4E+03	n	2.1E+03	n		1.0E+01	n	
														Perchlorates																
7790-98-9					7.0E-04	I					1			~Ammonium Perchlorate	7790-98-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
7791-03-9					7.0E-04	I					1			~Lithium Perchlorate	7791-03-9	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
14797-73-0					7.0E-04	I					1			~Perchlorate and Perchlorate Salts	14797-73-0	5.5E+01	n	8.2E+02	n					1.4E+01	n	1.5E+01(F)		n	
7778-74-7					7.0E-04	I					1			~Potassium Perchlorate	7778-74-7	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
7601-89-0					7.0E-04	I					1			~Sodium Perchlorate	7601-89-0	5.5E+01	n	8.2E+02	n					1.4E+01	n			n	
375-73-5					2.0E-02	P			V		1			Perfluorobutane Sulfonate	375-73-5	1.6E+03	n	2.3E+04	n					3.8E+02	n		2.1E-01	n	
52645-53-1					5.0E-02	I					1	0.1		Permethrin	52645-53-1	3.2E+03	n	4.1E+04	n					1.0E+03	n		2.4E+02	n	
62-44-2	2.2E-03	C	6.3E-07	C							1	0.1		Phenacetin	62-44-2	2.5E+02	c	1.0E+03	c	4.5E+00	c	1.9E+01	c	3.4E+01	c		9.7E-03	c	
13684-63-4					2.5E-01	I					1	0.1		Phenmedipham	13684-63-4	1.6E+04	n	2.1E+05	nm					4.0E+03	n		2.1E+01	n	
108-95-2					3.0E-01	I	2.0E-01	C			1	0.1		Phenol	108-95-2	1.9E+04	n	2.5E+05	nm	2.1E+02	n	8.8E+02	n	5.8E+03	n		3.3E+00	n	
114-26-1					4.0E-03	I					1	0.1		Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	2.5E+02	n	3.3E+03	n					7.8E+01	n		2.5E-02	n	
92-84-2					5.0E-04	X					1	0.1		Phenothiazine	92-84-2	3.2E+01	n	4.1E+02	n					4.3E+00	n		1.4E-02	n	
108-45-2					6.0E-03	I					1	0.1		Phenylenediamine, m-	108-45-2	3.8E+02	n	4.9E+03	n					1.2E+02	n		3.2E-02	n	
95-54-5	4.7E-02	H									1	0.1		Phenylenediamine, o-	95-54-5	1.2E+01	c	4.9E+01	c					1.6E+00	c		4.4E-04	c	
106-50-3					1.9E-01	H					1	0.1		Phenylenediamine, p-	106-50-3	1.2E+04	n	1.6E+05	nm					3.8E+03	n		1.0E+00	n	
90-43-7	1.9E-03	H									1	0.1		Phenylphenol, 2-	90-43-7	2.8E+02	c	1.2E+03	c					3.0E+01	c		4.1E-01	c	
298-02-2					2.0E-04	H					1	0.1		Phorate	298-02-2	1.3E+01	n	1.6E+02	n					3.0E+00	n		3.4E-03	n	
75-44-5							3.0E-04	I	V		1		1.6E+03	Phosgene	75-44-5	3.1E-01	n	1.3E+00	n	3.1E-01	n	1.3E+00	n						
732-11-6					2.0E-02	I					1	0.1		Phosmet	732-11-6	1.3E+03	n	1.6E+04	n					3.7E+02	n		8.2E-02	n	
														Phosphates, Inorganic																
13776-88-0					4.9E+01	P					1			~Aluminum metaphosphate	13776-88-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
68333-79-9					4.9E+01	P					1			~Ammonium polyphosphate	68333-79-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7790-76-3					4.9E+01	P					1			~Calcium pyrophosphate	7790-76-3	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7783-28-0					4.9E+01	P					1			~Diammonium phosphate	7783-28-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7757-93-9					4.9E+01	P					1			~Dicalcium phosphate	7757-93-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7782-75-4					4.9E+01	P					1			~Dimagnesium phosphate	7782-75-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7758-11-4					4.9E+01	P					1			~Dipotassium phosphate	7758-11-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	
7558-79-4					4.9E+01	P					1			~Disodium phosphate	7558-79-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n			n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
13530-50-2					4.9E+01	P					1			~Monoaluminum phosphate	13530-50-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7722-76-1					4.9E+01	P					1			~Monoammonium phosphate	7722-76-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7758-23-8					4.9E+01	P					1			~Monocalcium phosphate	7758-23-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7757-86-0					4.9E+01	P					1			~Monomagnesium phosphate	7757-86-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7778-77-0					4.9E+01	P					1			~Monopotassium phosphate	7778-77-0	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7558-80-7					4.9E+01	P					1			~Monosodium phosphate	7558-80-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
8017-16-1					4.9E+01	P					1			~Polyphosphoric acid	8017-16-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
13845-36-8					4.9E+01	P					1			~Potassium tripolyphosphate	13845-36-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7758-16-9					4.9E+01	P					1			~Sodium acid pyrophosphate	7758-16-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7785-88-8					4.9E+01	P					1			~Sodium aluminum phosphate (acidic)	7785-88-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
10279-59-1					4.9E+01	P					1			~Sodium aluminum phosphate (anhydrous)	10279-59-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
10305-76-7					4.9E+01	P					1			~Sodium aluminum phosphate (tetrahydrate)	10305-76-7	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
10124-56-8					4.9E+01	P					1			~Sodium hexametaphosphate	10124-56-8	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
68915-31-1					4.9E+01	P					1			~Sodium polyphosphate	68915-31-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7785-84-4					4.9E+01	P					1			~Sodium trimetaphosphate	7785-84-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7758-29-4					4.9E+01	P					1			~Sodium tripolyphosphate	7758-29-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7320-34-5					4.9E+01	P					1			~Tetrapotassium phosphate	7320-34-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7722-88-5					4.9E+01	P					1			~Tetrasodium pyrophosphate	7722-88-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
15136-87-5					4.9E+01	P					1			~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7758-87-4					4.9E+01	P					1			~Tricalcium phosphate	7758-87-4	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7757-87-1					4.9E+01	P					1			~Trimagnesium phosphate	7757-87-1	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7778-53-2					4.9E+01	P					1			~Tripotassium phosphate	7778-53-2	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7601-54-9					4.9E+01	P					1			~Trisodium phosphate	7601-54-9	3.8E+06	nm	5.7E+07	nm					9.7E+05	n				
7803-51-2					3.0E-04	I	3.0E-04	I	V		1			Phosphine	7803-51-2	2.3E+01	n	3.5E+02	n	3.1E-01	n	1.3E+00	n	5.7E-01	n				
7664-38-2					4.9E+01	P	1.0E-02	I			1			Phosphoric Acid	7664-38-2	3.0E+06	nm	2.9E+07	nm	1.0E+01	n	4.4E+01	n	9.7E+05	n				
7723-14-0					2.0E-05	I			V		1			Phosphorus, White	7723-14-0	1.6E+00	n	2.3E+01	n					4.0E-01	n		1.5E-03	n	
														Phthalates																
117-81-7	1.4E-02	I	2.4E-06	C	2.0E-02	I					1	0.1		~Bis(2-ethylhexyl)phthalate	117-81-7	3.9E+01	c*	1.6E+02	c	1.2E+00	c	5.1E+00	c	5.6E+00	c*	6.0E+00	1.3E+00	c*	1.4E+00
85-68-7	1.9E-03	P			2.0E-01	I					1	0.1		~Butyl Benzyl Phthalate	85-68-7	2.9E+02	c*	1.2E+03	c					1.6E+01	c		2.4E-01	c	
85-70-1					1.0E+00	I					1	0.1		~Butylphthalyl Butylglycolate	85-70-1	6.3E+04	n	8.2E+05	nm					1.3E+04	n		3.1E+02	n	
84-74-2					1.0E-01	I					1	0.1		~Dibutyl Phthalate	84-74-2	6.3E+03	n	8.2E+04	n					9.0E+02	n		2.3E+00	n	
84-66-2					8.0E-01	I					1	0.1		~Diethyl Phthalate	84-66-2	5.1E+04	n	6.6E+05	nm					1.5E+04	n		6.1E+00	n	
120-61-6					1.0E-01	I			V		1			~Dimethylterephthalate	120-61-6	7.8E+03	n	1.2E+05	nm					1.9E+03	n		4.9E-01	n	
117-84-0					1.0E-02	P					1	0.1		~Octyl Phthalate, di-N-	117-84-0	6.3E+02	n	8.2E+03	n					2.0E+02	n		5.7E+01	n	
100-21-0					1.0E+00	H					1	0.1		~Phthalic Acid, P-	100-21-0	6.3E+04	n	8.2E+05	nm					1.9E+04	n		6.8E+00	n	
85-44-9					2.0E+00	I	2.0E-02	C			1	0.1		~Phthalic Anhydride	85-44-9	1.3E+05	nm	1.6E+06	nm	2.1E+01	n	8.8E+01	n	3.9E+04	n		8.5E+00	n	
1918-02-1					7.0E-02	I					1	0.1		Picloram	1918-02-1	4.4E+03	n	5.7E+04	n					1.4E+03	n	5.0E+02	3.8E-01	n	1.4E-01
96-91-3					1.0E-04	X					1	0.1		Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	6.3E+00	n	8.2E+01	n					2.0E+00	n		1.3E-03	n	
88-89-1					9.0E-04	X					1	0.1		Picric Acid (2,4,6-Trinitrophenol)	88-89-1	5.7E+01	n	7.4E+02	n					1.8E+01	n		8.4E-02	n	
29232-93-7					1.0E-02	I					1	0.1		Pirimiphos, Methyl	29232-93-7	6.3E+02	n	8.2E+03	n					1.2E+02	n		1.2E-01	n	
59536-65-1	3.0E+01	C	8.6E-03	C	7.0E-06	H					1	0.1		Polybrominated Biphenyls	59536-65-1	1.8E-02	c*	7.7E-02	c*	3.3E-04	c	1.4E-03	c	2.6E-03	c*			c*	
														Polychlorinated Biphenyls (PCBs)																
12674-11-2	7.0E-02	S	2.0E-05	S	7.0E-05	I			V		1	0.14		~Aroclor 1016	12674-11-2	4.1E+00	n	2.7E+01	c**	1.4E-01	c	6.1E-01	c	2.2E-01	c**		2.1E-02	c**	
11104-28-2	2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1221	11104-28-2	2.0E-01	c	8.3E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c	
11141-16-5	2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1232	11141-16-5	1.7E-01	c	7.2E-01	c	4.9E-03	c	2.1E-02	c	4.7E-03	c		8.0E-05	c	
53469-21-9	2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1242	53469-21-9	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c	
12672-29-6	2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1248	12672-29-6	2.3E-01	c	9.5E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		1.2E-03	c	
11097-69-1	2.0E+00	S	5.7E-04	S	2.0E-05	I			V		1	0.14		~Aroclor 1254	11097-69-1	2.4E-01	c**	9.7E-01	c*	4.9E-03	c	2.1E-02	c	7.8E-03	c*		2.0E-03	c*	
11096-82-5	2.0E+00	S	5.7E-04	S					V		1	0.14		~Aroclor 1260	11096-82-5	2.4E-01	c	9.9E-01	c	4.9E-03	c	2.1E-02	c	7.8E-03	c		5.5E-03	c	
11126-42-4					6.0E-04	X			V		1	0.14		~Aroclor 5460	11126-42-4	3.5E+01	n	4.4E+02	n					1.2E+01	n		2.0E+00	n	
39635-31-9	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.3E-01	c*	5.2E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		2.8E-03	c	
52663-72-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.2E-01	c*	5.1E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c	
69782-90-7	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c	
38380-08-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.7E-03	c	
32774-16-6	3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		1	0.14		~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.2E-04	c*	5.1E-04	c*	2.5E-06	c	1.1E-05	c	4.0E-06	c		1.7E-06	c	
65510-44-3	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.2E-01	c*	4.9E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c	
31508-00-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.2E-01	c*	4.9E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c	
32598-14-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.2E-01	c*	4.9E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c	
74472-37-0	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		1	0.14		~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.2E-01	c*	5.0E-01	c*	2.5E-03	c	1.1E-02	c	4.0E-03	c		1.0E-03	c	
57465-28-8	1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		1	0.14		~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.6E-05	c*	1.5E-04	c*	7.4E-07	c	3.2E-06	c	1.2E-06	c		3.0E-07	c	
1336-36-3	2.0E+00	I	5.7E-04	I					V		1	0.14		~Polychlorinated Biphenyls (high risk)	1336-36-3	2.3E-01	c	9.4E-01	c	4.9E-03	c	2.1E-02	c						
1336-36-3	4.0E-01	I	1.0E-04	I					V		1	0.14		~Polychlorinated Biphenyls (low risk)	1336-36-3					2.8E-02	c	1.2E-01	c	4.4E-02	c	5.0E-01	6.8E-03	c	7.8E-02
1336-36-3	7.0E-02	I	2.0E-05	I					V		1	0.14		~Polychlorinated Biphenyls (lowest risk)	1336-36-3					1.4E-01	c	6.1E-01	c						
32598-13-3	1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			1	0.14		~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	3.8E-02	c*	1.6E-01	c*	7.4E-04	c	3.2E-03	c	6.0E-03	c*		9.4E-04	c*	
70362-50-4	3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		1	0.14		~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.2E-02	c*	4.8E-02	c*	2.5E-04	c	1.1E-03	c	4.0E-04	c		6.2E-05	c	
9016-87-9							6.0E-04	I			1	0.1		Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	8.5E+05	nm	3.6E+06	nm	6.3E-01	n	2.6E+00	n						
														Polynuclear Aromatic Hydrocarbons (PAHs)																
83-32-9					6.0E-02	I			V		1	0.13		~Acenaphthene	83-32-9	3.6E+03	n	4.5E+04	n					5.3E+02	n		5.5E+00	n	
120-12-7					3.0E-01	I			V		1	0.13		~Anthracene	120-12-7	1.8E+04	n	2.3E+05	nm					1.8E+03	n		5.8E+01	n	
56-55-3	7.3E-01	E	1.1E-04	C					V	M	1	0.13		~Benz[a]anthracene	56-55-3	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	1.2E-02	c		4.2E-03	c	
205-82-3	1.2E+00	C	1.1E-04	C							1	0.13		~Benzo(j)fluoranthene	205-82-3	4.2E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	6.5E-02	c		7.8E-02	c	
50-32-8	7.3E+00	I	1.1E-03	C						M	1	0.13		~Benzo[a]pyrene	50-32-8	1.6E-02	c	2.9E-01	c	9.2E-04	c	1.1E-02	c	3.4E-03	c	2.0E-01	4.0E-03	c	2.4E-01
205-99-2	7.3E-01	E	1.1E-04	C						M	1	0.13		~Benzo[b]fluoranthene	205-99-2	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		4.1E-02	c	
207-08-9	7.3E-02	E	1.1E-04	C						M	1	0.13		~Benzo[k]fluoranthene	207-08-9	1.6E+00	c	2.9E+01	c	9.2E-03	c	1.1E-01	c	3.4E-01	c		4.0E-01	c	
91-58-7					8.0E-02	I			V		1	0.13		~Chloronaphthalene, Beta-	91-58-7	4.8E+03	n	6.0E+04	n					7.5E+02	n		3.9E+00	n	
218-01-9	7.3E-03	E	1.1E-05	C						M	1	0.13		~Chrysene	218-01-9	1.6E+01	c	2.9E+02	c	9.2E-02	c	1.1E+00	c	3.4E+00	c		1.2E+00	c	
53-70-3	7.3E+00	E	1.2E-03	C						M	1	0.13		~Dibenz[a,h]anthracene	53-70-3	1.6E-02	c	2.9E-01	c	8.4E-04	c	1.0E-02	c	3.4E-03	c		1.3E-02	c	
192-65-4	1.2E+01	C	1.1E-03	C							1	0.13		~Dibenzo(a,e)pyrene	192-65-4	4.2E-02	c	1.8E-01	c	2.6E-03	c	1.1E-02	c	6.5E-03	c		8.4E-02	c	
57-97-6	2.5E+02	C	7.1E-02	C						M	1	0.13		~Dimethylbenz(a)anthracene, 7,12-	57-97-6	4.6E-04	c	8.4E-03	c	1.4E-05	c	1.7E-04	c	1.0E-04	c		9.9E-05	c	
206-44-0					4.0E-02	I					1	0.13		~Fluoranthene	206-44-0	2.4E+03	n	3.0E+04	n					8.0E+02	n		8.9E+01	n	
86-73-7					4.0E-02	I			V		1	0.13		~Fluorene	86-73-7	2.4E+03	n	3.0E+04	n					2.9E+02	n		5.4E+00	n	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information													Contaminant		Screening Levels												Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	muta-gen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
193-39-5	7.3E-01	E	1.1E-04	C						M	1	0.13		~Indeno[1,2,3-cd]pyrene	193-39-5	1.6E-01	c	2.9E+00	c	9.2E-03	c	1.1E-01	c	3.4E-02	c		1.3E-01	c	
90-12-0	2.9E-02	P			7.0E-02	A			V		1	0.13	3.9E+02	~Methylnaphthalene, 1-	90-12-0	1.8E+01	c	7.3E+01	c					1.1E+00	c		6.0E-03	c	
91-57-6					4.0E-03	I			V		1	0.13		~Methylnaphthalene, 2-	91-57-6	2.4E+02	n	3.0E+03	n					3.6E+01	n		1.9E-01	n	
91-20-3			3.4E-05	C	2.0E-02	I	3.0E-03	I	V		1	0.13		~Naphthalene	91-20-3	3.8E+00	c*	1.7E+01	c*	8.3E-02	c*	3.6E-01	c*	1.7E-01	c*		5.4E-04	c*	
57835-92-4	1.2E+00	C	1.1E-04	C							1	0.13		~Nitropyrene, 4-	57835-92-4	4.2E-01	c	1.8E+00	c	2.6E-02	c	1.1E-01	c	1.9E-02	c		3.3E-03	c	
129-00-0					3.0E-02	I			V		1	0.13		~Pyrene	129-00-0	1.8E+03	n	2.3E+04	n					1.2E+02	n		1.3E+01	n	
29420-49-3					2.0E-02	P					1	0.1		Potassium Perfluorobutane Sulfonate	29420-49-3	1.3E+03	n	1.6E+04	n					4.0E+02	n		2.2E-01	n	
67747-09-5	1.5E-01	I			9.0E-03	I					1	0.1		Prochloraz	67747-09-5	3.6E+00	c	1.5E+01	c					3.8E-01	c		1.9E-03	c	
26399-36-0					6.0E-03	H			V		1			Profluralin	26399-36-0	4.7E+02	n	7.0E+03	n					2.6E+01	n		1.6E+00	n	
1610-18-0					1.5E-02	I					1	0.1		Prometon	1610-18-0	9.5E+02	n	1.2E+04	n					2.5E+02	n		1.2E-01	n	
7287-19-6					4.0E-03	I					1	0.1		Prometryn	7287-19-6	2.5E+02	n	3.3E+03	n					6.0E+01	n		9.0E-02	n	
1918-16-7					1.3E-02	I					1	0.1		Propachlor	1918-16-7	8.2E+02	n	1.1E+04	n					2.5E+02	n		1.5E-01	n	
709-98-8					5.0E-03	I					1	0.1		Propanil	709-98-8	3.2E+02	n	4.1E+03	n					8.2E+01	n		4.5E-02	n	
2312-35-8					2.0E-02	I					1	0.1		Propargite	2312-35-8	1.3E+03	n	1.6E+04	n					1.6E+02	n		1.2E+01	n	
107-19-7					2.0E-03	I			V		1		1.1E+05	Propargyl Alcohol	107-19-7	1.6E+02	n	2.3E+03	n					4.0E+01	n		8.1E-03	n	
139-40-2					2.0E-02	I					1	0.1		Propazine	139-40-2	1.3E+03	n	1.6E+04	n					3.4E+02	n		3.0E-01	n	
122-42-9					2.0E-02	I					1	0.1		Propham	122-42-9	1.3E+03	n	1.6E+04	n					3.5E+02	n		2.2E-01	n	
60207-90-1					1.3E-02	I					1	0.1		Propiconazole	60207-90-1	8.2E+02	n	1.1E+04	n					2.1E+02	n		6.9E-01	n	
123-38-6							8.0E-03	I	V		1		3.3E+04	Propionaldehyde	123-38-6	7.5E+01	n	3.1E+02	n	8.3E+00	n	3.5E+01	n	1.7E+01	n		3.4E-03	n	
103-65-1					1.0E-01	X	1.0E+00	X	V		1		2.6E+02	Propyl benzene	103-65-1	3.8E+03	ns	2.4E+04	ns	1.0E+03	n	4.4E+03	n	6.6E+02	n		1.2E+00	n	
115-07-1							3.0E+00	C	V		1		3.5E+02	Propylene	115-07-1	2.2E+03	ns	9.3E+03	ns	3.1E+03	n	1.3E+04	n	6.3E+03	n		6.0E+00	n	
57-55-6					2.0E+01	P					1	0.1		Propylene Glycol	57-55-6	1.3E+06	nm	1.6E+07	nm					4.0E+05	n		8.1E+01	n	
6423-43-4							2.7E-04	A			1	0.1		Propylene Glycol Dinitrate	6423-43-4	3.9E+05	nm	1.6E+06	nm	2.8E-01	n	1.2E+00	n							
107-98-2					7.0E-01	H	2.0E+00	I	V		1		1.1E+05	Propylene Glycol Monomethyl Ether	107-98-2	4.1E+04	n	3.7E+05	nms	2.1E+03	n	8.8E+03	n	3.2E+03	n		6.5E-01	n	
75-56-9	2.4E-01	I	3.7E-06	I			3.0E-02	I	V		1		7.8E+04	Propylene Oxide	75-56-9	2.1E+00	c	9.7E+00	c	7.6E-01	c*	3.3E+00	c*	2.7E-01	c		5.6E-05	c	
23950-58-5					7.5E-02	I					1	0.1		Propyzamide	23950-58-5	4.7E+03	n	6.2E+04	n					1.2E+03	n		1.2E+00	n	
110-86-1					1.0E-03	I			V		1		5.3E+05	Pyridine	110-86-1	7.8E+01	n	1.2E+03	n					2.0E+01	n		6.8E-03	n	
13593-03-8					5.0E-04	I					1	0.1		Quinalphos	13593-03-8	3.2E+01	n	4.1E+02	n					5.1E+00	n		4.3E-02	n	
91-22-5	3.0E+00	I									1	0.1		Quinoline	91-22-5	1.8E-01	c	7.7E-01	c					2.4E-02	c		7.8E-05	c	
76578-14-8					9.0E-03	I					1	0.1		Quizalofop-ethyl	76578-14-8	5.7E+02	n	7.4E+03	n					1.2E+02	n		1.9E+00	n	
NA							3.0E-02	A			1			Refractory Ceramic Fibers	NA	4.3E+07	nm	1.8E+08	nm	3.1E+01	n	1.3E+02	n							
10453-86-8					3.0E-02	I					1	0.1		Resmethrin	10453-86-8	1.9E+03	n	2.5E+04	n					6.7E+01	n		4.2E+01	n	
299-84-3					5.0E-02	H			V		1			Ronnel	299-84-3	3.9E+03	n	5.8E+04	n					4.1E+02	n		3.7E+00	n	
83-79-4					4.0E-03	I					1	0.1		Rotenone	83-79-4	2.5E+02	n	3.3E+03	n					6.1E+01	n		3.2E+01	n	
94-59-7	2.2E-01	C	6.3E-05	C						M	1	0.1		Safrole	94-59-7	5.5E-01	c	1.0E+01	c	1.6E-02	c	1.9E-01	c	9.6E-02	c		5.9E-05	c	
7783-00-8					5.0E-03	I					1			Selenious Acid	7783-00-8	3.9E+02	n	5.8E+03	n					1.0E+02	n			n	
7782-49-2					5.0E-03	I	2.0E-02	C			1			Selenium	7782-49-2	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n	5.0E+01	5.2E-01	n	2.6E-01
7446-34-6					5.0E-03	C	2.0E-02	C			1			Selenium Sulfide	7446-34-6	3.9E+02	n	5.8E+03	n	2.1E+01	n	8.8E+01	n	1.0E+02	n			n	
74051-80-2					9.0E-02	I					1	0.1		Sethoxydim	74051-80-2	5.7E+03	n	7.4E+04	n					1.0E+03	n		9.3E+00	n	
7631-86-9							3.0E-03	C			1			Silica (crystalline, respirable)	7631-86-9	4.3E+06	nm	1.8E+07	nm	3.1E+00	n	1.3E+01	n							
7440-22-4					5.0E-03	I					0.04			Silver	7440-22-4	3.9E+02	n	5.8E+03	n					9.4E+01	n		8.0E-01	n	
122-34-9	1.2E-01	H			5.0E-03	I					1	0.1		Simazine	122-34-9	4.5E+00	c*	1.9E+01	c					6.1E-01	c	4.0E+00	3.0E-04	c	2.0E-03
62476-59-9					1.3E-02	I					1	0.1		Sodium Acifluorfen	62476-59-9	8.2E+02	n	1.1E+04	n					2.6E+02	n		2.1E+00	n	
26628-22-8					4.0E-03	I					1			Sodium Azide	26628-22-8	3.1E+02	n	4.7E+03	n					8.0E+01	n			n	
10588-01-9	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Sodium Dichromate	10588-01-9	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
148-18-5	2.7E-01	H			3.0E-02	I					1	0.1		Sodium Diethyldithiocarbamate	148-18-5	2.0E+00	c	8.5E+00	c					2.9E-01	c		1.8E-04	c	
7681-49-4					5.0E-02	A	1.3E-02	C			1			Sodium Fluoride	7681-49-4	3.9E+03	n	5.8E+04	n	1.4E+01	n	5.7E+01	n	1.0E+03	n			n	
62-74-8					2.0E-05	I					1	0.1		Sodium Fluoroacetate	62-74-8	1.3E+00	n	1.6E+01	n					4.0E-01	n		8.1E-05	n	
13718-26-8					1.0E-03	H					1			Sodium Metavanadate	13718-26-8	7.8E+01	n	1.2E+03	n					2.0E+01	n			n	
13472-45-2					8.0E-04	P					1			Sodium Tungstate	13472-45-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n	
10213-10-2					8.0E-04	P					1			Sodium Tungstate Dihydrate	10213-10-2	6.3E+01	n	9.3E+02	n					1.6E+01	n			n	
961-11-5	2.4E-02	H			3.0E-02	I					1	0.1		Stirofos (Tetrachlorovinphos)	961-11-5	2.3E+01	c*	9.6E+01	c					2.8E+00	c		8.2E-03	c	
7789-06-2	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M	0.025			Strontium Chromate	7789-06-2	3.0E-01	c	6.2E+00	c	6.8E-06	c	8.2E-05	c	4.1E-02	c			c	
7440-24-6					6.0E-01	I					1			Strontium, Stable	7440-24-6	4.7E+04	n	7.0E+05	nm					1.2E+04	n		4.2E+02	n	
57-24-9					3.0E-04	I					1	0.1		Strychnine	57-24-9	1.9E+01	n	2.5E+02	n					5.9E+00	n		6.5E-02	n	
100-42-5					2.0E-01	I	1.0E+00	I	V		1		8.7E+02	Styrene	100-42-5	6.0E+03	ns	3.5E+04	ns	1.0E+03	n	4.4E+03	n	1.2E+03	n	1.0E+02	1.3E+00	n	1.1E-01
NA					3.0E-03	P					1	0.1		Styrene-Acrylonitrile (SAN) Trimer	NA	1.9E+02	n	2.5E+03	n					4.8E+01	n			n	
126-33-0					1.0E-03	P	2.0E-03	X			1	0.1		Sulfolane	126-33-0	6.3E+01	n	8.2E+02	n	2.1E+00	n	8.8E+00	n	2.0E+01	n		4.4E-03	n	
80-07-9					8.0E-04	P					1	0.1		Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	5.1E+01	n	6.6E+02	n					1.1E+01	n		6.5E-02	n	
7446-11-9							1.0E-03	C	V		1			Sulfur Trioxide	7446-11-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n	2.1E+00	n			n	
7664-93-9							1.0E-03	C			1			Sulfuric Acid	7664-93-9	1.4E+06	nm	6.0E+06	nm	1.0E+00	n	4.4E+00	n							
140-57-8	2.5E-02	I	7.1E-06	I	5.0E-02	H					1	0.1		Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.2E+01	c	9.2E+01	c	4.0E-01	c	1.7E+00	c	1.3E+00	c		1.5E-02	c	
21564-17-0					3.0E-02	H					1	0.1		TCMTB	21564-17-0	1.9E+03	n	2.5E+04	n					4.8E+02	n		3.3E+00	n	
34014-18-1					7.0E-02	I					1	0.1		Tebuthiuron	34014-18-1	4.4E+03	n	5.7E+04	n					1.4E+03	n		3.9E-01	n	
3383-96-8					2.0E-02	H					1	0.1		Temephos	3383-96-8	1.3E+03	n	1.6E+04	n					4.0E+02	n		7.6E+01	n	
5902-51-2					1.3E-02	I					1	0.1		Terbacil	5902-51-2	8.2E+02	n	1.1E+04	n					2.5E+02	n		7.5E-02	n	
13071-79-9					2.5E-05	H			V		1		3.1E+01	Terbufos	13071-79-9	2.0E+00	n	2.9E+01	n					2.4E-01	n		5.2E-04	n	
886-50-0					1.0E-03	I					1	0.1		Terbutryn	886-50-0	6.3E+01	n	8.2E+02	n					1.3E+01	n		1.9E-02	n	
5436-43-1					1.0E-04	I					1	0.1		Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	6.3E+00	n	8.2E+01	n					2.0E+00	n		5.3E-02	n	
95-94-3					3.0E-04	I			V		1			Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.3E+01	n	3.5E+02	n					1.7E+00	n		7.9E-03	n	
630-20-6	2.6E-02	I	7.4E-06	I	3.0E-02	I			V		1		6.8E+02	Tetrachloroethane, 1,1,1,2-	630-20-6	2.0E+00	c	8.8E+00	c	3.8E-01	c	1.7E+00	c	5.7E-01	c		2.2E-04	c	
79-34-5	2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1		1.9E+03	Tetrachloroethane, 1,1,2,2-	79-34-5	6.0E-01	c	2.7E+00	c	4.8E-02	c	2.1E-01	c	7.6E-02	c		3.0E-05	c	
127-18-4	2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		1		1.7E+02	Tetrachloroethylene	127-18-4	2.4E+01	c**	1.0E+02	c**	1.1E+01	c**	4.7E+01	c**	1.1E+01	c**	5.0E+00	5.1E-03	c**	2.3E-03
58-90-2					3.0E-02	I					1	0.1		Tetrachlorophenol, 2,3,4,6-	58-90-2	1.9E+03	n	2.5E+04	n					2.4E+02	n		1.8E-01	n	
5216-25-1	2.0E+01	H							V		1			Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02	c	1.6E-01	c					1.3E-03	c		4.5E-06	c	
3689-24-5					5.0E-04	I					1	0.1		Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+01	n	4.1E+02	n					7.1E+00	n		5.2E-03	n	
811-97-2							8.0E+01	I	V		1		2.1E+03	Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+05	nms	4.3E+05	nms	8.3E+04	n	3.5E+05	n	1.7E+05	n		9.3E+01	n	
479-45-8					2.0E-03	P					1	7E-04		Tetryl (Trinitrophenylmethylnitramine)	479-45-8	1.6E+02	n	2.3E+03	n					3.9E+01	n		3.7E-01	n	
1314-32-5					2.0E-05	S					1			Thallic Oxide	1314-32-5	1.6E+00	n	2.3E+01	n					4.0E-01	n			n	
10102-45-1					1.0E-05	X					1			Thallium (I) Nitrate	10102-45-1	7.8E-01	n	1.2E+01	n					2.0E-01	n			n	
7440-28-0					1.0E-05	X					1			Thallium (Soluble Salts)	7440-28-0	7.8E-01	n	1.2E+01	n					2.0E-01	n	2.0E+00	1.4E-02	n	1.4E-01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information												Contaminant		Screening Levels														Protection of Ground Water SSLs		
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	volatile	mutagen	GIABS	ABS	C_{sat} (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)
563-68-8					1.0E-05	X			V		1			Thallium Acetate	563-68-8	7.8E-01	n	1.2E+01	n					2.0E-01	n		4.1E-05	n		
6533-73-9					2.0E-05	X			V		1			Thallium Carbonate	6533-73-9	1.6E+00	n	2.3E+01	n					4.0E-01	n		8.3E-05	n		
7791-12-0					1.0E-05	X					1			Thallium Chloride	7791-12-0	7.8E-01	n	1.2E+01	n					2.0E-01	n			n		
12039-52-0					1.0E-05	S					1			Thallium Selenite	12039-52-0	7.8E-01	n	1.2E+01	n					2.0E-01	n			n		
7446-18-6					2.0E-05	X					1			Thallium Sulfate	7446-18-6	1.6E+00	n	2.3E+01	n					4.0E-01	n			n		
79277-27-3					1.3E-02	I					1	0.1		Thifensulfuron-methyl	79277-27-3	8.2E+02	n	1.1E+04	n					2.6E+02	n		7.8E-02	n		
28249-77-6					1.0E-02	I					1	0.1		Thiobencarb	28249-77-6	6.3E+02	n	8.2E+03	n					1.6E+02	n		5.5E-01	n		
111-48-8					7.0E-02	X					1	0.008		Thiodiglycol	111-48-8	5.4E+03	n	7.9E+04	n					1.4E+03	n		2.8E-01	n		
39196-18-4					3.0E-04	H					1	0.1		Thiofanox	39196-18-4	1.9E+01	n	2.5E+02	n					5.3E+00	n		1.8E-03	n		
23564-05-8					8.0E-02	I					1	0.1		Thiophanate, Methyl	23564-05-8	5.1E+03	n	6.6E+04	n					1.6E+03	n		1.4E+00	n		
137-26-8					5.0E-03	I					1	0.1		Thiram	137-26-8	3.2E+02	n	4.1E+03	n					9.8E+01	n		1.4E-01	n		
7440-31-5					6.0E-01	H					1			Tin	7440-31-5	4.7E+04	n	7.0E+05	nm					1.2E+04	n		3.0E+03	n		
7550-45-0							1.0E-04	A	V		1			Titanium Tetrachloride	7550-45-0	1.4E+05	nm	6.0E+05	nm	1.0E-01	n	4.4E-01	n	2.1E-01	n			n		
108-88-3					8.0E-02	I	5.0E+00	I	V		1		8.2E+02	Toluene	108-88-3	4.9E+03	ns	4.7E+04	ns	5.2E+03	n	2.2E+04	n	1.1E+03	n	1.0E+03	7.6E-01	n	6.9E-01	
584-84-9			1.1E-05	C			8.0E-06	C	V		1			Toluene-2,4-diisocyante	584-84-9	6.4E+00	n	2.7E+01	n	8.3E-03	n	3.5E-02	n	1.7E-02	n		2.5E-04	n		
95-70-5	1.8E-01	X			2.0E-04	X					1	0.1		Toluene-2,5-diamine	95-70-5	3.0E+00	c**	1.3E+01	c*					4.3E-01	c**		1.3E-04	c**		
91-08-7			1.1E-05	C			8.0E-06	C	V		1		1.7E+03	Toluene-2,6-diisocyante	91-08-7	5.3E+00	n	2.2E+01	n	8.3E-03	n	3.5E-02	n	1.7E-02	n		2.6E-04	n		
95-53-4	1.6E-02	P	5.1E-05	C							1	0.1		Toluidine, o- (Methylaniline, 2-)	95-53-4	3.4E+01	c	1.4E+02	c	5.5E-02	c	2.4E-01	c	4.7E+00	c		2.0E-03	c		
106-49-0	3.0E-02	P			4.0E-03	X					1	0.1		Toluidine, p-	106-49-0	1.8E+01	c*	7.7E+01	c*					2.5E+00	c*		1.1E-03	c*		
NA					3.0E+00	P			V		1		3.4E-01	Total Petroleum Hydrocarbons (Aliphatic High)	NA	2.3E+05	nms	3.5E+06	nms					6.0E+04	n		2.4E+03	n		
NA							6.0E-01	P	V		1		1.4E+02	Total Petroleum Hydrocarbons (Aliphatic Low)	NA	5.2E+02	ns	2.2E+03	ns	6.3E+02	n	2.6E+03	n	1.3E+03	n		8.8E+00	n		
NA					1.0E-02	X	1.0E-01	P	V		1		6.9E+00	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	9.6E+01	ns	4.4E+02	ns	1.0E+02	n	4.4E+02	n	1.0E+02	n		1.5E+00	n		
NA					4.0E-02	P					1	0.1		Total Petroleum Hydrocarbons (Aromatic High)	NA	2.5E+03	n	3.3E+04	n					8.0E+02	n		8.9E+01	n		
NA					4.0E-03	P	3.0E-02	P	V		1		1.8E+03	Total Petroleum Hydrocarbons (Aromatic Low)	NA	8.2E+01	n	4.2E+02	n	3.1E+01	n	1.3E+02	n	3.3E+01	n		1.7E-02	n		
NA					4.0E-03	P	3.0E-03	P	V		1			Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.1E+02	n	6.0E+02	n	3.1E+00	n	1.3E+01	n	5.5E+00	n		2.3E-02	n		
8001-35-2	1.1E+00	I	3.2E-04	I							1	0.1		Toxaphene	8001-35-2	4.9E-01	c	2.1E+00	c	8.8E-03	c	3.8E-02	c	7.1E-02	c	3.0E+00	1.1E-02	c	4.6E-01	
66841-25-6					7.5E-03	I					1	0.1		Tralomethrin	66841-25-6	4.7E+02	n	6.2E+03	n					1.5E+02	n		5.8E+01	n		
688-73-3					3.0E-04	A			V		1			Tri-n-butyltin	688-73-3	2.3E+01	n	3.5E+02	n					3.7E+00	n		8.2E-02	n		
102-76-1					8.0E+01	X					1	0.1		Triacetin	102-76-1	5.1E+06	nm	6.6E+07	nm					1.6E+06	n		4.5E+02	n		
43121-43-3					3.0E-02	I					1	0.1		Triadimefon	43121-43-3	1.9E+03	n	2.5E+04	n					5.5E+02	n		4.4E-01	n		
2303-17-5					1.3E-02	I			V		1			Triallate	2303-17-5	1.0E+03	n	1.5E+04	n					1.2E+02	n		2.6E-01	n		
82097-50-5					1.0E-02	I					1	0.1		Triasulfuron	82097-50-5	6.3E+02	n	8.2E+03	n					2.0E+02	n		2.1E-01	n		
101200-48-0					8.0E-03	I					1	0.1		Tribenuron-methyl	101200-48-0	5.1E+02	n	6.6E+03	n					1.6E+02	n		6.1E-02	n		
615-54-3					5.0E-03	I			V		1			Tribromobenzene, 1,2,4-	615-54-3	3.9E+02	n	5.8E+03	n					4.5E+01	n		6.4E-02	n		
126-73-8	9.0E-03	P			1.0E-02	P					1	0.1		Tributyl Phosphate	126-73-8	6.0E+01	c*	2.6E+02	c*					5.2E+00	c*		2.5E-02	c*		
NA					3.0E-04	P					1	0.1		Tributyltin Compounds	NA	1.9E+01	n	2.5E+02	n					6.0E+00	n			n		
56-35-9					3.0E-04	I					1	0.1		Tributyltin Oxide	56-35-9	1.9E+01	n	2.5E+02	n					5.7E+00	n		2.9E+02	n		
76-13-1					3.0E+01	I	3.0E+01	H	V		1		9.1E+02	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	4.0E+04	ns	1.7E+05	nms	3.1E+04	n	1.3E+05	n	5.5E+04	n		1.4E+02	n		
76-03-9	7.0E-02	I			2.0E-02	I					1	0.1		Trichloroacetic Acid	76-03-9	7.8E+00	c	3.3E+01	c					1.1E+00	c	6.0E+01	2.2E-04	c	1.2E-02	
33663-50-2	2.9E-02	H									1	0.1		Trichloroaniline HCl, 2,4,6-	33663-50-2	1.9E+01	c	7.9E+01	c					2.7E+00	c		7.4E-03	c		
634-93-5	7.0E-03	X			3.0E-05	X					1	0.1		Trichloroaniline, 2,4,6-	634-93-5	1.9E+00	n	2.5E+01	n					4.0E-01	n		3.6E-03	n		
87-61-6					8.0E-04	X			V		1			Trichlorobenzene, 1,2,3-	87-61-6	6.3E+01	n	9.3E+02	n					7.0E+00	n		2.1E-02	n		
120-82-1	2.9E-02	P			1.0E-02	I	2.0E-03	P	V		1		4.0E+02	Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01	c**	1.1E+02	c**	2.1E+00	n	8.8E+00	n	1.2E+00	c**	7.0E+01	3.4E-03	c**	2.0E-01	
71-55-6					2.0E+00	I	5.0E+00	I	V		1		6.4E+02	Trichloroethane, 1,1,1-	71-55-6	8.1E+03	ns	3.6E+04	ns	5.2E+03	n	2.2E+04	n	8.0E+03	n	2.0E+02	2.8E+00	n	7.0E-02	
79-00-5	5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1		2.2E+03	Trichloroethane, 1,1,2-	79-00-5	1.1E+00	c**	5.0E+00	c**	1.8E-01	c**	7.7E-01	c**	2.8E-01	c**	5.0E+00	8.9E-05	c**	1.6E-03	
79-01-6	4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	1		6.9E+02	Trichloroethylene	79-01-6	9.4E-01	c**	6.0E+00	c**	4.8E-01	c**	3.0E+00	c**	4.9E-01	c**	5.0E+00	1.8E-04	c**	1.8E-03	
75-69-4					3.0E-01	I			V		1		1.2E+03	Trichlorofluoromethane	75-69-4	2.3E+04	ns	3.5E+05	nms					5.2E+03	n		3.3E+00	n		
95-95-4					1.0E-01	I					1	0.1		Trichlorophenol, 2,4,5-	95-95-4	6.3E+03	n	8.2E+04	n					1.2E+03	n		4.0E+00	n		
88-06-2	1.1E-02	I	3.1E-06	I	1.0E-03	P					1	0.1		Trichlorophenol, 2,4,6-	88-06-2	4.9E+01	c**	2.1E+02	c**	9.1E-01	c	4.0E+00	c	4.1E+00	c**		4.0E-03	c**		
93-76-5					1.0E-02	I					1	0.1		Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	6.3E+02	n	8.2E+03	n					1.6E+02	n		6.8E-02	n		
93-72-1					8.0E-03	I					1	0.1		Trichlorophenoxypropionic acid, -2,4,5	93-72-1	5.1E+02	n	6.6E+03	n					1.1E+02	n	5.0E+01	6.1E-02	n	2.8E-02	
598-77-6					5.0E-03	I			V		1		1.3E+03	Trichloropropane, 1,1,2-	598-77-6	3.9E+02	n	5.8E+03	ns					8.8E+01	n		3.5E-02	n		
96-18-4	3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1		1.4E+03	Trichloropropane, 1,2,3-	96-18-4	5.1E-03	c	1.1E-01	c	3.1E-01	n	1.3E+00	n	7.5E-04	c		3.2E-07	c		
96-19-5					3.0E-03	X	3.0E-04	P	V		1		3.1E+02	Trichloropropene, 1,2,3-	96-19-5	7.3E-01	n	3.1E+00	n	3.1E-01	n	1.3E+00	n	6.2E-01	n		3.1E-04	n		
1330-78-5					2.0E-02	A					1	0.1		Tricresyl Phosphate (TCP)	1330-78-5	1.3E+03	n	1.6E+04	n					1.6E+02	n		1.5E+01	n		
58138-08-2					3.0E-03	I					1	0.1		Tridiphane	58138-08-2	1.9E+02	n	2.5E+03	n					1.8E+01	n		1.3E-01	n		
121-44-8							7.0E-03	I	V		1		2.8E+04	Triethylamine	121-44-8	1.2E+02	n	4.8E+02	n	7.3E+00	n	3.1E+01	n	1.5E+01	n		4.4E-03	n		
112-27-6					2.0E+00	P					1	0.1		Triethylene Glycol	112-27-6	1.3E+05	nm	1.6E+06	nm					4.0E+04	n		8.8E+00	n		
420-46-2							2.0E+01	P	V		1		4.8E+03	Trifluoroethane, 1,1,1-	420-46-2	1.5E+04	ns	6.2E+04	ns	2.1E+04	n	8.8E+04	n	4.2E+04	n		1.3E+02	n		
1582-09-8	7.7E-03	I			7.5E-03	I			V		1			Trifluralin	1582-09-8	9.0E+01	c**	4.2E+02	c*					4.2E+00	c*		8.4E-02	c*		
512-56-1	2.0E-02	P			1.0E-02	P					1	0.1		Trimethyl Phosphate	512-56-1	2.7E+01	c*	1.1E+02	c*					3.9E+00	c*		8.6E-04	c*		
526-73-8							5.0E-03	P	V		1		2.9E+02	Trimethylbenzene, 1,2,3-	526-73-8	4.9E+01	n	2.1E+02	n	5.2E+00	n	2.2E+01	n	1.0E+01	n		1.5E-02	n		
95-63-6							7.0E-03	P	V		1		2.2E+02	Trimethylbenzene, 1,2,4-	95-63-6	5.8E+01	n	2.4E+02	ns	7.3E+00	n	3.1E+01	n	1.5E+01	n		2.1E-02	n		
108-67-8					1.0E-02	X			V		1		1.8E+02	Trimethylbenzene, 1,3,5-	108-67-8	7.8E+02	ns	1.2E+04	ns					1.2E+02	n		1.7E-01	n		
25167-70-8					1.0E-02	X			V		1		3.0E+01	Trimethylpentene, 2,4,4-	25167-70-8	7.8E+02	ns	1.2E+04	ns					6.5E+01	n		2.2E-01	n		
99-35-4					3.0E-02	I					1	0.019		Trinitrobenzene, 1,3,5-	99-35-4	2.2E+03	n	3.2E+04	n					5.9E+02	n		2.1E+00	n		
118-96-7	3.0E-02	I			5.0E-04	I					1	0.032		Trinitrotoluene, 2,4,6-	118-96-7	2.1E+01	c**	9.6E+01	c**					2.5E+00	c**		1.5E-02	c**		
791-28-6					2.0E-02	P					1	0.1		Triphenylphosphine Oxide	791-28-6	1.3E+03	n	1.6E+04	n					3.6E+02	n		1.5E+00	n		
13674-87-8					2.0E-02	A					1	0.1		Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	1.3E+03	n	1.6E+04	n					3.6E+02	n		8.0E+00	n		
13674-84-5					1.0E-02	X					1	0.1		Tris(1-chloro-2-propyl)phosphate	13674-84-5	6.3E+02	n	8.2E+03	n					1.9E+02	n		6.5E-01	n		
126-72-7	2.3E+00	C	6.6E-04	C					V		1		4.7E+02	Tris(2,3-dibromopropyl)phosphate	126-72-7	2.8E-01	c	1.3E+00	c	4.3E-03	c	1.9E-02	c	6.8E-03	c		1.3E-04	c		
115-96-8	2.0E-02	P			7.0E-03	P					1	0.1		Tris(2-chloroethyl)phosphate	115-96-8	2.7E+01	c*	1.1E+02	c*					3.8E+00	c*		3.8E-03	c*		
78-42-2	3.2E-03	P			1.0E-01	P					1	0.1		Tris(2-ethylhexyl)phosphate	78-42-2	1.7E+02	c*	7.2E+02	c					2.4E+01	c*		1.2E+02	c*		
7440-33-7					8.0E-04	P					1			Tungsten	7440-33-7	6.3E+01	n	9.3E+02	n					1.6E+01	n		2.4E+00	n		
NA					3.0E-03	I	4.0E-05	A			1			Uranium (Soluble Salts)	NA	2.3E+02	n	3.5E+03	n	4.2E-02	n	1.8E-01	n	6.0E+01	n	3.0E+01	2.7E+01	n	1.4E+01	
51-79-6	1.0E+00	C	2.9E-04	C						M	1	0.1		Urethane	51-79-6	1.2E-01	c	2.3E+00	c	3.5E-03	c	4.2E-02	c	2.5E-02	c		5.6E-06	c		
1314-62-1			8.3E-03	P	9.0E-03	I	7.0E-06	P			0.026			Vanadium Pentoxide	1314-62-1	4.6E+02	c**	2.0E+03	c**	3.4E-04	c*	1.5E-03	c*	1.5E+02	n			n		
7440-62-2					5.0E-03	S	1.0E-04	A			0.026			Vanadium and Compounds	7440-62-2	3.9E+02	n	5.8E+03	n	1.0E-01	n	4.4E-01	n	8.6E+01	n		8.6E+01	n		
1929-77-7					1.0E-03	I			V		1			Vernolate	1929-77-7	7.8E+01	n	1.2E+03	n					1.1E+01	n		8.9E-03	n		
50471-44-8					2.5E-02	I					1	0.1		Vinclozolin	50471-44-8	1.6E+03	n	2.1E+04	n					4.4E+02	n		3.4E-01	n		
108-05-4					1.0E+00	H	2.0E-01	I	V		1		2.8E+03	Vinyl Acetate	108-05-4	9.1E+02	n	3.8E+03	ns	2.1E+02	n	8.8E+02	n	4.1E+02	n		8.7E-02	n		

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

1	2	3	4	5	6	7	8	9	#	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
	Toxicity and Chemical-specific Information													Contaminant		Screening Levels											Protection of Ground Water SSLs					
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	GIABS	ABS	C$_{sat}$ (mg/kg)	Analyte	CAS No.	Resident Soil (mg/kg)	key	Industrial Soil (mg/kg)	key	Resident Air (ug/m^3)	key	Industrial Air (ug/m^3)	key	Tapwater (ug/L)	key	MCL (ug/L)	Risk-based SSL (mg/kg)	key	MCL-based SSL (mg/kg)			
593-60-2			3.2E-05	H			3.0E-03	I	V		1		2.5E+03	Vinyl Bromide	593-60-2	1.2E-01	c*	5.2E-01	c*	8.8E-02	c*	3.8E-01	c*	1.8E-01	c*		5.1E-05	c*				
75-01-4	7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1		3.9E+03	Vinyl Chloride	75-01-4	5.9E-02	c	1.7E+00	c	1.7E-01	c	2.8E+00	c	1.9E-02	c	2.0E+00	6.5E-06	c	6.9E-04			
81-81-2					3.0E-04	I					1	0.1		Warfarin	81-81-2	1.9E+01	n	2.5E+02	n					5.6E+00	n		5.9E-03	n				
106-42-3					2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, P-	106-42-3	5.6E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n				
108-38-3					2.0E-01	S	1.0E-01	S	V		1		3.9E+02	Xylene, m-	108-38-3	5.5E+02	ns	2.4E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n				
95-47-6					2.0E-01	S	1.0E-01	S	V		1		4.3E+02	Xylene, o-	95-47-6	6.5E+02	ns	2.8E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n		1.9E-01	n				
1330-20-7					2.0E-01	I	1.0E-01	I	V		1		2.6E+02	Xylenes	1330-20-7	5.8E+02	ns	2.5E+03	ns	1.0E+02	n	4.4E+02	n	1.9E+02	n	1.0E+04	1.9E-01	n	9.9E+00			
1314-84-7					3.0E-04	I					1			Zinc Phosphide	1314-84-7	2.3E+01	n	3.5E+02	n					6.0E+00	n			n				
7440-66-6					3.0E-01	I					1			Zinc and Compounds	7440-66-6	2.3E+04	n	3.5E+05	nm					6.0E+03	n		3.7E+02	n				
12122-67-7					5.0E-02	I					1	0.1		Zineb	12122-67-7	3.2E+03	n	4.1E+04	n					9.9E+02	n		2.9E+00	n				
7440-67-7					8.0E-05	X					1			Zirconium	7440-67-7	6.3E+00	n	9.3E+01	n					1.6E+00	n		4.8E+00	n				

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
30560-19-1	8.7E-03	I			4.0E-03	I					-0.85	1	1	Yes	Acephate	30560-19-1	9.0E+00	1.2E+04		8.9E+00	8.0E+01	1.1E+05		8.0E+01		2.0E-03	
75-07-0			2.2E-06	I			9.0E-03	I	V		-0.34	1	1	Yes	Acetaldehyde	75-07-0			2.6E+00	2.6E+00			1.9E+01	1.9E+01		5.2E-04	
34256-82-1					2.0E-02	I					3.03	1	0.9	Yes	Acetochlor	34256-82-1					4.0E+02	2.9E+03		3.5E+02		2.8E-01	
67-64-1					9.0E-01	I	3.1E+01	A	V		-0.24	1	1	Yes	Acetone	67-64-1					1.8E+04	4.4E+06	6.4E+04	1.4E+04		2.9E+00	
75-86-5							2.0E-03	X			-0.03	1	1	Yes	Acetone Cyanohydrin	75-86-5											
75-05-8					6.0E-02	I	V				-0.34	1	1	Yes	Acetonitrile	75-05-8							1.3E+02	1.3E+02		2.6E-02	
98-86-2					1.0E-01	I			V		1.58	1	1	Yes	Acetophenone	98-86-2					2.0E+03	4.6E+04		1.9E+03		5.8E-01	
53-96-3	3.8E+00	C	1.3E-03	C							3.12	1	1	Yes	Acetylaminofluorene, 2-	53-96-3	2.1E-02	6.7E-02		1.6E-02						7.2E-05	
107-02-8					5.0E-04	I	2.0E-05	I	V		-0.01	1	1	Yes	Acrolein	107-02-8					1.0E+01	1.7E+03	4.2E-02	4.2E-02		8.4E-06	
79-06-1	5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M	-0.67	1	1	Yes	Acrylamide	79-06-1	5.0E-02	2.3E+01		5.0E-02	4.0E+01	2.1E+04		4.0E+01		1.1E-05	
79-10-7					5.0E-01	I	1.0E-03	I	V		0.35	1	1	Yes	Acrylic Acid	79-10-7					1.0E+04	1.1E+06	2.1E+00	2.1E+00		4.2E-04	
107-13-1	5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		0.25	1	1	Yes	Acrylonitrile	107-13-1	1.4E-01	1.4E+01	8.3E-02	5.2E-02	8.0E+02	8.9E+04	4.2E+00	4.1E+00		1.1E-05	
111-69-3							6.0E-03	P			-0.32	1	1	Yes	Adiponitrile	111-69-3											
15972-60-8	5.6E-02	C			1.0E-02	I					3.52	1	0.9	Yes	Alachlor	15972-60-8	1.4E+00	4.4E+00		1.1E+00	2.0E+02	6.9E+02		1.6E+02	2.0E+00	8.7E-04	1.7E-03
116-06-3					1.0E-03	I					1.13	1	1	Yes	Aldicarb	116-06-3					2.0E+01	1.4E+03		2.0E+01	3.0E+00	4.9E-03	7.5E-04
1646-88-4					1.0E-03	I					-0.57	1	1	Yes	Aldicarb Sulfone	1646-88-4					2.0E+01	2.4E+04		2.0E+01	2.0E+00	4.4E-03	4.4E-04
1646-87-3											-0.78	1	1	Yes	Aldicarb sulfoxide	1646-87-3									4.0E+00		8.8E-04
309-00-2	1.7E+01	I	4.9E-03	I	3.0E-05	I			V		6.5	1	1	No	Aldrin	309-00-2	4.6E-03		1.1E-03	9.2E-04	6.0E-01			6.0E-01		1.5E-04	
107-18-6					5.0E-03	I	1.0E-04	X	V		0.17	1	1	Yes	Allyl Alcohol	107-18-6					1.0E+02	1.3E+04	2.1E-01	2.1E-01		4.2E-05	
107-05-1	2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.93	1	1	Yes	Allyl Chloride	107-05-1	3.7E+00	3.5E+01	9.4E-01	7.3E-01			2.1E+00	2.1E+00		2.3E-04	
7429-90-5					1.0E+00	P	5.0E-03	P				1	1	Yes	Aluminum	7429-90-5					2.0E+04	4.6E+06		2.0E+04		3.0E+04	
20859-73-8					4.0E-04	I						1	1	Yes	Aluminum Phosphide	20859-73-8					8.0E+00	1.8E+03		8.0E+00			
834-12-8					9.0E-03	I					2.98	1	1	Yes	Ametryn	834-12-8					1.8E+02	9.8E+02		1.5E+02		1.6E-01	
92-67-1	2.1E+01	C	6.0E-03	C							2.86	1	1	Yes	Aminobiphenyl, 4-	92-67-1	3.7E-03	1.5E-02		3.0E-03						1.5E-05	
591-27-5					8.0E-02	P					0.21	1	1	Yes	Aminophenol, m-	591-27-5					1.6E+03	2.8E+05		1.6E+03		6.1E-01	
123-30-8					2.0E-02	P					0.04	1	1	Yes	Aminophenol, p-	123-30-8					4.0E+02	9.1E+04		4.0E+02		1.5E-01	
33089-61-1					2.5E-03	I					5.5	1	0.9	Yes	Amitraz	33089-61-1					5.0E+01	9.8E+00		8.2E+00		4.2E+00	
7664-41-7							1.0E-01	I	V		0.23	1	1		Ammonia	7664-41-7											
7773-06-0					2.0E-01	I						1	1	Yes	Ammonium Sulfamate	7773-06-0					4.0E+03	9.1E+05		4.0E+03			
75-85-4							3.0E-03	X	V		0.89	1	1	Yes	Amyl Alcohol, tert-	75-85-4							6.3E+00	6.3E+00		1.3E-03	
62-53-3	5.7E-03	I	1.6E-06	C	7.0E-03	P	1.0E-03	I			0.9	1	1	Yes	Aniline	62-53-3	1.4E+01	6.9E+02		1.3E+01	1.4E+02	7.7E+03		1.4E+02		4.6E-03	
84-65-1	4.0E-02	P			2.0E-03	X					3.39	1	0.9	Yes	Anthraquinone, 9,10-	84-65-1	1.9E+00	5.1E+00		1.4E+00	4.0E+01	1.1E+02		3.0E+01		1.4E-02	
7440-36-0					4.0E-04	I						0.15	1	Yes	Antimony (metallic)	7440-36-0					8.0E+00	2.7E+02		7.8E+00	6.0E+00	3.5E-01	2.7E-01
1314-60-9					5.0E-04	H						0.15	1	Yes	Antimony Pentoxide	1314-60-9					1.0E+01	3.4E+02		9.7E+00			
1332-81-6					4.0E-04	H						0.15	1	Yes	Antimony Tetroxide	1332-81-6					8.0E+00	2.7E+02		7.8E+00			
1309-64-4							2.0E-04	I				0.15	1	Yes	Antimony Trioxide	1309-64-4											
7440-38-2	1.5E+00	I	4.3E-03	I	3.0E-04	L	1.5E-05	C				1	1	Yes	Arsenic, Inorganic	7440-38-2	5.2E-02	9.7E+00		5.2E-02	6.0E+00	1.4E+03		6.0E+00	1.0E+01	1.5E-03	2.9E-01
7784-42-1					3.5E-06	C	5.0E-05	I				1	1	Yes	Arsine	7784-42-1					7.0E-02	1.6E+01		7.0E-02			
3337-71-1					5.0E-02	I					-0.27	1	1	Yes	Asulam	3337-71-1					1.0E+03	8.0E+05		1.0E+03		2.6E-01	
1912-24-9	2.3E-01	C			3.5E-02	I					2.61	1	1	Yes	Atrazine	1912-24-9	3.4E-01	2.8E+00		3.0E-01	7.0E+02	6.2E+03		6.3E+02	3.0E+00	2.0E-04	2.0E-03
492-80-8	8.8E-01	C	2.5E-04	C							2.98	1	0.9	Yes	Auramine	492-80-8	8.9E-02	2.7E-01		6.7E-02						6.1E-04	
65195-55-3					4.0E-04	I					4.48	1	1	No	Avermectin B1	65195-55-3	8.0E+00							8.0E+00		1.4E+01	
86-50-0					3.0E-03	A	1.0E-02	A			2.75	1	1	Yes	Azinphos-methyl	86-50-0					6.0E+01	8.3E+02		5.6E+01		1.7E-02	
103-33-3	1.1E-01	I	3.1E-05	I					V		3.82	1	1	Yes	Azobenzene	103-33-3	7.1E-01	7.3E-01	1.8E-01	1.2E-01						9.3E-04	
123-77-3					1.0E+00	P	7.0E-06	P			-1.7	1	1	Yes	Azodicarbonamide	123-77-3					2.0E+04	6.8E+07		2.0E+04		6.8E+00	
7440-39-3					2.0E-01	I	5.0E-04	H				0.07	1	Yes	Barium	7440-39-3					4.0E+03	6.4E+04		3.8E+03	2.0E+03	1.6E+02	8.2E+01
10294-40-3	5.0E-01		1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Barium Chromate	10294-40-3	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
1861-40-1					3.0E-01	I			V		5.29	1	0.8	Yes	Benfluralin	1861-40-1					6.0E+03	2.4E+03		1.7E+03		5.6E+01	
17804-35-2					5.0E-02	I					2.12	1	1	Yes	Benomyl	17804-35-2					1.0E+03	3.0E+04		9.7E+02		8.5E-01	
83055-99-6					2.0E-01	I					2.18	1	1	Yes	Bensulfuron-methyl	83055-99-6					4.0E+03	2.4E+05		3.9E+03		1.0E+00	
25057-89-0					3.0E-02	I					2.34	1	1	Yes	Bentazon	25057-89-0					6.0E+02	9.4E+03		5.7E+02		1.2E-01	
100-52-7	4.0E-03	P			1.0E-01	I			V		1.48	1	1	Yes	Benzaldehyde	100-52-7	1.9E+01	4.4E+02		1.9E+01	2.0E+03	4.9E+04		1.9E+03		4.2E-03	
71-43-2	5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		2.13	1	1	Yes	Benzene	71-43-2	1.4E+00	9.8E+00	7.2E-01	4.6E-01	8.0E+01	6.1E+02	6.3E+01	3.3E+01	5.0E+00	2.3E-04	2.6E-03
6369-59-1	1.0E-01	X			3.0E-04	X					-3.7267	1	1	No	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.8E-01			7.8E-01	6.0E+00			6.0E+00		2.2E-04	
108-98-5					1.0E-03	P			V		2.52	1	1	Yes	Benzenethiol	108-98-5					2.0E+01	1.0E+02		1.7E+01		1.1E-02	
92-87-5	2.3E+02	I	6.7E-02	I	3.0E-03	I				M	1.34	1	1	Yes	Benzidine	92-87-5	1.1E-04	5.0E-03		1.1E-04	6.0E+01	3.0E+03		5.9E+01		2.9E-07	
65-85-0					4.0E+00	I					1.87	1	1	Yes	Benzoic Acid	65-85-0					8.0E+04	1.2E+06		7.5E+04		1.5E+01	
98-07-7	1.3E+01	I							V		3.9	1	1	Yes	Benzotrichloride	98-07-7	6.0E-03	6.0E-03		3.0E-03						6.6E-06	
100-51-6					1.0E-01	P					1.1	1	1	Yes	Benzyl Alcohol	100-51-6					2.0E+03	8.9E+04		2.0E+03		4.8E-01	
100-44-7	1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		2.3	1	1	Yes	Benzyl Chloride	100-44-7	4.6E-01	3.4E+00	1.1E-01	8.9E-02	4.0E+01	3.2E+02	2.1E+00	2.0E+00		9.8E-05	
7440-41-7			2.4E-03	I	2.0E-03	I	2.0E-05	I				0.007	1	Yes	Beryllium and compounds	7440-41-7					4.0E+01	6.4E+01		2.5E+01	4.0E+00	2.0E+01	3.2E+00
42576-02-3					9.0E-03	P					4.48	1	0.9	Yes	Bifenox	42576-02-3					1.8E+02	2.3E+02		1.0E+02		7.6E-01	
82657-04-3					1.5E-02	I					6	1	0	Yes	Biphenthrin	82657-04-3					3.0E+02			3.0E+02		1.4E+03	
92-52-4	8.0E-03	I			5.0E-01	I	4.0E-04	X	V		4.01	1	1	Yes	Biphenyl, 1,1'-	92-52-4	9.7E+00	6.5E+00		3.9E+00	1.0E+04	7.3E+03	8.3E-01	8.3E-01		8.7E-03	
108-60-1					4.0E-02	I			V		2.48	1	1	Yes	Bis(2-chloro-1-methylethyl) ether	108-60-1					8.0E+02	6.5E+03		7.1E+02		2.6E-01	
111-91-1					3.0E-03	P					1.3	1	1	Yes	Bis(2-chloroethoxy)methane	111-91-1					6.0E+01	3.0E+03		5.9E+01		1.4E-02	
111-44-4	1.1E+00	I	3.3E-04	I					V		1.29	1	1	Yes	Bis(2-chloroethyl)ether	111-44-4	7.1E-02	2.7E+00	1.7E-02	1.4E-02						3.6E-06	
542-88-1	2.2E+02	I	6.2E-02	I					V		0.57	1	1	Yes	Bis(chloromethyl)ether	542-88-1	3.5E-04	3.4E-02	9.1E-05	7.2E-05						1.7E-08	
80-05-7					5.0E-02	I					3.32	1	1	Yes	Bisphenol A	80-05-7					1.0E+03	3.2E+03		7.7E+02		5.8E+01	
7440-42-8					2.0E-01	I	2.0E-02	H				1	1	Yes	Boron And Borates Only	7440-42-8					4.0E+03	9.1E+05		4.0E+03		1.3E+01	
10294-34-5					2.0E+00	P	2.0E-02	P	V		1.16	1	1	Yes	Boron Trichloride	10294-34-5					4.0E+04	9.1E+06	4.2E+01	4.2E+01			
7637-07-2					4.0E-02	C	1.3E-02	C	V		0.22	1	1	Yes	Boron Trifluoride	7637-07-2					8.0E+02	1.8E+05	2.7E+01	2.6E+01			
15541-45-4	7.0E-01	I			4.0E-03	I						1	1	Yes	Bromate	15541-45-4	1.1E-01	2.1E+01		1.1E-01	8.0E+01	1.8E+04		8.0E+01	1.0E+01	8.5E-04	7.7E-02
107-04-0	2.0E+00	X	6.0E-04	X					V		1.92	1	1	Yes	Bromo-2-chloroethane, 1-	107-04-0	3.9E-02	5.7E-01	9.4E-03	7.4E-03						2.1E-06	
108-86-1					8.0E-03	I	6.0E-02	I	V		2.99	1	1	Yes	Bromobenzene	108-86-1					1.6E+02	5.4E+02	1.3E+02	6.2E+01		4.2E-02	
74-97-5							4.0E-02	X	V		1.41	1	1	Yes	Bromochloromethane	74-97-5							8.3E+01	8.3E+01		2.1E-02	
75-27-4	6.2E-02	I	3.7E-05	C	2.0E-02	I			V		2	1	1	Yes	Bromodichloromethane	75-27-4	1.3E+00	1.9E+01	1.5E-01	1.3E-01	4.0E+02	6.5E+03		3.8E+02	8.0E+01(F)	3.7E-05	2.2E-02
75-25-2	7.9E-03	I	1.1E-06	I	2.0E-02	I			V		2.4	1	1	Yes	Bromoform	75-25-2	9.9E+00	1.4E+02	5.1E+00	3.3E+00	4.0E+02	6.2E+03		3.8E+02	8.0E+01(F)	8.7E-04	2.1E-02
74-83-9					1.4E-03	I	5.0E-03	I	V		1.19	1	1	Yes	Bromomethane	74-83-9					2.8E+01	1.0E+03	1.0E+01	7.5E+00		1.9E-03	
2104-96-3					5.0E-03	H			V		5.21	1	0.8	Yes	Bromophos	2104-96-3					1.0E+02	5.5E+01		3.5E+01		1.5E-01	
1689-84-5					2.0E-02	I					2.8	1	0.9	Yes	Bromoxynil	1689-84-5					4.0E+02	1.8E+03		3.3E+02		2.8E-01	
1689-99-2					2.0E-02	I			V		5.4	1	0.8	Yes	Bromoxynil Octanoate	1689-99-2					4.0E+02	2.1E+02		1.4E+02		1.2E+00	
106-99-0	3.4E+00	C	3.0E-05	I			2.0E-03	I	V		1.99	1	1	Yes	Butadiene, 1,3-	106-99-0	2.3E-02	1.6E-01	1.9E-01	1.8E-02			4.2E+00	4.2E+00		9.9E-06	
71-36-3					1.0E-01	I			V		0.88	1	1	Yes	Butanol, N-	71-36-3					2.0E+03	1.0E+05		2.0E+03		4.1E-01	
78-92-2					2.0E+00	P	3.0E+01	P	V		0.61	1	1	Yes	Butyl alcohol, sec-	78-92-2					4.0E+04	3.0E+06	6.3E+04	2.4E+04		5.0E+00	
2008-41-5					5.0E-02	I			V		4.15	1	1	Yes	Butylate	2008-41-5					1.0E+03	8.5E+02		4.6E+02		4.5E-01	
25013-16-5	2.0E-04	C	5.7E-08	C							3.5	1	0.8	Yes	Butylated hydroxyanisole	25013-16-5	3.9E+02	2.5E+02		1.5E+02						2.9E-01	
128-37-0	3.6E-03	P			3.0E-01	P					5.1	1	1	Yes	Butylated hydroxytoluene	128-37-0	2.2E+01	4.0E+00		3.4E+00	6.0E+03	1.2E+03		1.0E+03		1.0E-01	
104-51-8					5.0E-02	P			V		4.38	1	1	No	Butylbenzene, n-	104-51-8					1.0E+03			1.0E+03		3.2E+00	
135-98-8					1.0E-01	X			V		4.57	1	1	No	Butylbenzene, sec-	135-98-8					2.0E+03			2.0E+03		5.9E+00	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRPTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
98-06-6					1.0E-01	X			V		4.11	1	1	Yes	Butylbenzene, tert-	98-06-6					2.0E+03	1.1E+03		6.9E+02		1.6E+00	
75-60-5					2.0E-02	A					0.36	1	1	Yes	Cacodylic Acid	75-60-5					4.0E+02	6.7E+04		4.0E+02		1.2E-01	
7440-43-9			1.8E-03	I	1.0E-03	I	1.0E-05	A				0.025	1		Cadmium (Diet)	7440-43-9											
7440-43-9			1.8E-03	I	5.0E-04	I	1.0E-05	A				0.05	1	Yes	Cadmium (Water)	7440-43-9					1.0E+01	1.1E+02		9.2E+00	5.0E+00	6.9E-01	3.8E-01
13765-19-0	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Calcium Chromate	13765-19-0	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
105-60-2					5.0E-01	I	2.2E-03	C			-0.19	1	1	Yes	Caprolactam	105-60-2					1.0E+04	9.0E+05		9.9E+03		2.5E+00	
2425-06-1	1.5E-01	C	4.3E-05	C	2.0E-03	I					3.8	1	0.9	Yes	Captafol	2425-06-1	5.2E-01	1.8E+00		4.0E-01	4.0E+01	1.5E+02		3.2E+01		7.1E-04	
133-06-2	2.3E-03	C	6.6E-07	C	1.3E-01	I					2.8	1	1	Yes	Captan	133-06-2	3.4E+01	3.6E+02		3.1E+01	2.6E+03	3.0E+04		2.4E+03		2.2E-02	
63-25-2					1.0E-01	I					2.36	1	1	Yes	Carbaryl	63-25-2					2.0E+03	2.4E+04		1.8E+03		1.7E+00	
1563-66-2					5.0E-03	I					2.32	1	1	Yes	Carbofuran	1563-66-2					1.0E+02	1.4E+03		9.4E+01	4.0E+01	3.7E-02	1.6E-02
75-15-0					1.0E-01	I	7.0E-01	I	V		1.94	1	1	Yes	Carbon Disulfide	75-15-0					2.0E+03	2.0E+04	1.5E+03	8.1E+02		2.4E-01	
56-23-5	7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		2.83	1	1	Yes	Carbon Tetrachloride	56-23-5	1.1E+00	4.3E+00	9.4E-01	4.6E-01	8.0E+01	3.4E+02	2.1E+02	4.9E+01	5.0E+00	1.8E-04	1.9E-03
463-58-1							1.0E-01	P	V		-1.33	1	1	Yes	Carbonyl Sulfide	463-58-1							2.1E+02	2.1E+02		5.1E-01	
55285-14-8					1.0E-02	I					5.57	1	0.8	Yes	Carbosulfan	55285-14-8					2.0E+02	6.9E+01		5.1E+01		1.2E+00	
5234-68-4					1.0E-01	I					2.14	1	1	Yes	Carboxin	5234-68-4					2.0E+03	4.1E+04		1.9E+03		1.0E+00	
1306-38-3							9.0E-04	I				1	1	Yes	Ceric oxide	1306-38-3											
302-17-0					1.0E-01	I			V		0.99	1	1	Yes	Chloral Hydrate	302-17-0					2.0E+03	1.5E+05		2.0E+03		4.0E-01	
133-90-4					1.5E-02	I					1.9	1	1	Yes	Chloramben	133-90-4					3.0E+02	7.4E+03		2.9E+02		7.0E-02	
118-75-2	4.0E-01	H									2.22	1	1	Yes	Chloranil	118-75-2	1.9E-01	3.5E+00		1.8E-01						1.5E-04	
12789-03-6	3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V		6.16	1	0.7	Yes	Chlordane	12789-03-6	2.2E-01	3.6E-02	5.6E-02	2.0E-02	1.0E+01	1.8E+00	1.5E+00	7.4E-01	2.0E+00	2.7E-03	2.7E-01
143-50-0	1.0E+01	I	4.6E-03	C	3.0E-04	I					5.41	1	0.8	Yes	Chlordecone (Kepone)	143-50-0	7.8E-03	6.5E-03		3.5E-03	6.0E+00	5.4E+00		2.9E+00		1.2E-04	
470-90-6					7.0E-04	A					3.81	1	0.9	Yes	Chlorfenvinphos	470-90-6					1.4E+01	5.6E+01		1.1E+01		3.1E-02	
90982-32-4					2.0E-02	I					2.5	1	1	Yes	Chlorimuron, Ethyl-	90982-32-4					4.0E+02	1.5E+04		3.9E+02		1.3E-01	
7782-50-5					1.0E-01	I	1.5E-04	A	V		0.85	1	1	Yes	Chlorine	7782-50-5					2.0E+03	4.6E+05	3.0E-01	3.0E-01		1.4E-04	
10049-04-4					3.0E-02	I	2.0E-04	I	V			1	1	Yes	Chlorine Dioxide	10049-04-4					6.0E+02	1.4E+05	4.2E-01	4.2E-01			
7758-19-2					3.0E-02	I						1	1	Yes	Chlorite (Sodium Salt)	7758-19-2					6.0E+02	1.4E+05		6.0E+02	1.0E+03		
75-68-3							5.0E+01	I	V		2.05	1	1	Yes	Chloro-1,1-difluoroethane, 1-	75-68-3							1.0E+05	1.0E+05		5.2E+01	
126-99-8			3.0E-04	I	2.0E-02	H	2.0E-02	I	V		2.53	1	1	Yes	Chloro-1,3-butadiene, 2-	126-99-8			1.9E-02	1.9E-02	4.0E+02	1.8E+03	4.2E+01	3.7E+01		9.9E-06	
3165-93-3	4.6E-01	H									2.27	1	1	Yes	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.7E-01	5.1E+02		1.7E-01						1.5E-04	
95-69-2	1.0E-01	P	7.7E-05	C	3.0E-03	X					2.27	1	1	Yes	Chloro-2-methylaniline, 4-	95-69-2	7.8E-01	6.6E+00		7.0E-01	6.0E+01	5.6E+02		5.4E+01		4.0E-04	
107-20-0	2.7E-01	X							V		0.09	1	1	Yes	Chloroacetaldehyde, 2-	107-20-0	2.9E-01	4.6E+01		2.9E-01						5.8E-05	
79-11-8											0.22	1	1	Yes	Chloroacetic Acid	79-11-8									6.0E+01		1.2E-02
532-27-4							3.0E-05	I			1.93	1	1	Yes	Chloroacetophenone, 2-	532-27-4											
106-47-8	2.0E-01	P			4.0E-03	I					1.83	1	1	Yes	Chloroaniline, p-	106-47-8	3.9E-01	5.9E+00		3.7E-01	8.0E+01	1.3E+03		7.6E+01		1.6E-04	
108-90-7					2.0E-02	I	5.0E-02	P	V		2.84	1	1	Yes	Chlorobenzene	108-90-7					4.0E+02	1.3E+03	1.0E+02	7.8E+01	1.0E+02	5.3E-02	6.8E-02
510-15-6	1.1E-01	C	3.1E-05	C	2.0E-02	I					4.74	1	0.8	Yes	Chlorobenzilate	510-15-6	7.1E-01	5.6E-01		3.1E-01	4.0E+02	3.5E+02		1.9E+02		1.0E-03	
74-11-3					3.0E-02	X					2.65	1	1	Yes	Chlorobenzoic Acid, p-	74-11-3					6.0E+02	3.4E+03		5.1E+02		1.3E-01	
98-56-6					3.0E-03	P	3.0E-01	P	V		3.6	1	1	Yes	Chlorobenzotrifluoride, 4-	98-56-6					6.0E+01	9.3E+01	6.3E+02	3.5E+01		1.2E-01	
109-69-3					4.0E-02	P			V		2.64	1	1	Yes	Chlorobutane, 1-	109-69-3					8.0E+02	3.1E+03		6.4E+02		2.6E-01	
75-45-6							5.0E+01	I	V		1.08	1	1	Yes	Chlorodifluoromethane	75-45-6							1.0E+05	1.0E+05		4.3E+01	
107-07-3					2.0E-02	P			V		0.03	1	1	Yes	Chloroethanol, 2-	107-07-3					4.0E+02	7.7E+04		4.0E+02		8.1E-02	
67-66-3	3.1E-02	C	2.3E-05	C	1.0E-02	I	9.8E-02	A	V		1.97	1	1	Yes	Chloroform	67-66-3	2.5E+00	2.9E+01	2.4E-01	2.2E-01	2.0E+02	2.5E+03	2.0E+02	9.7E+01	8.0E+01(F)	6.1E-05	2.2E-02
74-87-3					9.0E-02	I	V				0.91	1	1	Yes	Chloromethane	74-87-3							1.9E+02	1.9E+02		4.9E-02	
107-30-2	2.4E+00	C	6.9E-04	C					V		0.32	1	1	Yes	Chloromethyl Methyl Ether	107-30-2	3.2E-02	3.7E+00	8.1E-03	6.5E-03						1.4E-06	
88-73-3	3.0E-01	P			3.0E-03	P	1.0E-05	X			2.24	1	1	Yes	Chloronitrobenzene, o-	88-73-3	2.6E-01	2.6E+00		2.4E-01	6.0E+01	6.4E+02		5.5E+01		2.2E-04	
100-00-5	6.0E-02	P			7.0E-04	P	2.0E-03	P			2.39	1	1	Yes	Chloronitrobenzene, p-	100-00-5	1.3E+00	1.0E+01		1.2E+00	1.4E+01	1.2E+02		1.3E+01		1.1E-03	
95-57-8					5.0E-03	I			V		2.15	1	1	Yes	Chlorophenol, 2-	95-57-8					1.0E+02	1.0E+03		9.1E+01		8.9E-02	
76-06-2							4.0E-04	C	V		2.09	1	1	Yes	Chloropicrin	76-06-2							8.3E-01	8.3E-01		2.5E-04	
1897-45-6	3.1E-03	C	8.9E-07	C	1.5E-02	I					3.05	1	0.9	Yes	Chlorothalonil	1897-45-6	2.5E+01	1.6E+02		2.2E+01	3.0E+02	2.1E+03		2.6E+02		5.0E-02	
95-49-8					2.0E-02	I			V		3.42	1	1	Yes	Chlorotoluene, o-	95-49-8					4.0E+02	5.8E+02		2.4E+02		2.3E-01	
106-43-4					2.0E-02	X			V		3.33	1	1	Yes	Chlorotoluene, p-	106-43-4					4.0E+02	6.6E+02		2.5E+02		2.4E-01	
54749-90-5	2.4E+02	C	6.9E-02	C							-1.02	1	1	Yes	Chlorozotocin	54749-90-5	3.2E-04	1.0E+00		3.2E-04						7.1E-08	
101-21-3					2.0E-01	I					3.51	1	0.9	Yes	Chlorpropham	101-21-3					4.0E+03	9.8E+03		2.8E+03		2.6E+00	
2921-88-2					1.0E-03	A					4.96	1	0.8	Yes	Chlorpyrifos	2921-88-2					2.0E+01	1.5E+01		8.4E+00		1.3E-01	
5598-13-0					1.0E-02	H					4.31	1	0.9	Yes	Chlorpyrifos Methyl	5598-13-0					2.0E+02	2.9E+02		1.2E+02		5.5E-01	
64902-72-3					5.0E-02	I					2	1	1	Yes	Chlorsulfuron	64902-72-3					1.0E+03	5.7E+04		9.9E+02		8.3E-01	
1861-32-1					1.0E-02	I					4.28	1	0.9	Yes	Chlorthal-dimethyl	1861-32-1					2.0E+02	3.3E+03		1.2E+02		1.5E-01	
60238-56-4					8.0E-04	H					5.8	1	0.8	Yes	Chlorthiophos	60238-56-4					1.6E+01	3.4E+00		2.8E+00		7.3E-02	
16065-83-1					1.5E+00	I						0.013	1	Yes	Chromium(III), Insoluble Salts	16065-83-1					3.0E+04	8.9E+04		2.2E+04		4.0E+07	
18540-29-9	5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		0.025	1	Yes	Chromium(VI)	18540-29-9	5.0E-02	1.2E-01		3.5E-02	6.0E+01	1.7E+02		4.4E+01		6.7E-04	
7440-47-3												0.013	1	Yes	Chromium, Total	7440-47-3									1.0E+02		1.8E+05
74115-24-5					1.3E-02	I					3.1	1	0.9	Yes	Clofentezine	74115-24-5					2.6E+02	2.1E+03		2.3E+02		1.4E+01	
7440-48-4			9.0E-03	P	3.0E-04	P	6.0E-06	P				1	1	Yes	Cobalt	7440-48-4					6.0E+00	3.4E+03		6.0E+00		2.7E-01	
8007-45-2			6.2E-04	I					V	M		1	0		Coke Oven Emissions	8007-45-2											
7440-50-8					4.0E-02	H						1	1	Yes	Copper	7440-50-8					8.0E+02	1.8E+05		8.0E+02	1.3E+03	2.8E+01	4.6E+01
108-39-4					5.0E-02	I	6.0E-01	C			1.96	1	1	Yes	Cresol, m-	108-39-4					1.0E+03	1.2E+04		9.3E+02		7.4E-01	
95-48-7					5.0E-02	I	6.0E-01	C			1.95	1	1	Yes	Cresol, o-	95-48-7					1.0E+03	1.2E+04		9.3E+02		7.5E-01	
106-44-5					1.0E-01	A	6.0E-01	C			1.94	1	1	Yes	Cresol, p-	106-44-5					2.0E+03	2.5E+04		1.9E+03		1.5E+00	
59-50-7					1.0E-01	A					3.1	1	1	Yes	Cresol, p-chloro-m-	59-50-7					2.0E+03	5.2E+03		1.4E+03		1.7E+00	
1319-77-3					1.0E-01	A	6.0E-01	C			1.95	1	0.9	Yes	Cresols	1319-77-3					2.0E+03	6.7E+03		1.5E+03		1.3E+00	
123-73-9	1.9E+00	H			1.0E-03	P			V		0.6	1	1	Yes	Crotonaldehyde, trans-	123-73-9	4.1E-02	2.7E+00		4.0E-02	2.0E+01	1.5E+03		2.0E+01		8.2E-06	
98-82-8					1.0E-01	I	4.0E-01	I	V		3.66	1	1	Yes	Cumene	98-82-8					2.0E+03	1.9E+03	8.3E+02	4.5E+02		7.4E-01	
135-20-6	2.2E-01	C	6.3E-05	C							-1.73	1	1	Yes	Cupferron	135-20-6	3.5E-01	1.3E+04		3.5E-01						6.1E-04	
21725-46-2	8.4E-01	H			2.0E-03	H					2.22	1	1	Yes	Cyanazine	21725-46-2	9.3E-02	1.6E+00		8.8E-02	4.0E+01	7.6E+02		3.8E+01		4.1E-05	
															Cyanides												
592-01-8					1.0E-03	I						1	1	Yes	~Calcium Cyanide	592-01-8					2.0E+01	4.6E+03		2.0E+01			
544-92-3					5.0E-03	I						1	1	Yes	~Copper Cyanide	544-92-3					1.0E+02	2.3E+04		1.0E+02			
57-12-5					6.0E-04	I	8.0E-04	S	V			1	1	Yes	~Cyanide (CN-)	57-12-5					1.2E+01	2.7E+03	1.7E+00	1.5E+00	2.0E+02	1.5E-02	2.0E+00
460-19-5					1.0E-03	I			V		0.07	1	1	Yes	~Cyanogen	460-19-5					2.0E+01	5.1E+03		2.0E+01			
506-68-3					9.0E-02	I			V			1	1	Yes	~Cyanogen Bromide	506-68-3					1.8E+03	1.6E+06		1.8E+03			
506-77-4					5.0E-02	I			V			1	1	Yes	~Cyanogen Chloride	506-77-4					1.0E+03	5.8E+05		1.0E+03			
74-90-8					6.0E-04	I	8.0E-04	I	V		-0.25	1	1	Yes	~Hydrogen Cyanide	74-90-8					1.2E+01	2.7E+03	1.7E+00	1.5E+00		1.5E-02	
151-50-8					2.0E-03	I						1	1	Yes	~Potassium Cyanide	151-50-8					4.0E+01	4.6E+03		4.0E+01			
506-61-6					5.0E-03	I						0.04	1	Yes	~Potassium Silver Cyanide	506-61-6					1.0E+02	4.6E+02		8.2E+01			
506-64-9					1.0E-01	I						0.04	1	Yes	~Silver Cyanide	506-64-9					2.0E+03	1.8E+04		1.8E+03			
143-33-9					1.0E-03	I						1	1	Yes	~Sodium Cyanide	143-33-9					2.0E+01	4.6E+03		2.0E+01	2.0E+02		
NA					2.0E-04	P						1	0	Yes	~Thiocyanates	NA					4.0E+00	9.1E+02		4.0E+00			
463-56-9					2.0E-04	X			V		0.58	1	1	Yes	~Thiocyanic Acid	463-56-9					4.0E+00	9.1E+02		4.0E+00			
557-21-1					5.0E-02	I						1	1	Yes	~Zinc Cyanide	557-21-1					1.0E+03	3.8E+05		1.0E+03			
110-82-7							6.0E+00	I	V		3.44	1	1	Yes	Cyclohexane	110-82-7							1.3E+04	1.3E+04		1.3E+01	
87-84-3	2.3E-02	H									4.72	1	0.9	Yes	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.4E+00	8.3E+00		2.4E+00						1.4E-02	
108-94-1					5.0E+00	I	7.0E-01	P	V		0.81	1	1	Yes	Cyclohexanone	108-94-1					1.0E+05	6.5E+06	1.5E+03	1.4E+03		3.4E-01	
110-83-8					5.0E-03	P	1.0E+00	X	V		2.86	1	1	Yes	Cyclohexene	110-83-8					1.0E+02	2.5E+02	2.1E+03	7.0E+01		4.6E-02	
108-91-8					2.0E-01	I			V		1.49	1	1	Yes	Cyclohexylamine	108-91-8					4.0E+03	9.3E+04		3.8E+03		1.0E+00	
68359-37-5					2.5E-02	I					5.95	1	0.7	Yes	Cyfluthrin	68359-37-5					5.0E+02	1.6E+02		1.2E+02		3.1E+01	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
68085-85-8					5.0E-03	I					6.9	1	0.5	No	Cyhalothrin	68085-85-8					1.0E+02			1.0E+02		6.9E+01	
52315-07-8					1.0E-02	I					6.6	1	0.7	No	Cypermethrin	52315-07-8					2.0E+02			2.0E+02		3.2E+01	
66215-27-8					7.5E-03	I					-0.061	1	1	Yes	Cyromazine	66215-27-8					1.5E+02	1.2E+04		1.5E+02		3.8E-02	
72-54-8	2.4E-01	I	6.9E-05	C							6.02	1	0.8	Yes	DDD	72-54-8	3.2E-01	3.5E-02		3.2E-02						7.5E-03	
72-55-9	3.4E-01	I	9.7E-05	C					V		6.51	1	0.8	No	DDE, p,p'-	72-55-9	2.3E-01		5.8E-02	4.6E-02						1.1E-02	
50-29-3	3.4E-01	I	9.7E-05	I	5.0E-04	I					6.91	1	0.7	No	DDT	50-29-3	2.3E-01			2.3E-01	1.0E+01			1.0E+01		7.7E-02	
75-99-0					3.0E-02	I					0.78	1	1	Yes	Dalapon	75-99-0					6.0E+02	5.5E+04		6.0E+02	2.0E+02	1.2E-01	4.1E-02
1596-84-5	1.8E-02	C	5.1E-06	C	1.5E-01	I					-1.5	1	1	Yes	Daminozide	1596-84-5	4.3E+00	1.3E+04		4.3E+00	3.0E+03	1.0E+07		3.0E+03		9.5E-04	
1163-19-5	7.0E-04	I			7.0E-03	I					12.11	1	0	No	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	1.1E+02			1.1E+02	1.4E+02			1.4E+02		6.2E+01	
8065-48-3					4.0E-05	I					3.21	1	0.8	Yes	Demeton	8065-48-3					8.0E-01	8.8E-01		4.2E-01			
103-23-1	1.2E-03	I			6.0E-01	I					6.11	1	0	Yes	Di(2-ethylhexyl)adipate	103-23-1	6.5E+01			6.5E+01	1.2E+04			1.2E+04	4.0E+02	4.7E+00	2.9E+01
2303-16-4	6.1E-02	H									4.49	1	0.9	Yes	Diallate	2303-16-4	1.3E+00	9.2E-01		5.4E-01						8.0E-04	
333-41-5					7.0E-04	A					3.81	1	0.9	Yes	Diazinon	333-41-5					1.4E+01	3.9E+01		1.0E+01		6.5E-02	
132-65-0					1.0E-02	X			V		4.38	1	1	Yes	Dibenzothiophene						2.0E+02	9.6E+01		6.5E+01		1.2E+00	
96-12-8	8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	2.96	1	1	Yes	Dibromo-3-chloropropane, 1,2-	96-12-8	3.1E-02	1.7E-01	3.4E-04	3.3E-04	4.0E+00	2.4E+01	4.2E-01	3.7E-01	2.0E-01	1.4E-07	8.6E-05
108-36-1					4.0E-04	X			V		3.75	1	0.9	Yes	Dibromobenzene, 1,3-	108-36-1					8.0E+00	1.6E+01		5.3E+00		5.1E-03	
106-37-6					1.0E-02	I			V		3.79	1	0.9	Yes	Dibromobenzene, 1,4-	106-37-6					2.0E+02	3.7E+02		1.3E+02		1.2E-01	
124-48-1	8.4E-02	I			2.0E-02	I			V		2.16	1	1	Yes	Dibromochloromethane	124-48-1	9.3E-01	1.4E+01		8.7E-01	4.0E+02	6.7E+03		3.8E+02	8.0E+01(F)	2.3E-04	2.1E-02
106-93-4	2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.96	1	1	Yes	Dibromoethane, 1,2-	106-93-4	3.9E-02	7.1E-01	9.4E-03	7.5E-03	1.8E+02	3.6E+03	1.9E+01	1.7E+01	5.0E-02	2.1E-06	1.4E-05
74-95-3					4.0E-03	X			V		1.7	1	1	Yes	Dibromomethane (Methylene Bromide)	74-95-3							8.3E+00	8.3E+00		2.1E-03	
NA					3.0E-04	P						1	0	No	Dibutyltin Compounds	NA					6.0E+00			6.0E+00			
1918-00-9					3.0E-02	I					2.21	1	1	Yes	Dicamba	1918-00-9					6.0E+02	1.0E+04		5.7E+02		1.5E-01	
764-41-0			4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, 1,4-	764-41-0			1.3E-03	1.3E-03						6.6E-07	
1476-11-5			4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, cis-1,4-	1476-11-5			1.3E-03	1.3E-03						6.2E-07	
110-57-6			4.2E-03	P					V		2.6	1	1	Yes	Dichloro-2-butene, trans-1,4-	110-57-6			1.3E-03	1.3E-03						6.2E-07	
79-43-6	5.0E-02	I			4.0E-03	I					0.92	1	1	Yes	Dichloroacetic Acid	79-43-6	1.6E+00	9.6E+01		1.5E+00	8.0E+01	5.4E+03		7.9E+01	6.0E+01	3.1E-04	1.2E-02
95-50-1					9.0E-02	I	2.0E-01	H	V		3.43	1	1	Yes	Dichlorobenzene, 1,2-	95-50-1					1.8E+03	2.9E+03	4.2E+02	3.0E+02	6.0E+02	3.0E-01	5.8E-01
106-46-7	5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V		3.44	1	1	Yes	Dichlorobenzene, 1,4-	106-46-7	1.4E+01	2.1E+01	5.1E-01	4.8E-01	1.4E+03	2.2E+03	1.7E+03	5.7E+02	7.5E+01	4.6E-04	7.2E-02
91-94-1	4.5E-01	I	3.4E-04	C							3.51	1	1	Yes	Dichlorobenzidine, 3,3'-	91-94-1	1.7E-01	4.5E-01		1.3E-01						8.2E-04	
90-98-2					9.0E-03	X					4.44	1	0.9	Yes	Dichlorobenzophenone, 4,4'-	90-98-2					1.8E+02	1.4E+02		7.8E+01		4.7E-01	
75-71-8					2.0E-01	I	1.0E-01	X	V		2.16	1	1	Yes	Dichlorodifluoromethane	75-71-8					4.0E+03	3.8E+04	2.1E+02	2.0E+02		3.0E-01	
75-34-3	5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.79	1	1	Yes	Dichloroethane, 1,1-	75-34-3	1.4E+01	1.8E+02	3.5E+00	2.8E+00	4.0E+03	5.8E+04		3.8E+03		7.8E-04	
107-06-2	9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		1.48	1	1	Yes	Dichloroethane, 1,2-	107-06-2	8.6E-01	1.8E+01	2.2E-01	1.7E-01	1.2E+02	2.8E+03	1.5E+01	1.3E+01	5.0E+00	4.8E-05	1.4E-03
75-35-4					5.0E-02	I	2.0E-01	I	V		2.13	1	1	Yes	Dichloroethylene, 1,1-	75-35-4					1.0E+03	8.5E+03	4.2E+02	2.8E+02	7.0E+00	1.0E-01	2.5E-03
156-59-2					2.0E-03	I			V		1.86	1	1	Yes	Dichloroethylene, 1,2-cis-	156-59-2					4.0E+01	3.6E+02		3.6E+01	7.0E+01	1.1E-02	2.1E-02
156-60-5					2.0E-02	I			V		2.09	1	1	Yes	Dichloroethylene, 1,2-trans-	156-60-5					4.0E+02	3.6E+03		3.6E+02	1.0E+02	1.1E-01	3.1E-02
120-83-2					3.0E-03						3.06	1	1	Yes	Dichlorophenol, 2,4-	120-83-2					6.0E+01	1.9E+02		4.6E+01		2.3E-02	
94-75-7					1.0E-02	I					2.81	1	1	Yes	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					2.0E+02	1.4E+03		1.7E+02	7.0E+01	4.5E-02	1.8E-02
94-82-6					8.0E-03	I					3.53	1	0.9	Yes	Dichlorophenoxybutyric Acid, 4-(2,4-	94-82-6					1.6E+02	4.8E+02		1.2E+02		1.1E-01	
78-87-5	3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.98	1	1	Yes	Dichloropropane, 1,2-	78-87-5	2.2E+00	2.4E+01	5.6E-01	4.4E-01	1.8E+03	2.2E+04	8.3E+00	8.3E+00	5.0E+00	1.5E-04	1.7E-03
142-28-9					2.0E-02	P			V		2	1	1	Yes	Dichloropropane, 1,3-	142-28-9					4.0E+02	4.6E+03		3.7E+02		1.3E-01	
616-23-9					3.0E-03	I					0.78	1	1	Yes	Dichloropropanol, 2,3-	616-23-9					6.0E+01	5.0E+03		5.9E+01		1.3E-02	
542-75-6	1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		2.04	1	1	Yes	Dichloropropene, 1,3-	542-75-6	7.8E-01	7.8E+00	1.4E+00	4.7E-01	6.0E+02	6.6E+03	4.2E+01	3.9E+01		1.7E-04	
62-73-7	2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I			1.43	1	1	Yes	Dichlorvos	62-73-7	2.7E-01	1.4E+01		2.6E-01	1.0E+01	5.6E+02		9.9E+00		8.1E-05	
141-66-2					1.0E-04	I					0	1	1	Yes	Dicrotophos	141-66-2					2.0E+00	1.1E+03		2.0E+00		4.7E-04	
77-73-6					8.0E-02	P	3.0E-04	X	V		3.16	1	1	Yes	Dicyclopentadiene	77-73-6					1.6E+03	3.5E+03	6.3E-01	6.3E-01		2.2E-03	
60-57-1	1.6E+01	I	4.6E-03	I	5.0E-05	I					5.4	1	0.8	Yes	Dieldrin	60-57-1	4.9E-03	2.7E-03		1.8E-03	1.0E+00	6.1E-01		3.8E-01		7.1E-05	
NA			3.0E-04	C			5.0E-03	I				1	0		Diesel Engine Exhaust	NA											
111-42-2					2.0E-03	P	2.0E-04	P			-1.43	1	1	Yes	Diethanolamine	111-42-2					4.0E+01	8.4E+04		4.0E+01		8.1E-03	
112-34-5					3.0E-02	P	1.0E-04	P			0.56	1	1	Yes	Diethylene Glycol Monobutyl Ether	112-34-5					6.0E+02	8.7E+04		6.0E+02		1.3E-01	
111-90-0					6.0E-02	P	3.0E-04	P			-0.54	1	1	Yes	Diethylene Glycol Monoethyl Ether	111-90-0					1.2E+03	7.8E+05		1.2E+03		2.4E-01	
617-84-5					1.0E-03	P			V		0.05	1	1	Yes	Diethylformamide	617-84-5					2.0E+01	4.3E+03		2.0E+01		4.1E-03	
56-53-1	3.5E+02	C	1.0E-01	C							5.07	1	0.9	Yes	Diethylstilbestrol	56-53-1	2.2E-04	6.6E-05		5.1E-05						2.8E-05	
43222-48-6					8.0E-02	I					0.65	1	1	Yes	Difenzoquat	43222-48-6					1.6E+03	7.3E+05		1.6E+03		2.5E+02	
35367-38-5					2.0E-02	I					3.88	1	0.9	Yes	Diflubenzuron	35367-38-5					4.0E+02	1.0E+03		2.9E+02		3.3E-01	
75-37-6							4.0E+01	I	V		0.75	1	1	Yes	Difluoroethane, 1,1-	75-37-6							8.3E+04	8.3E+04		2.8E+01	
94-58-6	4.4E-02	C	1.3E-05	C					V		3.58	1	1	Yes	Dihydrosafrole	94-58-6	1.8E+00	2.3E+00	4.3E-01	3.0E-01						1.9E-04	
108-20-3							7.0E-01	P	V		1.52	1	1	Yes	Diisopropyl Ether	108-20-3							1.5E+03	1.5E+03		3.7E-01	
1445-75-6					8.0E-02	I			V		1.03	1	1	Yes	Diisopropyl Methylphosphonate	1445-75-6					1.6E+03	1.3E+05		1.6E+03		4.5E-01	
55290-64-7					2.0E-02	I					-0.17	1	1	Yes	Dimethipin	55290-64-7					4.0E+02	2.4E+05		4.0E+02		8.8E-02	
60-51-5					2.0E-04	I					0.78	1	1	Yes	Dimethoate	60-51-5					4.0E+00	6.4E+02		4.0E+00		9.0E-04	
119-90-4	1.6E+00	P									1.81	1	1	Yes	Dimethoxybenzidine, 3,3'-	119-90-4	4.9E-02	1.6E+00		4.7E-02						5.8E-05	
756-79-6	1.7E-03	P			6.0E-02	P					-0.61	1	1	Yes	Dimethyl methylphosphonate	756-79-6	4.6E+01	2.8E+04		4.6E+01	1.2E+03	8.1E+05		1.2E+03		9.7E-03	
60-11-7	4.6E+00	C	1.3E-03	C							4.58	1	1	Yes	Dimethylamino azobenzene [p-]	60-11-7	1.7E-02	7.2E-03		5.0E-03						2.2E-05	
21436-96-4	5.8E-01	H									2.17	1	1	Yes	Dimethylaniline HCl, 2,4-	21436-96-4	1.3E-01	5.2E+02		1.3E-01						1.2E-04	
95-68-1	2.0E-01	P			2.0E-03	X					1.68	1	1	Yes	Dimethylaniline, 2,4-	95-68-1	3.9E-01	7.1E+00		3.7E-01	4.0E+01	8.0E+02		3.8E+01		2.1E-04	
121-69-7					2.0E-03	I			V		2.31	1	1	Yes	Dimethylaniline, N,N-	121-69-7					4.0E+01	3.1E+02		3.5E+01		1.3E-02	
119-93-7	1.1E+01	P									2.34	1	1	Yes	Dimethylbenzidine, 3,3'-	119-93-7	7.1E-03	8.5E-02		6.5E-03						4.3E-05	
68-12-2					1.0E-01	P	3.0E-02	I	V		-1.01	1	1	Yes	Dimethylformamide	68-12-2					2.0E+03	1.8E+06	6.3E+01	6.1E+01		1.2E-02	
57-14-7					1.0E-04	X	2.0E-06	X	V		-1.19	1	1	Yes	Dimethylhydrazine, 1,1-	57-14-7					2.0E+00	3.5E+03	4.2E-03	4.2E-03		9.3E-07	
540-73-8	5.5E+02	C	1.6E-01	C					V		-0.54	1	1	Yes	Dimethylhydrazine, 1,2-	540-73-8	1.4E-04	5.0E-02	3.5E-05	2.8E-05						6.5E-09	
105-67-9					2.0E-02	I					2.3	1	1	Yes	Dimethylphenol, 2,4-	105-67-9					4.0E+02	3.1E+03		3.6E+02		4.2E-01	
576-26-1					6.0E-04	I					2.36	1	1	Yes	Dimethylphenol, 2,6-	576-26-1					1.2E+01	8.5E+01		1.1E+01		1.3E-02	
95-65-8					1.0E-03	I					2.23	1	1	Yes	Dimethylphenol, 3,4-	95-65-8					2.0E+01	1.7E+02		1.8E+01		2.1E-02	
513-37-1	4.5E-02	C	1.3E-05	C					V		2.58	1	1	Yes	Dimethylvinylchloride	513-37-1	1.7E+00	6.5E+00	4.3E-01	3.3E-01						1.1E-04	
534-52-1					8.0E-05	X					2.13	1	1	Yes	Dinitro-o-cresol, 4,6-	534-52-1					1.6E+00	2.6E+01		1.5E+00		2.6E-03	
131-89-5					2.0E-03	I					4.12	1	0.9	Yes	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					4.0E+01	5.4E+01		2.3E+01		7.7E-01	
528-29-0					1.0E-04	P					1.69	1	1	Yes	Dinitrobenzene, 1,2-	528-29-0					2.0E+00	5.3E+01		1.9E+00		1.8E-03	
99-65-0					1.0E-04	I					1.49	1	1	Yes	Dinitrobenzene, 1,3-	99-65-0					2.0E+00	7.3E+01		2.0E+00		1.8E-03	
100-25-4					1.0E-04	P					1.46	1	1	Yes	Dinitrobenzene, 1,4-	100-25-4					2.0E+00	7.6E+01		2.0E+00		1.8E-03	
51-28-5					2.0E-03	I					1.67	1	1	Yes	Dinitrophenol, 2,4-	51-28-5					4.0E+01	1.2E+03		3.9E+01		4.4E-02	
NA	6.8E-01	I									2.18	1	1	Yes	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.1E-01	1.5E+00		1.1E-01						1.5E-04	
121-14-2	3.1E-01	C	8.9E-05	C	2.0E-03	I					1.98	1	1	Yes	Dinitrotoluene, 2,4-	121-14-2	2.5E-01	4.3E+00		2.4E-01	4.0E+01	7.5E+02		3.8E+01		3.2E-04	
606-20-2	1.5E+00	P			3.0E-04	X					2.1	1	1	Yes	Dinitrotoluene, 2,6-	606-20-2	5.2E-02	7.4E-01		4.9E-02	6.0E+00	9.3E+01		5.7E+00		6.7E-05	
35572-78-2					2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					4.0E+01	1.0E+03		3.9E+01		3.0E-02	
19406-51-0					2.0E-03	S					1.84	1	1	Yes	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					4.0E+01	1.0E+03		3.9E+01		3.0E-02	
25321-14-6	4.5E-01	X			9.0E-04	X					2.18	1	0.8	Yes	Dinitrotoluene, Technical grade	25321-14-6	1.7E-01	2.6E-01		1.0E-01	1.8E+01	3.0E+01		1.1E+01		1.4E-04	
88-85-7					1.0E-03	I					3.56	1	0.9	Yes	Dinoseb	88-85-7					2.0E+01	5.4E+01		1.5E+01	7.0E+00	1.3E-01	6.2E-02
123-91-1	1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		-0.27	1	1	Yes	Dioxane, 1,4-	123-91-1	7.8E-01	2.3E+02	1.1E+00	4.6E-01	6.0E+02	1.9E+05	6.3E+01	5.7E+01		9.4E-05	
NA	6.2E+03	I	1.3E+00	I							8.21	1	0	No	Dioxins ~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.3E-05			1.3E-05						1.8E-05	
1746-01-6	1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V		6.8	1	0.5	No	~TCDD, 2,3,7,8-	1746-01-6	6.0E-07		1.5E-07	1.2E-07	1.4E-05		8.3E-05	1.2E-05	3.0E-05	5.9E-08	1.5E-05
957-51-7					3.0E-02	I					2.17	1	1	Yes	Diphenamid	957-51-7					6.0E+02	4.2E+03		5.3E+02		5.2E+00	
127-63-9					8.0E-04	X					2.4	1	1	Yes	Diphenyl Sulfone	127-63-9					1.6E+01	2.0E+02		1.5E+01		3.6E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
122-39-4					2.5E-02	I					3.5	1	1	Yes	Diphenylamine	122-39-4					5.0E+02	8.4E+02		3.1E+02		5.8E-01	
122-66-7	8.0E-01	I	2.2E-04	I							2.94	1	1	Yes	Diphenylhydrazine, 1,2-	122-66-7	9.7E-02	3.9E-01		7.8E-02						2.5E-04	
85-00-7					2.2E-03	I					-4.6	1	1	No	Diquat	85-00-7					4.4E+01			4.4E+01	2.0E+01	8.3E-01	3.8E-01
1937-37-7	7.1E+00	C	1.4E-01	C							4.9	1	1	No	Direct Black 38	1937-37-7	1.1E-02			1.1E-02						5.3E+00	
2602-46-2	7.4E+00	C	1.4E-01	C							2.6	1	1	No	Direct Blue 6	2602-46-2	1.1E-02			1.1E-02						1.7E+01	
16071-86-6	6.7E+00	C	1.4E-01	C							-6.53	1	1	No	Direct Brown 95	16071-86-6	1.2E-02			1.2E-02						1.6E-01	
298-04-4					4.0E-05	I					4.02	1	0.9	Yes	Disulfoton	298-04-4					8.0E-01	1.3E+00		5.0E-01		9.4E-04	
505-29-3					1.0E-02	I			V		0.77	1	1	Yes	Dithiane, 1,4-	505-29-3					2.0E+02	1.6E+04		2.0E+02		9.7E-02	
330-54-1					2.0E-03	I					2.68	1	1	Yes	Diuron	330-54-1					4.0E+01	3.6E+02		3.6E+01		1.5E-02	
2439-10-3					4.0E-03	I					1.15	1	1	Yes	Dodine	2439-10-3					8.0E+01	1.1E+04		8.0E+01		4.1E-01	
759-94-4					2.5E-02	I			V		3.21	1	1	Yes	EPTC	759-94-4					5.0E+02	1.5E+03		3.8E+02		2.0E-01	
115-29-7					6.0E-03	I			V		3.83	1	0.9	Yes	Endosulfan	115-29-7					1.2E+02	6.3E+02		1.0E+02		1.4E+00	
145-73-3					2.0E-02	I					1.91	1	1	Yes	Endothall	145-73-3					4.0E+02	8.5E+03		3.8E+02	1.0E+02	9.2E-02	2.4E-02
72-20-8					3.0E-04	I					5.2	1	0.8	Yes	Endrin	72-20-8					6.0E+00	3.7E+00		2.3E+00	2.0E+00	9.2E-02	8.1E-02
106-89-8	9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		0.45	1	1	Yes	Epichlorohydrin	106-89-8	7.9E+00	7.9E+02	4.7E+00	2.9E+00	1.2E+02	1.3E+04	2.1E+00	2.0E+00		4.5E-04	
106-88-7							2.0E-02	I	V		0.86	1	1	Yes	Epoxybutane, 1,2-	106-88-7							4.2E+01	4.2E+01		9.2E-03	
111-77-3					4.0E-02	P					-1.18	1	1	Yes	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					8.0E+02	3.9E+05		8.0E+02		1.6E-01	
16672-87-0					5.0E-03	I					-0.22	1	1	Yes	Ethephon	16672-87-0					1.0E+02	4.2E+04		1.0E+02		2.1E-02	
563-12-2					5.0E-04	I					5.07	1	0.8	Yes	Ethion	563-12-2					1.0E+01	7.7E+00		4.3E+00		8.5E-03	
111-15-9					1.0E-01	P	6.0E-02	P	V		0.59	1	1	Yes	Ethoxyethanol Acetate, 2-	111-15-9					2.0E+03	2.3E+05	1.3E+02	1.2E+02		2.5E-02	
110-80-5					9.0E-02	P	2.0E-01	I	V		-0.32	1	1	Yes	Ethoxyethanol, 2-	110-80-5					1.8E+03	6.3E+05	4.2E+02	3.4E+02		6.8E-02	
141-78-6					9.0E-01	I	7.0E-02	P	V		0.73	1	1	Yes	Ethyl Acetate	141-78-6					1.8E+04	1.2E+06	1.5E+02	1.4E+02		3.1E-02	
140-88-5					5.0E-03	P	8.0E-03	P	V		1.32	1	1	Yes	Ethyl Acrylate	140-88-5					1.0E+02	3.0E+03	1.7E+01	1.4E+01		3.2E-03	
75-00-3							1.0E+01	I	V		1.43	1	1	Yes	Ethyl Chloride (Chloroethane)	75-00-3							2.1E+04	2.1E+04		5.9E+00	
60-29-7					2.0E-01	I			V		0.89	1	1	Yes	Ethyl Ether	60-29-7					4.0E+03	2.0E+05		3.9E+03		8.8E-01	
97-63-2							3.0E-01	P	V		1.94	1	1	Yes	Ethyl Methacrylate	97-63-2							6.3E+02	6.3E+02		1.5E-01	
2104-64-5					1.0E-05	I					4.78	1	0.8	Yes	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					2.0E-01	1.6E-01		8.9E-02		2.8E-03	
100-41-4	1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		3.15	1	1	Yes	Ethylbenzene	100-41-4	7.1E+00	1.2E+01	2.2E+00	1.5E+00	2.0E+03	3.8E+03	2.1E+03	8.1E+02	7.0E+02	1.7E-03	7.9E-01
109-78-4					7.0E-02	P					-0.94	1	1	Yes	Ethylene Cyanohydrin	109-78-4					1.4E+03	1.1E+06		1.4E+03		2.8E-01	
107-15-3					9.0E-02	P			V		-2.04	1	1	No	Ethylene Diamine	107-15-3					1.8E+03			1.8E+03		4.2E-01	
107-21-1					2.0E+00	I	4.0E-01	C			-1.36	1	1	Yes	Ethylene Glycol	107-21-1					4.0E+04	5.7E+07		4.0E+04		8.1E+00	
111-76-2					1.0E-01	I	1.6E+00	I			0.83	1	1	Yes	Ethylene Glycol Monobutyl Ether	111-76-2					2.0E+03	1.4E+05		2.0E+03		4.1E-01	
75-21-8	3.1E-01	C	8.8E-05	C			3.0E-02	C	V		-0.3	1	1	Yes	Ethylene Oxide	75-21-8	2.5E-01	5.4E+01	6.4E-02	5.1E-02			6.3E+01	6.3E+01		1.1E-05	
96-45-7	4.5E-02	C	1.3E-05	C	3.0E-05	I					-0.66	1	1	Yes	Ethylene Thiourea	96-45-7	1.7E+00	1.0E+03		1.7E+00	1.6E+00	1.0E+03		1.6E+00		3.6E-04	
151-56-4	6.5E+01	C	1.9E-02	C					V		-0.28	1	1	Yes	Ethyleneimine	151-56-4	1.2E-03	2.5E-01	3.0E-04	2.4E-04						5.2E-08	
84-72-0					3.0E+00	I					2.19	1	1	Yes	Ethylphthalyl Ethyl Glycolate	84-72-0					6.0E+04	1.5E+06		5.8E+04		1.3E+02	
22224-92-6					2.5E-04	I					3.23	1	0.9	Yes	Fenamiphos	22224-92-6					5.0E+00	3.4E+01		4.4E+00		4.4E-03	
39515-41-8					2.5E-02	I					5.7	1	0.8	Yes	Fenpropathrin	39515-41-8					5.0E+02	7.3E+01		6.4E+01		2.9E+00	
51630-58-1					2.5E-02	I					6.2	1	0.7	No	Fenvalerate	51630-58-1					5.0E+02			5.0E+02		3.2E+02	
2164-17-2					1.3E-02	I					2.42	1	1	Yes	Fluometuron	2164-17-2					2.6E+02	3.4E+03		2.4E+02		1.9E-01	
16984-48-8					4.0E-02	C	1.3E-02	C				1	1	Yes	Fluoride	16984-48-8					8.0E+02	1.8E+05		8.0E+02		1.2E+02	
7782-41-4					6.0E-02	I	1.3E-02	C				1	1	Yes	Fluorine (Soluble Fluoride)	7782-41-4					1.2E+03	2.7E+05		1.2E+03	4.0E+03	1.8E+02	6.0E+02
59756-60-4					8.0E-02	I					3.16	1	0.9	Yes	Fluridone	59756-60-4					1.6E+03	1.4E+04		1.4E+03		1.6E+02	
56425-91-3					2.0E-02	I					3.34	1	0.9	Yes	Flurprimidol	56425-91-3					4.0E+02	2.4E+03		3.4E+02		1.6E+00	
85509-19-9					7.0E-04	I					3.7	1	0.9	Yes	Flusilazole	85509-19-9					1.4E+01	5.0E+01		1.1E+01		1.8E+00	
66332-96-5					6.0E-02	I					3.7	1	0.9	Yes	Flutolanil	66332-96-5					1.2E+03	4.5E+03		9.5E+02		5.0E+00	
69409-94-5					1.0E-02	I					6.81	1	0.6	No	Fluvalinate	69409-94-5					2.0E+02			2.0E+02		2.9E+02	
133-07-3	3.5E-03	I			1.0E-01	I					2.85	1	1	Yes	Folpet	133-07-3	2.2E+01	2.1E+02		2.0E+01	2.0E+03	2.1E+04		1.8E+03		4.7E-03	
72178-02-0	1.9E-01	I									2.9	1	1	Yes	Fomesafen	72178-02-0	4.1E-01	9.1E+00		3.9E-01						1.3E-03	
944-22-9					2.0E-03	I					3.94	1	0.9	Yes	Fonofos	944-22-9					4.0E+01	6.3E+01		2.4E+01		4.7E-02	
50-00-0			1.3E-05	I	2.0E-01	I	9.8E-03	A	V		0.35	1	1	Yes	Formaldehyde	50-00-0			4.3E-01	4.3E-01	4.0E+03	3.2E+05	2.0E+01	2.0E+01		8.7E-05	
64-18-6					9.0E-01	P	3.0E-04	X	V		-0.54	1	1	Yes	Formic Acid	64-18-6					1.8E+04	6.4E+06	6.3E-01	6.3E-01		1.3E-04	
39148-24-8					3.0E+00	I					-2.4	1	1	No	Fosetyl-AL	39148-24-8					6.0E+04			6.0E+04		7.9E+02	
															Furans												
132-64-9					1.0E-03	X			V		4.12	1	1	Yes	~Dibenzofuran	132-64-9					2.0E+01	1.3E+01		7.9E+00		1.5E-01	
110-00-9					1.0E-03	I			V		1.34	1	1	Yes	~Furan	110-00-9					2.0E+01	4.8E+02		1.9E+01		7.3E-03	
109-99-9					9.0E-01	I	2.0E+00	I	V		0.46	1	1	Yes	~Tetrahydrofuran	109-99-9					1.8E+04	1.7E+06	4.2E+03	3.4E+03		7.5E-01	
67-45-8	3.8E+00	H									-0.04	1	1	Yes	Furazolidone	67-45-8	2.1E-02	1.0E+01		2.0E-02						3.9E-05	
98-01-1					3.0E-03	I	5.0E-02	H	V		0.41	1	1	Yes	Furfural	98-01-1					6.0E+01	7.1E+03	1.0E+02	3.8E+01		8.1E-03	
531-82-8	1.5E+00	C	4.3E-04	C							1.8	1	1	Yes	Furium	531-82-8	5.2E-02	1.9E+00		5.1E-02						6.9E-05	
60568-05-0	3.0E-02	I	8.6E-06	C							4.38	1	0.9	Yes	Furmecyclox	60568-05-0	2.6E+00	2.0E+00		1.1E+00						1.2E-03	
77182-82-2					4.0E-04	I					-4.81	1	1	No	Glufosinate, Ammonium	77182-82-2					8.0E+00			8.0E+00		1.8E-03	
111-30-8							8.0E-05	C			-0.33	1	1	Yes	Glutaraldehyde	111-30-8											
765-34-4					4.0E-04	I	1.0E-03	H	V		-0.12	1	1	Yes	Glycidyl	765-34-4					8.0E+00	1.8E+03	2.1E+00	1.7E+00		3.3E-04	
1071-83-6					1.0E-01	I					-3.4	1	1	No	Glyphosate	1071-83-6					2.0E+03			2.0E+03	7.0E+02	8.8E+00	3.1E+00
113-00-8					1.0E-02	X			V		-1.63	1	1	Yes	Guanidine	113-00-8					2.0E+02	4.2E+05		2.0E+02		4.5E-02	
50-01-1					2.0E-02	P					-3.56	1	1	No	Guanidine Chloride	50-01-1					4.0E+02			4.0E+02			
69806-40-2					5.0E-05	I					4.07	1	0.9	Yes	Haloxyfop, Methyl	69806-40-2					1.0E+00	3.1E+00		7.6E-01		8.4E-03	
76-44-8	4.5E+00	I	1.3E-03	I	5.0E-04	I			V		6.1	1	0.8	Yes	Heptachlor	76-44-8	1.7E-02	2.3E-03	4.3E-03	1.4E-03	1.0E+01	1.5E+00		1.3E+00	4.0E-01	1.2E-04	3.3E-02
1024-57-3	9.1E+00	I	2.6E-03	I	1.3E-05	I			V		4.98	1	0.8	Yes	Heptachlor Epoxide	1024-57-3	8.6E-03	7.1E-03	2.2E-03	1.4E-03	2.6E-01	2.4E-01		1.2E-01	2.0E-01	2.8E-05	4.1E-03
87-82-1					2.0E-03	I			V		6.07	1	0.7	No	Hexabromobenzene	87-82-1					4.0E+01			4.0E+01		2.3E-01	
68631-49-2					2.0E-04	I						1	0	No	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					4.0E+00			4.0E+00			
118-74-1	1.6E+00	I	4.6E-04	I	8.0E-04	I			V		5.73	1	0.9	No	Hexachlorobenzene	118-74-1	4.9E-02		1.2E-02	9.8E-03	1.6E+01			1.6E+01	1.0E+00	1.2E-04	1.3E-02
87-68-3	7.8E-02	I	2.2E-05	I	1.0E-03	P			V		4.78	1	0.9	Yes	Hexachlorobutadiene	87-68-3	1.0E+00	4.4E-01	2.6E-01	1.4E-01	2.0E+01	9.5E+00		6.5E+00		2.7E-04	
319-84-6	6.3E+00	I	1.8E-03	I	8.0E-03	A					3.8	1	0.9	Yes	Hexachlorocyclohexane, Alpha-	319-84-6	1.2E-02	1.8E-02		7.2E-03	1.6E+02	2.5E+02		9.7E+01		4.2E-05	
319-85-7	1.8E+00	I	5.3E-04	I							3.78	1	0.9	Yes	Hexachlorocyclohexane, Beta-	319-85-7	4.3E-02	6.1E-02		2.5E-02						1.5E-04	
58-89-9	1.1E+00	C	3.1E-04	C	3.0E-04	I					3.72	1	0.9	Yes	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	7.1E-02	1.0E-01		4.2E-02	6.0E+00	9.3E+00		3.6E+00	2.0E-01	2.4E-04	1.2E-03
608-73-1	1.8E+00	I	5.1E-04	I							4.14	1	0.9	Yes	Hexachlorocyclohexane, Technical	608-73-1	4.3E-02	6.1E-02		2.5E-02						1.5E-04	
77-47-4					6.0E-03	I	2.0E-04	I	V		5.04	1	0.9	Yes	Hexachlorocyclopentadiene	77-47-4					1.2E+02	4.2E+01	4.2E-01	4.1E-01	5.0E+01	1.3E-03	1.6E-01
67-72-1	4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V		4.14	1	1	Yes	Hexachloroethane	67-72-1	1.9E+00	1.7E+00	5.1E-01	3.3E-01	1.4E+01	1.4E+01	6.3E+01	6.2E+00		2.0E-04	
70-30-4					3.0E-04	I					7.54	1	0	No	Hexachlorophene	70-30-4					6.0E+00			6.0E+00		8.1E+00	
121-82-4	1.1E-01	I			3.0E-03	I					0.87	1	1	Yes	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	7.1E-01	8.6E+01		7.0E-01	6.0E+01	8.0E+03		6.0E+01		2.7E-04	
822-06-0							1.0E-05	I	V		3.2	1	1	Yes	Hexamethylene Diisocyanate, 1,6-	822-06-0							2.1E-02	2.1E-02		2.1E-04	
680-31-9					4.0E-04	P					0.28	1	1	Yes	Hexamethylphosphoramide	680-31-9					8.0E+00	2.0E+03		8.0E+00		1.8E-03	
110-54-3							7.0E-01	I	V		3.9	1	1	Yes	Hexane, N-	110-54-3							1.5E+03	1.5E+03		1.0E+01	
124-04-9					2.0E+00	P					0.08	1	1	Yes	Hexanedioic Acid	124-04-9					4.0E+04	1.1E+07		4.0E+04		9.9E+00	
591-78-6					5.0E-03	I	3.0E-02	I	V		1.38	1	1	Yes	Hexanone, 2-	591-78-6					1.0E+02	2.8E+03	6.3E+01	3.8E+01		8.8E-03	
51235-04-2					3.3E-02	I					1.85	1	1	Yes	Hexazinone	51235-04-2					6.6E+02	2.4E+04		6.4E+02		3.0E-01	
78587-05-0					2.5E-02	I					5.57	1	0.8	Yes	Hexythiazox	78587-05-0					5.0E+02	1.4E+02		1.1E+02		5.0E-01	
67485-29-4					3.0E-04	I					2.31	1	1	Yes	Hydramethylnon	67485-29-4					6.0E+00	5.1E+02		5.9E+00		2.1E+03	
302-01-2	3.0E+00	I	4.9E-03	I			3.0E-05	P	V		-2.07	1	1	Yes	Hydrazine	302-01-2	2.6E-02	1.1E+02	1.1E-03	1.1E-03			6.3E-02	6.3E-02			
10034-93-2	3.0E+00	I	4.9E-03	I								1	1	Yes	Hydrazine Sulfate	10034-93-2	2.6E-02	4.9E+00		2.6E-02							
7647-01-0							2.0E-02	I	V			1	1	Yes	Hydrogen Chloride	7647-01-0							4.2E+01	4.2E+01			
7664-39-3					4.0E-02	C	1.4E-02	C	V		0.23	1	1	Yes	Hydrogen Fluoride	7664-39-3					8.0E+02	1.8E+05	2.9E+01	2.8E+01			
7783-06-4							2.0E-03	I	V		0.23	1	1	Yes	Hydrogen Sulfide	7783-06-4							4.2E+00	4.2E+00			
123-31-9	6.0E-02	P			4.0E-02	P					0.59	1	1	Yes	Hydroquinone	123-31-9	1.3E+00	1.2E+02		1.3E+00	8.0E+02	7.9E+04		7.9E+02		8.8E-04	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
35554-44-0					1.3E-02	I					3.82	1	0.9	Yes	Imazalil	35554-44-0					2.6E+02	6.8E+02		1.9E+02		3.2E+00	
81335-37-7					2.5E-01	I					1.86	1	1	Yes	Imazaquin	81335-37-7					5.0E+03	2.6E+05		4.9E+03		2.5E+01	
81335-77-5					2.5E-01	I					1.49	1	1	Yes	Imazethapyr	81335-77-5					5.0E+03	7.2E+04		4.7E+03		4.1E+00	
7553-56-2					1.0E-02	A					2.49	1	1	Yes	Iodine	7553-56-2					2.0E+02	4.6E+04		2.0E+02		1.2E+01	
36734-19-7					4.0E-02	I					3	1	0.9	Yes	Iprodione	36734-19-7					8.0E+02	9.1E+03		7.4E+02		2.3E-01	
7439-89-6					7.0E-01	P						1	1	Yes	Iron	7439-89-6					1.4E+04	3.2E+06		1.4E+04		3.5E+02	
78-83-1					3.0E-01	I			V		0.76	1	1	Yes	Isobutyl Alcohol	78-83-1					6.0E+03	3.6E+05		5.9E+03		1.2E+00	
78-59-1	9.5E-04	I			2.0E-01	I	2.0E+00	C			1.7	1	1	Yes	Isophorone	78-59-1	8.2E+01	1.6E+03		7.8E+01	4.0E+03	8.6E+04		3.8E+03		2.6E-02	
33820-53-0					1.5E-02	I			V		5.8	1	0.8	Yes	Isopropalin	33820-53-0					3.0E+02	4.6E+01		4.0E+01		9.2E-01	
67-63-0					2.0E+00	P	2.0E-01	P	V		0.05	1	1	Yes	Isopropanol	67-63-0					4.0E+04	6.5E+06	4.2E+02	4.1E+02		8.4E-02	
1832-54-8					1.0E-01	I					0.27	1	1	Yes	Isopropyl Methyl Phosphonic Acid	1832-54-8					2.0E+03	3.9E+05		2.0E+03		4.3E-01	
82558-50-7					5.0E-02	I					3.94	1	0.9	Yes	Isoxaben	82558-50-7					1.0E+03	2.7E+03		7.3E+02		2.0E+00	
NA							3.0E-01	A	V		8	1	0	No	JP-7	NA							6.3E+02	6.3E+02			
77501-63-4					2.0E-03	I					4.81	1	0.9	Yes	Lactofen	77501-63-4					4.0E+01	6.7E+01		2.5E+01		1.2E+00	
															Lead Compounds												
7758-97-6	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	~Lead Chromate	7758-97-6	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
7446-27-7	8.5E-03	C	1.2E-05	C								1	0.8	Yes	~Lead Phosphate	7446-27-7	9.2E+00	1.7E+03		9.1E+00							
301-04-2	8.5E-03	C	1.2E-05	C							-0.08	1	1	Yes	~Lead acetate	301-04-2	9.2E+00	9.1E+03		9.2E+00						1.9E-03	
7439-92-1												1	1	Yes	~Lead and Compounds	7439-92-1								1.5E+01	1.5E+01		1.4E+01
1335-32-6	8.5E-03	C	1.2E-05	C							-4	1	1	No	~Lead subacetate	1335-32-6	9.2E+00			9.2E+00						2.0E-03	
78-00-2					1.0E-07	I			V		4.15	1	0.9	Yes	~Tetraethyl Lead	78-00-2					2.0E-03	3.8E-03		1.3E-03		4.7E-06	
541-25-3					5.0E-06	P			V		2.56	1	1	Yes	Lewisite	541-25-3					1.0E-01	9.1E-01		9.0E-02		3.8E-05	
330-55-2					2.0E-03	I					3.2	1	0.9	Yes	Linuron	330-55-2					4.0E+01	2.0E+02		3.3E+01		2.9E-02	
7439-93-2					2.0E-03	P						1	1	Yes	Lithium	7439-93-2					4.0E+01	9.1E+03		4.0E+01		1.2E+01	
94-74-6					5.0E-04	I					3.25	1	1	Yes	MCPA	94-74-6					1.0E+01	3.0E+01		7.5E+00		2.0E-03	
94-81-5					1.0E-02	I					2.79	1	0.9	Yes	MCPB	94-81-5					2.0E+02	5.5E+02		1.5E+02		5.8E-02	
93-65-2					1.0E-03	I					3.13	1	1	Yes	MCPP	93-65-2					2.0E+01	1.1E+01		1.6E+01		4.7E-03	
121-75-5					2.0E-02	I					2.36	1	1	Yes	Malathion	121-75-5					4.0E+02	1.1E+04		3.9E+02		1.0E-01	
108-31-6					1.0E-01	I	7.0E-04	C			1.62	1	1	Yes	Maleic Anhydride	108-31-6					2.0E+03	3.8E+04		1.9E+03		3.9E-01	
123-33-1					5.0E-01	I					-0.84	1	1	Yes	Maleic Hydrazide	123-33-1					1.0E+04	8.9E+06		1.0E+04		2.1E+00	
109-77-3					1.0E-04	P					-0.6	1	1	Yes	Malononitrile	109-77-3					2.0E+00	9.2E+02		2.0E+00		4.1E-04	
8018-01-7					3.0E-02	H					1.33	1	0.9	Yes	Mancozeb	8018-01-7					6.0E+02	4.9E+03		5.4E+02		7.6E-01	
12427-38-2					5.0E-03	I					0.62	1	1	Yes	Maneb	12427-38-2					1.0E+02	3.6E+03		9.8E+01		1.4E-01	
7439-96-5					1.4E-01	I	5.0E-05	I				1	1		Manganese (Diet)	7439-96-5											
7439-96-5					2.4E-02	S	5.0E-05	I				0.04	1	Yes	Manganese (Non-diet)	7439-96-5					4.8E+02	4.4E+03		4.3E+02		2.8E+01	
950-10-7					9.0E-05	H					1.04	1	1	Yes	Mephosfolan	950-10-7					1.8E+00	2.5E+02		1.8E+00		2.6E-03	
24307-26-4					3.0E-02	I					-2.82	1	1	No	Mepiquat Chloride	24307-26-4					6.0E+02			6.0E+02		2.0E-01	
															Mercury Compounds												
7487-94-7					3.0E-04	I	3.0E-04	S			-0.22	0.07	1	Yes	~Mercuric Chloride (and other Mercury salts)	7487-94-7					6.0E+00	9.6E+01		5.7E+00	2.0E+00		
7439-97-6							3.0E-04	I	V		0.62	1	1	Yes	~Mercury (elemental)	7439-97-6							6.3E-01	6.3E-01	2.0E+00	3.3E-02	1.0E-01
22967-92-6					1.0E-04	I						1	1	Yes	~Methyl Mercury	22967-92-6					2.0E+00	4.6E+02		2.0E+00			
62-38-4					8.0E-05	I					0.71	1	1	Yes	~Phenylmercuric Acetate	62-38-4					1.6E+00	5.7E+02		1.6E+00		5.0E-04	
150-50-5					3.0E-05	I			V		7.67	1	0.3	No	Merphos	150-50-5					6.0E-01			6.0E-01		5.9E-02	
78-48-8					3.0E-05	I					5.7	1	0.9	Yes	Merphos Oxide	78-48-8					6.0E-01	9.9E-02		8.5E-02		4.2E-04	
57837-19-1					6.0E-02	I					1.65	1	1	Yes	Metalaxyl	57837-19-1					1.2E+03	6.4E+04		1.2E+03		3.3E-01	
126-98-7					1.0E-04	I	3.0E-02	P	V		0.68	1	1	Yes	Methacrylonitrile	126-98-7					2.0E+00	1.3E+02	6.3E+01	1.9E+00		4.4E-04	
10265-92-6					5.0E-05	I					-0.8	1	1	Yes	Methamidophos	10265-92-6					1.0E+00	1.0E+03		1.0E+00		2.1E-04	
67-56-1					2.0E+00	I	2.0E+01	I	V		-0.77	1	1	Yes	Methanol	67-56-1					4.0E+03	4.8E+07	4.2E+04	2.0E+04		4.1E+00	
950-37-8					1.0E-03	I					2.2	1	1	Yes	Methidathion	950-37-8					2.0E+01	5.8E+02		1.9E+01		4.7E-03	
16752-77-5					2.5E-02	I					0.6	1	1	Yes	Methomyl	16752-77-5					5.0E+02	6.8E+04		5.0E+02		1.1E-01	
99-59-2	4.9E-02	C	1.4E-05	C							1.47	1	1	Yes	Methoxy-5-nitroaniline, 2-	99-59-2	1.6E+00	5.4E+01		1.5E+00						5.3E-04	
72-43-5					5.0E-03	I					5.08	1	0.8	Yes	Methoxychlor	72-43-5					1.0E+02	5.9E+01		3.7E+01	4.0E+01	2.0E+00	2.2E+00
110-49-6					8.0E-03	P	1.0E-03	P	V		0.1	1	1	Yes	Methoxyethanol Acetate, 2-	110-49-6					1.6E+02	3.5E+04	2.1E+00	2.1E+00		4.2E-04	
109-86-4					5.0E-03	P	2.0E-02	I	V		-0.77	1	1	Yes	Methoxyethanol, 2-	109-86-4					1.0E+02	6.3E+04	4.2E+01	2.9E+01		6.0E-03	
79-20-9					1.0E+00	X			V		0.18	1	1	Yes	Methyl Acetate	79-20-9					2.0E+04	2.9E+06		2.0E+04		4.1E+00	
96-33-3							2.0E-02	P	V		0.8	1	1	Yes	Methyl Acrylate	96-33-3							4.2E+01	4.2E+01		8.9E-03	
78-93-3					6.0E-01	I	5.0E+00	I	V		0.29	1	1	Yes	Methyl Ethyl Ketone (2-Butanone)	78-93-3					1.2E+04	1.5E+06	1.0E+04	5.6E+03		1.2E+00	
60-34-4			1.0E-03	X	1.0E-03	P	2.0E-05	X	V		-1.05	1	1	Yes	Methyl Hydrazine	60-34-4			5.6E-03	5.6E-03	2.0E+01	1.5E+04	4.2E+02	4.2E+02		1.3E-06	
108-10-1							3.0E+00	I	V		1.31	1	1	Yes	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							6.3E+03	6.3E+03		1.4E+00	
624-83-9					1.0E-03	C	V				0.79	1	1	Yes	Methyl Isocyanate	624-83-9							2.1E+00	2.1E+00		5.9E-04	
80-62-6					1.4E+00	I	7.0E-01	I	V		1.38	1	1	Yes	Methyl Methacrylate	80-62-6					2.8E+04	7.7E+05	1.5E+03	1.4E+03		3.0E-01	
298-00-0					2.5E-04	I					2.86	1	1	Yes	Methyl Parathion	298-00-0					5.0E+00	4.1E+01		4.5E+00		7.4E-03	
993-13-5					6.0E-02	X					-0.7	1	1	Yes	Methyl Phosphonic Acid	993-13-5					1.2E+03	1.2E+06		1.2E+03		2.4E-01	
25013-15-4					6.0E-03	H	4.0E-02	H	V		3.44	1	0.8	Yes	Methyl Styrene (Mixed Isomers)	25013-15-4					1.2E+02	4.3E+01	8.3E+01	2.3E+01		3.8E-02	
66-27-3	9.9E-02	C	2.8E-05	C							-0.66	1	1	Yes	Methyl methanesulfonate	66-27-3	7.9E-01	4.8E+02		7.9E-01						1.6E-04	
1634-04-4	1.8E-03	C	2.6E-07	C			3.0E+00	I	V		0.94	1	1	Yes	Methyl tert-Butyl Ether (MTBE)	1634-04-4	4.3E+01	2.0E+03	2.2E+01	1.4E+01			6.3E+03	6.3E+03		3.2E-03	
615-45-2					3.0E-04	X					-2.06	1	1	Yes	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					6.0E+00	5.9E+04		6.0E+00		3.8E-03	
99-55-8	9.0E-03	P			2.0E-02	X					1.87	1	1	Yes	Methyl-5-Nitroaniline, 2-	99-55-8	8.7E+00	1.4E+02		8.2E+00	4.0E+02	7.3E+03		3.8E+02		4.6E-03	
70-25-7	8.3E+00	C	2.4E-03	C							-0.92	1	1	Yes	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	9.4E-03	1.1E+01		9.4E-03						3.2E-06	
636-21-5	1.3E-01	C	3.7E-05	C							1.62	1	1	Yes	Methylaniline Hydrochloride, 2-	636-21-5	6.0E-01	3.9E+03		6.0E-01						2.6E-04	
124-58-3					1.0E-02	A					-1.18	1	1	Yes	Methylarsonic acid	124-58-3					2.0E+02	3.6E+05		2.0E+02		5.8E-02	
74612-12-7					2.0E-04	X						1	0	No	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					4.0E+00			4.0E+00			
615-50-9	1.0E-01	X			3.0E-04	X						1	0	No	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.8E-01			7.8E-01	6.0E+00			6.0E+00			
56-49-5	2.2E+01	C	6.3E-03	C						M	6.42	1	0.8	No	Methylcholanthrene, 3-	56-49-5	1.1E-03			1.1E-03						2.2E-03	
75-09-2	2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	1.25	1	1	Yes	Methylene Chloride	75-09-2	1.3E+01	3.5E+02	2.0E+02	1.1E+01	1.2E+02	3.7E+03	1.3E+03	1.1E+02	5.0E+00	2.9E-03	1.3E-03
101-14-4	1.0E-01	P	4.3E-04	C	2.0E-03	P				M	3.91	1	0.9	Yes	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.5E-01	4.3E-01		1.6E-01	4.0E+01	7.5E+01		2.6E+01		1.8E-03	
101-61-1	4.6E-02	I	1.3E-05	C							4.37	1	1	Yes	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.7E+00	6.7E-01		4.8E-01						2.7E-03	
101-77-9	1.6E+00	C	4.6E-04	C			2.0E-02	C			1.59	1	1	Yes	Methylenebisbenzenamine, 4,4'-	101-77-9	4.9E-02	1.7E+00		4.7E-02						2.1E-04	
101-68-8							6.0E-04	I			5.22	1	0.9	Yes	Methylenediphenyl Diisocyanate	101-68-8											
98-83-9					7.0E-02	H			V		3.48	1	1	Yes	Methylstyrene, Alpha-	98-83-9					1.4E+03	1.7E+03		7.8E+02		1.3E+00	
51218-45-2					1.5E-01	I					3.13	1	1	Yes	Metolachlor	51218-45-2					3.0E+03	2.6E+04		2.7E+03		3.2E+00	
21087-64-9					2.5E-02	I					1.7	1	1	Yes	Metribuzin	21087-64-9					5.0E+02	1.8E+04		4.9E+02		1.5E-01	
74223-64-6					2.5E-01	I					2.2	1	1	Yes	Metsulfuron-methyl	74223-64-6					5.0E+03	2.4E+05		4.9E+03		1.9E+00	
8012-95-1					3.0E+00	P			V		6.1	1	1	No	Mineral oils	8012-95-1					6.0E+04			6.0E+04		2.4E+03	
2385-85-5	1.8E+01	C	5.1E-03	C	2.0E-04	I			V		6.89	1	0.5	No	Mirex	2385-85-5	4.3E-03		1.1E-03	8.8E-04	4.0E+00			4.0E+00		6.3E-04	
2212-67-1					2.0E-03	I					3.21	1	1	Yes	Molinate	2212-67-1					4.0E+01	1.2E+02		3.0E+01		1.7E-02	
7439-98-7					5.0E-03	I						1	1	Yes	Molybdenum	7439-98-7					1.0E+02	2.3E+04		1.0E+02		2.0E+00	
10599-90-3					1.0E-01	I						1	1	Yes	Monochloramine	10599-90-3					2.0E+03	4.6E+05		2.0E+03	4.0E+03		
100-61-8					2.0E-03	P					1.66	1	1	Yes	Monomethylaniline	100-61-8					4.0E+01	7.5E+02		3.8E+01		1.4E-02	
88671-89-0					2.5E-02	I					2.94	1	1	Yes	Myclobutanil	88671-89-0					5.0E+02	4.7E+03		4.5E+02		5.6E+00	
74-31-7					3.0E-04	X					4.04	1	0.9	Yes	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					6.0E+00	8.9E+00		3.6E+00		3.7E-01	
300-76-5					2.0E-03	I			V		1.38	1	1	Yes	Naled	300-76-5					4.0E+01	6.8E+03		4.0E+01		1.8E-02	
64742-95-6					3.0E-02	X	1.0E-01	P	V			1	0	No	Naphtha, High Flash Aromatic (HFAN)	64742-95-6					6.0E+02		2.1E+02	1.5E+02			
91-59-8	1.8E+00	C	0.0E+00	C							2.28	1	1	Yes	Naphthylamine, 2-	91-59-8	4.3E-02	3.6E-01		3.9E-02						2.0E-04	
15299-99-7					1.0E-01	I					3.36	1	0.9	Yes	Napropamide	15299-99-7					2.0E+03	9.0E+03		1.6E+03		1.1E+01	
373-02-4			2.6E-04	C	1.1E-02	C	1.4E-05	C			-1.38	1	1	Yes	Nickel Acetate	373-02-4					2.2E+02	6.8E+05		2.2E+02		4.5E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
3333-67-3			2.6E-04	C	1.1E-02	C	1.4E-05	C			-2.12	1	1	Yes	Nickel Carbonate	3333-67-3					2.2E+02	1.4E+06		2.2E+02			
13463-39-3			2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1	0	Yes	Nickel Carbonyl	13463-39-3			2.2E-02	2.2E-02	2.2E+02		2.9E-02	2.9E-02			
12054-48-7			2.6E-04	C	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Hydroxide	12054-48-7					2.2E+02	2.0E+03		2.0E+02			
1313-99-1			2.6E-04	C	1.1E-02	C	2.0E-05	C				0.04	1	Yes	Nickel Oxide	1313-99-1					2.2E+02	2.0E+03		2.0E+02			
NA			2.4E-04	I	1.1E-02	C	1.4E-05	C				0.04	0	Yes	Nickel Refinery Dust	NA					2.2E+02	1.0E+04		2.2E+02		3.2E+01	
7440-02-0			2.6E-04	C	2.0E-02	I	9.0E-05	A				0.04	1	Yes	Nickel Soluble Salts	7440-02-0					4.0E+02	1.8E+04		3.9E+02		2.6E+01	
12035-72-2	1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				0.04	1	Yes	Nickel Subsulfide	12035-72-2	4.6E-02	1.7E+00		4.5E-02	2.2E+02	1.0E+04		2.2E+02			
1271-28-9			2.6E-04	C	1.1E-02	C	1.4E-05	C				1	0	Yes	Nickelocene	1271-28-9					2.2E+02			2.2E+02			
14797-55-8					1.6E+00	I						1	1	Yes	Nitrate	14797-55-8					3.2E+04	7.3E+06		3.2E+04	1.0E+04		
NA												1	0	Yes	Nitrate + Nitrite (as N)	NA									1.0E+04		
14797-65-0					1.0E-01	I						1	1	Yes	Nitrite	14797-65-0					2.0E+03	4.6E+05		2.0E+03	1.0E+03		
88-74-4					1.0E-02	X	5.0E-05	X			1.85	1	1	Yes	Nitroaniline, 2-	88-74-4					2.0E+02	3.4E+03		1.9E+02		8.0E-02	
100-01-6	2.0E-02	P			4.0E-03	P	6.0E-03	P			1.39	1	1	Yes	Nitroaniline, 4-	100-01-6	3.9E+00	1.2E+02		3.8E+00	8.0E+01	2.8E+03		7.8E+01		1.6E-03	
98-95-3			4.0E-05	I	2.0E-03	I	9.0E-03	I	V		1.85	1	1	Yes	Nitrobenzene	98-95-3			1.4E-01	1.4E-01	4.0E+01	6.2E+02	1.9E+01	1.3E+01		9.2E-05	
9004-70-0					3.0E+03	P					-4.56	1	1	No	Nitrocellulose	9004-70-0					6.0E+07			6.0E+07		1.3E+04	
67-20-9					7.0E-02	H					-0.47	1	1	Yes	Nitrofurantoin	67-20-9					1.4E+03	1.6E+06		1.4E+03		6.1E-01	
59-87-0	1.3E+00	C	3.7E-04	C							0.23	1	1	Yes	Nitrofurazone	59-87-0	6.0E-02	1.7E+01		6.0E-02						5.4E-05	
55-63-0	1.7E-02	P			1.0E-04	P					1.62	1	1	Yes	Nitroglycerin	55-63-0	4.6E+00	1.8E+02		4.5E+00	2.0E+00	8.7E+01		2.0E+00		8.5E-04	
556-88-7					1.0E-01	I					-0.89	1	1	Yes	Nitroguanidine	556-88-7					2.0E+03	1.8E+06		2.0E+03		4.8E-01	
75-52-5			8.8E-06	P			5.0E-03	P	V		-0.35	1	1	Yes	Nitromethane	75-52-5			6.4E-01	6.4E-01			1.0E+01	1.0E+01		1.4E-04	
79-46-9			2.7E-03	H			2.0E-02	I	V		0.93	1	1	Yes	Nitropropane, 2-	79-46-9			2.1E-03	2.1E-03			4.2E+01	4.2E+01		5.5E-07	
759-73-9	2.7E+01	C	7.7E-03	C						M	0.23	1	1	Yes	Nitroso-N-ethylurea, N-	759-73-9	9.3E-04	1.5E-01		9.2E-04						2.2E-07	
684-93-5	1.2E+02	C	3.4E-02	C						M	-0.03	1	1	Yes	Nitroso-N-methylurea, N-	684-93-5	2.1E-04	4.6E-02		2.1E-04						4.6E-08	
924-16-3	5.4E+00	I	1.6E-03	I					V		2.63	1	1	Yes	Nitroso-di-N-butylamine, N-	924-16-3	1.4E-02	7.9E-02	3.5E-03	2.7E-03						5.5E-06	
621-64-7	7.0E+00	I	2.0E-03	C							1.36	1	1	Yes	Nitroso-di-N-propylamine, N-	621-64-7	1.1E-02	3.5E-01		1.1E-02						8.1E-06	
1116-54-7	2.8E+00	I	8.0E-04	C							-1.28	1	1	Yes	Nitrosodiethanolamine, N-	1116-54-7	2.8E-02	8.1E+01		2.8E-02						5.6E-06	
55-18-5	1.5E+02	I	4.3E-02	I						M	0.48	1	1	Yes	Nitrosodiethylamine, N-	55-18-5	1.7E-04	1.7E-02		1.7E-04						6.1E-08	
62-75-9	5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	-0.57	1	1	Yes	Nitrosodimethylamine, N-	62-75-9	4.9E-04	2.0E-01	1.4E-04	1.1E-04	1.6E-01	7.4E+01	8.3E-02	5.5E-02		2.8E-08	
86-30-6	4.9E-03	I	2.6E-05	C							3.13	1	1	Yes	Nitrosodiphenylamine, N-	86-30-6	1.6E+01	5.2E+01		1.2E+01						6.7E-02	
10595-95-6	2.2E+01	I	6.3E-03	C					V		0.04	1	1	Yes	Nitrosomethylethylamine, N-	10595-95-6	3.5E-03	6.4E-01	8.9E-04	7.1E-04						2.0E-07	
59-89-2	6.7E+00	C	1.9E-03	C							-0.44	1	1	Yes	Nitrosomorpholine [N-]	59-89-2	1.2E-02	5.3E+00		1.2E-02						2.8E-06	
100-75-4	9.4E+00	C	2.7E-03	C							0.36	1	1	Yes	Nitrosopiperidine [N-]	100-75-4	8.3E-03	1.1E+00		8.2E-03						4.4E-06	
930-55-2	2.1E+00	I	6.1E-04	I							-0.19	1	1	Yes	Nitrosopyrrolidine, N-	930-55-2	3.7E-02	1.0E+01		3.7E-02						1.4E-05	
99-08-1					1.0E-04	X					2.45	1	1	Yes	Nitrotoluene, m-	99-08-1					2.0E+00	1.4E+01		1.7E+00		1.6E-03	
88-72-2	2.2E-01	P			9.0E-04	P			V		2.3	1	1	Yes	Nitrotoluene, o-	88-72-2	3.5E-01	2.8E+00		3.1E-01	1.8E+01	1.5E+02		1.6E+01		3.0E-04	
99-99-0	1.6E-02	P			4.0E-03	P					2.37	1	1	Yes	Nitrotoluene, p-	99-99-0	4.9E+00	3.4E+01		4.3E+00	8.0E+01	6.2E+02		7.1E+01		4.0E-03	
111-84-2					3.0E-04	X	2.0E-02	P	V		5.65	1	1	No	Nonane, n-	111-84-2					6.0E+00		4.2E+01	5.3E+00		7.5E-02	
27314-13-2					4.0E-02	I					2.3	1	1	Yes	Norflurazon	27314-13-2					8.0E+02	2.0E+04		7.7E+02		5.0E+00	
32536-52-0					3.0E-03	I					8.71	1	0.3	No	Octabromodiphenyl Ether	32536-52-0					6.0E+01			6.0E+01		1.2E+01	
2691-41-0					5.0E-02	I					0.16	1	1	Yes	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					1.0E+03	6.3E+05		1.0E+03		1.3E+00	
152-16-9					2.0E-03	H					-1.01	1	1	Yes	Octamethylpyrophosphoramide	152-16-9					4.0E+01	1.4E+05		4.0E+01		9.6E-03	
19044-88-3					5.0E-02	I					3.73	1	0.9	Yes	Oryzalin	19044-88-3					1.0E+03	4.1E+03		8.1E+02		1.5E+00	
19666-30-9					5.0E-03	I					4.8	1	0.8	Yes	Oxadiazon	19666-30-9					1.0E+02	9.0E+01		4.7E+01		4.8E-01	
23135-22-0					2.5E-02	I					-0.47	1	1	Yes	Oxamyl	23135-22-0					5.0E+02	5.1E+05		5.0E+02	2.0E+02	1.1E-01	4.4E-02
42874-03-3					3.0E-03	I					4.73	1	0.8	Yes	Oxyfluorfen	42874-03-3					6.0E+01	6.7E+01		3.2E+01		2.5E+00	
76738-62-0					1.3E-02	I					3.2	1	0.9	Yes	Paclobutrazol	76738-62-0					2.6E+02	1.7E+03		2.3E+02		4.6E-01	
1910-42-5					4.5E-03	I					-4.5	1	1	No	Paraquat Dichloride	1910-42-5					9.0E+01			9.0E+01		1.2E+00	
56-38-2					6.0E-03	H					3.83	1	0.9	Yes	Parathion	56-38-2					1.2E+02	3.0E+02		8.6E+01		8.6E-01	
1114-71-2					5.0E-02	H			V		3.83	1	1	Yes	Pebulate	1114-71-2					1.0E+03	1.3E+03		5.6E+02		4.5E-01	
40487-42-1					4.0E-02	I					5.2	1	0.9	Yes	Pendimethalin	40487-42-1					8.0E+02	2.4E+02		1.8E+02		2.1E+00	
32534-81-9					2.0E-03	I			V		6.84	1	0.6	No	Pentabromodiphenyl Ether	32534-81-9					4.0E+01			4.0E+01		1.8E+00	
60348-60-9					1.0E-04	I					7.66	1	0.6	No	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					2.0E+00			2.0E+00		8.7E-02	
608-93-5					8.0E-04	I			V		5.17	1	0.9	Yes	Pentachlorobenzene	608-93-5					1.6E+01	3.9E+00		3.2E+00		2.4E-02	
76-01-7	9.0E-02	P							V		3.22	1	1	Yes	Pentachloroethane	76-01-7	8.7E-01	2.5E+00		6.5E-01						3.1E-04	
82-68-8	2.6E-01	H			3.0E-03	I			V		4.64	1	0.9	Yes	Pentachloronitrobenzene	82-68-8	3.0E-01	2.0E-01		1.2E-01	6.0E+01	4.4E+01		2.6E+01		1.5E-03	
87-86-5	4.0E-01	I	5.1E-06	C	5.0E-03	I					5.12	1	0.9	Yes	Pentachlorophenol	87-86-5	1.9E-01	5.2E-02		4.1E-02	1.0E+02	2.9E+01		2.3E+01	1.0E+00	5.7E-05	1.4E-03
78-11-5	4.0E-03	X			2.0E-03	P					2.38	1	1	Yes	Pentaerythritol tetranitrate (PETN)	78-11-5	1.9E+01	4.3E+02		1.9E+01	4.0E+01	9.6E+02		3.9E+01		2.8E-02	
109-66-0							1.0E+00	P	V		3.39	1	1	Yes	Pentane, n-	109-66-0							2.1E+03	2.1E+03		1.0E+01	
															Perchlorates												
7790-98-9					7.0E-04	I						1	1	Yes	~Ammonium Perchlorate	7790-98-9					1.4E+01	3.2E+03		1.4E+01			
7791-03-9					7.0E-04	I						1	1	Yes	~Lithium Perchlorate	7791-03-9					1.4E+01	3.2E+03		1.4E+01			
14797-73-0					7.0E-04	I						1	1	Yes	~Perchlorate and Perchlorate Salts	14797-73-0					1.4E+01	3.2E+03		1.4E+01	1.5E+01(F)		
7778-74-7					7.0E-04	I						1	1	Yes	~Potassium Perchlorate	7778-74-7					1.4E+01	1.6E+03		1.4E+01			
7601-89-0					7.0E-04	I						1	1	Yes	~Sodium Perchlorate	7601-89-0					1.4E+01	3.2E+03		1.4E+01			
375-73-5					2.0E-02	P			V		2.41	1	1	Yes	Perfluorobutane Sulfonate	375-73-5					4.0E+02	8.3E+03		3.8E+02		2.1E-01	
52645-53-1					5.0E-02	I					6.5	1	0.6	No	Permethrin	52645-53-1					1.0E+03			1.0E+03		2.4E+02	
62-44-2	2.2E-03	C	6.3E-07	C							1.58	1	1	Yes	Phenacetin	62-44-2	3.5E+01	1.1E+03		3.4E+01						9.7E-03	
13684-63-4					2.5E-01	I					3.59	1	0.9	Yes	Phenmedipham	13684-63-4					5.0E+03	1.9E+04		4.0E+03		2.1E+01	
108-95-2					3.0E-01	I	2.0E-01	C			1.46	1	1	Yes	Phenol	108-95-2					6.0E+03	1.4E+05		5.8E+03		3.3E+00	
114-26-1					4.0E-03	I					1.52	1	1	Yes	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1					8.0E+01	3.6E+03		7.8E+01		2.5E-02	
92-84-2					5.0E-04	X					4.15	1	1	Yes	Phenothiazine	92-84-2					1.0E+01	7.6E+00		4.3E+00		1.4E-02	
108-45-2					6.0E-03	I					-0.33	1	1	Yes	Phenylenediamine, m-	108-45-2					1.2E+02	4.8E+04		1.2E+02		3.2E-02	
95-54-5	4.7E-02	H									0.15	1	1	Yes	Phenylenediamine, o-	95-54-5	1.7E+00	2.9E+02		1.6E+00						4.4E-04	
106-50-3					1.9E-01	H					-0.3	1	1	Yes	Phenylenediamine, p-	106-50-3					3.8E+03	1.4E+06		3.8E+03		1.0E+00	
90-43-7	1.9E-03	H									3.09	1	1	Yes	Phenylphenol, 2-	90-43-7	4.0E+01	1.2E+02		3.0E+01						4.1E-01	
298-02-2					2.0E-04	H					3.56	1	0.9	Yes	Phorate	298-02-2					4.0E+00	1.2E+01		3.0E+00		3.4E-03	
75-44-5							3.0E-04	I	V		-0.71	1	1		Phosgene	75-44-5											
732-11-6					2.0E-02	I					2.78	1	1	Yes	Phosmet	732-11-6					4.0E+02	5.3E+03		3.7E+02		8.2E-02	
															Phosphates, Inorganic												
13776-88-0					4.9E+01	P						1	1	Yes	~Aluminum metaphosphate	13776-88-0					9.7E+05	2.2E+08		9.7E+05			
68333-79-9					4.9E+01	P						1	0	Yes	~Ammonium polyphosphate	68333-79-9					9.7E+05	2.2E+08		9.7E+05			
7790-76-3					4.9E+01	P						1	1	Yes	~Calcium pyrophosphate	7790-76-3					9.7E+05	2.2E+08		9.7E+05			
7783-28-0					4.9E+01	P						1	1	Yes	~Diammonium phosphate	7783-28-0					9.7E+05	2.2E+08		9.7E+05			
7757-93-9					4.9E+01	P						1	1	Yes	~Dicalcium phosphate	7757-93-9					9.7E+05	2.2E+08		9.7E+05			
7782-75-4					4.9E+01	P						1	1	Yes	~Dimagnesium phosphate	7782-75-4					9.7E+05	2.2E+08		9.7E+05			
7758-11-4					4.9E+01	P						1	1	Yes	~Dipotassium phosphate	7758-11-4					9.7E+05	2.2E+08		9.7E+05			
7558-79-4					4.9E+01	P						1	1	Yes	~Disodium phosphate	7558-79-4					9.7E+05	2.2E+08		9.7E+05			
13530-50-2					4.9E+01	P						1	1	Yes	~Monoaluminum phosphate	13530-50-2					9.7E+05	2.2E+08		9.7E+05			
7722-76-1					4.9E+01	P						1	1	Yes	~Monoammonium phosphate	7722-76-1					9.7E+05	2.2E+08		9.7E+05			
7758-23-8					4.9E+01	P						1	1	Yes	~Monocalcium phosphate	7758-23-8					9.7E+05	2.2E+08		9.7E+05			
7757-86-0					4.9E+01	P						1	1	Yes	~Monomagnesium phosphate	7757-86-0					9.7E+05	2.2E+08		9.7E+05			
7778-77-0					4.9E+01	P						1	1	Yes	~Monopotassium phosphate	7778-77-0					9.7E+05	2.2E+08		9.7E+05			
7558-80-7					4.9E+01	P						1	1	Yes	~Monosodium phosphate	7558-80-7					9.7E+05	2.2E+08		9.7E+05			

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
8017-16-1					4.9E+01	P						1	1	Yes	~Polyphosphoric acid	8017-16-1					9.7E+05	2.2E+08		9.7E+05			
13845-36-8					4.9E+01	P						1	0.9	Yes	~Potassium tripolyphosphate	13845-36-8					9.7E+05	2.2E+08		9.7E+05			
7758-16-9					4.9E+01	P						1	1	Yes	~Sodium acid pyrophosphate	7758-16-9					9.7E+05	2.2E+08		9.7E+05			
7785-88-8					4.9E+01	P						1	1	Yes	~Sodium aluminum phosphate (acidic)	7785-88-8					9.7E+05	2.2E+08		9.7E+05			
10279-59-1					4.9E+01	P						1	0	Yes	~Sodium aluminum phosphate (anhydrous)	10279-59-1					9.7E+05	2.2E+08		9.7E+05			
10305-76-7					4.9E+01	P						1	0.8	Yes	~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					9.7E+05	2.2E+08		9.7E+05			
10124-56-8					4.9E+01	P						1	0.9	Yes	~Sodium hexametaphosphate	10124-56-8					9.7E+05	2.2E+08		9.7E+05			
68915-31-1					4.9E+01	P						1	1	Yes	~Sodium polyphosphate	68915-31-1					9.7E+05	2.2E+08		9.7E+05			
7785-84-4					4.9E+01	P						1	1	Yes	~Sodium trimetaphosphate	7785-84-4					9.7E+05	2.2E+08		9.7E+05			
7758-29-4					4.9E+01	P						1	1	Yes	~Sodium tripolyphosphate	7758-29-4					9.7E+05	2.2E+08		9.7E+05			
7320-34-5					4.9E+01	P						1	1	Yes	~Tetrapotassium phosphate	7320-34-5					9.7E+05	2.2E+08		9.7E+05			
7722-88-5					4.9E+01	P						1	1	Yes	~Tetrasodium pyrophosphate	7722-88-5					9.7E+05	2.2E+08		9.7E+05			
15136-87-5					4.9E+01	P						1	0.8	Yes	~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					9.7E+05	2.2E+08		9.7E+05			
7758-87-4					4.9E+01	P						1	1	Yes	~Tricalcium phosphate	7758-87-4					9.7E+05	2.2E+08		9.7E+05			
7757-87-1					4.9E+01	P						1	1	Yes	~Trimagnesium phosphate	7757-87-1					9.7E+05	2.2E+08		9.7E+05			
7778-53-2					4.9E+01	P						1	1	Yes	~Tripotassium phosphate	7778-53-2					9.7E+05	2.2E+08		9.7E+05			
7601-54-9					4.9E+01	P						1	1	Yes	~Trisodium phosphate	7601-54-9					9.7E+05	2.2E+08		9.7E+05			
7803-51-2					3.0E-04	I	3.0E-04	I	V		-0.27	1	1	Yes	Phosphine	7803-51-2					6.0E+00	1.4E+03	6.3E-01	5.7E-01			
7664-38-2					4.9E+01	P	1.0E-02	I				1	1	Yes	Phosphoric Acid	7664-38-2					9.7E+05	2.2E+08		9.7E+05			
7723-14-0					2.0E-05	I			V		3.08	1	1	Yes	Phosphorus, White	7723-14-0					4.0E-01	9.1E+01		4.0E-01		1.5E-03	
															Phthalates													
117-81-7	1.4E-02	I	2.4E-06	C	2.0E-02	I					7.6	1	0.8	No	~Bis(2-ethylhexyl)phthalate	117-81-7	5.6E+00			5.6E+00	4.0E+02			4.0E+02	6.0E+00	1.3E+00	1.4E+00
85-68-7	1.9E-03	P			2.0E-01	I					4.73	1	0.9	Yes	~Butyl Benzyl Phthalate	85-68-7	4.1E+01	2.7E+01		1.6E+01	4.0E+03	2.9E+03		1.7E+03		2.4E-01	
85-70-1					1.0E+00	I					4.15	1	0.9	Yes	~Butylphthalyl Butylglycolate	85-70-1					2.0E+04	4.1E+04		1.3E+04		3.1E+02	
84-74-2					1.0E-01	I					4.5	1	0.9	Yes	~Dibutyl Phthalate	84-74-2					2.0E+03	1.6E+03		9.0E+02		2.3E+00	
84-66-2					8.0E-01	I					2.42	1	1	Yes	~Diethyl Phthalate	84-66-2					1.6E+04	2.0E+05		1.5E+04		6.1E+00	
120-61-6					1.0E-01	I			V		2.25	1	1	Yes	~Dimethylterephthalate	120-61-6					2.0E+03	2.7E+04		1.9E+03		4.9E-01	
117-84-0					1.0E-02	P					8.1	1	0	No	~Octyl Phthalate, di-N-	117-84-0					2.0E+02			2.0E+02		5.7E+01	
100-21-0					1.0E+00	H					2	1	1	Yes	~Phthalic Acid, P-	100-21-0					2.0E+04	3.3E+05		1.9E+04		6.8E+00	
85-44-9					2.0E+00	I	2.0E-02	C			1.6	1	1	Yes	~Phthalic Anhydride	85-44-9					4.0E+04	1.1E+06		3.9E+04		8.5E+00	
1918-02-1					7.0E-02	I					1.9	1	1	Yes	Picloram	1918-02-1					1.4E+03	4.3E+04		1.4E+03	5.0E+02	3.8E-01	1.4E-01
96-91-3					1.0E-04	X					0.93	1	1	Yes	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					2.0E+00	2.1E+02		2.0E+00		1.3E-03	
88-89-1					9.0E-04	X					1.44	1	1	Yes	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					1.8E+01	1.2E+03		1.8E+01		8.4E-02	
29232-93-7					1.0E-02	I					4.2	1	0.9	Yes	Pirimiphos, Methyl	29232-93-7					2.0E+02	3.1E+02		1.2E+02		1.2E-01	
59536-65-1	3.0E+01	C	8.6E-03	C	7.0E-06	H						1	0	No	Polybrominated Biphenyls	59536-65-1	2.6E-03			2.6E-03	1.4E-01			1.4E-01			
															Polychlorinated Biphenyls (PCBs)												
12674-11-2	7.0E-02	S	2.0E-05	S	7.0E-05	I			V		5.69	1	0	No	~Aroclor 1016	12674-11-2	1.1E+00		2.8E-01	2.2E-01	1.4E+00			1.4E+00		2.1E-02	
11104-28-2	2.0E+00	S	5.7E-04	S					V		4.65	1	1	Yes	~Aroclor 1221	11104-28-2	3.9E-02	1.2E-02	9.8E-03	4.7E-03						8.0E-05	
11141-16-5	2.0E+00	S	5.7E-04	S					V		4.4	1	1	Yes	~Aroclor 1232	11141-16-5	3.9E-02	1.2E-02	9.8E-03	4.7E-03						8.0E-05	
53469-21-9	2.0E+00	S	5.7E-04	S					V		6.34	1	0.7	No	~Aroclor 1242	53469-21-9	3.9E-02		9.8E-03	7.8E-03						1.2E-03	
12672-29-6	2.0E+00	S	5.7E-04	S					V		6.2	1	0	No	~Aroclor 1248	12672-29-6	3.9E-02		9.8E-03	7.8E-03						1.2E-03	
11097-69-1	2.0E+00	S	5.7E-04	S	2.0E-05	I			V		6.5	1	0.5	No	~Aroclor 1254	11097-69-1	3.9E-02		9.8E-03	7.8E-03	4.0E-01			4.0E-01		2.1E-03	
11096-82-5	2.0E+00	S	5.7E-04	S					V		7.55	1	0	No	~Aroclor 1260	11096-82-5	3.9E-02		9.8E-03	7.8E-03						5.5E-03	
11126-42-4					6.0E-04	X			V		6.34	1	0.7	No	~Aroclor 5460	11126-42-4					1.2E+01			1.2E+01		2.0E+00	
39635-31-9	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		8.27	1	0	No	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		2.8E-03	
52663-72-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.5	1	0	No	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
69782-90-7	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
38380-08-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.6	1	0	No	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.7E-03	
32774-16-6	3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V		7.41	1	0.1	No	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	2.0E-05		4.9E-06	4.0E-06	4.7E-04		2.8E-03	4.0E-04		1.7E-06	
65510-44-3	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
31508-00-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		7.12	1	0.3	No	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
32598-14-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.79	1	0.5	No	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
74472-37-0	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	2.0E-02		4.9E-03	4.0E-03	4.7E-01		2.8E+00	4.0E-01		1.0E-03	
57465-28-8	1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V		6.98	1	0.4	No	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	6.0E-06		1.5E-06	1.2E-06	1.4E-04		8.3E-04	1.2E-04		3.0E-07	
1336-36-3	2.0E+00	I	5.7E-04	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (high risk)	1336-36-3											
1336-36-3	4.0E-01	I	1.0E-04	I					V		7.1	1	0.7	No	~Polychlorinated Biphenyls (low risk)	1336-36-3	1.9E-01		5.6E-02	4.4E-02					5.0E-01	6.8E-03	7.8E-02
1336-36-3	7.0E-02	I	2.0E-05	I					V		7.1	1	0.7		~Polychlorinated Biphenyls (lowest risk)	1336-36-3											
32598-13-3	1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E			6.63	1	0.6	No	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	6.0E-03			6.0E-03	1.4E-01			1.4E-01		9.4E-04	
70362-50-4	3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V		6.34	1	0.7	No	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.0E-03		4.9E-04	4.0E-04	4.7E-02		2.8E-01	4.0E-02		6.2E-05	
9016-87-9							6.0E-04	I			10.46	1	0	No	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9											
															Polynuclear Aromatic Hydrocarbons (PAHs)												
83-32-9					6.0E-02	I			V		3.92	1	1	Yes	~Acenaphthene	83-32-9					1.2E+03	9.6E+02		5.3E+02		5.5E+00	
120-12-7					3.0E-01	I			V		4.45	1	1	Yes	~Anthracene	120-12-7					6.0E+03	2.5E+03		1.8E+03		5.8E+01	
56-55-3	7.3E-01	E	1.1E-04	C					V	M	5.76	1	1	No	~Benz[a]anthracene	56-55-3	3.4E-02		1.8E-02	1.2E-02						4.3E-03	
205-82-3	1.2E+00	C	1.1E-04	C							6.11	1	0.9	No	~Benzo(j)fluoranthene	205-82-3	6.5E-02			6.5E-02						7.8E-02	
50-32-8	7.3E+00	I	1.1E-03	C						M	6.13	1	1	No	~Benzo[a]pyrene	50-32-8	3.4E-03			3.4E-03					2.0E-01	4.0E-03	2.4E-01
205-99-2	7.3E-01	E	1.1E-04	C						M	5.78	1	1	No	~Benzo[b]fluoranthene	205-99-2	3.4E-02			3.4E-02						4.1E-02	
207-08-9	7.3E-02	E	1.1E-04	C						M	6.11	1	0.9	No	~Benzo[k]fluoranthene	207-08-9	3.4E-01			3.4E-01						4.0E-01	
91-58-7					8.0E-02	I			V		3.9	1	1	Yes	~Chloronaphthalene, Beta-	91-58-7					1.6E+03	1.4E+03		7.5E+02		3.9E+00	
218-01-9	7.3E-03	E	1.1E-05	C						M	5.81	1	1	No	~Chrysene	218-01-9	3.4E+00			3.4E+00						1.2E+00	
53-70-3	7.3E+00	E	1.2E-03	C						M	6.75	1	0.6	No	~Dibenz[a,h]anthracene	53-70-3	3.4E-03			3.4E-03						1.3E-02	
192-65-4	1.2E+01	C	1.1E-03	C							7.71	1	0.3	No	~Dibenzo(a,e)pyrene	192-65-4	6.5E-03			6.5E-03						8.4E-02	
57-97-6	2.5E+02	C	7.1E-02	C						M	5.8	1	0.9	No	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	1.0E-04			1.0E-04						9.9E-05	
206-44-0					4.0E-02	I					5.16	1	1	No	~Fluoranthene	206-44-0					8.0E+02			8.0E+02		8.9E+01	
86-73-7					4.0E-02	I			V		4.18	1	1	Yes	~Fluorene	86-73-7					8.0E+02	4.6E+02		2.9E+02		5.5E+00	
193-39-5	7.3E-01	E	1.1E-04	C						M	6.7	1	0.6	No	~Indeno[1,2,3-cd]pyrene	193-39-5	3.4E-02			3.4E-02						1.3E-01	
90-12-0	2.9E-02	P			7.0E-02	A			V		3.87	1	1	Yes	~Methylnaphthalene, 1-	90-12-0	2.7E+00	2.0E+00		1.1E+00	1.4E+03	1.1E+03		6.2E+02		6.0E-03	
91-57-6					4.0E-03	I			V		3.86	1	1	Yes	~Methylnaphthalene, 2-	91-57-6					8.0E+01	6.5E+01		3.6E+01		1.9E-01	
91-20-3			3.4E-05	C	2.0E-02	I	3.0E-03	I	V		3.3	1	1	Yes	~Naphthalene	91-20-3			1.7E-01	1.7E-01	4.0E+02	7.0E+02	6.3E+00	6.1E+00		5.4E-04	
57835-92-4	1.2E+00	C	1.1E-04	C							4.75	1	0.9	Yes	~Nitropyrene, 4-	57835-92-4	6.5E-02	2.7E-02		1.9E-02						3.3E-03	
129-00-0					3.0E-02	I			V		4.88	1	1	Yes	~Pyrene	129-00-0					6.0E+02	1.5E+02		1.2E+02		1.3E+01	
29420-49-3					2.0E-02	P					-0.3297	1	1	Yes	Potassium Perfluorobutane Sulfonate	29420-49-3					4.0E+02	2.8E+05		4.0E+02		2.2E-01	
67747-09-5	1.5E-01	I			9.0E-03	I					4.1	1	0.9	Yes	Prochloraz	67747-09-5	5.2E-01	1.4E+00		3.8E-01	1.8E+02	5.1E+02		1.3E+02		1.9E-03	
26399-36-0					6.0E-03	H			V		5.58	1	0.8	Yes	Profluralin	26399-36-0					1.2E+02	3.3E+01		2.6E+01		1.6E+00	
1610-18-0					1.5E-02	I					2.99	1	1	Yes	Prometon	1610-18-0					3.0E+02	1.6E+03		2.5E+02		1.2E-01	
7287-19-6					4.0E-03	I					3.51	1	0.9	Yes	Prometryn	7287-19-6					8.0E+01	2.3E+02		6.0E+01		9.1E-02	
1918-16-7					1.3E-02	I					2.18	1	1	Yes	Propachlor	1918-16-7					2.6E+02	4.3E+03		2.5E+02		1.5E-01	
709-98-8					5.0E-03	I					3.07	1	1	Yes	Propanil	709-98-8					1.0E+02	4.4E+02		8.2E+01		4.5E-02	
2312-35-8					2.0E-02	I					5	1	0.8	Yes	Propargite	2312-35-8					4.0E+02	2.7E+02		1.6E+02		1.2E+01	
107-19-7					2.0E-03	I			V		-0.38	1	1	Yes	Propargyl Alcohol	107-19-7					4.0E+01	1.2E+04		4.0E+01		8.2E-03	
139-40-2					2.0E-02	I					2.93	1	1	Yes	Propazine	139-40-2					4.0E+02	2.4E+03		3.4E+02		3.1E-01	
122-42-9					2.0E-02	I					2.6	1	1	Yes	Propham	122-42-9					4.0E+02	2.8E+03		3.5E+02		2.2E-01	
60207-90-1					1.3E-02	I					3.72	1	0.9	Yes	Propiconazole	60207-90-1					2.6E+02	1.1E+03		2.1E+02		6.9E-01	
123-38-6							8.0E-03	I	V		0.59	1	1	Yes	Propionaldehyde	123-38-6							1.7E+01	1.7E+01		3.4E-03	
103-65-1					1.0E-01	X	1.0E+00	X	V		3.69	1	1	Yes	Propyl benzene	103-65-1					2.0E+03	1.8E+03	2.1E+03	6.6E+02		1.2E+00	
115-07-1							3.0E+00	C	V		1.77	1	1	Yes	Propylene	115-07-1							6.3E+03	6.3E+03		6.0E+00	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information																Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
57-55-6					2.0E+01	P					-0.92	1	1	Yes	Propylene Glycol	57-55-6					4.0E+05	3.2E+08		4.0E+05		8.1E+01	
6423-43-4							2.7E-04	A			1.83	1	1	Yes	Propylene Glycol Dinitrate	6423-43-4											
107-98-2					7.0E-01	H	2.0E+00	I	V		-0.49	1	1	Yes	Propylene Glycol Monomethyl Ether	107-98-2					1.4E+04	3.9E+06	4.2E+03	3.2E+03		6.5E-01	
75-56-9	2.4E-01	I	3.7E-06	I			3.0E-02	I	V		0.03	1	1	Yes	Propylene Oxide	75-56-9	3.2E-01	4.7E+01	1.5E+00	2.7E-01			6.3E+01	6.3E+01		5.6E-05	
23950-58-5					7.5E-02	I					3.43	1	0.9	Yes	Propyzamide	23950-58-5	1.5E+03	5.5E+03						1.2E+03		1.2E+00	
110-86-1					1.0E-03	I			V		0.65	1	1	Yes	Pyridine	110-86-1	2.0E+01	1.5E+03						2.0E+01		6.8E-03	
13593-03-8					5.0E-04	I					4.44	1	0.9	Yes	Quinalphos	13593-03-8	1.0E+01	1.0E+01						5.1E+00		4.3E-02	
91-22-5	3.0E+00	I									2.03	1	1	Yes	Quinoline	91-22-5	2.6E-02	2.9E-01		2.4E-02						7.8E-05	
76578-14-8					9.0E-03	I					4.28	1	0.9	Yes	Quizalofop-ethyl	76578-14-8					1.8E+02	3.8E+02		1.2E+02		1.9E+00	
NA							3.0E-02	A				1	0	Yes	Refractory Ceramic Fibers	NA											
10453-86-8					3.0E-02	I					6.14	1	0.7	Yes	Resmethrin	10453-86-8					6.0E+02	7.6E+01		6.7E+01		4.2E+01	
299-84-3					5.0E-02	H			V		4.88	1	0.8	Yes	Ronnel	299-84-3					1.0E+03	6.8E+02		4.1E+02		3.7E+00	
83-79-4					4.0E-03	I					4.1	1	0.9	Yes	Rotenone	83-79-4					8.0E+01	2.6E+02		6.1E+01		3.2E+01	
94-59-7	2.2E-01	C	6.3E-05	C						M	3.45	1	1	Yes	Safrole	94-59-7	1.1E-01	6.0E-01		9.6E-02						5.9E-05	
7783-00-8					5.0E-03	I						1	1	Yes	Selenious Acid	7783-00-8					1.0E+02	2.3E+04		1.0E+02			
7782-49-2					5.0E-03	I	2.0E-02	C				1	1	Yes	Selenium	7782-49-2					1.0E+02	2.3E+04		1.0E+02	5.0E+01	5.2E-01	2.6E-01
7446-34-6					5.0E-03	C	2.0E-02	C				1	1	Yes	Selenium Sulfide	7446-34-6					1.0E+02	2.3E+04		1.0E+02			
74051-80-2					9.0E-02	I					4.38	1	0.9	Yes	Sethoxydim	74051-80-2					1.8E+03	2.4E+03		1.0E+03		9.3E+00	
7631-86-9							3.0E-03	C				1	1	Yes	Silica (crystalline, respirable)	7631-86-9											
7440-22-4					5.0E-03	I						0.04	1	Yes	Silver	7440-22-4					1.0E+02	1.5E+03		9.4E+01		8.0E-01	
122-34-9	1.2E-01	H			5.0E-03	I					2.18	1	1	Yes	Simazine	122-34-9	6.5E-01	9.3E+00		6.1E-01	1.0E+02	1.6E+03		9.4E+01	4.0E+00	3.0E-04	2.0E-03
62476-59-9					3.0E-02	I					0.37	1	1	Yes	Sodium Acifluorfen	62476-59-9					2.6E+02	2.1E+05		2.6E+02		2.1E+00	
26628-22-8					4.0E-03	I						1	1	Yes	Sodium Azide	26628-22-8					8.0E+01	1.8E+04		8.0E+01			
10588-01-9	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Sodium Dichromate	10588-01-9	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
148-18-5	2.7E-01	H			3.0E-02	I					-1.43	1	1	Yes	Sodium Diethyldithiocarbamate	148-18-5	2.9E-01	8.5E+02		2.9E-01	6.0E+02	1.9E+06		6.0E+02		1.8E-04	
7681-49-4					5.0E-02	A	1.3E-02	C				1	1	Yes	Sodium Fluoride	7681-49-4					1.0E+03	2.3E+05		1.0E+03			
62-74-8					2.0E-05	I					-3.78	1	1	No	Sodium Fluoroacetate	62-74-8					4.0E-01			4.0E-01		8.1E-05	
13718-26-8					1.0E-03	H						1	1	Yes	Sodium Metavanadate	13718-26-8					2.0E+01	4.6E+03		2.0E+01			
13472-45-2					8.0E-04	P						1	1	Yes	Sodium Tungstate	13472-45-2					1.6E+01	3.6E+03		1.6E+01			
10213-10-2					8.0E-04	P						1	1	Yes	Sodium Tungstate Dihydrate	10213-10-2					1.6E+01	3.6E+03		1.6E+01			
961-11-5	2.4E-02	H			3.0E-02	I					3.53	1	0.9	Yes	Stirofos (Tetrachlorovinphos)	961-11-5	3.2E+00	1.9E+01		2.8E+00	6.0E+02	3.8E+03		5.2E+02		8.2E-03	
7789-06-2	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		0.025	1	Yes	Strontium Chromate	7789-06-2	5.0E-02	2.3E-01		4.1E-02	4.0E+02	2.3E+03		3.4E+02			
7440-24-6					6.0E-01	I						1	1	Yes	Strontium, Stable	7440-24-6					1.2E+04	2.7E+06		1.2E+04		4.2E+02	
57-24-9					3.0E-04	I					1.93	1	1	Yes	Strychnine	57-24-9					6.0E+00	3.2E+02		5.9E+00		6.5E-02	
100-42-5					2.0E-01	I	1.0E+00	I	V		2.95	1	1	Yes	Styrene	100-42-5					4.0E+03	1.0E+04	2.1E+03	1.2E+03	1.0E+02	1.3E+00	1.1E-01
NA					3.0E-03	P					3.1	1	1	Yes	Styrene-Acrylonitrile (SAN) Trimer	NA					6.0E+01	2.4E+02		4.8E+01			
126-33-0					1.0E-03	P	2.0E-03	X			-0.77	1	1	Yes	Sulfolane	126-33-0					2.0E+01	1.7E+04		2.0E+01		4.4E-03	
80-07-9					8.0E-04	P					3.9	1	0.9	Yes	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					1.6E+01	3.5E+01		1.1E+01		6.5E-02	
7446-11-9							1.0E-03	C	V			1	1	Yes	Sulfur Trioxide	7446-11-9							2.1E+00	2.1E+00			
7664-93-9							1.0E-03	C				1	1	Yes	Sulfuric Acid	7664-93-9											
140-57-8	2.5E-02	I	7.1E-06	I	5.0E-02	H					4.82	1	0.8	Yes	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	3.1E+00	2.3E+00		1.3E+00	1.0E+03	8.2E+02		4.5E+02		1.5E-02	
21564-17-0					3.0E-02	H					3.3	1	0.9	Yes	TCMTB	21564-17-0					6.0E+02	2.4E+03		4.8E+02		3.3E+00	
34014-18-1					7.0E-02	I					1.79	1	1	Yes	Tebuthiuron	34014-18-1					1.4E+03	4.7E+04		1.4E+03		3.9E-01	
3383-96-8					2.0E-02	H					5.96	1	0.7	No	Temephos	3383-96-8					4.0E+02			4.0E+02		7.6E+01	
5902-51-2					1.3E-02	I					1.89	1	1	Yes	Terbacil	5902-51-2					2.6E+02	7.0E+03		2.5E+02		7.5E-02	
13071-79-9					2.5E-05	H			V		4.48	1	0.9	Yes	Terbufos	13071-79-9					5.0E-01	4.5E-01		2.4E-01		5.2E-04	
886-50-0					1.0E-03	I					3.74	1	0.9	Yes	Terbutryn	886-50-0					2.0E+01	4.1E+01		1.3E+01		1.9E-02	
5436-43-1					1.0E-04	I					6.77	1	0.6	No	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					2.0E+00			2.0E+00		5.4E-02	
95-94-3					3.0E-04	I			V		4.64	1	1	Yes	Tetrachlorobenzene, 1,2,4,5-	95-94-3					6.0E+00	2.4E+00		1.7E+00		7.9E-03	
630-20-6	2.6E-02	I	7.4E-06	I	3.0E-02	I			V		2.93	1	1	Yes	Tetrachloroethane, 1,1,1,2-	630-20-6	3.0E+00	1.1E+01	7.6E-01	5.7E-01	6.0E+02	2.4E+03		4.8E+02		2.2E-04	
79-34-5	2.0E-01	I	5.8E-05	C	2.0E-02	I			V		2.39	1	1	Yes	Tetrachloroethane, 1,1,2,2-	79-34-5	3.9E-01	3.3E+00	9.7E-02	7.6E-02	4.0E+02	3.6E+03		3.6E+02		3.0E-05	
127-18-4	2.1E-03	I	2.6E-07	I	6.0E-03	I	4.0E-02	I	V		3.4	1	1	Yes	Tetrachloroethylene	127-18-4	3.7E+01	6.5E+01	2.2E+01	1.1E+01	1.2E+02	2.3E+02	8.3E+01	4.1E+01	5.0E+00	5.1E-03	2.3E-03
58-90-2					3.0E-02	I					4.45	1	0.9	Yes	Tetrachlorophenol, 2,3,4,6-	58-90-2	6.0E+02	3.9E+02						2.4E+02		1.8E-01	
5216-25-1	2.0E+01	H							V		4.54	1	0.9	Yes	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.9E-03	2.0E-03		1.3E-03						4.5E-06	
3689-24-5					5.0E-04	I					3.99	1	0.9	Yes	Tetraethyl Dithiopyrophosphate	3689-24-5					1.0E+01	2.4E+01		7.1E+00		5.2E-03	
811-97-2							8.0E+01	I	V		1.68	1	1	Yes	Tetrafluoroethane, 1,1,1,2-	811-97-2							1.7E+05	1.7E+05		9.3E+01	
479-45-8					2.0E-03	P					1.64	1	1	Yes	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					4.0E+01	2.5E+03		3.9E+01		3.7E-01	
1314-32-5					2.0E-05	S						1	0.9	Yes	Thallic Oxide	1314-32-5					4.0E-01	9.1E+01		4.0E-01			
10102-45-1					1.0E-05	X						1	1	Yes	Thallium (I) Nitrate	10102-45-1					2.0E-01	4.6E+01		2.0E-01			
7440-28-0					1.0E-05	X						1	1	Yes	Thallium (Soluble Salts)	7440-28-0					2.0E-01	4.6E+01		2.0E-01	2.0E+00	1.4E-02	1.4E-01
563-68-8					1.0E-05	X			V		-0.17	1	1	Yes	Thallium Acetate	563-68-8					2.0E-01	1.7E+02		2.0E-01		4.1E-05	
6533-73-9					2.0E-05	X			V		-0.86	1	1	Yes	Thallium Carbonate	6533-73-9					4.0E-01	3.7E+03		4.0E-01		8.3E-05	
7791-12-0					1.0E-05	X						1	1	Yes	Thallium Chloride	7791-12-0					2.0E-01	4.6E+01		2.0E-01			
12039-52-0					1.0E-05	S						1	1	Yes	Thallium Selenite	12039-52-0					2.0E-01	4.6E+01		2.0E-01			
7446-18-6					2.0E-05	X						1	0.9	Yes	Thallium Sulfate	7446-18-6					4.0E-01	9.1E+01		4.0E-01			
79277-27-3					1.3E-02	I					1.56	1	1	Yes	Thifensulfuron-methyl	79277-27-3					2.6E+02	3.5E+04		2.6E+02		7.8E-02	
28249-77-6					1.0E-02	I					3.4	1	0.9	Yes	Thiobencarb	28249-77-6					2.0E+02	7.7E+02		1.6E+02		5.5E-01	
111-48-8					7.0E-02	X					-0.63	1	1	Yes	Thiodiglycol	111-48-8					1.4E+03	9.2E+05		1.4E+03		2.8E-01	
39196-18-4					3.0E-04	H					2.16	1	1	Yes	Thiofanox	39196-18-4					6.0E+00	4.4E+01		5.3E+00		1.8E-03	
23564-05-8					8.0E-02	I					1.4	1	1	Yes	Thiophanate, Methyl	23564-05-8					1.6E+03	2.1E+05		1.6E+03		1.4E+00	
137-26-8					5.0E-03	I					1.73	1	1	Yes	Thiram	137-26-8					1.0E+02	4.0E+03		9.8E+01		1.4E-01	
7440-31-5					6.0E-01	H						1	1	Yes	Tin	7440-31-5					1.2E+04	2.7E+06		1.2E+04		3.0E+03	
7550-45-0							1.0E-04	A	V			1	1	Yes	Titanium Tetrachloride	7550-45-0							2.1E-01	2.1E-01			
108-88-3					8.0E-02	I	5.0E+00	I	V		2.73	1	1	Yes	Toluene	108-88-3					1.6E+03	5.3E+03	1.0E+04	1.1E+03	1.0E+03	7.6E-01	6.9E-01
584-84-9			1.1E-05	C			8.0E-06	C	V		3.74	1	1	Yes	Toluene-2,4-diisocyante	584-84-9			5.1E-01	5.1E-01			1.7E-02	1.7E-02		2.5E-04	
95-70-5	1.8E-01	X			2.0E-04	X					0.16	1	1	Yes	Toluene-2,5-diamine	95-70-5	4.3E-01	8.2E+01		4.3E-01	4.0E+00	8.3E+02		4.0E+00		1.3E-04	
91-08-7			1.1E-05	C			8.0E-06	C	V		3.74	1	1	Yes	Toluene-2,6-diisocyante	91-08-7			5.1E-01	5.1E-01			1.7E-02	1.7E-02		2.6E-04	
95-53-4	1.6E-02	P	5.1E-05	C							1.32	1	1	Yes	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.9E+00	1.4E+02		4.7E+00						2.0E-03	
106-49-0	3.0E-02	P			4.0E-03	X					1.39	1	1	Yes	Toluidine, p-	106-49-0	2.6E+00	6.8E+01		2.5E+00	8.0E+01	2.3E+03		7.7E+01		1.1E-03	
NA					3.0E+00	P			V		6.1	1	1	No	Total Petroleum Hydrocarbons (Aliphatic High)	NA					6.0E+04			6.0E+04		2.4E+03	
NA							6.0E-01	P	V		3.9	1	1	Yes	Total Petroleum Hydrocarbons (Aliphatic Low)	NA							1.3E+03	1.3E+03		8.8E+00	
NA					1.0E-02	X	1.0E-01	P	V		5.65	1	1	No	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					2.0E+02		2.1E+02	1.0E+02		1.5E+00	
NA					4.0E-02	P					5.16	1	1	No	Total Petroleum Hydrocarbons (Aromatic High)	NA					8.0E+02			8.0E+02		8.9E+01	
NA					4.0E-03	P	3.0E-02	P	V		2.13	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Low)	NA					8.0E+01	6.1E+02	6.3E+01	3.3E+01		1.7E-02	
NA					4.0E-03	P	3.0E-03	P	V		3.58	1	1	Yes	Total Petroleum Hydrocarbons (Aromatic Medium)	NA					8.0E+01	9.0E+01	6.3E+00	5.5E+00		2.3E-02	
8001-35-2	1.1E+00	I	3.2E-04	I							5.9	1	0.8	No	Toxaphene	8001-35-2	7.1E-02			7.1E-02					3.0E+00	1.1E-02	4.6E-01
66841-25-6					7.5E-03	I					7.56	1	0.5	No	Tralomethrin	66841-25-6					1.5E+02			1.5E+02		5.8E+01	
688-73-3					3.0E-04	A			V		4.1	1	0.9	Yes	Tri-n-butyltin	688-73-3					6.0E+00	9.9E+00		3.7E+00		8.2E-02	
102-76-1					8.0E+01	X					0.25	1	1	Yes	Triacetin	102-76-1					1.6E+06	5.3E+08		1.6E+06		4.5E+02	
43121-43-3					3.0E-02	I					2.77	1	1	Yes	Triadimefon	43121-43-3					6.0E+02	6.9E+03		5.5E+02		4.4E-01	
2303-17-5					1.3E-02	I			V		4.6	1	0.9	Yes	Triallate	2303-17-5					2.6E+02	2.2E+02		1.2E+02		2.6E-01	
82097-50-5					1.0E-02	I					1.1	1	1	Yes	Triasulfuron	82097-50-5					2.0E+02	6.0E+04		2.0E+02		2.1E-01	
101200-48-0					8.0E-03	I					0.78	1	1	Yes	Tribenuron-methyl	101200-48-0					1.6E+02	5.0E+03		1.6E+02		6.1E-02	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PRPTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer CHILD Hazard Index (HI) = 1					Protection of Groundwater SSL	
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	LOGP	GIABS	FA	In EPD?	Analyte	CAS No.	Ingestion SL TR=1E-06 (µg/L)	Dermal SL TR=1E-06 (µg/L)	Inhalation SL TR=1E-06 (µg/L)	Carcinogenic SL TR=1E-06 (µg/L)	Ingestion SL Child THQ=1 (µg/L)	Dermal SL Child THQ=1 (µg/L)	Inhalation SL Child THQ=1 (µg/L)	Noncarcinogenic SL Child THI=1 (µg/L)	MCL (ug/L)	Risk-based SSL (mg/kg)	MCL-based SSL (mg/kg)
615-54-3					5.0E-03	I			V		4.66	1	0.9	Yes	Tribromobenzene, 1,2,4-	615-54-3					1.0E+02	8.1E+01		4.5E+01		6.4E-02	
126-73-8	9.0E-03	P			1.0E-02	P					4	1	0.9	Yes	Tributyl Phosphate	126-73-8	8.7E+00	1.3E+01		5.2E+00	2.0E+02	3.3E+02		1.2E+02		2.5E-02	
NA					3.0E-04	P						1	0	No	Tributyltin Compounds	NA					6.0E+00			6.0E+00			
56-35-9					3.0E-04	I					4.05	1	1	Yes	Tributyltin Oxide	56-35-9					6.0E+00	9.5E+01		5.7E+00		2.9E+02	
76-13-1					3.0E+01	I	3.0E+01	H	V		3.16	1	1	Yes	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					6.0E+05	1.9E+06	6.3E+04	5.5E+04		1.4E+02	
76-03-9	7.0E-02	I			2.0E-02	I					1.33	1	1	Yes	Trichloroacetic Acid	76-03-9	1.1E+00	4.6E+01		1.1E+00	4.0E+02	1.8E+04		3.9E+02	6.0E+01	2.2E-04	1.2E-02
33663-50-2	2.9E-02	H									-0.67	1	1	Yes	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.7E+00	3.7E+03		2.7E+00						7.4E-03	
634-93-5	7.0E-03	X			3.0E-05	X					3.52	1	1	Yes	Trichloroaniline, 2,4,6-	634-93-5	1.1E+01	2.0E+01		7.1E+00	6.0E-01	1.2E+00		4.0E-01		3.6E-03	
87-61-6					8.0E-04	X			V		4.05	1	1	Yes	Trichlorobenzene, 1,2,3-	87-61-6					1.6E+01	1.3E+01		7.0E+00		2.1E-02	
120-82-1	2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.02	1	1	Yes	Trichlorobenzene, 1,2,4-	120-82-1	2.7E+00	2.0E+00		1.2E+00	2.0E+02	1.6E+02	4.2E+00	4.0E+00	7.0E+01	3.4E-03	2.0E-01
71-55-6					2.0E+00	I	5.0E+00	I	V		2.49	1	1	Yes	Trichloroethane, 1,1,1-	71-55-6					4.0E+04	2.5E+05	1.0E+04	8.0E+03	2.0E+02	2.8E+00	7.0E-02
79-00-5	5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		1.89	1	1	Yes	Trichloroethane, 1,1,2-	79-00-5	1.4E+00	2.0E+01	3.5E-01	2.8E-01	8.0E+01	1.3E+03	4.2E-01	4.1E-01	5.0E+00	8.9E-05	1.6E-03
79-01-6	4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	2.42	1	1	Yes	Trichloroethylene	79-01-6	1.2E+00	7.4E+00	9.6E-01	4.9E-01	1.0E+01	6.9E+01	4.2E+00	2.8E+00	5.0E+00	1.8E-04	1.8E-03
75-69-4					3.0E-01	I			V		2.53	1	1	Yes	Trichlorofluoromethane	75-69-4					6.0E+03	3.6E+04		5.2E+03		3.3E+00	
95-95-4					1.0E-01	I					3.72	1	1	Yes	Trichlorophenol, 2,4,5-	95-95-4					2.0E+03	2.9E+03		1.2E+03		4.0E+00	
88-06-2	1.1E-02	I	3.1E-06	I	1.0E-03	P					3.69	1	1	Yes	Trichlorophenol, 2,4,6-	88-06-2	7.1E+00	9.8E+00		4.1E+00	2.0E+01	3.0E+01		1.2E+01		4.0E-03	
93-76-5					1.0E-02	I					3.31	1	0.9	Yes	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					2.0E+02	8.7E+02		1.6E+02		6.8E-02	
93-72-1					8.0E-03	I					3.8	1	0.9	Yes	Trichlorophenoxypropionic acid, 2,4,5-	93-72-1					1.6E+02	3.6E+02		1.1E+02	5.0E+01	6.1E-02	2.8E-02
598-77-6					5.0E-03	I			V		2.43	1	1	Yes	Trichloropropane, 1,1,2-	598-77-6					1.0E+02	7.5E+02		8.8E+01		3.5E-02	
96-18-4	3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	2.27	1	1	Yes	Trichloropropane, 1,2,3-	96-18-4	8.4E-04	7.3E-03		7.5E-04	8.0E+01	7.7E+02	6.3E-01	6.2E-01		3.2E-07	
96-19-5					3.0E-03	X	3.0E-04	P	V		2.78	1	1	Yes	Trichloropropene, 1,2,3-	96-19-5					6.0E+01	2.6E+02	6.3E-01	6.2E-01		3.1E-04	
1330-78-5					2.0E-02	A					5.11	1	0.8	Yes	Tricresyl Phosphate (TCP)	1330-78-5					4.0E+02	2.6E+02		1.6E+02		1.5E+01	
58138-08-2					3.0E-03	I					5.18	1	0.8	Yes	Tridiphane	58138-08-2					6.0E+01	2.6E+01		1.8E+01		1.3E-01	
121-44-8							7.0E-03	I	V		1.45	1	1	Yes	Triethylamine	121-44-8							1.5E+01	1.5E+01		4.4E-03	
112-27-6					2.0E+00	P					-1.75	1	1	Yes	Triethylene Glycol	112-27-6					4.0E+04	1.8E+08		4.0E+04		8.8E+00	
420-46-2							2.0E+01	P	V		1.74	1	1	Yes	Trifluoroethane, 1,1,1-	420-46-2							4.2E+04	4.2E+04		1.3E+02	
1582-09-8	7.7E-03	I			7.5E-03	I			V		5.34	1	0.8	Yes	Trifluralin	1582-09-8	1.0E+01	3.4E+00		2.6E+00	1.5E+02	5.5E+01		4.0E+01		8.4E-02	
512-56-1	2.0E-02	P			1.0E-02	P					-0.65	1	1	Yes	Trimethyl Phosphate	512-56-1	3.9E+00	2.8E+03		3.9E+00	2.0E+02	1.6E+05		2.0E+02		8.6E-04	
526-73-8							5.0E-03	P	V		3.66	1	1	Yes	Trimethylbenzene, 1,2,3-	526-73-8							1.0E+01	1.0E+01		1.5E-02	
95-63-6							7.0E-03	P	V		3.63	1	1	Yes	Trimethylbenzene, 1,2,4-	95-63-6							1.5E+01	1.5E+01		2.1E-02	
108-67-8					1.0E-02	X			V		3.42	1	1	Yes	Trimethylbenzene, 1,3,5-	108-67-8					2.0E+02	2.8E+02		1.2E+02		1.7E-01	
25167-70-8					1.0E-02	X			V		4.08	1	1	Yes	Trimethylpentene, 2,4,4-	25167-70-8					2.0E+02	9.6E+01		6.5E+01		2.2E-01	
99-35-4					3.0E-02	I					1.18	1	1	Yes	Trinitrobenzene, 1,3,5-	99-35-4					6.0E+02	4.7E+04		5.9E+02		2.1E+00	
118-96-7	3.0E-02	I			5.0E-04	I					1.6	1	1	Yes	Trinitrotoluene, 2,4,6-	118-96-7	2.6E+00	1.1E+02		2.5E+00	1.0E+01	4.5E+02		9.8E+00		1.5E-02	
791-28-6					2.0E-02	P					2.83	1	1	Yes	Triphenylphosphine Oxide	791-28-6					4.0E+02	3.8E+03		3.6E+02		1.5E+00	
13674-87-8					2.0E-02	A					3.65	1	0.9	Yes	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					4.0E+02	3.2E+03		3.6E+02		8.0E+00	
13674-84-5					1.0E-02	X					2.59	1	1	Yes	Tris(1-chloro-2-propyl)phosphate	13674-84-5					2.0E+02	3.8E+03		1.9E+02		6.5E-01	
126-72-7	2.3E+00	C	6.6E-04	C					V		4.29	1	1	No	Tris(2,3-dibromopropyl)phosphate	126-72-7	3.4E-02		8.5E-03	6.8E-03						1.3E-04	
115-96-8	2.0E-02	P			7.0E-03	P					1.44	1	1	Yes	Tris(2-chloroethyl)phosphate	115-96-8	3.9E+00	3.0E+02		3.8E+00	1.4E+02	1.2E+04		1.4E+02		3.8E-03	
78-42-2	3.2E-03	P			1.0E-01	P					9.49	1	0	No	Tris(2-ethylhexyl)phosphate	78-42-2	2.4E+01			2.4E+01	2.0E+03			2.0E+03		1.2E+02	
7440-33-7					8.0E-04	P						1	1	Yes	Tungsten	7440-33-7					1.6E+01	3.6E+03		1.6E+01		2.4E+00	
NA					3.0E-03	I	4.0E-05	A				1	1	Yes	Uranium (Soluble Salts)	NA					6.0E+01	1.4E+04		6.0E+01	3.0E+01	2.7E+01	1.4E+01
51-79-6	1.0E+00	C	2.9E-04	C						M	-0.15	1	1	Yes	Urethane	51-79-6	2.5E-02	6.1E+00		2.5E-02						5.6E-06	
1314-62-1			8.3E-03	P	9.0E-03	I	7.0E-06	P				0.026	1	Yes	Vanadium Pentoxide	1314-62-1					1.8E+02	1.1E+03		1.5E+02			
7440-62-2					5.0E-03	S	1.0E-04	A				0.026	1	Yes	Vanadium and Compounds	7440-62-2					1.0E+02	6.0E+02		8.6E+01		8.6E+01	
1929-77-7					1.0E-03	I			V		3.84	1	1	Yes	Vernolate	1929-77-7					2.0E+01	2.5E+01		1.1E+01		8.9E-03	
50471-44-8					2.5E-02	I					3.1	1	0.9	Yes	Vinclozolin	50471-44-8					5.0E+02	3.7E+03		4.4E+02		3.4E-01	
108-05-4					1.0E+00	H	2.0E-01	I	V		0.73	1	1	Yes	Vinyl Acetate	108-05-4					2.0E+04	1.4E+06	4.2E+02	4.1E+02		8.7E-02	
593-60-2			3.2E-05	H			3.0E-03	I	V		1.57	1	1	Yes	Vinyl Bromide	593-60-2			1.8E-01	1.8E-01			6.3E+00	6.3E+00		5.1E-05	
75-01-4	7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	1.38	1	1	Yes	Vinyl Chloride	75-01-4	2.1E-02	2.8E-01	3.4E-01	1.9E-02	6.0E+01	8.9E+02	2.1E+02	4.4E+01	2.0E+00	6.5E-06	6.9E-04
81-81-2					3.0E-04	I					2.7	1	1	Yes	Warfarin	81-81-2					6.0E+00	8.4E+01		5.6E+00		5.9E-03	
106-42-3					2.0E-01	S	1.0E-01	S	V		3.15	1	1	Yes	Xylene, P-	106-42-3					4.0E+03	7.6E+03	2.1E+02	1.9E+02		1.9E-01	
108-38-3					2.0E-01	S	1.0E-01	S	V		3.2	1	1	Yes	Xylene, m-	108-38-3					4.0E+03	7.1E+03	2.1E+02	1.9E+02		1.9E-01	
95-47-6					2.0E-01	S	1.0E-01	S	V		3.12	1	1	Yes	Xylene, o-	95-47-6					4.0E+03	8.0E+03	2.1E+02	1.9E+02		1.9E-01	
1330-20-7					2.0E-01	I	1.0E-01	I	V		3.16	1	1	Yes	Xylenes	1330-20-7					4.0E+03	7.5E+03	2.1E+02	1.9E+02	1.0E+04	1.9E-01	9.9E+00
1314-84-7					3.0E-04	I						1	1	Yes	Zinc Phosphide	1314-84-7					6.0E+00	2.3E+03		6.0E+00			
7440-66-6					3.0E-01	I						1	1	Yes	Zinc and Compounds	7440-66-6					6.0E+03	2.3E+06		6.0E+03		3.7E+02	
12122-67-7					5.0E-02	I					1.3	1	1	Yes	Zineb	12122-67-7					1.0E+03	9.7E+04		9.9E+02		2.9E+00	
7440-67-7					8.0E-05	X						1	1	Yes	Zirconium	7440-67-7					1.6E+00	3.6E+02		1.6E+00		4.8E+00	

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD$_o$ (mg/kg-day)	key	RfC$_i$ (mg/m^3)	key	vol	muta-gen	C$_{sat}$ (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
30560-19-1	8.7E-03	I			4.0E-03	I						1.4E+09		1	0.1	Acephate	30560-19-1	8.0E+01	2.8E+02		6.2E+01	3.1E+02	1.3E+03		2.5E+02
75-07-0			2.2E-06	I			9.0E-03	I	V		1.1E+05	1.4E+09	8.7E+03	1		Acetaldehyde	75-07-0			1.1E+01	1.1E+01			8.2E+01	8.2E+01
34256-82-1					2.0E-02	I						1.4E+09		1	0.1	Acetochlor	34256-82-1					1.6E+03	6.6E+03		1.3E+03
67-64-1					9.0E-01	I	3.1E+01	A	V		1.1E+05	1.4E+09	1.4E+04	1		Acetone	67-64-1					7.0E+04		4.4E+05	6.1E+04
75-86-5							2.0E-03	X				1.4E+09		1	0.1	Acetone Cyanohydrin	75-86-5							2.8E+06	2.8E+06
75-05-8							6.0E-02	I	V		1.3E+05	1.4E+09	1.3E+04	1		Acetonitrile	75-05-8							8.1E+02	8.1E+02
98-86-2					1.0E-01	I			V		2.5E+03	1.4E+09	6.0E+04	1		Acetophenone	98-86-2					7.8E+03			7.8E+03
53-96-3	3.8E+00	C	1.3E-03	C								1.4E+09		1	0.1	Acetylaminofluorene, 2-	53-96-3	1.8E-01	6.5E-01	2.9E+03	1.4E-01				
107-02-8					5.0E-04	I	2.0E-05	I	V		2.3E+04	1.4E+09	6.9E+03	1		Acrolein	107-02-8					3.9E+01		1.4E-01	1.4E-01
79-06-1	5.0E-01	I	1.0E-04	I	2.0E-03	I	6.0E-03	I		M		1.4E+09		1	0.1	Acrylamide	79-06-1	3.1E-01	1.2E+00	1.4E+04	2.4E-01	1.6E+02	6.6E+02	8.5E+06	1.3E+02
79-10-7					5.0E-01	I	1.0E-03	I	V		1.1E+05	1.4E+09	9.5E+04	1		Acrylic Acid	79-10-7					3.9E+04		9.9E+01	9.9E+01
107-13-1	5.4E-01	I	6.8E-05	I	4.0E-02	A	2.0E-03	I	V		1.1E+04	1.4E+09	7.7E+03	1		Acrylonitrile	107-13-1	1.3E+00		3.2E-01	2.5E-01	3.1E+03		1.6E+01	1.6E+01
111-69-3							6.0E-03	P				1.4E+09		1	0.1	Adiponitrile	111-69-3							8.5E+06	8.5E+06
15972-60-8	5.6E-02	C			1.0E-02	I						1.4E+09		1	0.1	Alachlor	15972-60-8	1.2E+01	4.4E+01		9.7E+00	7.8E+02	3.3E+03		6.3E+02
116-06-3					1.0E-03	I						1.4E+09		1	0.1	Aldicarb	116-06-3					7.8E+01	3.3E+02		6.3E+01
1646-88-4					1.0E-03	I						1.4E+09		1	0.1	Aldicarb Sulfone	1646-88-4					7.8E+01	3.3E+02		6.3E+01
1646-87-3												1.4E+09		1	0.1	Aldicarb sulfoxide	1646-87-3								
309-00-2	1.7E+01	I	4.9E-03	I	3.0E-05	I			V			1.4E+09	1.7E+06	1		Aldrin	309-00-2	4.1E-02		9.8E-01	3.9E-02	2.3E+00			2.3E+00
107-18-6					5.0E-03	I	1.0E-04	X	V		1.1E+05	1.4E+09	3.4E+04	1		Allyl Alcohol	107-18-6					3.9E+02		3.6E+00	3.5E+00
107-05-1	2.1E-02	C	6.0E-06	C			1.0E-03	I	V		1.4E+03	1.4E+09	1.6E+03	1		Allyl Chloride	107-05-1	3.3E+01		7.4E-01	7.2E-01			1.7E+00	1.7E+00
7429-90-5					1.0E+00	P	5.0E-03	P				1.4E+09		1		Aluminum	7429-90-5					7.8E+04		7.1E+06	7.7E+04
20859-73-8					4.0E-04	I						1.4E+09		1		Aluminum Phosphide	20859-73-8					3.1E+01			3.1E+01
834-12-8					9.0E-03	I						1.4E+09		1	0.1	Ametryn	834-12-8					7.0E+02	3.0E+03		5.7E+02
92-67-1	2.1E+01	C	6.0E-03	C								1.4E+09		1	0.1	Aminobiphenyl, 4-	92-67-1	3.3E-02	1.2E-01	6.4E+02	2.6E-02				
591-27-5					8.0E-02	P						1.4E+09		1	0.1	Aminophenol, m-	591-27-5					6.3E+03	2.6E+04		5.1E+03
123-30-8					2.0E-02	P						1.4E+09		1	0.1	Aminophenol, p-	123-30-8					1.6E+03	6.6E+03		1.3E+03
33089-61-1					2.5E-03	I						1.4E+09		1	0.1	Amitraz	33089-61-1					2.0E+02	8.2E+02		1.6E+02
7664-41-7							1.0E-01	I	V					1		Ammonia	7664-41-7								
7773-06-0					2.0E-01	I						1.4E+09		1		Ammonium Sulfamate	7773-06-0					1.6E+04			1.6E+04
75-85-4							3.0E-03	X	V		1.4E+04	1.4E+09	2.6E+04	1		Amyl Alcohol, tert-	75-85-4							8.2E+01	8.2E+01
62-53-3	5.7E-03	I	1.6E-05	C	7.0E-03	P	1.0E-03	I				1.4E+09		1	0.1	Aniline	62-53-3	1.2E+02	4.3E+02	2.4E+06	9.5E+01	5.5E+02	2.3E+03	1.4E+06	4.4E+02
84-65-1	4.0E-02	R			2.0E-03	X						1.4E+09		1	0.1	Anthraquinone, 9,10-	84-65-1	1.7E+01	6.2E+01		1.4E+01	1.6E+02	6.6E+02		1.3E+02
7440-36-0					4.0E-04	I						1.4E+09		0.15		Antimony (metallic)	7440-36-0					3.1E+01			3.1E+01
1314-60-9					5.0E-04	H						1.4E+09		0.15		Antimony Pentoxide	1314-60-9					3.9E+01			3.9E+01
1332-81-6					4.0E-04	H						1.4E+09		0.15		Antimony Tetroxide	1332-81-6					3.1E+01			3.1E+01
1309-64-4							2.0E-04	I				1.4E+09		0.15		Antimony Trioxide	1309-64-4							2.8E+05	2.8E+05
7440-38-2	1.5E+00	I	4.3E-03	I	3.0E-04	I	1.5E-05	C				1.4E+09		1	0.03	Arsenic, Inorganic	7440-38-2	7.7E-01	5.5E+00	8.9E+02	6.8E-01	3.9E+01	3.3E+02	2.1E+04	3.5E+01
7784-42-1					3.5E-06	C	5.0E-05	I				1.4E+09		1		Arsine	7784-42-1					2.7E-01		7.1E+04	2.7E-01
3337-71-1					5.0E-02	I						1.4E+09		1	0.1	Asulam	3337-71-1					3.9E+03	1.6E+04		3.2E+03
1912-24-9	2.3E-03	C			3.5E-02	I						1.4E+09		1	0.1	Atrazine	1912-24-9	3.0E+00	1.1E+01		2.4E+00	2.7E+03	1.2E+04		2.2E+03
492-80-8	8.8E-01	C	2.6E-04	C								1.4E+09		1	0.1	Auramine	492-80-8	7.9E-01	2.8E+00	1.5E+04	6.2E-01				
65195-55-3					4.0E-04	I						1.4E+09		1	0.1	Avermectin B1	65195-55-3					3.1E+01	1.3E+02		2.5E+01
86-50-0					3.0E-03	A	1.0E-02	A				1.4E+09		1	0.1	Azinphos-methyl	86-50-0					2.3E+02	9.9E+02	1.4E+07	1.9E+02
103-33-3	1.1E-01	I	3.1E-05	I					V			1.4E+09	5.2E+05	1		Azobenzene	103-33-3	6.3E+00		4.7E+01	5.6E+00				
123-77-3					1.0E+00	P	7.0E-06	P				1.4E+09		1	0.1	Azodicarbonamide	123-77-3					7.8E+04	3.3E+05	9.9E+03	8.6E+03
7440-39-3					2.0E-01	I	5.0E-04	H				1.4E+09		0.07		Barium	7440-39-3					1.6E+04		7.1E+05	1.5E+04
10294-40-3	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Barium Chromate	10294-40-3	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
1861-40-1					3.0E-01	I			V			1.4E+09	3.1E+05	1		Benfluralin	1861-40-1					2.3E+04			2.3E+04
17804-35-2					5.0E-02	I						1.4E+09		1	0.1	Benomyl	17804-35-2					3.9E+03	1.6E+04		3.2E+03
83055-99-6					2.0E-01	I						1.4E+09		1	0.1	Bensulfuron-methyl	83055-99-6					1.6E+04	6.6E+04		1.3E+04
25057-89-0					3.0E-02	I						1.4E+09		1	0.1	Bentazon	25057-89-0					2.3E+03	9.9E+03		1.9E+03
100-52-7	4.0E-03	P			1.0E-01	I			V		1.2E+03	1.4E+09	2.3E+04	1		Benzaldehyde	100-52-7	1.7E+02			1.7E+02	7.8E+03			7.8E+03
71-43-2	5.5E-02	I	7.8E-06	I	4.0E-03	I	3.0E-02	I	V		1.8E+03	1.4E+09	3.5E+03	1		Benzene	71-43-2	1.3E+01		1.3E+00	1.2E+00	3.1E+02		1.1E+02	8.2E+01
6369-59-1	1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
108-98-5					1.0E-03	P			V		1.3E+03	1.4E+09	1.9E+04	1		Benzenethiol	108-98-5					7.8E+01			7.8E+01
92-87-5	2.3E+02	I	6.7E-02	I	3.0E-03	I				M		1.4E+09		1	0.1	Benzidine	92-87-5	6.7E-04	2.6E-03	2.1E+01	5.3E-04	2.3E+02	9.9E+02		1.9E+02
65-85-0					4.0E+00	I						1.4E+09		1	0.1	Benzoic Acid	65-85-0					3.1E+05	1.3E+06		2.5E+05
98-07-7	1.3E+01	I							V		3.2E+02	1.4E+09	6.8E+04	1		Benzotrichloride	98-07-7	5.3E-02			5.3E-02				
100-51-6					1.0E-01	P						1.4E+09		1	0.1	Benzyl Alcohol	100-51-6					7.8E+03	3.3E+04		6.3E+03
100-44-7	1.7E-01	I	4.9E-05	C	2.0E-03	P	1.0E-03	P	V		1.5E+03	1.4E+09	2.6E+04	1		Benzyl Chloride	100-44-7	4.1E+00		1.5E+00	1.1E+00	1.6E+02		2.7E+01	2.3E+01
7440-41-7			2.4E-03	I	2.0E-03	I	2.0E-05	I				1.4E+09		0.007		Beryllium and compounds	7440-41-7			1.6E+03	1.6E+03	1.6E+02		2.8E+04	1.6E+02
42576-02-3					9.0E-03	P						1.4E+09		1	0.1	Bifenox	42576-02-3					7.0E+02	3.0E+03		5.7E+02
82657-04-3					1.5E-02	I						1.4E+09		1	0.1	Biphenthrin	82657-04-3					1.2E+03	4.9E+03		9.5E+02
92-52-4	8.0E-03	I			5.0E-01	I	4.0E-04	X	V			1.4E+09	1.1E+05	1		Biphenyl, 1,1'-	92-52-4	8.7E+01			8.7E+01	3.9E+04		4.8E+01	4.7E+01
108-60-1					4.0E-02	I			V		1.0E+03	1.4E+09	3.5E+04	1		Bis(2-chloro-1-methylethyl) ether	108-60-1					3.1E+03			3.1E+03
111-91-1					3.0E-03	P						1.4E+09		1	0.1	Bis(2-chloroethoxy)methane	111-91-1					2.3E+02	9.9E+02		1.9E+02
111-44-4	1.1E+00	I	3.3E-04	I					V		5.1E+03	1.4E+09	4.3E+04	1		Bis(2-chloroethyl)ether	111-44-4	6.3E-01		3.6E-01	2.3E-01				
542-88-1	2.2E+02	I	6.2E-02	I					V		4.2E+03	1.4E+09	1.9E+03	1		Bis(chloromethyl)ether	542-88-1	3.2E-03		8.5E-05	8.3E-05				
80-05-7					5.0E-02	I						1.4E+09		1	0.1	Bisphenol A	80-05-7					3.9E+03	1.6E+04		3.2E+03
7440-42-8					2.0E-01	I	2.0E-02	H				1.4E+09		1		Boron And Borates Only	7440-42-8					1.6E+04		2.8E+07	1.6E+04
10294-34-5					2.0E+00	P	2.0E-02	P	V			1.4E+09		1		Boron Trichloride	10294-34-5					1.6E+05		2.8E+07	1.6E+05
7637-07-2					4.0E-02	C	1.3E-02	C	V			1.4E+09		1		Boron Trifluoride	7637-07-2					3.1E+03		1.8E+07	3.1E+03
15541-45-4	7.0E-01	I			4.0E-03	I						1.4E+09		1		Bromate	15541-45-4	9.9E-01			9.9E-01	3.1E+02			3.1E+02
107-04-0	2.0E+00	X	6.0E-04	X					V		2.4E+03	1.4E+09	5.9E+03	1		Bromo-2-chloroethane, 1-	107-04-0	3.5E-01		2.8E-02	2.6E-02				
108-86-1					8.0E-03	I	6.0E-02	I	V		6.8E+02	1.4E+09	8.4E+03	1		Bromobenzene	108-86-1					6.3E+02		5.2E+02	2.9E+02
74-97-5							4.0E-02	X	V		4.0E+03	1.4E+09	3.6E+03	1		Bromochloromethane	74-97-5							1.5E+02	1.5E+02
75-27-4	6.2E-02	I	3.7E-05	C	2.0E-02	I			V		9.3E+02	1.4E+09	4.0E+03	1		Bromodichloromethane	75-27-4	1.1E+01		3.0E-01	2.9E-01	1.6E+03			1.6E+03
75-25-2	7.9E-03	I	1.1E-06	I	2.0E-02	I			V		9.2E+02	1.4E+09	9.7E+03	1		Bromoform	75-25-2	8.8E+01		2.5E+01	1.9E+01	1.6E+03			1.6E+03
74-83-9					1.4E-03	I	5.0E-03	I	V		3.6E+03	1.4E+09	1.4E+03	1		Bromomethane	74-83-9					1.1E+02		7.3E+00	6.8E+00
2104-96-3					5.0E-03	H			V			1.4E+09	1.2E+05	1		Bromophos	2104-96-3					3.9E+02			3.9E+02
1689-84-5					2.0E-02	I						1.4E+09		1	0.1	Bromoxynil	1689-84-5					1.6E+03	6.6E+03		1.3E+03
1689-99-2					2.0E-02	I			V			1.4E+09	4.7E+05	1		Bromoxynil Octanoate	1689-99-2					1.6E+03			1.6E+03
106-99-0	3.4E+00	C	3.0E-05	I			2.0E-03	I	V		6.7E+02	1.4E+09	8.7E+02	1		Butadiene, 1,3-	106-99-0	2.0E-01		8.1E-02	5.8E-02			1.8E+00	1.8E+00
71-36-3					1.0E-01	I			V		7.6E+03	1.4E+09	3.0E+04	1		Butanol, N-	71-36-3					7.8E+03			7.8E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
78-92-2					2.0E+00	P	3.0E+01	P	V		2.1E+04	1.4E+09	2.9E+04	1		Butyl alcohol, sec-	78-92-2					1.6E+05		9.1E+05	1.3E+05
2008-41-5					5.0E-02	I			V			1.4E+09	8.6E+04	1		Butylate	2008-41-5					3.9E+03			3.9E+03
25013-16-5	2.0E-04	C	5.7E-08	C								1.4E+09		1	0.1	Butylated hydroxyanisole	25013-16-5	3.5E+03	1.2E+04	6.7E+07	2.7E+03				
128-37-0	3.6E-03	P			3.0E-01	P						1.4E+09		1	0.1	Butylated hydroxytoluene	128-37-0	1.9E+02	6.9E+02		1.5E+02	2.3E+04	9.9E+04		1.9E+04
104-51-8					5.0E-02	P			V		1.1E+02	1.4E+09	8.1E+03	1		Butylbenzene, n-	104-51-8					3.9E+03			3.9E+03
135-98-8					1.0E-01	X			V		1.5E+02	1.4E+09	7.4E+03	1		Butylbenzene, sec-	135-98-8					7.8E+03			7.8E+03
98-06-6					1.0E-01	X			V		1.8E+02	1.4E+09	7.4E+03	1		Butylbenzene, tert-	98-06-6					7.8E+03			7.8E+03
75-60-5					2.0E-02	A						1.4E+09		1	0.1	Cacodylic Acid	75-60-5					1.6E+03	6.6E+03		1.3E+03
7440-43-9			1.8E-03	I	1.0E-03	I	1.0E-05	A				1.4E+09		0.025	0.001	Cadmium (Diet)	7440-43-9			2.1E+03	2.1E+03	7.8E+01	8.2E+02	1.4E+04	7.1E+01
7440-43-9			1.8E-03	I	5.0E-04	I	1.0E-05	A						0.05	0.001	Cadmium (Water)	7440-43-9								
13765-19-0	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Calcium Chromate	13765-19-0	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
105-60-2					5.0E-01	I	2.2E-03	C				1.4E+09		1	0.1	Caprolactam	105-60-2					3.9E+04	1.6E+05	3.1E+06	3.1E+04
2425-06-1	1.5E-01	C	4.3E-05	C	2.0E-03	I						1.4E+09		1	0.1	Captafol	2425-06-1	4.6E+00	1.6E+01	8.9E+04	3.6E+00	1.6E+02	6.6E+02		1.3E+02
133-06-2	2.3E-03	C	6.6E-07	C	1.3E-01	I						1.4E+09		1	0.1	Captan	133-06-2	3.0E+02	1.1E+03	5.8E+06	2.4E+02	1.0E+04	4.3E+04		8.2E+03
63-25-2					1.0E-01	I						1.4E+09		1	0.1	Carbaryl	63-25-2					7.8E+03	3.3E+04		6.3E+03
1563-66-2					5.0E-03	I						1.4E+09		1	0.1	Carbofuran	1563-66-2					3.9E+02	1.6E+03		3.2E+02
75-15-0					1.0E-01	I	7.0E-01	I	V		7.4E+02	1.4E+09	1.2E+03	1		Carbon Disulfide	75-15-0					7.8E+03		8.5E+02	7.7E+02
56-23-5	7.0E-02	I	6.0E-06	I	4.0E-03	I	1.0E-01	I	V		4.6E+02	1.4E+09	1.5E+03	1		Carbon Tetrachloride	56-23-5	9.9E+00		7.0E-01	6.5E-01	3.1E+02		1.6E+02	1.0E+02
463-58-1					1.0E-01	P	V				5.9E+03	1.4E+09	6.5E+02	1		Carbonyl Sulfide	463-58-1							6.7E+01	6.7E+01
55285-14-8					1.0E-02	I						1.4E+09		1	0.1	Carbosulfan	55285-14-8					7.8E+02	3.3E+03		6.3E+02
5234-68-4					1.0E-01	I						1.4E+09		1	0.1	Carboxin	5234-68-4					7.8E+03	3.3E+04		6.3E+03
1306-38-3							9.0E-04	I				1.4E+09		1		Ceric oxide	1306-38-3							1.3E+06	1.3E+06
302-17-0					1.0E-01	I			V			1.4E+09	1.5E+05	1		Chloral Hydrate	302-17-0					7.8E+03			7.8E+03
133-90-4					1.5E-02	I						1.4E+09		1	0.1	Chloramben	133-90-4					1.2E+03	4.9E+03		9.5E+02
118-75-2	4.0E-01	H										1.4E+09		1	0.1	Chloranil	118-75-2	1.7E+00	6.1E+00		1.3E+00				
12789-03-6	3.5E-01	I	1.0E-04	I	5.0E-04	I	7.0E-04	I	V			1.4E+09	1.5E+06	1	0.04	Chlordane	12789-03-6	2.0E+00	1.8E+01	4.3E+01	1.7E+00	3.9E+01	4.1E+02	1.1E+03	3.5E+01
143-50-0	1.0E+01	I	4.6E-03	C	3.0E-04	I						1.4E+09		1	0.1	Chlordecone (Kepone)	143-50-0	7.0E-02	2.5E-01	8.3E+02	5.4E-02	2.3E+01	9.9E+01		1.9E+01
470-90-6					7.0E-04	A						1.4E+09		1	0.1	Chlorfenvinphos	470-90-6					5.5E+01	2.3E+02		4.4E+01
90982-32-4					2.0E-02	I						1.4E+09		1	0.1	Chlorimuron, Ethyl-	90982-32-4					1.6E+03	6.6E+03		1.3E+03
7782-50-5					1.0E-01	I	1.5E-04	A	V		2.8E+03	1.4E+09	1.2E+03	1		Chlorine	7782-50-5					7.8E+03		1.8E-01	1.8E-01
10049-04-4					3.0E-02	I	2.0E-04	I	V			1.4E+09		1		Chlorine Dioxide	10049-04-4					2.3E+03		2.8E+05	2.3E+03
7758-19-2					3.0E-02	I						1.4E+09		1		Chlorite (Sodium Salt)	7758-19-2					2.3E+03			2.3E+03
75-68-3							5.0E+01	I	V		1.2E+03	1.4E+09	1.0E+03	1		Chloro-1,1-difluoroethane, 1-	75-68-3							5.4E+04	5.4E+04
126-99-8			3.0E-04	I	2.0E-02	H	2.0E-02	I	V		7.9E+02	1.4E+09	1.1E+03	1		Chloro-1,3-butadiene, 2-	126-99-8			1.0E-02	1.0E-02	1.6E+03		2.2E+01	2.2E+01
3165-93-3	4.6E-01	H										1.4E+09		1	0.1	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.5E+00	5.4E+00		1.2E+00				
95-69-2	1.0E-01	P	7.7E-05	C	3.0E-03	X						1.4E+09		1	0.1	Chloro-2-methylaniline, 4-	95-69-2	7.0E+00	2.5E+01	5.0E+04	5.4E+00	2.3E+02	9.9E+02		1.9E+02
107-20-0	2.7E-01	X							V		1.2E+04	1.4E+09	1.6E+04	1		Chloroacetaldehyde, 2-	107-20-0	2.6E+00			2.6E+00				
79-11-8												1.4E+09		1	0.1	Chloroacetic Acid	79-11-8								
532-27-4							3.0E-05	I				1.4E+09		1	0.1	Chloroacetophenone, 2-	532-27-4							4.3E+04	4.3E+04
106-47-8	2.0E-01	P			4.0E-03	I						1.4E+09		1	0.1	Chloroaniline, p-	106-47-8	3.5E+00	1.2E+01		2.7E+00	3.1E+02	1.3E+03		2.5E+02
108-90-7					2.0E-02	I	5.0E-02	P	V		7.6E+02	1.4E+09	6.5E+03	1		Chlorobenzene	108-90-7					1.6E+03		3.4E+02	2.8E+02
510-15-6	1.1E-01	C	3.1E-05	C	2.0E-02	I						1.4E+09		1	0.1	Chlorobenzilate	510-15-6	6.3E+00	2.2E+01	1.2E+05	4.9E+00	1.6E+03	6.6E+03		1.3E+03
74-11-3					3.0E-02	X						1.4E+09		1	0.1	Chlorobenzoic Acid, p-	74-11-3					2.3E+03	9.9E+03		1.9E+03
98-56-6					3.0E-03	P	3.0E-01	P	V		2.9E+02	1.4E+09	6.8E+03	1		Chlorobenzotrifluoride, 4-	98-56-6					2.3E+02		2.1E+03	2.1E+02
109-69-3					4.0E-02	P			V		7.3E+02	1.4E+09	1.8E+03	1		Chlorobutane, 1-	109-69-3					3.1E+03			3.1E+03
75-45-6							5.0E+01	I	V		1.7E+03	1.4E+09	9.4E+02	1		Chlorodifluoromethane	75-45-6							4.9E+04	4.9E+04
107-07-3					2.0E-02	P			V		1.1E+05	1.4E+09	7.8E+04	1		Chloroethanol, 2-	107-07-3					1.6E+03			1.6E+03
67-66-3	3.1E-02	C	2.3E-05	I	1.0E-02	I	9.8E-02	A	V		2.5E+03	1.4E+09	2.6E+03	1		Chloroform	67-66-3	2.2E+01		3.2E-01	3.2E-01	7.8E+02		2.7E+02	2.0E+02
74-87-3							9.0E-02	I	V		1.3E+03	1.4E+09	1.2E+03	1		Chloromethane	74-87-3							1.1E+02	1.1E+02
107-30-2	2.4E+00	C	6.9E-04	C					V		9.3E+03	1.4E+09	5.3E+03	1		Chloromethyl Methyl Ether	107-30-2	2.9E-01		2.2E-02	2.0E-02				
88-73-3	3.0E-01	P			3.0E-03	P	1.0E-05	X				1.4E+09		1	0.1	Chloronitrobenzene, o-	88-73-3	2.3E+00	8.2E+00		1.8E+00	2.3E+02	9.9E+02	1.4E+04	1.9E+02
100-00-5	6.0E-02	P			7.0E-04	P	2.0E-03	P				1.4E+09		1	0.1	Chloronitrobenzene, p-	100-00-5	1.2E+01	4.1E+01		9.0E+00	5.5E+01	2.3E+02	2.8E+06	4.4E+01
95-57-8					5.0E-03	I			V		2.7E+04	1.4E+09	1.4E+05	1		Chlorophenol, 2-	95-57-8					3.9E+02			3.9E+02
76-06-2							4.0E-04	C	V		6.2E+02	1.4E+09	4.7E+03	1		Chloropicrin	76-06-2							2.0E+00	2.0E+00
1897-45-6	3.1E-03	C	8.9E-07	C	1.5E-02	I						1.4E+09		1	0.1	Chlorothalonil	1897-45-6	2.2E+02	8.0E+02	4.3E+06	1.8E+02	1.2E+03	4.9E+03		9.5E+02
95-49-8					2.0E-02	I			V		9.1E+02	1.4E+09	8.1E+03	1		Chlorotoluene, o-	95-49-8					1.6E+03			1.6E+03
106-43-4					2.0E-02	X			V		2.5E+02	1.4E+09	7.3E+03	1		Chlorotoluene, p-	106-43-4					1.6E+03			1.6E+03
54749-90-5	2.4E+02	C	6.9E-02	C								1.4E+09		1	0.1	Chlorozotocin	54749-90-5	2.9E-03	1.0E-02	5.5E+01	2.3E-03				
101-21-3					2.0E-01	I						1.4E+09		1	0.1	Chlorpropham	101-21-3					1.6E+04	6.6E+04		1.3E+04
2921-88-2					1.0E-03	A						1.4E+09		1	0.1	Chlorpyrifos	2921-88-2					7.8E+01	3.3E+02		6.3E+01
5598-13-0					1.0E-02	H						1.4E+09		1	0.1	Chlorpyrifos Methyl	5598-13-0					7.8E+02	3.3E+03		6.3E+02
64902-72-3					5.0E-02	I						1.4E+09		1	0.1	Chlorsulfuron	64902-72-3					3.9E+03	1.6E+04		3.2E+03
1861-32-1					1.0E-02	I						1.4E+09		1	0.1	Chlorthal-dimethyl	1861-32-1					7.8E+02	3.3E+03		6.3E+02
60238-56-4					8.0E-04	H						1.4E+09		1	0.1	Chlorthiophos	60238-56-4					6.3E+01	2.6E+02		5.1E+01
16065-83-1					1.5E+00	I						1.4E+09		0.013		Chromium(III), Insoluble Salts	16065-83-1					1.2E+05			1.2E+05
18540-29-9	5.0E-01	J	8.4E-02	S	3.0E-03	I	1.0E-04	I		M		1.4E+09		0.025		Chromium(VI)	18540-29-9	3.1E-01		1.6E+01	3.0E-01	2.3E+02		1.4E+05	2.3E+02
7440-47-3												1.4E+09		0.013		Chromium, Total	7440-47-3								
74115-24-5					1.3E-02	I						1.4E+09		1	0.1	Clofentezine	74115-24-5					1.0E+03	4.3E+03		8.2E+02
7440-48-4			9.0E-03	P	3.0E-04	P	6.0E-06	P				1.4E+09		1		Cobalt	7440-48-4			4.2E+02	4.2E+02	2.3E+01		8.5E+03	2.3E+01
8007-45-2			6.2E-04	I					V	M				1		Coke Oven Emissions	8007-45-2								
7440-50-8					4.0E-02	H						1.4E+09		1		Copper	7440-50-8					3.1E+03			3.1E+03
108-39-4					5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, m-	108-39-4					3.9E+03	1.6E+04	8.5E+08	3.2E+03
95-48-7					5.0E-02	I	6.0E-01	C				1.4E+09		1	0.1	Cresol, o-	95-48-7					3.9E+03	1.6E+04	8.5E+08	3.2E+03
106-44-5					1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresol, p-	106-44-5					7.8E+03	3.3E+04	8.5E+08	6.3E+03
59-50-7					1.0E-01	A						1.4E+09		1	0.1	Cresol, p-chloro-m-	59-50-7					7.8E+03	3.3E+04		6.3E+03
1319-77-3					1.0E-01	A	6.0E-01	C				1.4E+09		1	0.1	Cresols	1319-77-3					7.8E+03	3.3E+04	8.5E+08	6.3E+03
123-73-9	1.9E+00	H			1.0E-03	P			V		1.7E+04	1.4E+09	1.9E+04	1		Crotonaldehyde, trans-	123-73-9	3.7E-01			3.7E-01	7.8E+01			7.8E+01
98-82-8					1.0E-01	I	4.0E-01	I	V		2.7E+02	1.4E+09	6.2E+03	1		Cumene	98-82-8					7.8E+03		2.6E+03	1.9E+03
135-20-6	2.2E-01	C	6.3E-05	C								1.4E+09		1	0.1	Cupferron	135-20-6	3.2E+00	1.1E+01	6.1E+04	2.5E+00				
21725-46-2	8.4E-01	H			2.0E-03	H						1.4E+09		1	0.1	Cyanazine	21725-46-2	8.3E-01	2.9E+00		6.5E-01	1.6E+02	6.6E+02		1.3E+02
																Cyanides									
592-01-8					1.0E-03	I						1.4E+09		1		~Calcium Cyanide	592-01-8					7.8E+01			7.8E+01
544-92-3					5.0E-03	I						1.4E+09		1		~Copper Cyanide	544-92-3					3.9E+02			3.9E+02
57-12-5					6.0E-04	I	8.0E-04	S	V		9.5E+05	1.4E+09	5.3E+04	1		~Cyanide (CN-)	57-12-5					4.7E+01		4.4E+01	2.3E+01

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
460-19-5					1.0E-03	I			V			1.4E+09		1		~Cyanogen	460-19-5					7.8E+01			7.8E+01
506-68-3					9.0E-02	I			V			1.4E+09		1		~Cyanogen Bromide	506-68-3					7.0E+03			7.0E+03
506-77-4					5.0E-02	I			V			1.4E+09		1		~Cyanogen Chloride	506-77-4					3.9E+03			3.9E+03
74-90-8					6.0E-04	I	8.0E-04	I	V		1.0E+07	1.4E+09	5.2E+04	1		~Hydrogen Cyanide	74-90-8					4.7E+01		4.4E+01	2.3E+01
151-50-8					2.0E-03	I						1.4E+09		1		~Potassium Cyanide	151-50-8					1.6E+02			1.6E+02
506-61-6					5.0E-03	I						1.4E+09		0.04		~Potassium Silver Cyanide	506-61-6					3.9E+02			3.9E+02
506-64-9					1.0E-01	I						1.4E+09		0.04		~Silver Cyanide	506-64-9					7.8E+03			7.8E+03
143-33-9					1.0E-03	I						1.4E+09		1		~Sodium Cyanide	143-33-9					7.8E+01			7.8E+01
NA					2.0E-04	P						1.4E+09		1		~Thiocyanates	NA					1.6E+01			1.6E+01
463-56-9					2.0E-04	X			V			1.4E+09		1		~Thiocyanic Acid	463-56-9					1.6E+01			1.6E+01
557-21-1					5.0E-02	I						1.4E+09		1		~Zinc Cyanide	557-21-1					3.9E+03			3.9E+03
110-82-7							6.0E+00	I	V		1.2E+02	1.4E+09	1.0E+03	1		Cyclohexane	110-82-7							6.5E+03	6.5E+03
87-84-3	2.3E-02	H										1.4E+09		1	0.1	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	3.0E+01	1.1E+02		2.4E+01				
108-94-1					5.0E+00	I	7.0E-01	P	V		5.1E+03	1.4E+09	4.2E+04	1		Cyclohexanone	108-94-1					3.9E+05		3.0E+04	2.8E+04
110-83-8					5.0E-03	P	1.0E+00	X	V		2.8E+02	1.4E+09	1.5E+03	1		Cyclohexene	110-83-8					3.9E+02		1.5E+03	3.1E+02
108-91-8					2.0E-01				V		2.9E+05	1.4E+09	7.5E+04	1		Cyclohexylamine	108-91-8					1.6E+04			1.6E+04
68359-37-5					2.5E-02	I						1.4E+09		1	0.1	Cyfluthrin	68359-37-5					2.0E+03	8.2E+03		1.6E+03
68085-85-8					5.0E-03	I						1.4E+09		1	0.1	Cyhalothrin	68085-85-8					3.9E+02	1.6E+03		3.2E+02
52315-07-8					1.0E-02							1.4E+09		1	0.1	Cypermethrin	52315-07-8					7.8E+02	3.3E+03		6.3E+02
66215-27-8					7.5E-03	I						1.4E+09		1	0.1	Cyromazine	66215-27-8					5.9E+02	2.5E+03		4.7E+02
72-54-8	2.4E-01	I	6.9E-05	C								1.4E+09		1	0.1	DDD	72-54-8	2.9E+00	1.0E+01	5.5E+04	2.3E+00				
72-55-9	3.4E-01	I	9.7E-05	C					V			1.4E+09	2.1E+06	1		DDE, p,p'-	72-55-9	2.0E+00		6.1E+01	2.0E+00				
50-29-3	3.4E-01	I	9.7E-05	I	5.0E-04	I						1.4E+09		1	0.03	DDT	50-29-3	2.0E+00	2.4E+01	3.9E+04	1.9E+00	3.9E+01	5.5E+02		3.7E+01
75-99-0					3.0E-02	I						1.4E+09		1	0.1	Dalapon	75-99-0					2.3E+03	9.9E+03		1.9E+03
1596-84-5	1.3E-02	C	5.1E-06	C	1.5E-01	I						1.4E+09		1	0.1	Daminozide	1596-84-5	3.9E+01	1.4E+02	7.5E+05	3.0E+01	1.2E+04	4.9E+04		9.5E+03
1163-19-5	7.0E-04	I			7.0E-03	I						1.4E+09		1	0.1	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.9E+02	3.5E+03		7.8E+02	5.5E+02	2.3E+03		4.4E+02
8065-48-3					4.0E-05	I						1.4E+09		1	0.1	Demeton	8065-48-3					3.1E+00	1.3E+01		2.5E+00
103-23-1	1.2E-03	I			6.0E-01	I						1.4E+09		1	0.1	Di(2-ethylhexyl)adipate	103-23-1	5.8E+02	2.1E+03		4.5E+02	4.7E+04	2.0E+05		3.8E+04
2303-16-4	6.1E-02	H										1.4E+09		1	0.1	Diallate	2303-16-4	1.1E+01	4.1E+01		8.9E+00				
333-41-5					7.0E-04	A						1.4E+09		1	0.1	Diazinon	333-41-5					5.5E+01	2.3E+02		4.4E+01
132-65-0					1.0E-02	X			V			1.4E+09	5.2E+05	1		Dibenzothiophene	132-65-0					7.8E+02			7.8E+02
96-12-8	8.0E-01	P	6.0E-03	P	2.0E-04	P	2.0E-04	I	V	M	9.8E+02	1.4E+09	3.2E+04	1		Dibromo-3-chloropropane, 1,2-	96-12-8	1.9E-01		5.4E-03	5.3E-03	1.6E+01		6.7E+00	4.7E+00
108-36-1					4.0E-04	X			V		1.6E+02	1.4E+09	1.9E+04	1		Dibromobenzene, 1,3-	108-36-1					3.1E+01			3.1E+01
106-37-6					1.0E-02	I			V			1.4E+09	2.2E+04	1		Dibromobenzene, 1,4-	106-37-6					7.8E+02			7.8E+02
124-48-1	8.4E-02	I			2.0E-02	I			V		8.0E+02	1.4E+09	8.0E+03	1		Dibromochloromethane	124-48-1	8.3E+00			8.3E+00	1.6E+03			1.6E+03
106-93-4	2.0E+00	I	6.0E-04	I	9.0E-03	I	9.0E-03	I	V		1.3E+03	1.4E+09	8.6E+03	1		Dibromoethane, 1,2-	106-93-4	3.5E-01		4.0E-02	3.6E-02	7.0E+02		8.1E+01	7.3E+01
74-95-3							4.0E-03	X	V		2.8E+03	1.4E+09	5.6E+03	1		Dibromomethane (Methylene Bromide)	74-95-3							2.4E+01	2.4E+01
NA					3.0E-04	P						1.4E+09		1	0.1	Dibutyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
1918-00-9					3.0E-02	I						1.4E+09		1	0.1	Dicamba	1918-00-9					2.3E+03	9.9E+03		1.9E+03
764-41-0			4.2E-03	P					V		5.5E+02	1.4E+09	3.2E+03	1		Dichloro-2-butene, 1,4-	764-41-0			2.1E-03	2.1E-03				
1476-11-5			4.2E-03	P					V		5.2E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, cis-1,4-	1476-11-5			7.4E-03	7.4E-03				
110-57-6			4.2E-03	P					V		7.6E+02	1.4E+09	1.1E+04	1		Dichloro-2-butene, trans-1,4-	110-57-6			7.4E-03	7.4E-03				
79-43-6	5.0E-02	I			4.0E-03	I						1.4E+09		1	0.1	Dichloroacetic Acid	79-43-6	1.4E+01	4.9E+01		1.1E+01	3.1E+02	1.3E+03		2.5E+02
95-50-1					9.0E-02	I	2.0E-01	H	V		3.8E+02	1.4E+09	1.2E+04	1		Dichlorobenzene, 1,2-	95-50-1					7.0E+03		2.4E+03	1.8E+03
106-46-7	5.4E-03	C	1.1E-05	C	7.0E-02	A	8.0E-01	I	V			1.4E+09	1.0E+04	1		Dichlorobenzene, 1,4-	106-46-7	1.3E+02		2.7E+00	2.6E+00	5.5E+03		8.7E+03	3.4E+03
91-94-1	4.5E-01	I	3.4E-04	C								1.4E+09		1	0.1	Dichlorobenzidine, 3,3'-	91-94-1	1.5E+00	5.5E+00	1.1E+04	1.2E+00				
90-98-2					9.0E-03	X						1.4E+09		1	0.1	Dichlorobenzophenone, 4,4'-	90-98-2					7.0E+02	3.0E+03		5.7E+02
75-71-8					2.0E-01	I	1.0E-01	X	V		8.5E+02	1.4E+09	8.4E+02	1		Dichlorodifluoromethane	75-71-8					1.6E+04		8.8E+01	8.7E+01
75-34-3	5.7E-03	C	1.6E-06	C	2.0E-01	P			V		1.7E+03	1.4E+09	2.1E+03	1		Dichloroethane, 1,1-	75-34-3	1.2E+02		3.7E+00	3.6E+00	1.6E+04			1.6E+04
107-06-2	9.1E-02	I	2.6E-05	I	6.0E-03	X	7.0E-03	P	V		3.0E+03	1.4E+09	4.6E+03	1		Dichloroethane, 1,2-	107-06-2	7.6E+00		4.9E-01	4.6E-01	4.7E+02		3.3E+01	3.1E+01
75-35-4					5.0E-02	I	2.0E-01	I	V		1.2E+03	1.4E+09	1.2E+03	1		Dichloroethylene, 1,1-	75-35-4					3.9E+03		2.4E+02	2.3E+02
156-59-2					2.0E-03	I			V		2.4E+03	1.4E+09	2.5E+03	1		Dichloroethylene, 1,2-cis-	156-59-2					1.6E+02			1.6E+02
156-60-5					2.0E-02	I			V		1.9E+03	1.4E+09	1.8E+03	1		Dichloroethylene, 1,2-trans-	156-60-5					1.6E+03			1.6E+03
120-83-2					3.0E-03	I						1.4E+09		1	0.1	Dichlorophenol, 2,4-	120-83-2					2.3E+02	9.9E+02		1.9E+02
94-75-7					1.0E-02	I						1.4E+09		1	0.05	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7					7.8E+02	6.6E+03		7.0E+02
94-82-6					8.0E-03	I						1.4E+09		1	0.1	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6					6.3E+02	2.6E+03		5.1E+02
78-87-5	3.6E-02	C	1.0E-05	C	9.0E-02	A	4.0E-03	I	V		1.4E+03	1.4E+09	3.8E+03	1		Dichloropropane, 1,2-	78-87-5	1.9E+01		1.1E+00	1.0E+00	7.0E+03		1.6E+01	1.6E+01
142-28-9					2.0E-02	P			V		1.5E+03	1.4E+09	6.8E+03	1		Dichloropropane, 1,3-	142-28-9					1.6E+03			1.6E+03
616-23-9					3.0E-03	I						1.4E+09		1	0.1	Dichloropropanol, 2,3-	616-23-9					2.3E+02	9.9E+02		1.9E+02
542-75-6	1.0E-01	I	4.0E-06	I	3.0E-02	I	2.0E-02	I	V		1.6E+03	1.4E+09	3.6E+03	1		Dichloropropene, 1,3-	542-75-6	7.0E+00		2.5E+00	1.8E+00	2.3E+03		7.4E+01	7.2E+01
62-73-7	2.9E-01	I	8.3E-05	C	5.0E-04	I	5.0E-04	I				1.4E+09		1	0.1	Dichlorvos	62-73-7	2.4E+00	8.5E+00	4.6E+04	1.9E+00	3.9E+01	1.6E+02	7.1E+05	3.2E+01
141-66-2					1.0E-04	I						1.4E+09		1	0.1	Dicrotophos	141-66-2					7.8E+00	3.3E+01		6.3E+00
77-73-6					8.0E-02	P	3.0E-04	X	V		2.6E+02	1.4E+09	4.1E+03	1		Dicyclopentadiene	77-73-6					6.3E+03		1.3E+00	1.3E+00
60-57-1	1.6E+01	I	4.6E-03	I	5.0E-05	I						1.4E+09		1	0.1	Dieldrin	60-57-1	4.3E-02	1.5E-01	8.3E+02	3.4E-02	3.9E+00	1.6E+01		3.2E+00
NA			3.0E-04	C			5.0E-03	I						1	0.1	Diesel Engine Exhaust	NA								
111-42-2					2.0E-03	P	2.0E-04	P				1.4E+09		1	0.1	Diethanolamine	111-42-2					1.6E+02	6.6E+02	2.8E+05	1.3E+02
112-34-5					3.0E-02	P	1.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monobutyl Ether	112-34-5					2.3E+03	9.9E+03	1.4E+05	1.9E+03
111-90-0					6.0E-02	P	3.0E-04	P				1.4E+09		1	0.1	Diethylene Glycol Monoethyl Ether	111-90-0					4.7E+03	2.0E+04	4.3E+05	3.8E+03
617-84-5					1.0E-03	P			V		1.1E+05	1.4E+09	1.4E+05	1		Diethylformamide	617-84-5					7.8E+01			7.8E+01
56-53-1	3.5E+02	C	1.0E-01	C								1.4E+09		1	0.1	Diethylstilbestrol	56-53-1	2.0E-03	7.1E-03	3.8E+01	1.6E-03				
43222-48-6					8.0E-02	I						1.4E+09		1	0.1	Difenzoquat	43222-48-6					6.3E+03	2.6E+04		5.1E+03
35367-38-5					2.0E-02	I						1.4E+09		1	0.1	Diflubenzuron	35367-38-5					1.6E+03	6.6E+03		1.3E+03
75-37-6							4.0E+01	I	V		1.4E+03	1.4E+09	1.2E+03	1		Difluoroethane, 1,1-	75-37-6							4.8E+04	4.8E+04
94-58-6	4.4E-02	C	1.3E-05	C					V			1.4E+09	1.2E+05	1		Dihydrosafrole	94-58-6	1.6E+01		2.7E+01	9.9E+00				
108-20-3					7.0E-01	P			V		2.3E+03	1.4E+09	3.1E+03	1		Diisopropyl Ether	108-20-3							2.2E+03	2.2E+03
1445-75-6					8.0E-02	I			V		5.3E+02	1.4E+09	3.8E+04	1		Diisopropyl Methylphosphonate	1445-75-6					6.3E+03			6.3E+03
55290-64-7					2.0E-02	I						1.4E+09		1	0.1	Dimethipin	55290-64-7					1.6E+03	6.6E+03		1.3E+03
60-51-5					2.0E-04	I						1.4E+09		1	0.1	Dimethoate	60-51-5					1.6E+01	6.6E+01		1.3E+01
119-90-4	1.6E+00	P										1.4E+09		1	0.1	Dimethoxybenzidine, 3,3'-	119-90-4	4.3E-01	1.5E+00		3.4E-01				
756-79-6	1.7E-03	P			6.0E-02	P						1.4E+09		1	0.1	Dimethyl methylphosphonate	756-79-6	4.1E+02	1.5E+03		3.2E+02	4.7E+03	2.0E+04		3.8E+03
60-11-7	4.6E+00	C	1.3E-03	C								1.4E+09		1	0.1	Dimethylamino azobenzene [p-]	60-11-7	1.5E-01	5.4E-01	2.9E+03	1.2E-01				
21436-96-4	5.8E-01	H										1.4E+09		1	0.1	Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+00	4.3E+00		9.4E-01				
95-68-1	2.0E-01	P			2.0E-03	X						1.4E+09		1	0.1	Dimethylaniline, 2,4-	95-68-1	3.5E+00	1.2E+01		2.7E+00	1.6E+02	6.6E+02		1.3E+02
121-69-7					2.0E-03	I			V		8.3E+02	1.4E+09	3.1E+04	1		Dimethylaniline, N,N-	121-69-7					1.6E+02			1.6E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
119-93-7	1.1E+01	P										1.4E+09		1	0.1	Dimethylbenzidine, 3,3'-	119-93-7	6.3E-02	2.2E-01		4.9E-02				
68-12-2					1.0E-01	P	3.0E-02	I	V		1.1E+05	1.4E+09	1.3E+05	1		Dimethylformamide	68-12-2					7.8E+03		4.0E+03	2.6E+03
57-14-7					1.0E-04	X	2.0E-06	X	V		1.7E+05	1.4E+09	2.8E+04	1		Dimethylhydrazine, 1,1-	57-14-7					7.8E+00		5.8E-02	5.7E-02
540-73-8	5.5E+02	C	1.6E-01	C					V		1.9E+05	1.4E+09	1.7E+05	1		Dimethylhydrazine, 1,2-	540-73-8	1.3E-03		2.9E-03	8.8E-04				
105-67-9					2.0E-02	I						1.4E+09		1	0.1	Dimethylphenol, 2,4-	105-67-9					1.6E+03	6.6E+03		1.3E+03
576-26-1					6.0E-04	I						1.4E+09		1	0.1	Dimethylphenol, 2,6-	576-26-1					4.7E+01	2.0E+02		3.8E+01
95-65-8					1.0E-03							1.4E+09		1	0.1	Dimethylphenol, 3,4-	95-65-8					7.8E+01	3.3E+02		6.3E+01
513-37-1	4.5E-02	C	1.3E-05	C					V		4.7E+02	1.4E+09	5.5E+03	1		Dimethylvinylchloride	513-37-1	1.5E+01		1.2E+00	1.1E+00				
534-52-1					8.0E-05	X						1.4E+09		1	0.1	Dinitro-o-cresol, 4,6-	534-52-1					6.3E+00	2.6E+01		5.1E+00
131-89-5					2.0E-03							1.4E+09		1	0.1	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5					1.6E+02	6.6E+02		1.3E+02
528-29-0					1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,2-	528-29-0					7.8E+00	3.3E+01		6.3E+00
99-65-0					1.0E-04	I						1.4E+09		1	0.1	Dinitrobenzene, 1,3-	99-65-0					7.8E+00	3.3E+01		6.3E+00
100-25-4					1.0E-04	P						1.4E+09		1	0.1	Dinitrobenzene, 1,4-	100-25-4					7.8E+00	3.3E+01		6.3E+00
51-28-5					2.0E-03	I						1.4E+09		1	0.1	Dinitrophenol, 2,4-	51-28-5					1.6E+02	6.6E+02		1.3E+02
NA	6.8E-01	I										1.4E+09		1	0.1	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.0E+00	3.6E+00		8.0E-01				
121-14-2	3.1E-01	C	8.9E-05	C	2.0E-03	I						1.4E+09		1	0.102	Dinitrotoluene, 2,4-	121-14-2	2.2E+00	7.8E+00	4.3E+04	1.7E+00	1.6E+02	6.5E+02		1.3E+02
606-20-2	1.5E+00	P			3.0E-04	X						1.4E+09		1	0.099	Dinitrotoluene, 2,6-	606-20-2	4.6E-01	1.7E+00		3.6E-01	2.3E+01	1.0E+02		1.9E+01
35572-78-2					2.0E-03	S						1.4E+09		1	0.006	Dinitrotoluene, 2-Amino-4,6-	35572-78-2					1.6E+02	1.1E+04		1.5E+02
19406-51-0					2.0E-03	S						1.4E+09		1	0.009	Dinitrotoluene, 4-Amino-2,6-	19406-51-0					1.6E+02	7.3E+03		1.5E+02
25321-14-6	4.5E-01	X			9.0E-04	X						1.4E+09		1	0.1	Dinitrotoluene, Technical grade	25321-14-6	1.5E+00	5.5E+00		1.2E+00	7.0E+01	3.0E+02		5.7E+01
88-85-7					1.0E-03	I						1.4E+09		1	0.1	Dinoseb	88-85-7					7.8E+01	3.3E+02		6.3E+01
123-91-1	1.0E-01	I	5.0E-06	I	3.0E-02	I	3.0E-02	I	V		1.2E+05	1.4E+09	4.0E+04	1		Dioxane, 1,4-	123-91-1	7.0E+00		2.2E+01	5.3E+00	2.3E+03		1.2E+03	8.1E+02
																Dioxins									
NA	6.2E+03	I	1.3E+00	I								1.4E+09		1	0.03	~Hexachlorodibenzo-p-dioxin, Mixture	NA	1.1E-04	1.3E-03	2.9E+00	1.0E-04				
1746-01-6	1.3E+05	C	3.8E+01	C	7.0E-10	I	4.0E-08	C	V			1.4E+09	2.0E+06	1	0.03	~TCDD, 2,3,7,8-	1746-01-6	5.3E-06	6.3E-05	1.4E-04	4.8E-06	5.5E-05	7.7E-04	8.2E-02	5.1E-05
957-51-7					3.0E-02	I						1.4E+09		1	0.1	Diphenamid	957-51-7					2.3E+03	9.9E+03		1.9E+03
127-63-9					8.0E-04	X						1.4E+09		1	0.1	Diphenyl Sulfone	127-63-9					6.3E+01	2.6E+02		5.1E+01
122-39-4					2.5E-02	I						1.4E+09		1	0.1	Diphenylamine	122-39-4					2.0E+03	8.2E+03		1.6E+03
122-66-7	8.0E-01	I	2.2E-04	I								1.4E+09		1	0.1	Diphenylhydrazine, 1,2-	122-66-7	8.7E-01	3.1E+00	1.7E+04	6.8E-01				
85-00-7					2.2E-03	I						1.4E+09		1	0.1	Diquat	85-00-7					1.7E+02	7.3E+02		1.4E+02
1937-37-7	7.1E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Black 38	1937-37-7	9.8E-02	3.5E-01	2.7E+01	7.6E-02				
2602-46-2	7.4E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Blue 6	2602-46-2	9.4E-02	3.3E-01	2.7E+01	7.3E-02				
16071-86-6	6.7E+00	C	1.4E-01	C								1.4E+09		1	0.1	Direct Brown 95	16071-86-6	1.0E-01	3.7E-01	2.7E+01	8.1E-02				
298-04-4					4.0E-05	I						1.4E+09		1	0.1	Disulfoton	298-04-4					3.1E+00	1.3E+01		2.5E+00
505-29-3					1.0E-02	I			V			1.4E+09	4.5E+04	1		Dithiane, 1,4-	505-29-3					7.8E+02			7.8E+02
330-54-1					2.0E-03	I						1.4E+09		1	0.1	Diuron	330-54-1					1.6E+02	6.6E+02		1.3E+02
2439-10-3					4.0E-03	I						1.4E+09		1	0.1	Dodine	2439-10-3					3.1E+02	1.3E+03		2.5E+02
759-94-4					2.5E-02	I			V			1.4E+09	1.2E+05	1		EPTC	759-94-4					2.0E+03			2.0E+03
115-29-7					6.0E-03	I			V			1.4E+09	4.1E+05	1		Endosulfan	115-29-7					4.7E+02			4.7E+02
145-73-3					2.0E-02	I						1.4E+09		1	0.1	Endothall	145-73-3					1.6E+03	6.6E+03		1.3E+03
72-20-8					3.0E-04	I						1.4E+09		1	0.1	Endrin	72-20-8					2.3E+01	9.9E+01		1.9E+01
106-89-8	9.9E-03	I	1.2E-06	I	6.0E-03	P	1.0E-03	I	V		1.1E+04	1.4E+09	1.9E+04	1		Epichlorohydrin	106-89-8	7.0E+01		4.4E+01	2.7E+01	4.7E+02		2.0E+01	1.9E+01
106-88-7							2.0E-02	I	V		1.5E+04	1.4E+09	7.7E+03	1		Epoxybutane, 1,2-	106-88-7							1.6E+02	1.6E+02
111-77-3					4.0E-02	P						1.4E+09		1	0.1	Ethanol, 2-(2-methoxyethoxy)-	111-77-3					3.1E+03	1.3E+04		2.5E+03
16672-87-0					5.0E-03	I						1.4E+09		1	0.1	Ethephon	16672-87-0					3.9E+02	1.6E+03		3.2E+02
563-12-2					5.0E-04	I						1.4E+09		1	0.1	Ethion	563-12-2					3.9E+01	1.6E+02		3.2E+01
111-15-9					1.0E-01	P	6.0E-02	P	V		2.4E+04	1.4E+09	6.2E+04	1		Ethoxyethanol Acetate, 2-	111-15-9					7.8E+03		3.8E+03	2.6E+03
110-80-5					9.0E-02	P	2.0E-01	I	V		1.1E+05	1.4E+09	9.8E+04	1		Ethoxyethanol, 2-	110-80-5					7.0E+03		2.1E+04	5.2E+03
141-78-6					9.0E-01	I	7.0E-02	P	V		1.1E+04	1.4E+09	8.6E+03	1		Ethyl Acetate	141-78-6					7.0E+04		6.3E+02	6.2E+02
140-88-5					5.0E-03	P	8.0E-03	P	V		2.5E+03	1.4E+09	6.3E+03	1		Ethyl Acrylate	140-88-5					3.9E+02		5.3E+01	4.7E+01
75-00-3							1.0E+01	I	V		2.1E+03	1.4E+09	1.3E+03	1		Ethyl Chloride (Chloroethane)	75-00-3							1.4E+04	1.4E+04
60-29-7					2.0E-01	I			V		1.0E+04	1.4E+09	3.1E+03	1		Ethyl Ether	60-29-7					1.6E+04			1.6E+04
97-63-2							3.0E-01	P	V		1.1E+03	1.4E+09	5.8E+03	1		Ethyl Methacrylate	97-63-2							1.8E+03	1.8E+03
2104-64-5					1.0E-05	I						1.4E+09		1	0.1	Ethyl-p-nitrophenyl Phosphonate	2104-64-5					7.8E-01	3.3E+00		6.3E-01
100-41-4	1.1E-02	C	2.5E-06	C	1.0E-01	I	1.0E+00	I	V		4.8E+02	1.4E+09	5.7E+03	1		Ethylbenzene	100-41-4	6.3E+01		6.4E+00	5.8E+00	7.8E+03		5.9E+03	3.4E+03
109-78-4					7.0E-02	P						1.4E+09		1	0.1	Ethylene Cyanohydrin	109-78-4					5.5E+03	2.3E+04		4.4E+03
107-15-3					9.0E-02	P			V		1.9E+05	1.4E+09	1.8E+05	1		Ethylene Diamine	107-15-3					7.0E+03			7.0E+03
107-21-1					2.0E+00	I	4.0E-01	C				1.4E+09		1	0.1	Ethylene Glycol	107-21-1					1.6E+05	6.6E+05	5.7E+08	1.3E+05
111-76-2					1.0E-01	I	1.6E+00	I				1.4E+09		1	0.1	Ethylene Glycol Monobutyl Ether	111-76-2					7.8E+03	3.3E+04	2.3E+09	6.3E+03
75-21-8	3.1E-01	C	8.8E-05	C			3.0E-02	C	V		1.2E+05	1.4E+09	6.1E+03	1		Ethylene Oxide	75-21-8	2.2E+00		1.9E-01	1.8E-01			1.9E+02	1.9E+02
96-45-7	4.5E-02	C	1.3E-05	C	8.0E-05	I						1.4E+09		1	0.1	Ethylene Thiourea	96-45-7	1.5E+01	5.5E+01	2.9E+05	1.2E+01	6.3E+00	2.6E+01		5.1E+00
151-56-4	6.5E+01	C	1.9E-02	C					V		1.5E+05	1.4E+09	2.4E+04	1		Ethyleneimine	151-56-4	1.1E-02		3.5E-03	2.7E-03				
84-72-0					3.0E+00	I						1.4E+09		1	0.1	Ethylphthalyl Ethyl Glycolate	84-72-0					2.3E+05	9.9E+05		1.9E+05
22224-92-6					2.5E-04	I						1.4E+09		1	0.1	Fenamiphos	22224-92-6					2.0E+01	8.2E+01		1.6E+01
39515-41-8					2.5E-02	I						1.4E+09		1	0.1	Fenpropathrin	39515-41-8					2.0E+03	8.2E+03		1.6E+03
51630-58-1					2.5E-02	I						1.4E+09		1	0.1	Fenvalerate	51630-58-1					2.0E+03	8.2E+03		1.6E+03
2164-17-2					1.3E-02	I						1.4E+09		1	0.1	Fluometuron	2164-17-2					1.0E+03	4.3E+03		8.2E+02
16984-48-8					4.0E-02	C	1.3E-02	C				1.4E+09		1		Fluoride	16984-48-8					3.1E+03		1.8E+07	3.1E+03
7782-41-4					6.0E-02	I	1.3E-02	C				1.4E+09		1		Fluorine (Soluble Fluoride)	7782-41-4					4.7E+03		1.8E+07	4.7E+03
59756-60-4					8.0E-02	I						1.4E+09		1	0.1	Fluridone	59756-60-4					6.3E+03	2.6E+04		5.1E+03
56425-91-3					2.0E-02	I						1.4E+09		1	0.1	Flurprimidol	56425-91-3					1.6E+03	6.6E+03		1.3E+03
85509-19-9					7.0E-04	I						1.4E+09		1	0.1	Flusilazole	85509-19-9					5.5E+01	2.3E+02		4.4E+01
66332-96-5					6.0E-02	I						1.4E+09		1	0.1	Flutolanil	66332-96-5					4.7E+03	2.0E+04		3.8E+03
69409-94-5					1.0E-02	I						1.4E+09		1	0.1	Fluvalinate	69409-94-5					7.8E+02	3.3E+03		6.3E+02
133-07-3	3.5E-03	I			1.0E-01	I						1.4E+09		1	0.1	Folpet	133-07-3	2.0E+02	7.1E+02		1.6E+02	7.8E+03	3.3E+04		6.3E+03
72178-02-0	1.9E-01	I										1.4E+09		1	0.1	Fomesafen	72178-02-0	3.7E+00	1.3E+01		2.9E+00				
944-22-9					2.0E-03	I						1.4E+09		1	0.1	Fonofos	944-22-9					1.6E+02	6.6E+02		1.3E+02
50-00-0			1.3E-05	I	2.0E-01	I	9.8E-03	A	V		4.2E+04	1.4E+09	7.8E+04	1		Formaldehyde	50-00-0			1.7E+01	1.7E+01	1.6E+04		8.0E+02	7.6E+02
64-18-6					9.0E-01	P	3.0E-04	X	V		1.1E+05	1.4E+09	9.3E+04	1		Formic Acid	64-18-6					7.0E+04		2.9E+01	2.9E+01
39148-24-8					3.0E+00	I						1.4E+09		1	0.1	Fosetyl-AL	39148-24-8					2.3E+05	9.9E+05		1.9E+05
																Furans									
132-64-9					1.0E-03	X			V			1.4E+09	1.6E+05	1	0.03	~Dibenzofuran	132-64-9					7.8E+01	1.1E+03		7.3E+01
110-00-9					1.0E-03	I			V		6.2E+03	1.4E+09	2.6E+03	1	0.03	~Furan	110-00-9					7.8E+01	1.1E+03		7.3E+01
109-99-9					9.0E-01	I	2.0E+00	I	V		1.7E+05	1.4E+09	1.2E+04	1	0.03	~Tetrahydrofuran	109-99-9					7.0E+04	9.9E+05	2.5E+04	1.8E+04

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
67-45-8	3.8E+00	H										1.4E+09		1	0.1	Furazolidone	67-45-8	1.8E-01	6.5E-01		1.4E-01				
98-01-1					3.0E-03	I	5.0E-02	H	V		1.0E+04	1.4E+09	4.9E+04	1		Furfural	98-01-1					2.3E+02		2.5E+03	2.1E+02
531-82-8	1.5E+00	C	4.3E-04	C								1.4E+09		1	0.1	Furium	531-82-8	4.6E-01	1.6E+00	8.9E+03	3.6E-01				
60568-05-0	3.0E-02	I	8.6E-06	C								1.4E+09		1	0.1	Furmecyclox	60568-05-0	2.3E+01	8.2E+01	4.4E+05	1.8E+01				
77182-82-2					4.0E-04	I						1.4E+09		1	0.1	Glufosinate, Ammonium	77182-82-2					3.1E+01	1.3E+02		2.5E+01
111-30-8							8.0E-05	C				1.4E+09		1	0.1	Glutaraldehyde	111-30-8							1.1E+05	1.1E+05
765-34-4					4.0E-04	I	1.0E-03	H	V		1.1E+05	1.4E+09	8.4E+04	1		Glycidyl	765-34-4					3.1E+01		8.8E+01	2.3E+01
1071-83-6					1.0E-01	I						1.4E+09		1	0.1	Glyphosate	1071-83-6					7.8E+03	3.3E+04		6.3E+03
113-00-8					1.0E-02	X			V			1.4E+09	1.5E+05	1		Guanidine	113-00-8					7.8E+02			7.8E+02
50-01-1					2.0E-02	P						1.4E+09		1	0.1	Guanidine Chloride	50-01-1					1.6E+03	6.6E+03		1.3E+03
69806-40-2					5.0E-05	I						1.4E+09		1	0.1	Haloxyfop, Methyl	69806-40-2					3.9E+00	1.6E+01		3.2E+00
76-44-8	4.5E+00	I	1.3E-03	I	5.0E-04	I			V			1.4E+09	4.8E+05	1		Heptachlor	76-44-8	1.5E-01		1.0E+00	1.3E-01	3.9E+01			3.9E+01
1024-57-3	9.1E+00	I	2.6E-03	I	1.3E-05	I			V			1.4E+09	8.4E+05	1		Heptachlor Epoxide	1024-57-3	7.6E-02		9.1E-01	7.0E-02	1.0E+00			1.0E+00
87-82-1					2.0E-03	I			V			1.4E+09	3.8E+05	1		Hexabromobenzene	87-82-1					1.6E+02			1.6E+02
68631-49-2					2.0E-04	I						1.4E+09		1	0.1	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2					1.6E+01	6.6E+01		1.3E+01
118-74-1	1.6E+00	I	4.6E-04	I	8.0E-04	I			V			1.4E+09	6.8E+04	1		Hexachlorobenzene	118-74-1	4.3E-01		4.1E-01	2.1E-01	6.3E+01			6.3E+01
87-68-3	7.8E-02	I	2.2E-05	I	1.0E-03	P			V		1.7E+01	1.4E+09	1.1E+04	1		Hexachlorobutadiene	87-68-3	8.9E+00		1.4E+00	1.2E+00	7.8E+01			7.8E+01
319-84-6	6.3E+00	I	1.8E-03	I	8.0E-03	A						1.4E+09		1	0.1	Hexachlorocyclohexane, Alpha-	319-84-6	1.1E-01	3.9E-01	2.1E+03	8.6E-02	6.3E+02	2.6E+03		5.1E+02
319-85-7	1.8E+00	I	5.3E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Beta-	319-85-7	3.9E-01	1.4E+00	7.2E+03	3.0E-01				
58-89-9	1.1E+00	C	3.1E-04	C	3.0E-04	I						1.4E+09		1	0.04	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	6.3E-01	5.6E+00	1.2E+04	5.7E-01	2.3E+01	2.5E+02		2.1E+01
608-73-1	1.8E+00	I	5.1E-04	I								1.4E+09		1	0.1	Hexachlorocyclohexane, Technical	608-73-1	3.9E-01	1.4E+00	7.5E+03	3.0E-01				
77-47-4					6.0E-03	I	2.0E-04	I	V		1.6E+01	1.4E+09	8.5E+03	1		Hexachlorocyclopentadiene	77-47-4					4.7E+02		1.8E+00	1.8E+00
67-72-1	4.0E-02	I	1.1E-05	C	7.0E-04	I	3.0E-02	I	V			1.4E+09	8.0E+03	1		Hexachloroethane	67-72-1	1.7E+01		2.0E+00	1.8E+00	5.5E+01		2.5E+02	4.5E+01
70-30-4					3.0E-04	I						1.4E+09		1	0.1	Hexachlorophene	70-30-4					2.3E+01	9.9E+01		1.9E+01
121-82-4	1.1E-01	I			3.0E-03	I						1.4E+09		1	0.015	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	6.3E+00	1.5E+02		6.1E+00	2.3E+02	6.6E+03		2.3E+02
822-06-0							1.0E-05	I	V		3.4E+03	1.4E+09	3.0E+05	1		Hexamethylene Diisocyanate, 1,6-	822-06-0							3.1E+00	3.1E+00
680-31-9					4.0E-04	P						1.4E+09		1	0.1	Hexamethylphosphoramide	680-31-9					3.1E+01	1.3E+02		2.5E+01
110-54-3							7.0E-01	I	V		1.4E+02	1.4E+09	8.3E+02	1		Hexane, N-	110-54-3							6.1E+02	6.1E+02
124-04-9					2.0E+00	P						1.4E+09		1	0.1	Hexanedioic Acid	124-04-9					1.6E+05	6.6E+05		1.3E+05
591-78-6					5.0E-03	I	3.0E-02	I	V		3.3E+03	1.4E+09	1.3E+04	1		Hexanone, 2-	591-78-6					3.9E+02		4.2E+02	2.0E+02
51235-04-2					3.3E-02	I						1.4E+09		1	0.1	Hexazinone	51235-04-2					2.6E+03	1.1E+04		2.1E+03
78587-05-0					2.5E-02	I						1.4E+09		1	0.1	Hexythiazox	78587-05-0					2.0E+03	8.2E+03		1.6E+03
67485-29-4					3.0E-04	I						1.4E+09		1	0.1	Hydramethylnon	67485-29-4					2.3E+01	9.9E+01		1.9E+01
302-01-2	3.0E+00	I	4.9E-03	I			3.0E-05	P	V			1.4E+09		1		Hydrazine	302-01-2	2.3E-01		7.8E+02	2.3E-01			4.3E+04	4.3E+04
10034-93-2	3.0E+00	I	4.9E-03	I								1.4E+09		1		Hydrazine Sulfate	10034-93-2	2.3E-01		7.8E+02	2.3E-01				
7647-01-0							2.0E-02	I	V			1.4E+09		1		Hydrogen Chloride	7647-01-0							2.8E+07	2.8E+07
7664-39-3					4.0E-02	C	1.4E-02	C	V			1.4E+09		1		Hydrogen Fluoride	7664-39-3					3.1E+03		2.0E+07	3.1E+03
7783-06-4							2.0E-03	I	V			1.4E+09		1		Hydrogen Sulfide	7783-06-4							2.8E+06	2.8E+06
123-31-9	6.0E-02	P			4.0E-02	P						1.4E+09		1	0.1	Hydroquinone	123-31-9	1.2E+01	4.1E+01		9.0E+00	3.1E+03	1.3E+04		2.5E+03
35554-44-0					1.3E-02	I						1.4E+09		1	0.1	Imazalil	35554-44-0					1.0E+03	4.3E+03		8.2E+02
81335-37-7					2.5E-01	I						1.4E+09		1	0.1	Imazaquin	81335-37-7					2.0E+04	8.2E+04		1.6E+04
81335-77-5					2.5E-01	I						1.4E+09		1	0.1	Imazethapyr	81335-77-5					2.0E+04	8.2E+04		1.6E+04
7553-56-2					1.0E-02	A						1.4E+09		1		Iodine	7553-56-2					7.8E+02			7.8E+02
36734-19-7					4.0E-02	I						1.4E+09		1	0.1	Iprodione	36734-19-7					3.1E+03	1.3E+04		2.5E+03
7439-89-6					7.0E-01	P						1.4E+09		1		Iron	7439-89-6					5.5E+04			5.5E+04
78-83-1					3.0E-01	I			V		1.0E+04	1.4E+09	2.8E+04	1		Isobutyl Alcohol	78-83-1					2.3E+04			2.3E+04
78-59-1	9.5E-04	I			2.0E-01	I	2.0E+00	C				1.4E+09		1	0.1	Isophorone	78-59-1	7.3E+02	2.6E+03		5.7E+02	1.6E+04	6.6E+04	2.8E+09	1.3E+04
33820-53-0					1.5E-02	I			V			1.4E+09	4.2E+05	1		Isopropalin	33820-53-0					1.2E+03			1.2E+03
67-63-0					2.0E+00	P	2.0E-01	P	V		1.1E+05	1.4E+09	2.8E+04	1		Isopropanol	67-63-0					1.6E+05		5.8E+03	5.6E+03
1832-54-8					1.0E-01	I						1.4E+09		1	0.1	Isopropyl Methyl Phosphonic Acid	1832-54-8					7.8E+03	3.3E+04		6.3E+03
82558-50-7					5.0E-02	I						1.4E+09		1	0.1	Isoxaben	82558-50-7					3.9E+03	1.6E+04		3.2E+03
NA							3.0E-01	A	V			1.4E+09		1		JP-7	NA							4.3E+08	4.3E+08
77501-63-4					2.0E-03	I						1.4E+09		1	0.1	Lactofen	77501-63-4					1.6E+02	6.6E+02		1.3E+02
																Lead Compounds									
7758-97-6	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		~Lead Chromate	7758-97-6	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
7446-27-7	8.5E-03	C	1.2E-05	C								1.4E+09		1		~Lead Phosphate	7446-27-7	8.2E+01		3.2E+05	8.2E+01				
301-04-2	8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead acetate	301-04-2	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
7439-92-1												1.4E+09		1		~Lead and Compounds	7439-92-1								4.0E+02
1335-32-6	8.5E-03	C	1.2E-05	C								1.4E+09		1	0.1	~Lead subacetate	1335-32-6	8.2E+01	2.9E+02	3.2E+05	6.4E+01				
78-00-2					1.0E-07	I			V		2.4E+00	1.4E+09	1.9E+03	1		~Tetraethyl Lead	78-00-2					7.8E-03			7.8E-03
541-25-3					5.0E-06	P			V		3.8E+02	1.4E+09	2.6E+04	1		Lewisite	541-25-3					3.9E-01			3.9E-01
330-55-2					2.0E-03	I						1.4E+09		1	0.1	Linuron	330-55-2					1.6E+02	6.6E+02		1.3E+02
7439-93-2					2.0E-03	P						1.4E+09		1		Lithium	7439-93-2					1.6E+02			1.6E+02
94-74-6					5.0E-04	I						1.4E+09		1	0.1	MCPA	94-74-6					3.9E+01	1.6E+02		3.2E+01
94-81-5					1.0E-02	I						1.4E+09		1	0.1	MCPB	94-81-5					7.8E+02	3.3E+03		6.3E+02
93-65-2					1.0E-03	I						1.4E+09		1	0.1	MCPP	93-65-2					7.8E+01	3.3E+02		6.3E+01
121-75-5					2.0E-02	I						1.4E+09		1	0.1	Malathion	121-75-5					1.6E+03	6.6E+03		1.3E+03
108-31-6					1.0E-01	I	7.0E-04	C				1.4E+09		1	0.1	Maleic Anhydride	108-31-6					7.8E+03	3.3E+04	9.9E+05	6.3E+03
123-33-1					5.0E-01	I						1.4E+09		1	0.1	Maleic Hydrazide	123-33-1					3.9E+04	1.6E+05		3.2E+04
109-77-3					1.0E-04	P						1.4E+09		1	0.1	Malononitrile	109-77-3					7.8E+00	3.3E+01		6.3E+00
8018-01-7					3.0E-02	H						1.4E+09		1	0.1	Mancozeb	8018-01-7					2.3E+03	9.9E+03		1.9E+03
12427-38-2					5.0E-03	I						1.4E+09		1	0.1	Maneb	12427-38-2					3.9E+02	1.6E+03		3.2E+02
7439-96-5					1.4E-01	I	5.0E-05	I						1		Manganese (Diet)	7439-96-5								
7439-96-5					2.4E-02	S	5.0E-05	I				1.4E+09		0.04		Manganese (Non-diet)	7439-96-5					1.9E+03		7.1E+04	1.8E+03
950-10-7					9.0E-05	H						1.4E+09		1	0.1	Mephosfolan	950-10-7					7.0E+00	3.0E+01		5.7E+00
24307-26-4					3.0E-02	I						1.4E+09		1	0.1	Mepiquat Chloride	24307-26-4					2.3E+03	9.9E+03		1.9E+03
																Mercury Compounds									
7487-94-7					3.0E-04	I	3.0E-04	S				1.4E+09		0.07		~Mercuric Chloride (and other Mercury salts)	7487-94-7					2.3E+01		4.3E+05	2.3E+01
7439-97-6							3.0E-04	I	V		3.1E+00	1.4E+09	3.5E+04	1		~Mercury (elemental)	7439-97-6							1.1E+01	1.1E+01
22967-92-6					1.0E-04	I						1.4E+09		1		~Methyl Mercury	22967-92-6					7.8E+00			7.8E+00
62-38-4					8.0E-05	I						1.4E+09		1	0.1	~Phenylmercuric Acetate	62-38-4					6.3E+00	2.6E+01		5.1E+00
150-50-5					3.0E-05	I			V			1.4E+09	1.9E+06	1		Merphos	150-50-5					2.3E+00			2.3E+00
78-48-8					3.0E-05	I						1.4E+09		1	0.1	Merphos Oxide	78-48-8					2.3E+00	9.9E+00		1.9E+00
57837-19-1					6.0E-02	I						1.4E+09		1	0.1	Metalaxyl	57837-19-1					4.7E+03	2.0E+04		3.8E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
126-98-7					1.0E-04	I	3.0E-02	P	V		4.6E+03	1.4E+09	6.8E+03	1		Methacrylonitrile	126-98-7					7.8E+00		2.1E+02	7.5E+00
10265-92-6					5.0E-05	I						1.4E+09		1	0.1	Methamidophos	10265-92-6					3.9E+00	1.6E+01		3.2E+00
67-56-1					2.0E+00	I	2.0E+01	I	V		1.1E+05	1.4E+09	2.9E+04	1		Methanol	67-56-1					1.6E+05		6.1E+05	1.2E+05
950-37-8					1.0E-03	I						1.4E+09		1	0.1	Methidathion	950-37-8					7.8E+01	3.3E+02		6.3E+01
16752-77-5					2.5E-02	I						1.4E+09		1	0.1	Methomyl	16752-77-5					2.0E+03	8.2E+03		1.6E+03
99-59-2	4.9E-02	C	1.4E-05	C								1.4E+09		1	0.1	Methoxy-5-nitroaniline, 2-	99-59-2	1.4E+01	5.0E+01	2.7E+05	1.1E+01				
72-43-5					5.0E-03	I						1.4E+09		1	0.1	Methoxychlor	72-43-5					3.9E+02	1.6E+03		3.2E+02
110-49-6					8.0E-03	P	1.0E-03	P	V		1.2E+05	1.4E+09	1.2E+05	1		Methoxyethanol Acetate, 2-	110-49-6					6.3E+02		1.3E+02	1.1E+02
109-86-4					5.0E-03	P	2.0E-02	I	V		1.1E+05	1.4E+09	1.0E+05	1		Methoxyethanol, 2-	109-86-4					3.9E+02		2.1E+03	3.3E+02
79-20-9					1.0E+00	X			V		2.9E+04	1.4E+09	8.1E+03	1		Methyl Acetate	79-20-9					7.8E+04			7.8E+04
96-33-3							2.0E-02	P	V		6.8E+03	1.4E+09	7.0E+03	1		Methyl Acrylate	96-33-3							1.5E+02	1.5E+02
78-93-3					6.0E-01	I	5.0E+00	I	V		2.8E+04	1.4E+09	1.2E+04	1		Methyl Ethyl Ketone (2-Butanone)	78-93-3					4.7E+04		6.4E+04	2.7E+04
60-34-4			1.0E-03	X	1.0E-03	P	2.0E-05	X	V		1.8E+05	1.4E+09	5.0E+04	1		Methyl Hydrazine	60-34-4			1.4E-01	1.4E-01	7.8E+01		1.1E+00	1.0E+00
108-10-1							3.0E+00	I	V		3.4E+03	1.4E+09	1.1E+04	1		Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1							3.3E+04	3.3E+04
624-83-9							1.0E-03	C	V		1.0E+04	1.4E+09	4.4E+03	1		Methyl Isocyanate	624-83-9							4.6E+00	4.6E+00
80-62-6					1.4E+00	I	7.0E-01	I	V		2.4E+03	1.4E+09	6.3E+03	1		Methyl Methacrylate	80-62-6					1.1E+05		4.6E+03	4.4E+03
298-00-0					2.5E-04	I						1.4E+09		1	0.1	Methyl Parathion	298-00-0					2.0E+01	8.2E+01		1.6E+01
993-13-5					6.0E-02	X						1.4E+09		1	0.1	Methyl Phosphonic Acid	993-13-5					4.7E+03	2.0E+04		3.8E+03
25013-15-4					6.0E-03	H	4.0E-02	H	V		3.9E+02	1.4E+09	2.4E+04	1		Methyl Styrene (Mixed Isomers)	25013-15-4					4.7E+02		1.0E+03	3.2E+02
66-27-3	9.9E-02	C	2.8E-05	C								1.4E+09		1	0.1	Methyl methanesulfonate	66-27-3	7.0E+00	2.5E+01	1.4E+05	5.5E+00				
1634-04-4	1.8E-03	C	2.6E-07	C			3.0E+00	I	V		8.9E+03	1.4E+09	4.9E+03	1		Methyl tert-Butyl Ether (MTBE)	1634-04-4	3.9E+02		5.3E+01	4.7E+01			1.5E+04	1.5E+04
615-45-2					3.0E-04	X						1.4E+09		1	0.1	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2					2.3E+01	9.9E+01		1.9E+01
99-55-8	9.0E-03	P			2.0E-02	X						1.4E+09		1	0.1	Methyl-5-Nitroaniline, 2-	99-55-8	7.7E+01	2.7E+02		6.0E+01	1.6E+03	6.6E+03		1.3E+03
70-25-7	8.3E+00	C	2.4E-03	C								1.4E+09		1	0.1	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	8.4E-02	3.0E-01	1.6E+03	6.5E-02				
636-21-5	1.3E-01	C	3.7E-05	C								1.4E+09		1	0.1	Methylaniline Hydrochloride, 2-	636-21-5	5.3E+00	1.9E+01	1.0E+05	4.2E+00				
124-58-3					1.0E-02	A						1.4E+09		1	0.1	Methylarsonic acid	124-58-3					7.8E+02	3.3E+03		6.3E+02
74612-12-7					2.0E-04	X						1.4E+09		1	0.1	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7					1.6E+01	6.6E+01		1.3E+01
615-50-9	1.0E-01	X			3.0E-04	X						1.4E+09		1	0.1	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	7.0E+00	2.5E+01		5.4E+00	2.3E+01	9.9E+01		1.9E+01
56-49-5	2.2E+01	C	6.3E-03	C						M		1.4E+09		1	0.1	Methylcholanthrene, 3-	56-49-5	7.0E-03	2.7E-02	2.2E+02	5.5E-03				
75-09-2	2.0E-03	I	1.0E-08	I	6.0E-03	I	6.0E-01	I	V	M	3.3E+03	1.4E+09	2.2E+03	1		Methylene Chloride	75-09-2	7.7E+01		2.2E+02	5.7E+01	4.7E+02		1.4E+03	3.5E+02
101-14-4	1.0E-01	P	4.3E-04	C	2.0E-03	P				M		1.4E+09		1	0.1	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	1.5E+00	6.0E+00	3.2E+03	1.2E+00	1.6E+02	6.6E+02		1.3E+02
101-61-1	4.6E-02	I	1.3E-05	C								1.4E+09		1	0.1	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	1.5E+01	5.4E+01	2.9E+05	1.2E+01				
101-77-9	1.6E+00	C	4.6E-04	C			2.0E-02	C				1.4E+09		1	0.1	Methylenebisbenzenamine, 4,4'-	101-77-9	4.3E-01	1.5E+00	8.3E+03	3.4E-01			2.8E+07	2.8E+07
101-68-8					6.0E-04	I						1.4E+09		1	0.1	Methylenediphenyl Diisocyanate	101-68-8							8.5E+05	8.5E+05
98-83-9					7.0E-02	H			V		5.0E+02	1.4E+09	1.3E+04	1		Methylstyrene, Alpha-	98-83-9					5.5E+03			5.5E+03
51218-45-2					1.5E-01	I						1.4E+09		1	0.1	Metolachlor	51218-45-2					1.2E+04	4.9E+04		9.5E+03
21087-64-9					2.5E-02	I						1.4E+09		1	0.1	Metribuzin	21087-64-9					2.0E+03	8.2E+03		1.6E+03
74223-64-6					2.5E-01	I						1.4E+09		1	0.1	Metsulfuron-methyl	74223-64-6					2.0E+04	8.2E+04		1.6E+04
8012-95-1					3.0E+00	P			V		3.4E-01	1.4E+09	1.4E+03	1		Mineral oils	8012-95-1					2.3E+05			2.3E+05
2385-85-5	1.8E+01	C	5.1E-03	C	2.0E-04	I			V			1.4E+09	8.6E+05	1		Mirex	2385-85-5	3.9E-02		4.7E-01	3.6E-02	1.6E+01			1.6E+01
2212-67-1					2.0E-03	I						1.4E+09		1	0.1	Molinate	2212-67-1					1.6E+02	6.6E+02		1.3E+02
7439-98-7					5.0E-03	I						1.4E+09		1		Molybdenum	7439-98-7					3.9E+02			3.9E+02
10599-90-3					1.0E-01	I						1.4E+09		1		Monochloramine	10599-90-3					7.8E+03			7.8E+03
100-61-8					2.0E-03	P						1.4E+09		1	0.1	Monomethylaniline	100-61-8					1.6E+02	6.6E+02		1.3E+02
88671-89-0					2.5E-02	I						1.4E+09		1	0.1	Myclobutanil	88671-89-0					2.0E+03	8.2E+03		1.6E+03
74-31-7					3.0E-04	X						1.4E+09		1	0.1	N,N'-Diphenyl-1,4-benzenediamine	74-31-7					2.3E+01	9.9E+01		1.9E+01
300-76-5					2.0E-03	I			V			1.4E+09	5.7E+04	1		Naled	300-76-5					1.6E+02			1.6E+02
64742-95-6					3.0E-02	X	1.0E-01	P	V			1.4E+09		1		Naphtha, High Flash Aromatic (HFAN)	64742-95-6					2.3E+03		1.4E+08	2.3E+03
91-59-8	1.8E+00	C	0.0E+00	C								1.4E+09		1	0.1	Naphthylamine, 2-	91-59-8	3.9E-01	1.4E+00		3.0E-01				
15299-99-7					1.0E-01	I						1.4E+09		1	0.1	Napropamide	15299-99-7					7.8E+03	3.3E+04		6.3E+03
373-02-4			2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Acetate	373-02-4			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
3333-67-3			2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickel Carbonate	3333-67-3			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
13463-39-3			2.6E-04	C	1.1E-02	C	1.4E-05	C	V			1.4E+09		1		Nickel Carbonyl	13463-39-3			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
12054-48-7			2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Hydroxide	12054-48-7			1.5E+04	1.5E+04	8.6E+02		2.0E+04	8.2E+02
1313-99-1			2.6E-04	C	1.1E-02	C	2.0E-05	C				1.4E+09		0.04		Nickel Oxide	1313-99-1			1.5E+04	1.5E+04	8.6E+02		2.8E+04	8.4E+02
NA			2.4E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Refinery Dust	NA			1.6E+04	1.6E+04	8.6E+02		2.0E+04	8.2E+02
7440-02-0			2.6E-04	C	2.0E-02	I	9.0E-05	A				1.4E+09		0.04		Nickel Soluble Salts	7440-02-0			1.5E+04	1.5E+04	1.6E+03		1.3E+05	1.5E+03
12035-72-2	1.7E+00	C	4.8E-04	I	1.1E-02	C	1.4E-05	C				1.4E+09		0.04		Nickel Subsulfide	12035-72-2	4.1E-01		8.0E+03	4.1E-01	8.6E+02		2.0E+04	8.2E+02
1271-28-9			2.6E-04	C	1.1E-02	C	1.4E-05	C				1.4E+09		1	0.1	Nickelocene	1271-28-9			1.5E+04	1.5E+04	8.6E+02	3.6E+03	2.0E+04	6.7E+02
14797-55-8					1.6E+00	I						1.4E+09		1		Nitrate	14797-55-8					1.3E+05			1.3E+05
NA												1.4E+09		1		Nitrate + Nitrite (as N)	NA								
14797-65-0					1.0E-01	I						1.4E+09		1		Nitrite	14797-65-0					7.8E+03			7.8E+03
88-74-4					1.0E-02	X	5.0E-05	X				1.4E+09		1	0.1	Nitroaniline, 2-	88-74-4					7.8E+02	3.3E+03	7.1E+04	6.3E+02
100-01-6	2.0E-02	P			4.0E-03	I	6.0E-03	P				1.4E+09		1	0.1	Nitroaniline, 4-	100-01-6	3.5E+01	1.2E+02		2.7E+01	3.1E+02	1.3E+03	8.5E+06	2.5E+02
98-95-3			4.0E-05	I	2.0E-03	I	9.0E-03	I	V		3.1E+03	1.4E+09	7.3E+04	1		Nitrobenzene	98-95-3			5.1E+00	5.1E+00	1.6E+02		6.9E+02	1.3E+02
9004-70-0					3.0E+03	P						1.4E+09		1	0.1	Nitrocellulose	9004-70-0					2.3E+08	9.9E+08		1.9E+08
67-20-9					7.0E-02	H						1.4E+09		1	0.1	Nitrofurantoin	67-20-9					5.5E+03	2.3E+04		4.4E+03
59-87-0	1.3E+00	C	3.7E-04	C								1.4E+09		1	0.1	Nitrofurazone	59-87-0	5.3E-01	1.9E+00	1.0E+04	4.2E-01				
55-63-0	1.7E-02	P			1.0E-04	P						1.4E+09		1	0.1	Nitroglycerin	55-63-0	4.1E+01	1.5E+02		3.2E+01	7.8E+00	3.3E+01		6.3E+00
556-88-7					1.0E-01	I						1.4E+09		1	0.1	Nitroguanidine	556-88-7					7.8E+03	3.3E+04		6.3E+03
75-52-5			8.8E-06	P			5.0E-03	P	V		1.8E+04	1.4E+09	1.7E+04	1		Nitromethane	75-52-5			5.4E+00	5.4E+00			8.8E+01	8.8E+01
79-46-9			2.7E-03	H			2.0E-02	I	V		4.9E+03	1.4E+09	1.3E+04	1		Nitropropane, 2-	79-46-9			1.4E-02	1.4E-02			2.7E+02	2.7E+02
759-73-9	2.7E+01	C	7.7E-03	C						M		1.4E+09		1	0.1	Nitroso-N-ethylurea, N-	759-73-9	5.7E-03	2.2E-02	1.8E+02	4.5E-03				
684-93-5	1.2E+02	C	3.4E-02	C						M		1.4E+09		1	0.1	Nitroso-N-methylurea, N-	684-93-5	1.3E-03	5.0E-03	4.1E+01	1.0E-03				
924-16-3	5.4E+00	I	1.6E-03	I					V			1.4E+09	2.4E+05	1		Nitroso-di-N-butylamine, N-	924-16-3	1.3E-01		4.3E-01	9.9E-02				
621-64-7	7.0E+00	I	2.0E-03	C								1.4E+09		1	0.1	Nitroso-di-N-propylamine, N-	621-64-7	9.9E-02	3.5E-01	1.9E+03	7.8E-02				
1116-54-7	2.8E+00	I	8.0E-04	C								1.4E+09		1	0.1	Nitrosodiethanolamine, N-	1116-54-7	2.5E-01	8.8E-01	4.8E+03	1.9E-01				
55-18-5	1.5E+02	I	4.3E-02	I						M		1.4E+09		1	0.1	Nitrosodiethylamine, N-	55-18-5	1.0E-03	4.0E-03	3.2E+01	8.1E-04				
62-75-9	5.1E+01	I	1.4E-02	I	8.0E-06	P	4.0E-05	X	V	M	2.4E+05	1.4E+09	8.2E+04	1		Nitrosodimethylamine, N-	62-75-9	3.0E-03		6.0E-03	2.0E-03	6.3E-01		3.4E+00	5.3E-01
86-30-6	4.9E-03	I	2.6E-06	C								1.4E+09		1	0.1	Nitrosodiphenylamine, N-	86-30-6	1.4E+02	5.0E+02	1.5E+06	1.1E+02				
10595-95-6	2.2E+01	I	6.3E-03	C					V		1.1E+05	1.4E+09	1.2E+05	1		Nitrosomethylethylamine, N-	10595-95-6	3.2E-02		5.4E-02	2.0E-02				
59-89-2	6.7E+00	C	1.9E-03	C								1.4E+09		1	0.1	Nitrosomorpholine [N-]	59-89-2	1.0E-01	3.7E-01	2.0E+03	8.1E-02				
100-75-4	9.4E+00	C	2.7E-03	C								1.4E+09		1	0.1	Nitrosopiperidine [N-]	100-75-4	7.4E-02	2.6E-01	1.4E+03	5.8E-02				
930-55-2	2.1E+00	I	6.1E-04	I								1.4E+09		1	0.1	Nitrosopyrrolidine, N-	930-55-2	3.3E-01	1.2E+00	6.3E+03	2.6E-01				

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
99-08-1					1.0E-04	X						1.4E+09		1	0.1	Nitrotoluene, m-	99-08-1					7.8E+00	3.3E+01		6.3E+00
88-72-2	2.2E-01	P			9.0E-04	P			V		1.5E+03	1.4E+09	1.4E+05	1		Nitrotoluene, o-	88-72-2	3.2E+00			3.2E+00	7.0E+01			7.0E+01
99-99-0	1.6E-02	P			4.0E-03	P						1.4E+09		1	0.1	Nitrotoluene, p-	99-99-0	4.3E+01	1.5E+02		3.4E+01	3.1E+02	1.3E+03		2.5E+02
111-84-2					3.0E-04	X	2.0E-02	P	V		6.9E+00	1.4E+09	1.0E+03	1		Nonane, n-	111-84-2					2.3E+01		2.2E+01	1.1E+01
27314-13-2					4.0E-02	I						1.4E+09		1	0.1	Norflurazon	27314-13-2					3.1E+03	1.3E+04		2.5E+03
32536-52-0					3.0E-03	I						1.4E+09		1	0.1	Octabromodiphenyl Ether	32536-52-0					2.3E+02	9.9E+02		1.9E+02
2691-41-0					5.0E-02	I						1.4E+09		1	0.006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0					3.9E+03	2.7E+05		3.9E+03
152-16-9					2.0E-03	H						1.4E+09		1	0.1	Octamethylpyrophosphoramide	152-16-9					1.6E+02	6.6E+02		1.3E+02
19044-88-3					5.0E-02	I						1.4E+09		1	0.1	Oryzalin	19044-88-3					3.9E+03	1.6E+04		3.2E+03
19666-30-9					5.0E-03	I						1.4E+09		1	0.1	Oxadiazon	19666-30-9					3.9E+02	1.6E+03		3.2E+02
23135-22-0					2.5E-02	I						1.4E+09		1	0.1	Oxamyl	23135-22-0					2.0E+03	8.2E+03		1.6E+03
42874-03-3					3.0E-03	I						1.4E+09		1	0.1	Oxyfluorfen	42874-03-3					2.3E+02	9.9E+02		1.9E+02
76738-62-0					1.3E-02	I						1.4E+09		1	0.1	Paclobutrazol	76738-62-0					1.0E+03	4.3E+03		8.2E+02
1910-42-5					4.5E-03	I						1.4E+09		1	0.1	Paraquat Dichloride	1910-42-5					3.5E+02	1.5E+03		2.8E+02
56-38-2					6.0E-03	H						1.4E+09		1	0.1	Parathion	56-38-2					4.7E+02	2.0E+03		3.8E+02
1114-71-2					5.0E-02	H			V			1.4E+09	4.5E+04	1		Pebulate	1114-71-2					3.9E+03			3.9E+03
40487-42-1					4.0E-02	I						1.4E+09		1	0.1	Pendimethalin	40487-42-1					3.1E+03	1.3E+04		2.5E+03
32534-81-9					2.0E-03	I			V		3.1E-01	1.4E+09	5.1E+05	1		Pentabromodiphenyl Ether	32534-81-9					1.6E+02			1.6E+02
60348-60-9					1.0E-04	I						1.4E+09		1	0.1	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9					7.8E+00	3.3E+01		6.3E+00
608-93-5					8.0E-04	I			V			1.4E+09	8.1E+04	1		Pentachlorobenzene	608-93-5					6.3E+01			6.3E+01
76-01-7	9.0E-02	P							V		4.6E+02	1.4E+09	9.7E+03	1		Pentachloroethane	76-01-7	7.7E+00			7.7E+00				
82-68-8	2.6E-01	H			3.0E-03	I			V			1.4E+09	4.3E+05	1		Pentachloronitrobenzene	82-68-8	2.7E+00			2.7E+00	2.3E+02			2.3E+02
87-86-5	4.0E-01	I	5.1E-06	C	5.0E-03	I						1.4E+09		1	0.25	Pentachlorophenol	87-86-5	1.7E+00	2.5E+00	7.5E+05	1.0E+00	3.9E+02	6.6E+02		2.5E+02
78-11-5	4.0E-03	X			2.0E-03	P						1.4E+09		1	0.1	Pentaerythritol tetranitrate (PETN)	78-11-5	1.7E+02	6.2E+02		1.4E+02	1.6E+02	6.6E+02		1.3E+02
109-66-0							1.0E+00	P	V		3.9E+02	1.4E+09	7.8E+02	1		Pentane, n-	109-66-0							8.1E+02	8.1E+02
																Perchlorates									
7790-98-9					7.0E-04	I						1.4E+09		1		~Ammonium Perchlorate	7790-98-9					5.5E+01			5.5E+01
7791-03-9					7.0E-04	I						1.4E+09		1		~Lithium Perchlorate	7791-03-9					5.5E+01			5.5E+01
14797-73-0					7.0E-04	I						1.4E+09		1		~Perchlorate and Perchlorate Salts	14797-73-0					5.5E+01			5.5E+01
7778-74-7					7.0E-04	I						1.4E+09		1		~Potassium Perchlorate	7778-74-7					5.5E+01			5.5E+01
7601-89-0					7.0E-04	I						1.4E+09		1		~Sodium Perchlorate	7601-89-0					5.5E+01			5.5E+01
375-73-5					2.0E-02	P			V			1.4E+09	1.3E+05	1		Perfluorobutane Sulfonate	375-73-5					1.6E+03			1.6E+03
52645-53-1					5.0E-02	I						1.4E+09		1	0.1	Permethrin	52645-53-1					3.9E+03	1.6E+04		3.2E+03
62-44-2	2.2E-03	C	6.3E-07	C								1.4E+09		1	0.1	Phenacetin	62-44-2	3.2E+02	1.1E+03	6.1E+06	2.5E+02				
13684-63-4					2.5E-01	I						1.4E+09		1	0.1	Phenmedipham	13684-63-4					2.0E+04	8.2E+04		1.6E+04
108-95-2					3.0E-01	I	2.0E-01	C				1.4E+09		1	0.1	Phenol	108-95-2					2.3E+04	9.9E+04	2.8E+08	1.9E+04
114-26-1					4.0E-03	I						1.4E+09		1	0.1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1					3.1E+02	1.3E+03		2.5E+02
92-84-2					5.0E-04	X						1.4E+09		1	0.1	Phenothiazine	92-84-2					3.9E+01	1.6E+02		3.2E+01
108-45-2					6.0E-03	I						1.4E+09		1	0.1	Phenylenediamine, m-	108-45-2					4.7E+02	2.0E+03		3.8E+02
95-54-5	4.7E-02	H										1.4E+09		1	0.1	Phenylenediamine, o-	95-54-5	1.5E+01	5.3E+01		1.2E+01				
106-50-3					1.9E-01	H						1.4E+09		1	0.1	Phenylenediamine, p-	106-50-3					1.5E+04	6.3E+04		1.2E+04
90-43-7	1.9E-03	H										1.4E+09		1	0.1	Phenylphenol, 2-	90-43-7	3.6E+02	1.3E+03		2.8E+02				
298-02-2					2.0E-04	H						1.4E+09		1	0.1	Phorate	298-02-2					1.6E+01	6.6E+01		1.3E+01
75-44-5							3.0E-04	I	V		1.6E+03	1.4E+09	9.8E+02	1		Phosgene	75-44-5							3.1E-01	3.1E-01
732-11-6					2.0E-02	I						1.4E+09		1	0.1	Phosmet	732-11-6					1.6E+03	6.6E+03		1.3E+03
																Phosphates, Inorganic									
13776-88-0					4.9E+01	P						1.4E+09		1		~Aluminum metaphosphate	13776-88-0					3.8E+06			3.8E+06
68333-79-9					4.9E+01	P						1.4E+09		1		~Ammonium polyphosphate	68333-79-9					3.8E+06			3.8E+06
7790-76-3					4.9E+01	P						1.4E+09		1		~Calcium pyrophosphate	7790-76-3					3.8E+06			3.8E+06
7783-28-0					4.9E+01	P						1.4E+09		1		~Diammonium phosphate	7783-28-0					3.8E+06			3.8E+06
7757-93-9					4.9E+01	P						1.4E+09		1		~Dicalcium phosphate	7757-93-9					3.8E+06			3.8E+06
7782-75-4					4.9E+01	P						1.4E+09		1		~Dimagnesium phosphate	7782-75-4					3.8E+06			3.8E+06
7758-11-4					4.9E+01	P						1.4E+09		1		~Dipotassium phosphate	7758-11-4					3.8E+06			3.8E+06
7558-79-4					4.9E+01	P						1.4E+09		1		~Disodium phosphate	7558-79-4					3.8E+06			3.8E+06
13530-50-2					4.9E+01	P						1.4E+09		1		~Monoaluminum phosphate	13530-50-2					3.8E+06			3.8E+06
7722-76-1					4.9E+01	P						1.4E+09		1		~Monoammonium phosphate	7722-76-1					3.8E+06			3.8E+06
7758-23-8					4.9E+01	P						1.4E+09		1		~Monocalcium phosphate	7758-23-8					3.8E+06			3.8E+06
7757-86-0					4.9E+01	P						1.4E+09		1		~Monomagnesium phosphate	7757-86-0					3.8E+06			3.8E+06
7778-77-0					4.9E+01	P						1.4E+09		1		~Monopotassium phosphate	7778-77-0					3.8E+06			3.8E+06
7558-80-7					4.9E+01	P						1.4E+09		1		~Monosodium phosphate	7558-80-7					3.8E+06			3.8E+06
8017-16-1					4.9E+01	P						1.4E+09		1		~Polyphosphoric acid	8017-16-1					3.8E+06			3.8E+06
13845-36-8					4.9E+01	P						1.4E+09		1		~Potassium tripolyphosphate	13845-36-8					3.8E+06			3.8E+06
7758-16-9					4.9E+01	P						1.4E+09		1		~Sodium acid pyrophosphate	7758-16-9					3.8E+06			3.8E+06
7785-88-8					4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (acidic)	7785-88-8					3.8E+06			3.8E+06
10279-59-1					4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (anhydrous)	10279-59-1					3.8E+06			3.8E+06
10305-76-7					4.9E+01	P						1.4E+09		1		~Sodium aluminum phosphate (tetrahydrate)	10305-76-7					3.8E+06			3.8E+06
10124-56-8					4.9E+01	P						1.4E+09		1		~Sodium hexametaphosphate	10124-56-8					3.8E+06			3.8E+06
68915-31-1					4.9E+01	P						1.4E+09		1		~Sodium polyphosphate	68915-31-1					3.8E+06			3.8E+06
7785-84-4					4.9E+01	P						1.4E+09		1		~Sodium trimetaphosphate	7785-84-4					3.8E+06			3.8E+06
7758-29-4					4.9E+01	P						1.4E+09		1		~Sodium tripolyphosphate	7758-29-4					3.8E+06			3.8E+06
7320-34-5					4.9E+01	P						1.4E+09		1		~Tetrapotassium phosphate	7320-34-5					3.8E+06			3.8E+06
7722-88-5					4.9E+01	P						1.4E+09		1		~Tetrasodium pyrophosphate	7722-88-5					3.8E+06			3.8E+06
15136-87-5					4.9E+01	P						1.4E+09		1		~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5					3.8E+06			3.8E+06
7758-87-4					4.9E+01	P						1.4E+09		1		~Tricalcium phosphate	7758-87-4					3.8E+06			3.8E+06
7757-87-1					4.9E+01	P						1.4E+09		1		~Trimagnesium phosphate	7757-87-1					3.8E+06			3.8E+06
7778-53-2					4.9E+01	P						1.4E+09		1		~Tripotassium phosphate	7778-53-2					3.8E+06			3.8E+06
7601-54-9					4.9E+01	P						1.4E+09		1		~Trisodium phosphate	7601-54-9					3.8E+06			3.8E+06
7803-51-2					3.0E-04	I	3.0E-04	I	V			1.4E+09		1		Phosphine	7803-51-2					2.3E+01		4.3E+05	2.3E+01
7664-38-2					4.9E+01	P	1.0E-02	I				1.4E+09		1		Phosphoric Acid	7664-38-2					3.8E+06		1.4E+07	3.0E+06
7723-14-0					2.0E-05	I			V			1.4E+09	6.9E+03	1		Phosphorus, White	7723-14-0					1.6E+00			1.6E+00
																Phthalates									
117-81-7	1.4E-02	I	2.4E-06	C	2.0E-02	I						1.4E+09		1	0.1	~Bis(2-ethylhexyl)phthalate	117-81-7	5.0E+01	1.8E+02	1.6E+06	3.9E+01	1.6E+03	6.6E+03		1.3E+03
85-68-7	1.9E-03	P			2.0E-01	I						1.4E+09		1	0.1	~Butyl Benzyl Phthalate	85-68-7	3.7E+02	1.3E+03		2.9E+02	1.6E+04	6.6E+04		1.3E+04
85-70-1					1.0E+00	I						1.4E+09		1	0.1	~Butylphthalyl Butylglycolate	85-70-1					7.8E+04	3.3E+05		6.3E+04

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
84-74-2					1.0E-01	I						1.4E+09		1	0.1	~Dibutyl Phthalate	84-74-2					7.8E+03	3.3E+04		6.3E+03
84-66-2					8.0E-01	I						1.4E+09		1	0.1	~Diethyl Phthalate	84-66-2					6.3E+04	2.6E+05		5.1E+04
120-61-6					1.0E-01	I			V			1.4E+09	2.1E+04	1		~Dimethylterephthalate	120-61-6					7.8E+03			7.8E+03
117-84-0					1.0E-02	P						1.4E+09		1	0.1	~Octyl Phthalate, di-N-	117-84-0					7.8E+02	3.3E+03		6.3E+02
100-21-0					1.0E+00	H						1.4E+09		1	0.1	~Phthalic Acid, P-	100-21-0					7.8E+04	3.3E+05		6.3E+04
85-44-9					2.0E+00	I	2.0E-02	C				1.4E+09		1	0.1	~Phthalic Anhydride	85-44-9					1.6E+05	6.6E+05	2.8E+07	1.3E+05
1918-02-1					7.0E-02	I						1.4E+09		1	0.1	Picloram	1918-02-1					5.5E+03	2.3E+04		4.4E+03
96-91-3					1.0E-04	X						1.4E+09		1	0.1	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3					7.8E+00	3.3E+01		6.3E+00
88-89-1					9.0E-04	X						1.4E+09		1	0.1	Picric Acid (2,4,6-Trinitrophenol)	88-89-1					7.0E+01	3.0E+02		5.7E+01
29232-93-7					1.0E-02	I						1.4E+09		1	0.1	Pirimiphos, Methyl	29232-93-7					7.8E+02	3.3E+03		6.3E+02
59536-65-1	3.0E+01	C	8.6E-03	C	7.0E-06	H						1.4E+09		1	0.1	Polybrominated Biphenyls Polychlorinated Biphenyls (PCBs)	59536-65-1	2.3E-02	8.2E-02	4.4E+02	1.8E-02	5.5E-01	2.3E+00		4.4E-01
12674-11-2	7.0E-02	S	2.0E-05	S	7.0E-05	I			V			1.4E+09	7.1E+05	1	0.14	~Aroclor 1016	12674-11-2	9.9E+00	2.5E+01	1.0E+02	6.7E+00	5.5E+00	1.6E+01		4.1E+00
11104-28-2	2.0E+00	S	5.7E-04	S					V			1.4E+09	2.0E+05	1	0.14	~Aroclor 1221	11104-28-2	3.5E-01	8.8E-01	1.0E+00	2.0E-01				
11141-16-5	2.0E+00	S	5.7E-04	S					V			1.4E+09	1.1E+05	1	0.14	~Aroclor 1232	11141-16-5	3.5E-01	8.8E-01	5.5E-01	1.7E-01				
53469-21-9	2.0E+00	S	5.7E-04	S					V			1.4E+09	5.9E+05	1	0.14	~Aroclor 1242	53469-21-9	3.5E-01	8.8E-01	2.9E+00	2.3E-01				
12672-29-6	2.0E+00	S	5.7E-04	S					V			1.4E+09	6.3E+05	1	0.14	~Aroclor 1248	12672-29-6	3.5E-01	8.8E-01	3.1E+00	2.3E-01				
11097-69-1	2.0E+00	S	5.7E-04	S	2.0E-05	I			V			1.4E+09	8.4E+05	1	0.14	~Aroclor 1254	11097-69-1	3.5E-01	8.8E-01	4.1E+00	2.4E-01	1.6E+00	4.7E+00		1.2E+00
11096-82-5	2.0E+00	S	5.7E-04	S					V			1.4E+09	1.3E+06	1	0.14	~Aroclor 1260	11096-82-5	3.5E-01	8.8E-01	6.5E+00	2.4E-01				
11126-42-4					6.0E-04	X			V			1.4E+09	9.6E+05	1	0.14	~Aroclor 5460	11126-42-4					4.7E+01	1.4E+02		3.5E+01
39635-31-9	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	2.4E+06	1	0.14	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.8E-01	4.5E-01	6.0E+00	1.3E-01	1.8E+00	5.5E+00	3.4E+03	1.4E+00
52663-72-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.8E-01	4.5E-01	3.9E+00	1.2E-01	1.8E+00	5.5E+00	2.2E+03	1.4E+00
69782-90-7	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.0E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E+00	5.5E+00	1.4E+03	1.4E+00
38380-08-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.8E-01	4.5E-01	2.7E+00	1.2E-01	1.8E+00	5.5E+00	1.5E+03	1.4E+00
32774-16-6	3.9E+03	E	1.1E+00	E	2.3E-08	E	1.3E-06	E	V			1.4E+09	1.6E+06	1	0.14	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	1.8E-04	4.5E-04	3.9E-03	1.2E-04	1.8E-03	5.5E-03	2.2E+00	1.4E-03
65510-44-3	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.8E-01	4.5E-01	1.8E+00	1.2E-01	1.8E+00	5.5E+00	1.0E+03	1.4E+00
31508-00-6	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	5.9E+05	1	0.14	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E+00	5.5E+00	8.2E+02	1.4E+00
32598-14-4	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	6.0E+05	1	0.14	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.8E-01	4.5E-01	1.5E+00	1.2E-01	1.8E+00	5.5E+00	8.4E+02	1.4E+00
74472-37-0	3.9E+00	E	1.1E-03	E	2.3E-05	E	1.3E-03	E	V			1.4E+09	1.1E+06	1	0.14	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.8E-01	4.5E-01	2.6E+00	1.2E-01	1.8E+00	5.5E+00	1.5E+03	1.4E+00
57465-28-8	1.3E+04	E	3.8E+00	E	7.0E-09	E	4.0E-07	E	V			1.4E+09	7.3E+05	1	0.14	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	5.3E-05	1.4E-04	5.4E-04	3.6E-05	5.5E-04	1.6E-03	3.0E-01	4.1E-04
1336-36-3	2.0E+00	I	5.7E-04	I					V			1.4E+09	5.3E+05	1	0.14	~Polychlorinated Biphenyls (high risk)	1336-36-3	3.5E-01	8.8E-01	2.6E+00	2.3E-01				
1336-36-3	4.0E-01	I	1.0E-04	I					V					1	0.14	~Polychlorinated Biphenyls (low risk)	1336-36-3								
1336-36-3	7.0E-02	I	2.0E-05	I					V					1	0.14	~Polychlorinated Biphenyls (lowest risk)	1336-36-3								
32598-13-3	1.3E+01	E	3.8E-03	E	7.0E-06	E	4.0E-04	E				1.4E+09		1	0.14	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	5.3E-02	1.4E-01	1.0E+03	3.8E-02	5.5E-01	1.6E+00	5.7E+05	4.1E-01
70362-50-4	3.9E+01	E	1.1E-02	E	2.3E-06	E	1.3E-04	E	V			1.4E+09	5.1E+05	1	0.14	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	1.8E-02	4.5E-02	1.3E-01	1.2E-02	1.8E-01	5.5E-01	7.1E+01	1.4E-01
9016-87-9							6.0E-04	I				1.4E+09		1	0.1	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9							8.5E+05	8.5E+05
																Polynuclear Aromatic Hydrocarbons (PAHs)									
83-32-9					6.0E-02	I			V			1.4E+09	1.4E+05	1	0.13	~Acenaphthene	83-32-9					4.7E+03	1.5E+04		3.6E+03
120-12-7					3.0E-01	I			V			1.4E+09	5.2E+05	1	0.13	~Anthracene	120-12-7					2.3E+04	7.6E+04		1.8E+04
56-55-3	7.3E-01	E	1.1E-04	C					V	M		1.4E+09	4.4E+06	1	0.13	~Benz[a]anthracene	56-55-3	2.1E-01	6.3E-01	4.1E+01	1.6E-01				
205-82-3	1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Benzo(j)fluoranthene	205-82-3	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
50-32-8	7.3E+00	I	1.1E-03	C						M		1.4E+09		1	0.13	~Benzo[a]pyrene	50-32-8	2.1E-02	6.3E-02	1.3E+03	1.6E-02				
205-99-2	7.3E-01	E	1.1E-04	C						M		1.4E+09		1	0.13	~Benzo[b]fluoranthene	205-99-2	2.1E-01	6.3E-01	1.3E+04	1.6E-01				
207-08-9	7.3E-02	E	1.1E-04	C						M		1.4E+09		1	0.13	~Benzo[k]fluoranthene	207-08-9	2.1E+00	6.3E+00	1.3E+04	1.6E+00				
91-58-7					8.0E-02	I			V			1.4E+09	8.0E+04	1	0.13	~Chloronaphthalene, Beta-	91-58-7					6.3E+03	2.0E+04		4.8E+03
218-01-9	7.3E-03	E	1.1E-05	C						M		1.4E+09		1	0.13	~Chrysene	218-01-9	2.1E+01	6.3E+01	1.3E+05	1.6E+01				
53-70-3	7.3E+00	E	1.1E-03	C						M		1.4E+09		1	0.13	~Dibenz[a,h]anthracene	53-70-3	2.1E-02	6.3E-02	1.1E+03	1.6E-02				
192-65-4	1.2E+01	C	1.1E-03	C								1.4E+09		1	0.13	~Dibenzo(a,e)pyrene	192-65-4	5.8E-02	1.6E-01	3.5E+03	4.2E-02				
57-97-6	2.5E+02	C	7.1E-02	C						M		1.4E+09		1	0.13	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	6.1E-04	1.8E-03	1.9E+01	4.6E-04				
206-44-0					4.0E-02	I						1.4E+09		1	0.13	~Fluoranthene	206-44-0					3.1E+03	1.0E+04		2.4E+03
86-73-7					4.0E-02	I			V			1.4E+09	2.8E+05	1	0.13	~Fluorene	86-73-7					3.1E+03	1.0E+04		2.4E+03
193-39-5	7.3E-01	E	1.1E-04	C						M		1.4E+09		1	0.13	~Indeno[1,2,3-cd]pyrene	193-39-5	2.1E-01	6.3E-01	1.3E+04	1.6E-01				
90-12-0	2.9E-02	P			7.0E-02	A			V		3.9E+02	1.4E+09	5.9E+04	1	0.13	~Methylnaphthalene, 1-	90-12-0	2.4E+01	6.6E+01		1.8E+01	5.5E+03	1.8E+04		4.2E+03
91-57-6					4.0E-03	I			V			1.4E+09	5.8E+04	1	0.13	~Methylnaphthalene, 2-	91-57-6					3.1E+02	1.0E+03		2.4E+02
91-20-3			3.4E-05	C	2.0E-02	I	3.0E-03	I	V			1.4E+09	4.6E+04	1	0.13	~Naphthalene	91-20-3			3.8E+00	3.8E+00	1.6E+03	5.1E+03	1.4E+02	1.3E+02
57835-92-4	1.2E+00	C	1.1E-04	C								1.4E+09		1	0.13	~Nitropyrene, 4-	57835-92-4	5.8E-01	1.6E+00	3.5E+04	4.2E-01				
129-00-0					3.0E-02	I			V			1.4E+09	2.4E+06	1	0.13	~Pyrene	129-00-0					2.3E+03	7.6E+03		1.8E+03
29420-49-3					2.0E-02	P						1.4E+09		1	0.1	Potassium Perfluorobutane Sulfonate	29420-49-3					1.6E+03	6.6E+03		1.3E+03
67747-09-5	1.5E-01	I			9.0E-03	I						1.4E+09		1	0.1	Prochloraz	67747-09-5	4.6E+00	1.6E+01		3.6E+00	7.0E+02	3.0E+03		5.7E+02
26399-36-0					6.0E-03	H			V			1.4E+09	4.2E+05	1		Profluralin	26399-36-0					4.7E+02			4.7E+02
1610-18-0					1.5E-02	I						1.4E+09		1	0.1	Prometon	1610-18-0					1.2E+03	4.9E+03		9.5E+02
7287-19-6					4.0E-03	I						1.4E+09		1	0.1	Prometryn	7287-19-6					3.1E+02	1.3E+03		2.5E+02
1918-16-7					1.3E-02	I						1.4E+09		1	0.1	Propachlor	1918-16-7					1.0E+03	4.3E+03		8.2E+02
709-98-8					5.0E-03	I						1.4E+09		1	0.1	Propanil	709-98-8					3.9E+02	1.6E+03		3.2E+02
2312-35-8					2.0E-02	I						1.4E+09		1	0.1	Propargite	2312-35-8					1.6E+03	6.6E+03		1.3E+03
107-19-7					2.0E-03	I			V		1.1E+05	1.4E+09	6.3E+04	1		Propargyl Alcohol	107-19-7					1.6E+02			1.6E+02
139-40-2					2.0E-02	I						1.4E+09		1	0.1	Propazine	139-40-2					1.6E+03	6.6E+03		1.3E+03
122-42-9					2.0E-02	I						1.4E+09		1	0.1	Propham	122-42-9					1.6E+03	6.6E+03		1.3E+03
60207-90-1					1.3E-02	I						1.4E+09		1	0.1	Propiconazole	60207-90-1					1.0E+03	4.3E+03		8.2E+02
123-38-6							8.0E-03	I	V		3.3E+04	1.4E+09	8.9E+03	1		Propionaldehyde	123-38-6							7.5E+01	7.5E+01
103-65-1					1.0E-01	X	1.0E+00	X	V		2.6E+02	1.4E+09	7.0E+03	1		Propyl benzene	103-65-1					7.8E+03		7.3E+03	3.8E+03
115-07-1							3.0E+00	C	V		3.5E+02	1.4E+09	7.0E+02	1		Propylene	115-07-1							2.2E+03	2.2E+03
57-55-6					2.0E+01	P						1.4E+09		1	0.1	Propylene Glycol	57-55-6					1.6E+06	6.6E+06		1.3E+06
6423-43-4							2.7E-04	A				1.4E+09		1	0.1	Propylene Glycol Dinitrate	6423-43-4							3.9E+05	3.9E+05
107-98-2					7.0E-01	H	2.0E+00	I	V		1.1E+05	1.4E+09	7.8E+04	1		Propylene Glycol Monomethyl Ether	107-98-2					5.5E+04		1.6E+05	4.1E+04
75-56-9	2.4E-01	I	3.7E-06	I			3.0E-02	I	V		7.8E+04	1.4E+09	1.0E+04	1		Propylene Oxide	75-56-9	2.9E+00		7.8E+00	2.1E+00			3.2E+02	3.2E+02
23950-58-5					7.5E-02	I						1.4E+09		1	0.1	Propyzamide	23950-58-5					5.9E+03	2.5E+04		4.7E+03
110-86-1					1.0E-03	I			V		5.3E+05	1.4E+09	5.5E+04	1		Pyridine	110-86-1					7.8E+01			7.8E+01
13593-03-8					5.0E-04	I						1.4E+09		1	0.1	Quinalphos	13593-03-8					3.9E+01	1.6E+02		3.2E+01
91-22-5	3.0E+00	I										1.4E+09		1	0.1	Quinoline	91-22-5	2.3E-01	8.2E-01		1.8E-01				
76578-14-8					9.0E-03	I						1.4E+09		1	0.1	Quizalofop-ethyl	76578-14-8					7.0E+02	3.0E+03		5.7E+02
NA							3.0E-02	A				1.4E+09		1		Refractory Ceramic Fibers	NA							4.3E+07	4.3E+07
10453-86-8					3.0E-02	I						1.4E+09		1	0.1	Resmethrin	10453-86-8					2.3E+03	9.9E+03		1.9E+03
299-84-3					5.0E-02	H			V			1.4E+09	4.7E+05	1		Ronnel	299-84-3					3.9E+03			3.9E+03

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information															Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
83-79-4					4.0E-03	I						1.4E+09		1	0.1	Rotenone	83-79-4					3.1E+02	1.3E+03		2.5E+02
94-59-7	2.2E-01	C	6.3E-05	C						M		1.4E+09		1	0.1	Safrole	94-59-7	7.0E-01	2.7E+00	2.2E+04	5.5E-01				
7783-00-8					5.0E-03	I						1.4E+09		1		Selenious Acid	7783-00-8					3.9E+02			3.9E+02
7782-49-2					5.0E-03	I	2.0E-02	C				1.4E+09		1		Selenium	7782-49-2					3.9E+02		2.8E+07	3.9E+02
7446-34-6					5.0E-03	C	2.0E-02	C				1.4E+09		1		Selenium Sulfide	7446-34-6					3.9E+02		2.8E+07	3.9E+02
74051-80-2					9.0E-02	I						1.4E+09		1	0.1	Sethoxydim	74051-80-2					7.0E+03	3.0E+04		5.7E+03
7631-86-9							3.0E-03	C				1.4E+09		1		Silica (crystalline, respirable)	7631-86-9							4.3E+06	4.3E+06
7440-22-4					5.0E-03	I						1.4E+09		0.04		Silver	7440-22-4					3.9E+02			3.9E+02
122-34-9	1.2E-01	H			5.0E-03	I						1.4E+09		1	0.1	Simazine	122-34-9	5.8E+00	2.1E+01		4.5E+00	3.9E+02	1.6E+03		3.2E+02
62476-59-9					1.3E-02	I						1.4E+09		1	0.1	Sodium Acifluorfen	62476-59-9					1.0E+03	4.3E+03		8.2E+02
26628-22-8					4.0E-03	I						1.4E+09		1		Sodium Azide	26628-22-8					3.1E+02			3.1E+02
10588-01-9	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Sodium Dichromate	10588-01-9	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
148-18-5	2.7E-01	H			3.0E-02	I						1.4E+09		1	0.1	Sodium Diethyldithiocarbamate	148-18-5	2.6E+00	9.2E+00		2.0E+00	2.3E+03	9.9E+03		1.9E+03
7681-49-4					5.0E-02	A	1.3E-02	C				1.4E+09		1		Sodium Fluoride	7681-49-4					3.9E+03		1.8E+07	3.9E+03
62-74-8					2.0E-05	I						1.4E+09		1	0.1	Sodium Fluoroacetate	62-74-8					1.6E+00	6.6E+00		1.3E+00
13718-26-8					1.0E-03	H						1.4E+09		1		Sodium Metavanadate	13718-26-8					7.8E+01			7.8E+01
13472-45-2					8.0E-04	P						1.4E+09		1		Sodium Tungstate	13472-45-2					6.3E+01			6.3E+01
10213-10-2					8.0E-04	P						1.4E+09		1		Sodium Tungstate Dihydrate	10213-10-2					6.3E+01			6.3E+01
961-11-5	2.4E-02	H			3.0E-02	I						1.4E+09		1	0.1	Stirofos (Tetrachlorovinphos)	961-11-5	2.9E+01	1.0E+02		2.3E+01	2.3E+03	9.9E+03		1.9E+03
7789-06-2	5.0E-01	C	1.5E-01	C	2.0E-02	C	2.0E-04	C		M		1.4E+09		0.025		Strontium Chromate	7789-06-2	3.1E-01		9.2E+00	3.0E-01	1.6E+03		2.8E+05	1.6E+03
7440-24-6					6.0E-01	I						1.4E+09		1		Strontium, Stable	7440-24-6					4.7E+04			4.7E+04
57-24-9					3.0E-04	I						1.4E+09		1	0.1	Strychnine	57-24-9					2.3E+01	9.9E+01		1.9E+01
100-42-5					2.0E-01	I	1.0E+00	I	V		8.7E+02	1.4E+09	9.4E+03	1		Styrene	100-42-5					1.6E+04		9.7E+03	6.0E+03
NA					3.0E-03	P						1.4E+09		1	0.1	Styrene-Acrylonitrile (SAN) Trimer	NA					2.3E+02	9.9E+02		1.9E+02
126-33-0					1.0E-03	P	2.0E-03	X				1.4E+09		1	0.1	Sulfolane	126-33-0					7.8E+01	3.3E+02	2.8E+06	6.3E+01
80-07-9					8.0E-04	P						1.4E+09		1	0.1	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9					6.3E+01	2.6E+02		5.1E+01
7446-11-9							1.0E-03	C	V			1.4E+09		1		Sulfur Trioxide	7446-11-9							1.4E+06	1.4E+06
7664-93-9							1.0E-03	C				1.4E+09		1		Sulfuric Acid	7664-93-9							1.4E+06	1.4E+06
140-57-8	2.5E-02	I	7.1E-06	I	5.0E-02	H						1.4E+09		1	0.1	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	2.8E+01	9.9E+01	5.4E+05	2.2E+01	3.9E+03	1.6E+04		3.2E+03
21564-17-0					3.0E-02	H						1.4E+09		1	0.1	TCMTB	21564-17-0					2.3E+03	9.9E+03		1.9E+03
34014-18-1					7.0E-02	I						1.4E+09		1	0.1	Tebuthiuron	34014-18-1					5.5E+03	2.3E+04		4.4E+03
3383-96-8					2.0E-02	H						1.4E+09		1	0.1	Temephos	3383-96-8					1.6E+03	6.6E+03		1.3E+03
5902-51-2					1.3E-02	I						1.4E+09		1	0.1	Terbacil	5902-51-2					1.0E+03	4.3E+03		8.2E+02
13071-79-9					2.5E-05	H			V		3.1E+01	1.4E+09	2.6E+05	1		Terbufos	13071-79-9					2.0E+00			2.0E+00
886-50-0					1.0E-03	I						1.4E+09		1	0.1	Terbutryn	886-50-0					7.8E+01	3.3E+02		6.3E+01
5436-43-1					1.0E-04	I						1.4E+09		1	0.1	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1					7.8E+00	3.3E+01		6.3E+00
95-94-3					3.0E-04	I			V			1.4E+09	5.1E+04	1		Tetrachlorobenzene, 1,2,4,5-	95-94-3					2.3E+01			2.3E+01
630-20-6	2.6E-02	I	7.4E-06	I	3.0E-02	I			V		6.8E+02	1.4E+09	5.7E+03	1		Tetrachloroethane, 1,1,1,2-	630-20-6	2.7E+01		2.2E+00	2.0E+00	2.3E+03			2.3E+03
79-34-5	2.0E-01	I	5.8E-05	C	2.0E-02	I			V		1.9E+03	1.4E+09	1.5E+04	1		Tetrachloroethane, 1,1,2,2-	79-34-5	3.5E+00		7.3E-01	6.0E-01	1.6E+03			1.6E+03
127-18-4	2.1E-03	I	2.6E-07	I	6.0E-03		4.0E-02	I	V		1.7E+02	1.4E+09	2.4E+03	1		Tetrachloroethylene	127-18-4	3.3E+02		2.5E+01	2.4E+01	4.7E+02		9.8E+01	8.1E+01
58-90-2					3.0E-02	I						1.4E+09		1	0.1	Tetrachlorophenol, 2,3,4,6-	58-90-2					2.3E+03	9.9E+03		1.9E+03
5216-25-1	2.0E+01	H							V			1.4E+09	1.1E+05	1		Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	3.5E-02			3.5E-02				
3689-24-5					5.0E-04	I						1.4E+09		1	0.1	Tetraethyl Dithiopyrophosphate	3689-24-5					3.9E+01	1.6E+02		3.2E+01
811-97-2							8.0E+01	I	V		2.1E+03	1.4E+09	1.2E+03	1		Tetrafluoroethane, 1,1,1,2-	811-97-2							1.0E+05	1.0E+05
479-45-8					2.0E-03	P						1.4E+09		1	0.0007	Tetryl (Trinitrophenylmethylnitramine)	479-45-8					1.6E+02	1.0E+05		1.6E+02
1314-32-5					2.0E-05	S						1.4E+09		1		Thallic Oxide	1314-32-5					1.6E+00			1.6E+00
10102-45-1					1.0E-05	X						1.4E+09		1		Thallium (I) Nitrate	10102-45-1					7.8E-01			7.8E-01
7440-28-0					1.0E-05	X						1.4E+09		1		Thallium (Soluble Salts)	7440-28-0					7.8E-01			7.8E-01
563-68-8					1.0E-05	X			V			1.4E+09		1		Thallium Acetate	563-68-8					7.8E-01			7.8E-01
6533-73-9					2.0E-05	X			V			1.4E+09		1		Thallium Carbonate	6533-73-9					1.6E+00			1.6E+00
7791-12-0					1.0E-05	X						1.4E+09		1		Thallium Chloride	7791-12-0					7.8E-01			7.8E-01
12039-52-0					1.0E-05	S						1.4E+09		1		Thallium Selenite	12039-52-0					7.8E-01			7.8E-01
7446-18-6					2.0E-05	X						1.4E+09		1		Thallium Sulfate	7446-18-6					1.6E+00			1.6E+00
79277-27-3					1.3E-02	I						1.4E+09		1	0.1	Thifensulfuron-methyl	79277-27-3					1.0E+03	4.3E+03		8.2E+02
28249-77-6					1.0E-02	I						1.4E+09		1	0.1	Thiobencarb	28249-77-6					7.8E+02	3.3E+03		6.3E+02
111-48-8					7.0E-02	X						1.4E+09		1	0.0075	Thiodiglycol	111-48-8					5.5E+03	3.1E+05		5.4E+03
39196-18-4					3.0E-04	H						1.4E+09		1	0.1	Thiofanox	39196-18-4					2.3E+01	9.9E+01		1.9E+01
23564-05-8					8.0E-02	I						1.4E+09		1	0.1	Thiophanate, Methyl	23564-05-8					6.3E+03	2.6E+04		5.1E+03
137-26-8					5.0E-03	I						1.4E+09		1	0.1	Thiram	137-26-8					3.9E+02	1.6E+03		3.2E+02
7440-31-5					6.0E-01	H						1.4E+09		1		Tin	7440-31-5					4.7E+04			4.7E+04
7550-45-0							1.0E-04	A	V			1.4E+09		1		Titanium Tetrachloride	7550-45-0							1.4E+05	1.4E+05
108-88-3					8.0E-02	I	5.0E+00	I	V		8.2E+02	1.4E+09	4.3E+03	1		Toluene	108-88-3					6.3E+03		2.2E+04	4.9E+03
584-84-9			1.1E-05	C			8.0E-06	C	V			1.4E+09	7.6E+05	1		Toluene-2,4-diisocyanate	584-84-9			1.9E+02	1.9E+02			6.4E+00	6.4E+00
95-70-5	1.8E-01	X			2.0E-04	X						1.4E+09		1	0.1	Toluene-2,5-diamine	95-70-5	3.9E+00	1.4E+01		3.0E+00	1.6E+01	6.6E+01		1.3E+01
91-08-7			1.1E-05	C			8.0E-06	C	V		1.7E+03	1.4E+09	6.3E+05	1		Toluene-2,6-diisocyante	91-08-7			1.6E+02	1.6E+02			5.3E+00	5.3E+00
95-53-4	1.6E-02	P	5.1E-05	C								1.4E+09		1	0.1	Toluidine, o- (Methylaniline, 2-)	95-53-4	4.3E+01	1.5E+02	7.5E+04	3.4E+01				
106-49-0	3.0E-02	P			4.0E-03	X						1.4E+09		1	0.1	Toluidine, p-	106-49-0	2.3E+01	8.2E+01		1.8E+01	3.1E+02	1.3E+03		2.5E+02
NA					3.0E+00	P			V		3.4E-01	1.4E+09	1.1E+03	1		Total Petroleum Hydrocarbons (Aliphatic High)	NA					2.3E+05			2.3E+05
NA							6.0E-01	P	V		1.4E+02	1.4E+09	8.3E+02	1		Total Petroleum Hydrocarbons (Aliphatic Low)	NA							5.2E+02	5.2E+02
NA					1.0E-02	X	1.0E-01	P	V		6.9E+00	1.4E+09	1.0E+03	1		Total Petroleum Hydrocarbons (Aliphatic Medium)	NA					7.8E+02		1.1E+02	9.6E+01
NA					4.0E-02	P						1.4E+09		1	0.1	Total Petroleum Hydrocarbons (Aromatic High)	NA					3.1E+03	1.3E+04		2.5E+03
NA					4.0E-03	P	3.0E-02	P	V		1.8E+03	1.4E+09	3.5E+03	1		Total Petroleum Hydrocarbons (Aromatic Low)	NA					3.1E+02		1.1E+02	8.2E+01
NA					4.0E-03	P	3.0E-03	P	V			1.4E+09	5.2E+04	1		Total Petroleum Hydrocarbons (Aromatic Medium)	NA					3.1E+02		1.6E+02	1.1E+02
8001-35-2	1.1E+00	I	3.2E-04	I								1.4E+09		1	0.1	Toxaphene	8001-35-2	6.3E-01	2.2E+00	1.2E+04	4.9E-01				
66841-25-6					7.5E-03	I						1.4E+09		1	0.1	Tralomethrin	66841-25-6					5.9E+02	2.5E+03		4.7E+02
688-73-3					3.0E-04	A			V			1.4E+09	3.4E+03	1		Tri-n-butyltin	688-73-3					2.3E+01			2.3E+01
102-76-1					8.0E+01	X						1.4E+09		1	0.1	Triacetin	102-76-1					6.3E+06	2.6E+07		5.1E+06
43121-43-3					3.0E-02	I						1.4E+09		1	0.1	Triadimefon	43121-43-3					2.3E+03	9.9E+03		1.9E+03
2303-17-5					1.3E-02	I			V			1.4E+09	3.6E+05	1		Triallate	2303-17-5					1.0E+03			1.0E+03
82097-50-5					1.0E-02	I						1.4E+09		1	0.1	Triasulfuron	82097-50-5					7.8E+02	3.3E+03		6.3E+02
101200-48-0					8.0E-03	I						1.4E+09		1	0.1	Tribenuron-methyl	101200-48-0					6.3E+02	2.6E+03		5.1E+02
615-54-3					5.0E-03	I			V			1.4E+09	4.8E+04	1		Tribromobenzene, 1,2,4-	615-54-3					3.9E+02			3.9E+02
126-73-8	9.0E-03	P			1.0E-02	P						1.4E+09		1	0.1	Tributyl Phosphate	126-73-8	7.7E+01	2.7E+02		6.0E+01	7.8E+02	3.3E+03		6.3E+02

Key: I = IRIS; P = PPRTV; A = ATSDR; C = Cal EPA; X = APPENDIX PPRTV SCREEN (See FAQ #27); H = HEAST; F = See FAQ; J = New Jersey; O = EPA Office of Water; E = see user guide Section 2.3.5; L = see user guide on lead; M = mutagen; S = see user guide Section 5; V = volatile; R = RBA applied (See User Guide for Arsenic notice) ; c = cancer; n = noncancer; * = where: n SL < 100X c SL; ** = where n SL < 10X c SL; SSL values are based on DAF=1; m = Concentration may exceed ceiling limit (See User Guide); s = Concentration may exceed Csat (See User Guide)

	Toxicity and Chemical-specific Information														Contaminant		Carcinogenic Target Risk (TR) = 1E-06				Noncancer Child Hazard Index (HI) = 1			
CAS No.	SFO (mg/kg-day)$^{-1}$	key	IUR (ug/m^3)$^{-1}$	key	RfD_o (mg/kg-day)	key	RfC_i (mg/m^3)	key	vol	muta-gen	C_{sat} (mg/kg)	PEF (m^3/kg)	VF (m^3/kg)	GIABS	ABS	Analyte	CAS No.	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=1 (mg/kg)	Dermal SL Child THQ=1 (mg/kg)	Inhalation SL Child THQ=1 (mg/kg)	Noncarcinogenic SL Child THI=1 (mg/kg)
NA					3.0E-04	P						1.4E+09		1	0.1	Tributyltin Compounds	NA					2.3E+01	9.9E+01		1.9E+01
56-35-9					3.0E-04	I						1.4E+09		1	0.1	Tributyltin Oxide	56-35-9					2.3E+01	9.9E+01		1.9E+01
76-13-1					3.0E+01	I	3.0E+01	H	V		9.1E+02	1.4E+09	1.3E+03	1		Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1					2.3E+06		4.0E+04	4.0E+04
76-03-9	7.0E-02	I			2.0E-02	I						1.4E+09		1	0.1	Trichloroacetic Acid	76-03-9	9.9E+00	3.5E+01		7.8E+00	1.6E+03	6.6E+03		1.3E+03
33663-50-2	2.9E-02	H										1.4E+09		1	0.1	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.4E+01	8.5E+01		1.9E+01				
634-93-5	7.0E-03	X			3.0E-05	X						1.4E+09		1	0.1	Trichloroaniline, 2,4,6-	634-93-5	9.9E+01	3.5E+02		7.8E+01	2.3E+00	9.9E+00		1.9E+00
87-61-6					8.0E-04	X			V			1.4E+09	3.2E+04	1		Trichlorobenzene, 1,2,3-	87-61-6					6.3E+01			6.3E+01
120-82-1	2.9E-02	P			1.0E-02	I	2.0E-03	P	V		4.0E+02	1.4E+09	3.0E+04	1		Trichlorobenzene, 1,2,4-	120-82-1	2.4E+01			2.4E+01	7.8E+02		6.2E+01	5.8E+01
71-55-6					2.0E+00	I	5.0E+00	I	V		6.4E+02	1.4E+09	1.7E+03	1		Trichloroethane, 1,1,1-	71-55-6					1.6E+05		8.6E+03	8.1E+03
79-00-5	5.7E-02	I	1.6E-05	I	4.0E-03	I	2.0E-04	X	V		2.2E+03	1.4E+09	7.2E+03	1		Trichloroethane, 1,1,2-	79-00-5	1.2E+01		1.3E+00	1.1E+00	3.1E+02		1.5E+00	1.5E+00
79-01-6	4.6E-02	I	4.1E-06	I	5.0E-04	I	2.0E-03	I	V	M	6.9E+02	1.4E+09	2.2E+03	1		Trichloroethylene	79-01-6	8.8E+00		1.1E+00	9.4E-01	3.9E+01		4.6E+00	4.1E+00
75-69-4					3.0E-01	I			V		1.2E+03	1.4E+09	1.0E+03	1		Trichlorofluoromethane	75-69-4					2.3E+04			2.3E+04
95-95-4					1.0E-01	I						1.4E+09		1	0.1	Trichlorophenol, 2,4,5-	95-95-4					7.8E+03	3.3E+04		6.3E+03
88-06-2	1.1E-02	I	3.1E-06	I	1.0E-03	P						1.4E+09		1	0.1	Trichlorophenol, 2,4,6-	88-06-2	6.3E+01	2.2E+02	1.2E+06	4.9E+01	7.8E+01	3.3E+02		6.3E+01
93-76-5					1.0E-02	I						1.4E+09		1	0.1	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5					7.8E+02	3.3E+03		6.3E+02
93-72-1					8.0E-03	I						1.4E+09		1	0.1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1					6.3E+02	2.6E+03		5.1E+02
598-77-6					5.0E-03	I			V		1.3E+03	1.4E+09	1.5E+04	1		Trichloropropane, 1,1,2-	598-77-6					3.9E+02			3.9E+02
96-18-4	3.0E+01	I			4.0E-03	I	3.0E-04	I	V	M	1.4E+03	1.4E+09	1.6E+04	1		Trichloropropane, 1,2,3-	96-18-4	5.1E-03			5.1E-03	3.1E+02		4.9E+00	4.8E+00
96-19-5					3.0E-03	X	3.0E-04	P	V		3.1E+02	1.4E+09	2.3E+03	1		Trichloropropene, 1,2,3-	96-19-5					2.3E+02		7.3E-01	7.3E-01
1330-78-5					2.0E-02	A						1.4E+09		1	0.1	Tricresyl Phosphate (TCP)	1330-78-5					1.6E+03	6.6E+03		1.3E+03
58138-08-2					3.0E-03	I						1.4E+09		1	0.1	Tridiphane	58138-08-2					2.3E+02	9.9E+02		1.9E+02
121-44-8							7.0E-03	I	V		2.8E+04	1.4E+09	1.6E+04	1		Triethylamine	121-44-8							1.2E+02	1.2E+02
112-27-6					2.0E+00	P						1.4E+09		1	0.1	Triethylene Glycol	112-27-6					1.6E+05	6.6E+05		1.3E+05
420-46-2							2.0E+01	P	V		4.8E+03	1.4E+09	7.1E+02	1		Trifluoroethane, 1,1,1-	420-46-2							1.5E+04	1.5E+04
1582-09-8	7.7E-03	I			7.5E-03	I			V			1.4E+09	5.1E+05	1		Trifluralin	1582-09-8	9.0E+01			9.0E+01	5.9E+02			5.9E+02
512-56-1	2.0E-02	P			1.0E-02	P						1.4E+09		1	0.1	Trimethyl Phosphate	512-56-1	3.5E+01	1.2E+02		2.7E+01	7.8E+02	3.3E+03		6.3E+02
526-73-8							5.0E-03	P	V		2.9E+02	1.4E+09	9.4E+03	1		Trimethylbenzene, 1,2,3-	526-73-8							4.9E+01	4.9E+01
95-63-6							7.0E-03	P	V		2.2E+02	1.4E+09	7.9E+03	1		Trimethylbenzene, 1,2,4-	95-63-6							5.8E+01	5.8E+01
108-67-8					1.0E-02	X			V		1.8E+02	1.4E+09	6.6E+03	1		Trimethylbenzene, 1,3,5-	108-67-8					7.8E+02			7.8E+02
25167-70-8					1.0E-02	X			V		3.0E+01	1.4E+09	1.0E+03	1		Trimethylpentene, 2,4,4-	25167-70-8					7.8E+02			7.8E+02
99-35-4					3.0E-02	I						1.4E+09		1	0.019	Trinitrobenzene, 1,3,5-	99-35-4					2.3E+03	5.2E+04		2.2E+03
118-96-7	3.0E-02	I			5.0E-04	I						1.4E+09		1	0.032	Trinitrotoluene, 2,4,6-	118-96-7	2.3E+01	2.6E+02		2.1E+01	3.9E+01	5.2E+02		3.6E+01
791-28-6					2.0E-02	P						1.4E+09		1	0.1	Triphenylphosphine Oxide	791-28-6					1.6E+03	6.6E+03		1.3E+03
13674-87-8					2.0E-02	A						1.4E+09		1	0.1	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8					1.6E+03	6.6E+03		1.3E+03
13674-84-5					1.0E-02	X						1.4E+09		1	0.1	Tris(1-chloro-2-propyl)phosphate	13674-84-5					7.8E+02	3.3E+03		6.3E+02
126-72-7	2.3E+00	C	6.6E-04	C					V		4.7E+02	1.4E+09	9.0E+05	1		Tris(2,3-dibromopropyl)phosphate	126-72-7	3.0E-01		3.8E+00	2.8E-01				
115-96-8	2.0E-02	P			7.0E-03	P						1.4E+09		1	0.1	Tris(2-chloroethyl)phosphate	115-96-8	3.5E+01	1.2E+02		2.7E+01	5.5E+02	2.3E+03		4.4E+02
78-42-2	3.2E-03	P			1.0E-01	P						1.4E+09		1	0.1	Tris(2-ethylhexyl)phosphate	78-42-2	2.2E+02	7.7E+02		1.7E+02	7.8E+03	3.3E+04		6.3E+03
7440-33-7					8.0E-04	P						1.4E+09		1		Tungsten	7440-33-7					6.3E+01			6.3E+01
NA					3.0E-03	I	4.0E-05	A				1.4E+09		1		Uranium (Soluble Salts)	NA					2.3E+02		5.7E+04	2.3E+02
51-79-6	1.0E+00	C	2.9E-04	C						M		1.4E+09		1	0.1	Urethane	51-79-6	1.5E-01	6.0E-01	4.8E+03	1.2E-01				
1314-62-1			8.3E-03	P	9.0E-03	I	7.0E-06	P				1.4E+09		0.026		Vanadium Pentoxide	1314-62-1			4.6E+02	4.6E+02	7.0E+02		9.9E+03	6.6E+02
7440-62-2					5.0E-03	S	1.0E-04	A				1.4E+09		0.026		Vanadium and Compounds	7440-62-2					3.9E+02		1.4E+05	3.9E+02
1929-77-7					1.0E-03	I			V			1.4E+09	1.2E+05	1		Vernolate	1929-77-7					7.8E+01			7.8E+01
50471-44-8					2.5E-02	I						1.4E+09		1	0.1	Vinclozolin	50471-44-8					2.0E+03	8.2E+03		1.6E+03
108-05-4					1.0E+00	H	2.0E-01	I	V		2.8E+03	1.4E+09	4.4E+03	1		Vinyl Acetate	108-05-4					7.8E+04		9.2E+02	9.1E+02
593-60-2			3.2E-05	H			3.0E-03	I	V		2.5E+03	1.4E+09	1.4E+03	1		Vinyl Bromide	593-60-2			1.2E-01	1.2E-01			4.3E+00	4.3E+00
75-01-4	7.2E-01	I	4.4E-06	I	3.0E-03	I	1.0E-01	I	V	M	3.9E+03	1.4E+09	9.6E+02	1		Vinyl Chloride	75-01-4	9.4E-02		1.6E-01	5.9E-02	2.3E+02		1.0E+02	7.0E+01
81-81-2					3.0E-04	I						1.4E+09		1	0.1	Warfarin	81-81-2					2.3E+01	9.9E+01		1.9E+01
106-42-3					2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.6E+03	1		Xylene, P-	106-42-3					1.6E+04		5.8E+02	5.6E+02
108-38-3					2.0E-01	S	1.0E-01	S	V		3.9E+02	1.4E+09	5.5E+03	1		Xylene, m-	108-38-3					1.6E+04		5.7E+02	5.5E+02
95-47-6					2.0E-01	S	1.0E-01	S	V		4.3E+02	1.4E+09	6.5E+03	1		Xylene, o-	95-47-6					1.6E+04		6.7E+02	6.5E+02
1330-20-7					2.0E-01	I	1.0E-01	I	V		2.6E+02	1.4E+09	5.7E+03	1		Xylenes	1330-20-7					1.6E+04		6.0E+02	5.8E+02
1314-84-7					3.0E-04	I						1.4E+09		1		Zinc Phosphide	1314-84-7					2.3E+01			2.3E+01
7440-66-6					3.0E-01	I						1.4E+09		1		Zinc and Compounds	7440-66-6					2.3E+04			2.3E+04
12122-67-7					5.0E-02	I						1.4E+09		1	0.1	Zineb	12122-67-7					3.9E+03	1.6E+04		3.2E+03
7440-67-7					8.0E-05	X						1.4E+09		1		Zirconium	7440-67-7					6.3E+00			6.3E+00

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H` (unitless)	HLC (atm-m^3/mole)	H` and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
30560-19-1	Acephate	30560-19-1	1.8E+02	PHYSPROP	2.0E-11	5.0E-13	EPI	1.7E-06	PHYSPROP	8.8E+01	PHYSPROP	1.4E+00	CRC89	3.7E-02	8.0E-06	WATER9			1.0E+01	EPI	-8.5E-01	PHYSPROP	8.2E+05	PHYSPROP	2.1E-04	1.1E+00	2.7E+00	4.0E-05	EPI
75-07-0	Acetaldehyde	75-07-0	4.4E+01	PHYSPROP	2.7E-03	6.7E-05	PHYSPROP	9.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	7.8E-01	CRC89	1.3E-01	1.4E-05	WATER9			1.0E+00	EPI	-3.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.3E-03	1.9E-01	4.5E-01	5.3E-04	EPI
34256-82-1	Acetochlor	34256-82-1	2.7E+02	PHYSPROP	9.1E-07	2.2E-08	PHYSPROP	2.8E-05	PHYSPROP	1.1E+01	PubChem	1.1E+00	PubChem	2.2E-02	5.6E-06	WATER9			3.0E+02	EPI	3.0E+00	PHYSPROP	2.2E+02	PHYSPROP	3.1E-02	3.4E+00	8.2E+00	5.0E-03	EPI
67-64-1	Acetone	67-64-1	5.8E+01	PHYSPROP	1.4E-03	3.5E-05	PHYSPROP	2.3E+02	PHYSPROP	-9.5E+01	PHYSPROP	7.8E-01	CRC89	1.1E-01	1.2E-05	WATER9			2.4E+00	EPI	-2.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.5E-03	2.2E-01	5.3E-01	5.1E-04	EPI
75-86-5	Acetone Cyanohydrin	75-86-5	8.5E+01	PHYSPROP	8.1E-08	2.0E-09	PHYSPROP	3.4E-01	PHYSPROP	-1.9E+01	PHYSPROP	9.3E-01	CRC89	8.6E-02	1.0E-05	WATER9			1.0E+00	EPI	-3.0E-02	PHYSPROP	1.0E+06	PHYSPROP	1.8E-03	3.2E-01	7.6E-01	5.0E-04	EPI
75-05-8	Acetonitrile	75-05-8	4.1E+01	PHYSPROP	1.4E-03	3.5E-05	PHYSPROP	8.9E+01	PHYSPROP	-4.4E+01	PHYSPROP	7.9E-01	CRC89	1.3E-01	1.4E-05	WATER9			4.7E+00	EPI	-3.4E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	1.8E-01	4.3E-01	5.5E-04	EPI
98-86-2	Acetophenone	98-86-2	1.2E+02	PHYSPROP	4.3E-04	1.0E-05	PHYSPROP	4.0E-01	PHYSPROP	2.0E+01	PHYSPROP	1.0E+00	CRC89	6.5E-02	8.7E-06	WATER9			5.2E+01	EPI	1.6E+00	PHYSPROP	6.1E+03	PHYSPROP	1.6E-02	5.0E-01	1.2E+00	3.7E-03	EPI
53-96-3	Acetylaminofluorene, 2-	53-96-3	2.2E+02	PHYSPROP	7.8E-09	1.9E-10	PHYSPROP	9.4E-08	PHYSPROP	1.9E+02	PHYSPROP			5.2E-02	6.0E-06	WATER9			2.2E+03	EPI	3.1E+00	PHYSPROP	5.5E+00	PHYSPROP	7.2E-02	1.9E+00	4.5E+00	1.2E-02	RAGSE
107-02-8	Acrolein	107-02-8	5.6E+01	PHYSPROP	5.0E-03	1.2E-04	PHYSPROP	2.7E+02	PHYSPROP	-8.8E+01	PHYSPROP	8.4E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.0E+00	EPI	-1.0E-02	PHYSPROP	2.1E+05	PHYSPROP	2.2E-03	2.2E-01	5.2E-01	7.5E-04	EPI
79-06-1	Acrylamide	79-06-1	7.1E+01	PHYSPROP	7.0E-08	1.7E-09	EPI	7.0E-03	PHYSPROP	8.5E+01	PHYSPROP	1.2E+00	LANGE	1.1E-01	1.3E-05	WATER9			5.7E+00	EPI	-6.7E-01	PHYSPROP	3.9E+05	PHYSPROP	7.3E-04	2.6E-01	6.3E-01	2.2E-04	EPI
79-10-7	Acrylic Acid	79-10-7	7.2E+01	PHYSPROP	1.5E-05	3.7E-07	EPI	4.0E+00	PHYSPROP	1.3E+01	PHYSPROP	1.1E+00	CRC89	1.0E-01	1.2E-05	WATER9			1.4E+00	EPI	3.5E-01	PHYSPROP	1.0E+06	PHYSPROP	3.4E-03	2.7E-01	6.4E-01	1.1E-03	EPI
107-13-1	Acrylonitrile	107-13-1	5.3E+01	PHYSPROP	5.6E-03	1.4E-04	PHYSPROP	1.1E+02	PHYSPROP	-8.4E+01	PHYSPROP	8.0E-01	CRC89	1.1E-01	1.2E-05	WATER9			8.5E+00	EPI	2.5E-01	PHYSPROP	7.5E+04	PHYSPROP	3.3E-03	2.1E-01	5.0E-01	1.2E-03	EPI
111-69-3	Adiponitrile	111-69-3	1.1E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	6.8E-04	PHYSPROP	1.0E+00	PHYSPROP	9.7E-01	CRC89	7.1E-02	9.0E-06	WATER9			2.0E+01	EPI	-3.2E-01	PHYSPROP	8.0E+04	PHYSPROP	9.5E-04	4.2E-01	1.0E+00	2.4E-04	EPI
15972-60-8	Alachlor	15972-60-8	2.7E+02	PHYSPROP	3.4E-07	8.3E-09	PHYSPROP	2.2E-05	PHYSPROP	4.0E+01	PHYSPROP	1.1E+00	CRC89	2.3E-02	5.7E-06	WATER9			3.1E+02	EPI	3.5E+00	PHYSPROP	2.4E+02	PHYSPROP	6.6E-02	3.4E+00	8.2E+00	1.1E-02	EPI
116-06-3	Aldicarb	116-06-3	1.9E+02	PHYSPROP	5.9E-08	1.4E-09	EPI	3.5E-05	PHYSPROP	9.9E+01	PHYSPROP	1.2E+00	CRC89	3.2E-02	7.2E-06	WATER9			2.5E+01	EPI	1.1E+00	PHYSPROP	6.0E+03	PHYSPROP	4.0E-03	1.2E+00	2.9E+00	7.6E-04	EPI
1646-88-4	Aldicarb Sulfone	1646-88-4	2.2E+02	PHYSPROP	1.4E-07	3.4E-09	EPI	9.0E-05	PHYSPROP	1.4E+02	PHYSPROP			5.2E-02	6.1E-06	WATER9			1.0E+01	EPI	-5.7E-01	PHYSPROP	1.0E+04	PHYSPROP	2.1E-04	1.8E+00	4.4E+00	3.7E-05	EPI
1646-87-3	Aldicarb sulfoxide	1646-87-3	2.1E+02	PHYSPROP	4.0E-08	9.7E-10	EPI	1.0E-04	PHYSPROP	7.8E+01	EPI			5.4E-02	6.4E-06	WATER9			1.0E+01	EPI	-7.8E-01	PHYSPROP	2.8E+04	PHYSPROP	1.8E-04	1.5E+00	3.6E+00	3.3E-05	EPI
309-00-2	Aldrin	309-00-2	3.6E+02	PHYSPROP	1.8E-03	4.4E-05	PHYSPROP	1.2E-04	PHYSPROP	1.0E+02	PHYSPROP	1.6E+00	PubChem	2.3E-02	5.8E-06	WATER9			8.2E+04	EPI	6.5E+00	PHYSPROP	1.7E-02	PHYSPROP	2.2E+00	1.2E+01	4.8E+01	2.9E-01	EPI
107-18-6	Allyl Alcohol	107-18-6	5.8E+01	PHYSPROP	2.0E-04	5.0E-06	PHYSPROP	2.6E+01	PHYSPROP	-1.3E+02	PHYSPROP	8.5E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.9E+00	EPI	1.7E-01	PHYSPROP	1.0E+06	PHYSPROP	2.8E-03	2.2E-01	5.3E-01	9.6E-04	EPI
107-05-1	Allyl Chloride	107-05-1	7.7E+01	PHYSPROP	4.5E-01	1.1E-02	EPI	3.7E+02	PHYSPROP	-1.3E+02	PHYSPROP	9.4E-01	CRC89	9.4E-02	1.1E-05	WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	3.4E+03	PHYSPROP	3.8E-02	2.8E-01	6.8E-01	1.1E-02	EPI
7429-90-5	Aluminum	7429-90-5	2.7E+01	CRC89				0.0E+00	NIOSH	6.6E+02	CRC89	2.7E+00	CRC89				1.5E+03	BAES							2.0E-03	1.5E-01	3.6E-01	1.0E-03	RAGSE
20859-73-8	Aluminum Phosphide	20859-73-8	5.8E+01	PHYSPROP						2.6E+03	CRC89	2.4E+00	CRC89												2.9E-03	2.2E-01	5.3E-01	1.0E-03	RAGSE
834-12-8	Ametryn	834-12-8	2.3E+02	PHYSPROP	9.9E-08	2.4E-09	EPI	2.7E-06	PHYSPROP	8.8E+01	PHYSPROP			5.1E-02	6.0E-06	WATER9			4.3E+02	EPI	3.0E+00	PHYSPROP	2.1E+02	PHYSPROP	4.6E-02	2.0E+00	4.7E+00	7.9E-03	EPI
92-67-1	Aminobiphenyl, 4-	92-67-1	1.7E+02	PHYSPROP	6.0E-06	1.5E-07	PHYSPROP	1.2E-04	PHYSPROP	5.4E+01	PHYSPROP			6.2E-02	7.3E-06	WATER9			2.5E+03	EPI	2.9E+00	PHYSPROP	2.2E+02	PHYSPROP	7.0E-02	9.3E-01	2.2E+00	1.4E-02	EPI
591-27-5	Aminophenol, m-	591-27-5	1.1E+02	PHYSPROP	8.1E-09	2.0E-10	PHYSPROP	9.6E-03	PHYSPROP	1.2E+02	PHYSPROP			8.3E-02	9.7E-06	WATER9			9.0E+01	EPI	2.1E-01	PHYSPROP	2.7E+04	PHYSPROP	2.1E-03	4.3E-01	1.0E+00	5.3E-04	EPI
123-30-8	Aminophenol, p-	123-30-8	1.1E+02	PHYSPROP	1.5E-08	3.6E-10	EPI	4.0E-05	EPI	1.9E+02	PHYSPROP			8.3E-02	9.7E-06	WATER9			9.0E+01	EPI	4.0E-02	PHYSPROP	1.6E+04	PHYSPROP	1.6E-03	4.3E-01	1.0E+00	4.1E-04	EPI
33089-61-1	Amitraz	33089-61-1	2.9E+02	PHYSPROP	4.0E-04	9.9E-06	PHYSPROP	2.0E-06	PHYSPROP	8.6E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	WATER9			2.6E+05	EPI	5.5E+00	PHYSPROP	1.0E+00	PHYSPROP	1.1E+00	4.6E+00	1.8E+01	1.6E-01	EPI
7664-41-7	Ammonia	7664-41-7	1.7E+01	PHYSPROP	6.6E-04	1.6E-05	PHYSPROP	7.5E+03	PHYSPROP	-7.8E+01	PHYSPROP	7.0E-01	CRC89	2.3E-01	2.2E-05	WATER9					2.3E-01	OTHER	4.8E+05	PHYSPROP	1.6E-03	1.3E-01	3.1E-01	1.0E-03	RAGSE
7773-06-0	Ammonium Sulfamate	7773-06-0	1.1E+02	CRC89				0.0E+00	NIOSH	1.3E+02	CRC89	1.8E+00	PubChem										1.3E+06	PERRY	4.1E-03	4.6E-01	1.1E+00	1.0E-03	RAGSE
75-85-4	Amyl Alcohol, tert-	75-85-4	8.8E+01	PHYSPROP	5.6E-04	1.4E-05	PHYSPROP	1.7E+01	PHYSPROP	-9.1E+00	PHYSPROP	8.1E-01	CRC89	7.9E-02	9.1E-06	WATER9			4.1E+00	EPI	8.9E-01	PHYSPROP	1.1E+05	PHYSPROP	7.1E-03	3.3E-01	7.9E-01	2.0E-03	EPI
62-53-3	Aniline	62-53-3	9.3E+01	PHYSPROP	8.3E-05	2.0E-06	PHYSPROP	6.7E-01	PHYSPROP	-6.0E+00	PHYSPROP	1.0E+00	CRC89	8.3E-02	1.0E-05	WATER9			7.0E+01	EPI	9.0E-01	PHYSPROP	3.6E+04	PHYSPROP	6.9E-03	3.5E-01	8.4E-01	1.9E-03	EPI
84-65-1	Anthraquinone, 9,10-	84-65-1	2.1E+02	PHYSPROP	9.6E-07	2.4E-08	EPI	1.2E-07	PHYSPROP	2.9E+02	PHYSPROP			5.4E-02	6.3E-06	WATER9			5.0E+03	EPI	3.4E+00	PHYSPROP	1.4E+00	PHYSPROP	1.1E-01	1.5E+00	3.7E+00	1.9E-02	EPI
7440-36-0	Antimony (metallic)	7440-36-0	1.2E+02	PHYSPROP				0.0E+00	NIOSH	6.3E+02	PHYSPROP	6.7E+00	CRC89				4.5E+01	SSL							4.3E-03	5.3E-01	1.3E+00	1.0E-03	RAGSE
1314-60-9	Antimony Pentoxide	1314-60-9	3.2E+02	CRC89								3.8E+00	CRC89										3.0E+03	CRC89	6.9E-03	6.8E+00	1.6E+01	1.0E-03	RAGSE
1332-81-6	Antimony Tetroxide	1332-81-6	3.1E+02	EPI								6.6E+00	CRC89												6.7E-03	5.5E+00	1.3E+01	1.0E-03	RAGSE
1309-64-4	Antimony Trioxide	1309-64-4	2.9E+02	EPI						5.7E+02	CRC89	5.6E+00	CRC89												6.6E-03	4.5E+00	1.1E+01	1.0E-03	RAGSE
7440-38-2	Arsenic, Inorganic	7440-38-2	7.8E+01	PHYSPROP						2.7E+02	CRC89	4.9E+00	CRC89				2.9E+01	SSL							3.4E-03	2.9E-01	6.9E-01	1.0E-03	RAGSE
7784-42-1	Arsine	7784-42-1	7.8E+01	PHYSPROP						-1.2E+02	PHYSPROP	3.2E+00	CRC89										2.0E+05	PERRY	3.4E-03	2.9E-01	6.9E-01	1.0E-03	RAGSE
3337-71-1	Asulam	3337-71-1	2.3E+02	PHYSPROP	7.0E-11	1.7E-12	PHYSPROP	1.4E-06	PHYSPROP	1.4E+02	PHYSPROP			5.1E-02	5.9E-06	WATER9			2.8E+01	EPI	-2.7E-01	PHYSPROP	5.0E+03	PHYSPROP	3.1E-04	2.0E+00	4.9E+00	5.3E-05	EPI
1912-24-9	Atrazine	1912-24-9	2.2E+02	PHYSPROP	9.6E-08	2.4E-09	EPI	2.9E-07	PHYSPROP	1.7E+02	PHYSPROP	1.2E+00	PubChem	2.6E-02	6.8E-06	WATER9			2.2E+02	EPI	2.6E+00	PHYSPROP	3.5E+01	PHYSPROP	3.0E-02	1.7E+00	4.1E+00	5.2E-03	EPI
492-80-8	Auramine	492-80-8	2.7E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	1.3E-06	PHYSPROP	1.4E+02	PHYSPROP			4.6E-02	5.3E-06	WATER9			4.5E+03	EPI	3.0E+00	PHYSPROP	5.4E+01	PHYSPROP	7.0E-02	3.3E+00	7.9E+00	1.1E-02	RAGSE
65195-55-3	Avermectin B1	65195-55-3	8.8E+02	PHYSPROP	5.4E-26	1.3E-27	PHYSPROP	1.5E-30	PHYSPROP	3.5E+02	EPI			2.1E-02	2.4E-06	WATER9			8.8E+05	EPI	4.5E+00	PHYSPROP	3.5E-04	PHYSPROP	2.1E-04	8.4E+03	2.0E+04	1.8E-05	EPI
86-50-0	Azinphos-methyl	86-50-0	3.2E+02	PHYSPROP	9.8E-07	2.4E-08	EPI	1.6E-06	PHYSPROP	7.3E+01	PHYSPROP	1.4E+00	CRC89	2.3E-02	6.0E-06	WATER9			5.2E+01	EPI	2.8E+00	PHYSPROP	2.1E+01	PHYSPROP	1.2E-02	6.3E+00	1.5E+01	1.8E-03	EPI
103-33-3	Azobenzene	103-33-3	1.8E+02	PHYSPROP	5.5E-04	1.4E-05	EPI	3.6E-04	PHYSPROP	6.8E+01	PHYSPROP	1.2E+00	PERRY	3.6E-02	7.5E-06	WATER9			3.8E+03	EPI	3.8E+00	PHYSPROP	6.4E+00	PHYSPROP	2.7E-01	1.1E+00	2.6E+00	5.1E-02	EPI
123-77-3	Azodicarbonamide	123-77-3	1.2E+02	PHYSPROP	3.4E-11	8.2E-13	EPI	1.9E-10	PHYSPROP	2.1E+02	EPI	1.7E+00	GuideChem	8.3E-02	1.2E-05	WATER9			7.0E+01	EPI	-1.7E+00	PHYSPROP	3.5E+01	PHYSPROP	1.1E-04	4.7E-01	1.1E+00	2.6E-05	EPI
7440-39-3	Barium	7440-39-3	1.4E+02	PHYSPROP						7.1E+02	PHYSPROP	3.6E+00	CRC89				4.1E+01	SSL							4.5E-03	6.3E-01	1.5E+00	1.0E-03	RAGSE
10294-40-3	Barium Chromate	10294-40-3	2.5E+02	CRC89						1.4E+03	CRC89	4.5E+00	CRC89										2.6E+00	CRC89	6.1E-03	2.8E+00	6.6E+00	1.0E-03	RAGSE
1861-40-1	Benfluralin	1861-40-1	3.4E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	6.5E-05	PHYSPROP	6.6E+01	PHYSPROP	1.3E+00	ChemNet	2.2E-02	5.5E-06	WATER9			1.6E+04	EPI	5.3E+00	PHYSPROP	1.0E-01	PHYSPROP	4.8E-01	7.9E+00	1.9E+01	6.8E-02	EPI
17804-35-2	Benomyl	17804-35-2	2.9E+02	PHYSPROP	2.0E-10	4.9E-12	PHYSPROP	3.7E-09	PHYSPROP	1.4E+02	EPI			4.3E-02	5.1E-06	WATER9			3.4E+02	EPI	2.1E+00	PHYSPROP	3.8E+00	PHYSPROP	6.2E-03	4.4E+00	1.1E+01	9.4E-04	EPI
83055-99-6	Bensulfuron-methyl	83055-99-6	4.1E+02	PHYSPROP	1.5E-13	3.8E-15	EPI	2.1E-14	PHYSPROP	1.9E+02	PHYSPROP			3.4E-02	4.0E-06	WATER9			2.8E+01	EPI	2.2E+00	PHYSPROP	1.2E+02	PHYSPROP	1.7E-03	2.1E+01	5.0E+01	2.2E-04	EPI
25057-89-0	Bentazon	25057-89-0	2.4E+02	PHYSPROP	8.9E-08	2.2E-09	EPI	3.5E-06	PHYSPROP	1.4E+02	PHYSPROP			4.9E-02	5.7E-06	WATER9			1.0E+01	EPI	2.3E+00	PHYSPROP	5.0E+02	PHYSPROP	1.5E-02	2.3E+00	5.6E+00	2.5E-03	EPI
100-52-7	Benzaldehyde	100-52-7	1.1E+02	PHYSPROP	1.1E-03	2.7E-05	PHYSPROP	1.3E+00	PHYSPROP	-2.6E+01	PHYSPROP	1.0E+00	CRC89	7.4E-02	9.5E-06	WATER9			1.1E+01	EPI	1.5E+00	PHYSPROP	7.0E+03	PHYSPROP	1.5E-02	4.1E-01	9.9E-01	3.8E-03	EPI
71-43-2	Benzene	71-43-2	7.8E+01	PHYSPROP	2.3E-01	5.6E-03	PHYSPROP	9.5E+01	PHYSPROP	5.5E+00	PHYSPROP	8.8E-01	CRC89	9.0E-02	1.0E-05	WATER9			1.5E+02	EPI	2.1E+00	PHYSPROP	1.8E+03	PHYSPROP	5.1E-02	2.9E-01	6.9E-01	1.5E-02	EPI
6369-59-1	Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	2.2E+02	EPI	8.9E-22	2.2E-23	EPI	2.9E-14	EPI	2.4E+02	EPI			5.2E-02	6.1E-06	WATER9			3.8E+01	EPI	-3.7E+00	EPI	1.0E+06	EPI	1.7E-06	1.8E+00	4.3E+00	3.0E-07	EPI
108-98-5	Benzenethiol	108-98-5	1.1E+02	PHYSPROP	1.4E-02	3.4E-04	EPI	1.9E+00	PHYSPROP	-1.5E+01	PHYSPROP	1.1E+00	CRC89	7.3E-02	9.5E-06	WATER9			2.3E+02	EPI	2.5E+00	PHYSPROP	8.4E+02	PHYSPROP	7.2E-02	4.4E-01	1.0E+00	1.8E-02	EPI
92-87-5	Benzidine	92-87-5	1.8E+02	PHYSPROP	2.1E-09	5.2E-11	PHYSPROP	9.0E-07	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	Yaws 2008	3.5E-02	7.5E-06	WATER9			1.2E+03	EPI	1.3E+00	PHYSPROP	3.2E+02	PHYSPROP	5.9E-03	1.1E+00	2.7E+00	1.1E-03	EPI
65-85-0	Benzoic Acid	65-85-0	1.2E+02	PHYSPROP	1.6E-06	3.8E-08	EPI	7.0E-04	PHYSPROP	1.2E+02	PHYSPROP	1.3E+00	CRC89	7.0E-02	9.8E-06	WATER9			6.0E-01	SSL	1.9E+00	PHYSPROP	3.4E+03	PHYSPROP	2.4E-02	5.1E-01	1.2E+00	5.7E-03	EPI
98-07-7	Benzotrichloride	98-07-7	2.0E+02	PHYSPROP	1.1E-02	2.6E-04	PHYSPROP	4.1E-01	EPI	-5.0E+00	PHYSPROP	1.4E+00	CRC89	3.1E-02	7.7E-06	WATER9			1.0E+03	EPI	3.9E+00	PHYSPROP	5.3E+01	PHYSPROP	2.6E-01	1.3E+00	3.1E+00	4.9E-02	EPI
100-51-6	Benzyl Alcohol	100-51-6	1.1E+02	PHYSPROP	1.4E-05	3.4E-07	PHYSPROP	9.4E-02	PHYSPROP	-1.5E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.4E-06	WATER9			2.1E+01	EPI	1.1E+00	PHYSPROP	4.3E+04	PHYSPROP	8.4E-03	4.2E-01	1.0E+00	2.1E-03	EPI
100-44-7	Benzyl Chloride	100-44-7	1.3E+02	PHYSPROP	1.7E-02	4.1E-04	EPI	1.2E+00	PHYSPROP	-4.5E+01	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.8E-06	WATER9			4.5E+02	EPI	2.3E+00	PHYSPROP	5.3E+02	PHYSPROP	4.5E-02	5.4E-01	1.3E+00	1.0E-02	EPI
7440-41-7	Beryllium and compounds	7440-41-7	1.1E+01	PHYSPROP				0.0E+00	NIOSH	9.9E+02	PHYSPROP	1.9E+00	CRC89				7.9E+02	SSL							1.3E-03	1.2E-01	2.9E-01	1.0E-03	RAGSE
42576-02-3	Bifenox	42576-02-3	3.4E+02	PHYSPROP	4.4E-06	1.1E-07	EPI	1.0E-07	PHYSPROP	8.5E+01	PHYSPROP	1.2E+00	PubChem	2.0E-02	5.0E-06	WATER9			3.7E+03	EPI	4.5E+00	PHYSPROP	4.0E-01	PHYSPROP	1.3E-01	8.7E+00	2.1E+01	1.8E-02	EPI
82657-04-3	Biphenthrin	82657-04-3	4.2E+02	PHYSPROP	4.1E-05	1.0E-06	EPI	1.8E-07	PHYSPROP	6.9E+01	PHYSPROP	1.2E+00	CRC89	1.8E-02	4.5E-06	WATER9			2.3E+06	EPI	6.0E+00	PHYSPROP	1.0E-03	PHYSPROP	1.4E+01	2.5E+01	1.1E+02	1.7E+00	EPI
92-52-4	Biphenyl, 1,1'-	92-52-4	1.5E+02	PHYSPROP	1.3E-02	3.1E-04	PHYSPROP	8.9E-03	PHYSPROP	6.9E+01	PHYSPROP	1.0E+00	CRC89	4.7E-02	7.6E-06	WATER9			5.1E+03	EPI	4.0E+00	PHYSPROP	7.5E+00	PHYSPROP	4.5E-01	7.7E-01	1.8E+00	9.4E-02	EPI
108-60-1	Bis(2-chloro-1-methylethyl) ether	108-60-1	1.7E+02	PHYSPROP	3.0E-03	7.4E-05	EPI	5.6E-01	PHYSPROP	-9.7E+01	PHYSPROP	1.1E+00	CRC89	4.0E-02	7.4E-06	WATER9			8.3E+01	EPI	2.5E+00	PHYSPROP	1.7E+03	PHYSPROP	3.8E-02	9.5E-01	2.3E+00	7.6E-03	EPI
111-91-1	Bis(2-chloroethoxy)methane	111-91-1	1.7E+02	PHYSPROP	1.6E-04	3.9E-06	EPI	1.3E-01	EPI	-3.2E+01	PHYSPROP			6.1E-02	7.1E-06	WATER9			1.4E+01	EPI	1.3E+00	PHYSPROP	7.8E+03	PHYSPROP	6.2E-03	9.8E-01	2.4E+00	1.2E-03	EPI
111-44-4	Bis(2-chloroethyl)ether	111-44-4	1.4E+02	PHYSPROP	7.0E-04	1.7E-05	EPI	1.6E+00	PHYSPROP	-5.2E+01	PHYSPROP	1.2E+00	CRC89	5.7E-02	8.7E-06	WATER9			3.2E+01	EPI	1.3E+00	PHYSPROP	1.7E+04	PHYSPROP	8.2E-03	6.6E-01	1.6E+00	1.8E-03	EPI
542-88-1	Bis(chloromethyl)ether	542-88-1	1.1E+02	PHYSPROP	1.8E-01	4.4E-03	EPI	2.9E+01	PHYSPROP	-4.2E+01	PHYSPROP	1.3E+00	CRC89	7.6E-02	1.0E-05	WATER9			9.7E+00	EPI	5.7E-01	PHYSPROP	2.2E+04	PHYSPROP	3.5E-03	4.6E-01	1.1E+00	8.6E-04	EPI
80-05-7	Bisphenol A	80-05-7	2.3E+02	PHYSPROP	4.1E-10	1.0E-11	PHYSPROP	3.9E-07	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	PubChem	2.5E-02	6.5E-06	WATER9			3.8E+04	EPI	3.3E+00	PHYSPROP	1.2E+02	PHYSPROP	7.7E-02	2.0E+00	4.8E+00	1.3E-02	EPI
7440-42-8	Boron And Borates Only	7440-42-8	1.4E+01	EPI						2.1E+03	CRC89	2.3E+00	CRC89				3.0E+00	BAES							1.4E-03	1.3E-01	3.0E-01	1.0E-03	RAGSE
10294-34-5	Boron Trichloride	10294-34-5	1.2E+02	PHYSPROP	7.5E-01	1.8E-02		1.0E+00	PHYSPROP	-1.1E+02	PHYSPROP	4.8E+00	CRC89	1.2E-01	2.2E-05	WATER9					1.2E+00	OTHER			4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
7637-07-2	Boron Trifluoride	7637-07-2	6.8E+01	PHYSPROP				3.7E+04	PHYSPROP	-1.3E+02	PHYSPROP	2.8E+00	CRC89	1.6E-01	2.2E-05	WATER9					2.2E-01	OTHER	3.3E+06	PHYSPROP	3.2E-03	2.5E-01	6.1E-01	1.0E-03	RAGSE
15541-45-4	Bromate	15541-45-4	8.0E+01	EPI													7.5E+00	BAES							3.4E-03	2.9E-01	7.1E-01	1.0E-03	RAGSE
107-04-0	Bromo-2-chloroethane, 1-	107-04-0	1.4E+02	PHYSPROP	3.7E-02	9.1E-04	PHYSPROP	3.3E+01	PHYSPROP	-1.7E+01	PHYSPROP	1.7E+00	CRC89	6.6E-02	1.1E-05	WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	6.9E+03	PHYSPROP	2.1E-02	6.7E-01	1.6E+00	4.6E-03	EPI
108-86-1	Bromobenzene	108-86-1	1.6E+02	PHYSPROP	1.0E-01	2.5E-03	PHYSPROP	4.2E+00	PHYSPROP	-3.1E+01	PHYSPROP	1.5E+00	CRC89	5.4E-02	9.3E-06	WATER9			2.3E+02	EPI	3.0E+00	PHYSPROP	4.5E+02	PHYSPROP	9.6E-02	8.0E-01	1.9E+00	2.0E-02	EPI
74-97-5	Bromochloromethane	74-97-5	1.3E+02	PHYSPROP	6.0E-02	1.5E-03	EPI	1.4E+02	PHYSPROP	-8.8E+01	PHYSPROP	1.9E+00	CRC89	7.9E-02	1.2E-05	WATER9			2.2E+01	EPI	1.4E+00	PHYSPROP	1.7E+04	PHYSPROP	1.1E-02	5.6E-01	1.3E+00	2.6E-03	EPI
75-27-4	Bromodichloromethane	75-27-4	1.6E+02	PHYSPROP	8.7E-02	2.1E-03	PHYSPROP	5.0E+01	PHYSPROP	-5.7E+01	PHYSPROP	2.0E+00	CRC89	5.6E-02	1.1E-05	WATER9			3.2E+01	EPI	2.0E+00	PHYSPROP	3.0E+03	PHYSPROP	2.0E-02	8.7E-01	2.1E+00	4.0E-03	EPI
75-25-2	Bromoform	75-25-2	2.5E+02	PHYSPROP	2.2E-02	5.4E-04	PHYSPROP	5.4E+00	EPI	8.0E+00	PHYSPROP	2.9E+00	CRC89	3.6E-02	1.0E-05	WATER9			3.2E+01	EPI	2.4E+00	PHYSPROP	3.1E+03	PHYSPROP	1.4E-02	2.7E+00	6.6E+00	2.4E-03	EPI
74-83-9	Bromomethane	74-83-9	9.5E+01	PHYSPROP	3.0E-01	7.3E-03	PHYSPROP	1.6E+03	PHYSPROP	-9.4E+01	PHYSPROP	1.7E+00	CRC89	1.0E-01	1.4E-05	WATER9			1.3E+01	EPI	1.2E+00	PHYSPROP	1.5E+04	PHYSPROP	1.1E-02	3.6E-01	8.6E-01	2.8E-03	EPI
2104-96-3	Bromophos	2104-96-3	3.7E+02	PHYSPROP	8.4E-03	2.1E-04	EPI	1.3E-04	PHYSPROP	5.4E+01	PHYSPROP	1.7E+00	LookChem	2.3E-02	6.1E-06	WATER9			2.0E+03	EPI	5.2E+00	PHYSPROP	3.0E-01	PHYSPROP	3.0E-01	1.2E+01	2.8E+01	4.0E-02	EPI
1689-84-5	Bromoxynil	1689-84-5	2.8E+02	PHYSPROP	5.4E-09	1.3E-10	EPI	4.7E-08	PHYSPROP	1.9E+02	PHYSPROP			4.5E-02	5.2E-06	WATER9			3.3E+02	EPI	2.8E+00	PHYSPROP	1.3E+02	PHYSPROP	5.0E-02	3.7E+00	9.0E+00	7.8E-03	EPI
1689-99-2	Bromoxynil Octanoate	1689-99-2	4.0E+02	PHYSPROP	1.3E-03	3.2E-05	EPI	4.8E-06	PHYSPROP	4.6E+01	PHYSPROP	1.5E+00	LookChem	2.1E-02	5.4E-06	WATER9			4.3E+03	EPI	5.4E+00	PHYSPROP	8.0E-02	PHYSPROP	2.6E-01	1.9E+01	4.6E+01	3.3E-02	EPI
106-99-0	Butadiene, 1,3-	106-99-0	5.4E+01	PHYSPROP	3.0E+00	7.4E-02	EPI	2.1E+03	PHYSPROP	-1.1E+02	PHYSPROP	6.1E-01	CRC89	1.0E-01	1.0E-05	WATER9			4.0E+01	EPI	2.0E+00	PHYSPROP	7.4E+02	PHYSPROP	4.6E-02	2.1E-01	5.1E-01	1.6E-02	EPI
71-36-3	Butanol, N-	71-36-3	7.4E+01	PHYSPROP	3.6E-04	8.8E-06	PHYSPROP	6.7E+00	PHYSPROP	-9.0E+01	PHYSPROP	8.1E-01	CRC89	9.0E-02	1.0E-05	WATER9			3.5E+00	EPI	8.8E-01	PHYSPROP	6.3E+04	PHYSPROP	7.6E-03	2.7E-01	6.6E-01	2.3E-03	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
78-92-2	Butyl alcohol, sec-	78-92-2	7.4E+01	PHYSPROP	3.7E-04	9.1E-06	PHYSPROP	1.8E+01	PHYSPROP	-1.1E+02	PHYSPROP	8.1E-01	CRC89	9.0E-02	1.0E-05	WATER9			2.9E+00	EPI	6.1E-01	PHYSPROP	1.8E+05	PHYSPROP	5.1E-03	2.7E-01	6.6E-01	1.5E-03	EPI
2008-41-5	Butylate	2008-41-5	2.2E+02	PHYSPROP	3.5E-03	8.5E-05	EPI	1.3E-02	PHYSPROP	6.0E+01	EPI	9.4E-01	CRC89	2.3E-02	5.8E-06	WATER9			3.9E+02	EPI	4.2E+00	PHYSPROP	4.5E+01	PHYSPROP	3.1E-01	1.7E+00	4.2E+00	5.4E-02	EPI
25013-16-5	Butylated hydroxyanisole	25013-16-5	3.6E+02	PHYSPROP	4.8E-05	1.2E-06	PHYSPROP	2.5E-03	PHYSPROP	5.1E+01	PHYSPROP			3.8E-02	4.4E-06	WATER9			8.4E+02	EPI	3.5E+00	PHYSPROP	2.1E+02	PHYSPROP	2.4E-01	1.1E+01	2.6E+01	3.3E-02	EPI
128-37-0	Butylated hydroxytoluene	128-37-0	2.2E+02	PHYSPROP	1.7E-04	4.1E-06	PHYSPROP	5.2E-03	EPI	7.1E+01	PHYSPROP	8.9E-01	CRC89	2.3E-02	5.6E-06	WATER9			1.5E+04	EPI	5.1E+00	PHYSPROP	6.0E-01	PHYSPROP	1.3E+00	1.8E+00	7.1E+00	2.2E-01	EPI
104-51-8	Butylbenzene, n-	104-51-8	1.3E+02	PHYSPROP	6.5E-01	1.6E-02	EPI	1.1E+00	PHYSPROP	-8.8E+01	PHYSPROP	8.6E-01	CRC89	5.3E-02	7.3E-06	WATER9			1.5E+03	EPI	4.4E+00	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	5.9E-01	2.3E+00	2.3E-01	EPI
135-98-8	Butylbenzene, sec-	135-98-8	1.3E+02	PHYSPROP	7.2E-01	1.8E-02	EPI	1.8E+00	PHYSPROP	-8.3E+01	PHYSPROP	8.6E-01	LANGE	5.3E-02	7.3E-06	WATER9			1.3E+03	EPI	4.6E+00	PHYSPROP	1.8E+01	PHYSPROP	1.3E+00	5.9E-01	2.3E+00	3.0E-01	EPI
98-06-6	Butylbenzene, tert-	98-06-6	1.3E+02	PHYSPROP	5.4E-01	1.3E-02	EPI	2.2E+00	PHYSPROP	-5.8E+01	PHYSPROP	8.7E-01	CRC89	5.3E-02	7.4E-06	WATER9			1.0E+03	EPI	4.1E+00	PHYSPROP	3.0E+01	PHYSPROP	6.6E-01	5.9E-01	2.3E+00	1.5E-01	EPI
75-60-5	Cacodylic Acid	75-60-5	1.4E+02	PHYSPROP	7.4E-13	1.8E-14	PHYSPROP	1.0E-07	PHYSPROP	2.0E+02	PHYSPROP			7.1E-02	8.3E-06	WATER9			4.4E+01	EPI	3.6E-01	PHYSPROP	2.0E+06	PHYSPROP	2.1E-03	6.2E-01	1.5E+00	4.6E-04	EPI
7440-43-9	Cadmium (Diet)	7440-43-9	1.1E+02	PHYSPROP				0.0E+00	NIOSH	3.2E+02	PHYSPROP	8.7E+00	CRC89				7.5E+01	SSL							4.1E-03	4.5E-01	1.1E+00	1.0E-03	RAGSE
7440-43-9	Cadmium (Water)	7440-43-9	1.1E+02	PHYSPROP				0.0E+00	NIOSH	3.2E+02	PHYSPROP	8.7E+00	CRC89				7.5E+01	SSL							4.1E-03	4.5E-01	1.1E+00	1.0E-03	RAGSE
13765-19-0	Calcium Chromate	13765-19-0	1.6E+02	CRC89						1.0E+03	CRC89														4.8E-03	7.9E-01	1.9E+00	1.0E-03	RAGSE
105-60-2	Caprolactam	105-60-2	1.1E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	1.6E-03	EPI	6.9E+01	PHYSPROP	1.0E+00	LANGE	6.9E-02	9.0E-06	WATER9			2.5E+01	EPI	-1.9E-01	YAWS	7.7E+05	PHYSPROP	4.1E-03	4.5E-01	1.1E+00	1.0E-03	EPI
2425-06-1	Captafol	2425-06-1	3.5E+02	PHYSPROP	2.0E-07	4.9E-09	EPI	1.5E-08	EPI	1.6E+02	PHYSPROP			3.8E-02	4.5E-06	WATER9			7.8E+02	EPI	3.8E+00	PHYSPROP	1.4E+00	PHYSPROP	4.1E-02	9.5E+00	2.3E+01	5.8E-03	EPI
133-06-2	Captan	133-06-2	3.0E+02	PHYSPROP	2.9E-07	7.0E-09	EPI	9.0E-08	PHYSPROP	1.8E+02	PHYSPROP	1.7E+00	CRC89	2.6E-02	6.9E-06	WATER9			2.5E+02	EPI	2.8E+00	PHYSPROP	5.1E+00	PHYSPROP	1.6E-02	5.1E+00	1.2E+01	2.3E-03	EPI
63-25-2	Carbaryl	63-25-2	2.0E+02	PHYSPROP	1.3E-07	3.3E-09	EPI	1.4E-06	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	CRC89	2.7E-02	7.1E-06	WATER9			3.5E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	2.4E-02	1.4E+00	3.4E+00	4.3E-03	EPI
1563-66-2	Carbofuran	1563-66-2	2.2E+02	PHYSPROP	1.3E-07	3.1E-09	EPI	4.9E-06	PHYSPROP	1.5E+02	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.6E-06	WATER9			9.5E+01	EPI	2.3E+00	PHYSPROP	3.2E+02	PHYSPROP	1.8E-02	1.8E+00	4.4E+00	3.1E-03	EPI
75-15-0	Carbon Disulfide	75-15-0	7.6E+01	PHYSPROP	5.9E-01	1.4E-02	PHYSPROP	3.6E+02	PHYSPROP	-1.1E+02	PHYSPROP	1.3E+00	CRC89	1.1E-01	1.3E-05	WATER9			2.2E+01	EPI	1.9E+00	PHYSPROP	2.2E+03	PHYSPROP	3.8E-02	2.8E-01	6.7E-01	1.1E-02	EPI
56-23-5	Carbon Tetrachloride	56-23-5	1.5E+02	PHYSPROP	1.1E+00	2.8E-02	PHYSPROP	1.2E+02	PHYSPROP	-2.3E+01	PHYSPROP	1.6E+00	CRC89	5.7E-02	9.8E-06	WATER9			4.4E+01	EPI	2.8E+00	PHYSPROP	7.9E+02	PHYSPROP	7.8E-02	7.6E-01	1.8E+00	1.6E-02	EPI
463-58-1	Carbonyl Sulfide	463-58-1	6.0E+01	PHYSPROP	2.5E+01	6.1E-01	EPI	9.4E+03	PHYSPROP	-1.4E+02	PHYSPROP	1.0E+00	CRC89	1.2E-01	1.3E-05	WATER9			1.0E+00	EPI	-1.3E+00	PHYSPROP	1.2E+03	PHYSPROP	2.8E-04	2.3E-01	5.5E-01	9.4E-05	EPI
55285-14-8	Carbosulfan	55285-14-8	3.8E+02	PHYSPROP	2.1E-05	5.1E-07	EPI	3.1E-07	PHYSPROP	1.8E+02	EPI	1.1E+00	CRC89	1.8E-02	4.4E-06	WATER9			1.2E+04	EPI	5.6E+00	PHYSPROP	3.0E-01	PHYSPROP	4.3E-01	1.4E+01	3.4E+01	5.8E-02	EPI
5234-68-4	Carboxin	5234-68-4	2.4E+02	PHYSPROP	1.3E-08	3.2E-10	EPI	1.5E-07	PHYSPROP	9.2E+01	PHYSPROP			5.0E-02	5.8E-06	WATER9			1.7E+02	EPI	2.1E+00	PHYSPROP	1.5E+02	PHYSPROP	1.2E-02	2.2E+00	5.2E+00	2.0E-03	EPI
1306-38-3	Ceric oxide	1306-38-3	1.7E+02	CRC89						2.5E+03	CRC89	7.2E+00	CRC89												5.0E-03	9.7E-01	2.3E+00	1.0E-03	RAGSE
302-17-0	Chloral Hydrate	302-17-0	1.7E+02	PHYSPROP	2.3E-07	5.7E-09	PHYSPROP	1.5E+01	PHYSPROP	5.7E+01	PHYSPROP	1.9E+00	CRC89	5.4E-02	1.0E-05	WATER9			1.0E+00	EPI	9.9E-01	PHYSPROP	7.9E+05	PHYSPROP	4.2E-03	8.9E-01	2.1E+00	8.4E-04	EPI
133-90-4	Chloramben	133-90-4	2.1E+02	PHYSPROP	1.6E-09	3.9E-11	EPI	1.0E-07	PHYSPROP	2.0E+02	PHYSPROP			5.4E-02	6.4E-06	WATER9			2.1E+01	EPI	1.9E+00	PHYSPROP	7.0E+02	PHYSPROP	1.1E-02	1.5E+00	3.6E+00	2.0E-03	EPI
118-75-2	Chloranil	118-75-2	2.5E+02	PHYSPROP	1.3E-08	3.3E-10	PHYSPROP	2.3E-06	PHYSPROP	2.9E+02	PHYSPROP			4.8E-02	5.7E-06	WATER9			3.1E+02	EPI	2.2E+00	PHYSPROP	2.5E+02	PHYSPROP	1.2E-02	2.5E+00	6.0E+00	1.9E-03	EPI
12789-03-6	Chlordane	12789-03-6	4.1E+02	PHYSPROP	2.0E-03	4.9E-05	EPI	1.0E-05	PHYSPROP	1.1E+02	EPI	1.6E+00	CRC89	2.1E-02	5.4E-06	WATER9			6.8E+04	EPI	6.2E+00	EPI	5.6E-02	EPI	8.3E-01	2.1E+01	8.0E+01	1.1E-01	EPI
143-50-0	Chlordecone (Kepone)	143-50-0	4.9E+02	PHYSPROP	2.2E-06	5.4E-08	EPI	2.3E-07	PHYSPROP	3.5E+02	EPI	1.6E+00	CRC89	2.0E-02	4.9E-06	WATER9			1.8E+04	EPI	5.4E+00	PHYSPROP	2.7E+00	PHYSPROP	9.3E-02	5.9E+01	1.4E+02	1.1E-02	EPI
470-90-6	Chlorfenvinphos	470-90-6	3.6E+02	PHYSPROP	1.2E-06	2.9E-08	EPI	7.5E-06	PHYSPROP	-2.0E+01	PHYSPROP			3.8E-02	4.4E-06	WATER9			1.3E+03	EPI	3.8E+00	PHYSPROP	1.2E+02	PHYSPROP	3.7E-02	1.1E+01	2.6E+01	5.1E-03	EPI
90982-32-4	Chlorimuron, Ethyl-	90982-32-4	4.1E+02	PHYSPROP	7.4E-14	1.8E-15	EPI	4.0E-12	PHYSPROP	1.8E+02	PHYSPROP			3.4E-02	4.0E-06	WATER9			7.2E+01	EPI	2.5E+00	PHYSPROP	1.2E+03	PHYSPROP	2.6E-03	2.2E+01	5.3E+01	3.4E-04	EPI
7782-50-5	Chlorine	7782-50-5	7.1E+01	PHYSPROP	4.8E-01	1.2E-02	PHYSPROP	5.9E+03	PHYSPROP	-1.0E+02	PHYSPROP	2.9E+00	CRC89	1.5E-01	2.2E-05	WATER9	2.5E-01	BAES			8.5E-01	OTHER	6.3E+03	PHYSPROP	3.2E-03	2.6E-01	6.3E-01	1.0E-03	RAGSE
10049-04-4	Chlorine Dioxide	10049-04-4	6.7E+01	EPI	1.6E+00	4.0E-02	Toxnet HSDB	7.6E+02	Toxnet HSDB	-5.9E+01	CRC89	2.8E+00	CRC89	1.6E-01	2.2E-05	WATER9									3.2E-03	2.5E-01	6.0E-01	1.0E-03	RAGSE
7758-19-2	Chlorite (Sodium Salt)	7758-19-2	9.0E+01	EPI						1.8E+02	CRC89												6.4E+05	CRC89	3.7E-03	3.4E-01	8.1E-01	1.0E-03	RAGSE
75-68-3	Chloro-1,1-difluoroethane, 1-	75-68-3	1.0E+02	PHYSPROP	2.4E+00	5.9E-02	PHYSPROP	2.5E+03	PHYSPROP	-1.3E+02	PHYSPROP	1.1E+00	CRC89	8.0E-02	1.0E-05	WATER9			4.4E+01	EPI	2.1E+00	PHYSPROP	1.4E+03	PHYSPROP	3.8E-02	3.8E-01	9.2E-01	9.9E-03	EPI
126-99-8	Chloro-1,3-butadiene, 2-	126-99-8	8.9E+01	PHYSPROP	2.3E+00	5.6E-02	PHYSPROP	2.2E+02	PHYSPROP	-1.3E+02	PHYSPROP	9.6E-01	CRC89	8.4E-02	1.0E-05	WATER9			6.1E+01	EPI	2.5E+00	PHYSPROP	8.7E+02	PHYSPROP	8.6E-02	3.3E-01	7.9E-01	2.4E-02	EPI
3165-93-3	Chloro-2-methylaniline HCl, 4-	3165-93-3	1.8E+02	PHYSPROP	6.4E-05	1.6E-06	PHYSPROP	4.1E-02	PHYSPROP	1.6E+02	EPI			6.0E-02	7.0E-06	WATER9			3.5E+02	EPI	2.3E+00	PHYSPROP	9.5E+02	PHYSPROP	9.2E-05	1.0E+00	2.5E+00	1.8E-05	EPI
95-69-2	Chloro-2-methylaniline, 4-	95-69-2	1.4E+02	PHYSPROP	8.1E-05	2.0E-06	PHYSPROP	4.1E-02	PHYSPROP	3.0E+01	PHYSPROP			7.0E-02	8.2E-06	WATER9			1.8E+02	EPI	2.3E+00	PHYSPROP	9.5E+02	PHYSPROP	3.7E-02	6.5E-01	1.6E+00	8.1E-03	EPI
107-20-0	Chloroacetaldehyde, 2-	107-20-0	7.8E+01	PHYSPROP	9.8E-04	2.4E-05	PHYSPROP	6.4E+01	PHYSPROP	-1.6E+01	PHYSPROP	1.2E+00	CRC89	1.0E-01	1.2E-05	WATER9			1.0E+00	EPI	9.0E-02	PHYSPROP	1.1E+05	PHYSPROP	2.2E-03	2.9E-01	6.9E-01	6.5E-04	EPI
79-11-8	Chloroacetic Acid	79-11-8	9.4E+01	PHYSPROP	3.8E-07	9.3E-09	PHYSPROP	6.5E-02	PHYSPROP	6.3E+01	PHYSPROP	1.4E+00	CRC89	9.4E-02	1.2E-05	WATER9			1.4E+00	EPI	2.2E-01	PHYSPROP	8.6E+05	PHYSPROP	2.4E-03	3.6E-01	8.5E-01	6.5E-04	EPI
532-27-4	Chloroacetophenone, 2-	532-27-4	1.5E+02	PHYSPROP	1.4E-04	3.5E-06	PHYSPROP	5.4E-03	PHYSPROP	5.7E+01	PHYSPROP	1.3E+00	CRC89	5.2E-02	8.7E-06	WATER9			9.9E+01	EPI	1.9E+00	PHYSPROP	1.1E+03	PERRY	1.9E-02	7.7E-01	1.9E+00	4.1E-03	EPI
106-47-8	Chloroaniline, p-	106-47-8	1.3E+02	PHYSPROP	4.7E-05	1.2E-06	EPI	2.7E-02	PHYSPROP	7.3E+01	PHYSPROP	1.4E+00	CRC89	7.0E-02	1.0E-05	WATER9			1.1E+02	EPI	1.8E+00	PHYSPROP	3.9E+03	PHYSPROP	2.2E-02	5.4E-01	1.3E+00	5.0E-03	EPI
108-90-7	Chlorobenzene	108-90-7	1.1E+02	PHYSPROP	1.3E-01	3.1E-03	PHYSPROP	1.2E+01	PHYSPROP	-4.5E+01	PHYSPROP	1.1E+00	CRC89	7.2E-02	9.5E-06	WATER9			2.3E+02	EPI	2.8E+00	PHYSPROP	5.0E+02	PHYSPROP	1.2E-01	4.5E-01	1.1E+00	2.8E-02	EPI
510-15-6	Chlorobenzilate	510-15-6	3.3E+02	PHYSPROP	3.0E-06	7.2E-08	EPI	2.2E-06	PHYSPROP	3.7E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.5E-06	WATER9			1.5E+03	EPI	4.7E+00	PHYSPROP	1.3E+01	PHYSPROP	2.3E-01	7.0E+00	1.7E+01	3.3E-02	EPI
74-11-3	Chlorobenzoic Acid, p-	74-11-3	1.6E+02	PHYSPROP	3.3E-06	8.0E-08	PHYSPROP	2.3E-03	PHYSPROP	2.4E+02	PHYSPROP	1.5E+00	PERRY	5.5E-02	9.5E-06	WATER9			2.7E+01	EPI	2.7E+00	PHYSPROP	7.2E+01	PHYSPROP	5.8E-02	7.9E-01	1.9E+00	1.2E-02	EPI
98-56-6	Chlorobenzotrifluoride, 4-	98-56-6	1.8E+02	PHYSPROP	1.4E+00	3.5E-02	PHYSPROP	7.6E+00	PHYSPROP	-3.3E+01	PHYSPROP	1.3E+00	CRC89	3.8E-02	8.0E-06	WATER9			1.6E+03	EPI	3.6E+00	PHYSPROP	2.9E+01	PHYSPROP	1.9E-01	1.1E+00	2.6E+00	3.8E-02	EPI
109-69-3	Chlorobutane, 1-	109-69-3	9.3E+01	PHYSPROP	6.8E-01	1.7E-02	PHYSPROP	1.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	8.9E-01	CRC89	7.8E-02	9.3E-06	WATER9			7.2E+01	EPI	2.6E+00	PHYSPROP	1.1E+03	PHYSPROP	1.0E-01	3.5E-01	8.3E-01	2.7E-02	EPI
75-45-6	Chlorodifluoromethane	75-45-6	8.6E+01	PHYSPROP	1.7E+00	4.1E-02	PHYSPROP	7.3E+03	PHYSPROP	-1.6E+02	PHYSPROP	1.5E+00	CRC89	1.0E-01	1.3E-05	WATER9			3.2E+01	EPI	1.1E+00	PHYSPROP	2.8E+03	PHYSPROP	9.6E-03	3.2E-01	7.7E-01	2.7E-03	EPI
107-07-3	Chloroethanol, 2-	107-07-3	8.1E+01	PHYSPROP	3.1E-05	7.6E-07	EPI	7.2E+00	PHYSPROP	-6.8E+01	PHYSPROP	1.2E+00	CRC89	1.0E-01	1.2E-05	WATER9			1.9E+00	EPI	3.0E-02	PHYSPROP	1.0E+06	PHYSPROP	2.0E-03	3.0E-01	7.1E-01	5.8E-04	EPI
67-66-3	Chloroform	67-66-3	1.2E+02	PHYSPROP	1.5E-01	3.7E-03	PHYSPROP	2.0E+02	PHYSPROP	-6.4E+01	PHYSPROP	1.5E+00	CRC89	7.7E-02	1.1E-05	WATER9			3.2E+01	EPI	2.0E+00	PHYSPROP	8.0E+03	PHYSPROP	2.9E-02	4.9E-01	1.2E+00	6.8E-03	EPI
74-87-3	Chloromethane	74-87-3	5.0E+01	PHYSPROP	3.6E-01	8.8E-03	PHYSPROP	4.3E+03	PHYSPROP	-9.8E+01	PHYSPROP	9.1E-01	CRC89	1.2E-01	1.4E-05	WATER9			1.3E+01	EPI	9.1E-01	PHYSPROP	5.3E+03	PHYSPROP	9.0E-03	2.0E-01	4.8E-01	3.3E-03	EPI
107-30-2	Chloromethyl Methyl Ether	107-30-2	8.1E+01	PHYSPROP	1.2E-02	3.0E-04	PHYSPROP	3.0E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.1E+00	CRC89	9.5E-02	1.1E-05	WATER9			5.3E+00	EPI	3.2E-01	PHYSPROP	6.9E+04	PHYSPROP	3.1E-03	3.0E-01	7.1E-01	9.1E-04	EPI
88-73-3	Chloronitrobenzene, o-	88-73-3	1.6E+02	PHYSPROP	3.8E-04	9.3E-06	PHYSPROP	1.8E-02	EPI	3.3E+01	PHYSPROP	1.4E+00	CRC89	5.1E-02	8.8E-06	WATER9			3.7E+02	EPI	2.2E+00	PHYSPROP	4.4E+02	PHYSPROP	3.0E-02	8.0E-01	1.9E+00	6.3E-03	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
100-00-5	Chloronitrobenzene, p-	100-00-5	1.6E+02	PHYSPROP	2.0E-04	4.9E-06	PHYSPROP	2.2E-02	EPI	8.4E+01	PHYSPROP	1.3E+00	CRC89	5.0E-02	8.5E-06	WATER9			3.6E+02	EPI	2.4E+00	PHYSPROP	2.3E+02	PHYSPROP	3.8E-02	8.0E-01	1.9E+00	7.9E-03	EPI
95-57-8	Chlorophenol, 2-	95-57-8	1.3E+02	PHYSPROP	4.6E-04	1.1E-05	PHYSPROP	2.5E+00	PHYSPROP	9.8E+00	PHYSPROP	1.3E+00	CRC89	6.6E-02	9.5E-06	WATER9			3.9E+02	SSL	2.2E+00	PHYSPROP	1.1E+04	PHYSPROP	3.5E-02	5.5E-01	1.3E+00	8.0E-03	EPI
76-06-2	Chloropicrin	76-06-2	1.6E+02	PHYSPROP	8.4E-02	2.1E-03	PHYSPROP	2.4E+01	PHYSPROP	-6.4E+01	PHYSPROP	1.7E+00	CRC89	5.2E-02	9.6E-06	WATER9			4.4E+01	EPI	2.1E+00	PHYSPROP	1.6E+03	PHYSPROP	2.3E-02	8.8E-01	2.1E+00	4.6E-03	EPI
1897-45-6	Chlorothalonil	1897-45-6	2.7E+02	PHYSPROP	8.2E-05	2.0E-06	PHYSPROP	5.7E-07	PHYSPROP	2.5E+02	PHYSPROP	1.7E+00	CRC89	2.8E-02	7.3E-06	WATER9			1.0E+03	EPI	3.1E+00	PHYSPROP	8.1E-01	PHYSPROP	3.4E-02	3.2E+00	7.8E+00	5.4E-03	EPI
95-49-8	Chlorotoluene, o-	95-49-8	1.3E+02	PHYSPROP	1.5E-01	3.6E-03	PHYSPROP	3.4E+00	PHYSPROP	-3.6E+01	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.7E-06	WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	3.7E+02	PHYSPROP	2.5E-01	5.4E-01	1.3E+00	5.7E-02	EPI
106-43-4	Chlorotoluene, p-	106-43-4	1.3E+02	PHYSPROP	1.8E-01	4.4E-03	EPI	2.7E+00	PHYSPROP	7.5E+00	PHYSPROP	1.1E+00	CRC89	6.3E-02	8.7E-06	WATER9			3.8E+02	EPI	3.3E+00	PHYSPROP	1.1E+02	PHYSPROP	2.2E-01	5.4E-01	1.3E+00	5.0E-02	EPI
54749-90-5	Chlorozotocin	54749-90-5	2.7E+02	PHYSPROP	1.5E-20	3.7E-22	PHYSPROP	4.0E-14	PHYSPROP	1.5E+02	EPI			4.6E-02	5.4E-06	WATER9			1.0E+01	EPI	-1.0E+00	PHYSPROP	1.8E+03	PHYSPROP	6.2E-05	3.2E+00	7.8E+00	9.9E-06	EPI
101-21-3	Chlorpropham	101-21-3	2.1E+02	PHYSPROP	2.3E-05	5.7E-07	EPI	1.8E-04	PHYSPROP	4.1E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.7E-06	WATER9			3.5E+02	EPI	3.5E+00	PHYSPROP	8.9E+01	PHYSPROP	1.2E-01	1.7E+00	4.0E+00	2.1E-02	EPI
2921-88-2	Chlorpyrifos	2921-88-2	3.5E+02	PHYSPROP	1.2E-04	2.9E-06	PHYSPROP	2.0E-05	PHYSPROP	4.2E+01	PHYSPROP			3.8E-02	4.5E-06	WATER9			7.3E+03	EPI	5.0E+00	PHYSPROP	1.1E+00	PHYSPROP	2.4E-01	9.7E+00	2.3E+01	3.3E-02	EPI
5598-13-0	Chlorpyrifos Methyl	5598-13-0	3.2E+02	PHYSPROP	1.5E-04	3.8E-06	EPI	4.2E-05	PHYSPROP	4.3E+01	PHYSPROP			4.0E-02	4.7E-06	WATER9			2.2E+03	EPI	4.3E+00	PHYSPROP	4.8E+00	PHYSPROP	1.2E-01	6.7E+00	1.6E+01	1.8E-02	EPI
64902-72-3	Chlorsulfuron	64902-72-3	3.6E+02	PHYSPROP	1.4E-14	3.4E-16	EPI	2.3E-11	PHYSPROP	1.8E+02	PHYSPROP			3.8E-02	4.4E-06	WATER9			3.2E+02	EPI	2.0E+00	PHYSPROP	3.1E+04	PHYSPROP	2.4E-03	1.1E+01	2.5E+01	3.3E-04	EPI
1861-32-1	Chlorthal-dimethyl	1861-32-1	3.3E+02	PHYSPROP	8.9E-05	2.2E-06	EPI	2.5E-06	PHYSPROP	1.6E+02	PHYSPROP			4.0E-02	4.6E-06	WATER9			5.1E+02	EPI	4.3E+00	PHYSPROP	5.0E-01	PHYSPROP	1.1E-01	7.6E+00	1.8E+01	1.5E-02	EPI
60238-56-4	Chlorthiophos	60238-56-4	3.6E+02	PHYSPROP	4.9E-05	1.2E-06	PHYSPROP	4.0E-01	PHYSPROP	8.6E+01	EPI			3.7E-02	4.4E-06	WATER9			1.3E+04	EPI	5.8E+00	PHYSPROP	3.0E-01	PHYSPROP	7.7E-01	1.1E+01	4.3E+01	1.1E-01	EPI
16065-83-1	Chromium(III), Insoluble Salts	16065-83-1	5.2E+01	EPI								5.2E+00	CRC89				1.8E+06	SSL							2.8E-03	2.1E-01	4.9E-01	1.0E-03	RAGSE
18540-29-9	Chromium(VI)	18540-29-9	5.2E+01	EPI													1.9E+01	SSL					1.7E+06	CRC89	5.5E-03	2.1E-01	4.9E-01	2.0E-03	RAGSE
7440-47-3	Chromium, Total	7440-47-3	5.2E+01	PHYSPROP						1.9E+03	PHYSPROP	7.2E+00	CRC89				1.8E+06	SSL							2.8E-03	2.1E-01	4.9E-01	1.0E-03	RAGSE
74115-24-5	Clofentezine	74115-24-5	3.0E+02	PHYSPROP	1.6E-08	3.9E-10	EPI	9.8E-10	PHYSPROP	1.8E+02	PHYSPROP			4.2E-02	4.9E-06	WATER9			3.0E+04	EPI	3.1E+00	PHYSPROP	1.0E+00	PHYSPROP	2.4E-02	5.2E+00	1.3E+01	3.6E-03	EPI
7440-48-4	Cobalt	7440-48-4	5.9E+01	EPI				0.0E+00	NIOSH	1.5E+03	CRC89	8.9E+00	CRC89				4.5E+01	BAES							1.2E-03	2.2E-01	5.4E-01	4.0E-04	RAGSE
8007-45-2	Coke Oven Emissions	8007-45-2			4.5E-01	1.1E-02	Toxnet HSDB	9.5E+01	Toxnet HSDB					1.0E-01	1.2E-05	WATER9			1.6E+04										
7440-50-8	Copper	7440-50-8	6.4E+01	PHYSPROP				0.0E+00	NIOSH	1.1E+03	PHYSPROP	9.0E+00	CRC89				3.5E+01	BAES							3.1E-03	2.4E-01	5.7E-01	1.0E-03	RAGSE
108-39-4	Cresol, m-	108-39-4	1.1E+02	PHYSPROP	3.5E-05	8.6E-07	PHYSPROP	1.1E-01	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.3E-06	WATER9			3.0E+02	EPI	2.0E+00	PHYSPROP	2.3E+04	PHYSPROP	3.1E-02	4.2E-01	1.0E+00	7.8E-03	EPI
95-48-7	Cresol, o-	95-48-7	1.1E+02	PHYSPROP	4.9E-05	1.2E-06	PHYSPROP	3.0E-01	EPI	3.0E+01	PHYSPROP	1.0E+00	CRC89	7.3E-02	9.3E-06	WATER9			3.1E+02	EPI	2.0E+00	PHYSPROP	2.6E+04	PHYSPROP	3.1E-02	4.2E-01	1.0E+00	7.7E-03	EPI
106-44-5	Cresol, p-	106-44-5	1.1E+02	PHYSPROP	4.1E-05	1.0E-06	PHYSPROP	1.1E-01	PHYSPROP	3.6E+01	PHYSPROP	1.0E+00	CRC89	7.2E-02	9.2E-06	WATER9			3.0E+02	EPI	1.9E+00	PHYSPROP	2.2E+04	PHYSPROP	3.0E-02	4.2E-01	1.0E+00	7.5E-03	EPI
59-50-7	Cresol, p-chloro-m-	59-50-7	1.4E+02	PHYSPROP	1.0E-04	2.5E-06	EPI	5.0E-02	PHYSPROP	6.7E+01	PHYSPROP			7.0E-02	8.1E-06	WATER9			4.9E+02	EPI	3.1E+00	PHYSPROP	3.8E+03	PHYSPROP	1.3E-01	6.6E-01	1.6E+00	2.9E-02	EPI
1319-77-3	Cresols	1319-77-3	3.2E+02	PHYSPROP	2.5E-05	6.2E-07	PHYSPROP	1.7E-01	PHYSPROP	3.0E+01	EPI			4.0E-02	4.7E-06	WATER9			3.1E+02	EPI	2.0E+00	PHYSPROP	9.1E+03	PHYSPROP	5.3E-02	6.9E+00	1.7E+01	7.7E-03	EPI
123-73-9	Crotonaldehyde, trans-	123-73-9	7.0E+01	PHYSPROP	7.9E-04	1.9E-05	PHYSPROP	3.0E+01	PHYSPROP	-7.6E+01	PHYSPROP	8.5E-01	CRC89	9.6E-02	1.1E-05	WATER9			1.8E+00	EPI	6.0E-01	PHYSPROP	1.5E+05	PHYSPROP	5.1E-03	2.6E-01	6.2E-01	1.6E-03	EPI
98-82-8	Cumene	98-82-8	1.2E+02	PHYSPROP	4.7E-01	1.2E-02	PHYSPROP	4.5E+00	PHYSPROP	-9.6E+01	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.9E-06	WATER9			7.0E+02	EPI	3.7E+00	PHYSPROP	6.1E+01	PHYSPROP	3.8E-01	5.0E-01	1.2E+00	9.0E-02	EPI
135-20-6	Cupferron	135-20-6	1.6E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	6.3E-05	PHYSPROP	1.6E+02	PHYSPROP			6.6E-02	7.7E-06	WATER9			7.6E+02	EPI	-1.7E+00	PHYSPROP	6.1E+05	PHYSPROP	8.0E-06	7.8E-01	1.9E+00	1.7E-06	EPI
21725-46-2	Cyanazine	21725-46-2	2.4E+02	PHYSPROP	1.1E-10	2.6E-12	EPI	1.4E-07	PHYSPROP	1.7E+02	PHYSPROP			4.9E-02	5.7E-06	WATER9			1.3E+02	EPI	2.2E+00	PHYSPROP	1.7E+02	PHYSPROP	1.2E-02	2.3E+00	5.6E+00	2.1E-03	EPI
	Cyanides																												
592-01-8	~Calcium Cyanide	592-01-8	9.2E+01	PHYSPROP																					3.7E-03	3.4E-01	8.3E-01	1.0E-03	RAGSE
544-92-3	~Copper Cyanide	544-92-3	9.0E+01	PHYSPROP						4.7E+02	PHYSPROP	2.9E+00	CRC89												3.6E-03	3.3E-01	8.0E-01	1.0E-03	RAGSE
57-12-5	~Cyanide (CN-)	57-12-5	2.6E+01	PHYSPROP	4.2E-03	1.0E-04	Ma et al 2010	3.1E+02	PHYSPROP			7.0E-01	CHEM GUIDE	2.1E-01	2.5E-05	WATER9	9.9E+00	SSL					9.5E+04	PHYSPROP	2.0E-03	1.5E-01	3.5E-01	1.0E-03	RAGSE
460-19-5	~Cyanogen	460-19-5	5.2E+01	PHYSPROP	2.2E-01	5.4E-03	EPI	4.3E+03	PHYSPROP	-2.8E+01	PHYSPROP	9.5E-01	CRC89	1.2E-01	1.4E-05	WATER9					7.0E-02	PHYSPROP	8.0E+03	CRC89	2.5E-03	2.1E-01	4.9E-01	8.9E-04	RAGSE
506-68-3	~Cyanogen Bromide	506-68-3	1.1E+02	PHYSPROP	1.0E+00	2.5E-02	EPI	1.2E+02	PHYSPROP	5.2E+01	PHYSPROP	2.0E+00	CRC89	9.8E-02	1.4E-05	WATER9									1.0E-03	4.1E-01	9.9E-01	2.6E-04	RAGSE
506-77-4	~Cyanogen Chloride	506-77-4	6.1E+01	PHYSPROP	7.9E-02	1.9E-03	YAWS	1.2E+03	PHYSPROP	-6.6E+00	PHYSPROP	1.2E+00	CRC89	1.2E-01	1.4E-05	WATER9							6.0E+04	PHYSPROP	1.2E-03	2.3E-01	5.6E-01	3.9E-04	RAGSE
74-90-8	~Hydrogen Cyanide	74-90-8	2.7E+01	PHYSPROP	5.4E-03	1.3E-04	PHYSPROP	7.4E+02	PHYSPROP	-1.3E+01	PHYSPROP	6.9E-01	CRC89	1.7E-01	1.7E-05	WATER9	9.9E+00	SSL			-2.5E-01	PHYSPROP	1.0E+06	PHYSPROP	2.0E-03	1.5E-01	3.6E-01	1.0E-03	RAGSE
151-50-8	~Potassium Cyanide	151-50-8	6.5E+01	PHYSPROP				0.0E+00	NIOSH	6.3E+02	PHYSPROP	1.6E+00	CRC89										7.2E+05	PHYSPROP	6.2E-03	2.4E-01	5.8E-01	2.0E-03	RAGSE
506-61-6	~Potassium Silver Cyanide	506-61-6	2.0E+02	PHYSPROP																					1.1E-02	1.4E+00	3.3E+00	2.0E-03	RAGSE
506-64-9	~Silver Cyanide	506-64-9	1.3E+02	PHYSPROP						3.2E+02	PHYSPROP	4.0E+00	CRC89										2.3E+01	PHYSPROP	4.5E-03	5.9E-01	1.4E+00	1.0E-03	RAGSE
143-33-9	~Sodium Cyanide	143-33-9	4.9E+01	PHYSPROP				0.0E+00	NIOSH	5.6E+02	PHYSPROP	1.6E+00	CRC89										5.8E+05	CRC89	2.7E-03	2.0E-01	4.7E-01	1.0E-03	RAGSE
NA	~Thiocyanates	NA																										1.0E-03	RAGSE
463-56-9	~Thiocyanic Acid	463-56-9	5.9E+01	PHYSPROP				4.7E+00	PPRTV	5.0E+00	PPRTV	1.1E+00	PPRTV	1.2E-01	1.4E-05	WATER9					5.8E-01	OTHER			3.0E-03	2.3E-01	5.4E-01	1.0E-03	RAGSE
557-21-1	~Zinc Cyanide	557-21-1	1.2E+02	PHYSPROP						8.0E+01	PERRY	1.9E+00	CRC89										4.7E+00	CRC89	2.5E-03	4.8E-01	1.1E+00	6.0E-04	RAGSE
110-82-7	Cyclohexane	110-82-7	8.4E+01	PHYSPROP	6.1E+00	1.5E-01	PHYSPROP	9.7E+01	PHYSPROP	6.6E+00	PHYSPROP	7.7E-01	CRC89	8.0E-02	9.1E-06	WATER9			1.5E+02	EPI	3.4E+00	PHYSPROP	5.5E+01	PHYSPROP	3.6E-01	3.1E-01	7.5E-01	1.0E-01	EPI
87-84-3	Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	5.1E+02	PHYSPROP	3.9E-05	9.6E-07	PHYSPROP	3.5E-06	PHYSPROP	2.0E+02	CRC89			3.0E-02	3.5E-06	WATER9			2.8E+03	EPI	4.7E+00	PHYSPROP	5.5E-02	PHYSPROP	2.5E-02	7.9E+01	1.9E+02	2.8E-03	EPI
108-94-1	Cyclohexanone	108-94-1	9.8E+01	PHYSPROP	3.7E-04	9.0E-06	PHYSPROP	4.3E+00	PHYSPROP	-3.1E+01	PHYSPROP	9.5E-01	CRC89	7.7E-02	9.4E-06	WATER9			1.7E+01	EPI	8.1E-01	PHYSPROP	2.5E+04	PHYSPROP	5.8E-03	3.7E-01	8.9E-01	1.5E-03	EPI
110-83-8	Cyclohexene	110-83-8	8.2E+01	PHYSPROP	1.9E+00	4.6E-02	PHYSPROP	8.9E+01	PHYSPROP	-1.0E+02	PHYSPROP	8.1E-01	NIOSH	8.3E-02	9.5E-06	WATER9			1.5E+02	EPI	2.9E+00	PHYSPROP	2.1E+02	PHYSPROP	1.5E-01	3.0E-01	7.3E-01	4.3E-02	EPI
108-91-8	Cyclohexylamine	108-91-8	9.9E+01	PHYSPROP	1.7E-04	4.2E-06	PHYSPROP	1.0E+01	PHYSPROP	-1.8E+01	PHYSPROP	8.2E-01	CRC89	7.1E-02	8.5E-06	WATER9			3.2E+01	EPI	1.5E+00	PHYSPROP	1.0E+06	PHYSPROP	1.6E-02	3.8E-01	9.1E-01	4.3E-03	EPI
68359-37-5	Cyfluthrin	68359-37-5	4.3E+02	PHYSPROP	1.2E-06	2.9E-08	EPI	1.5E-10	PHYSPROP	6.0E+01	PHYSPROP			3.3E-02	3.9E-06	WATER9			1.3E+05	EPI	6.0E+00	PHYSPROP	3.0E-03	PHYSPROP	4.1E-01	2.8E+01	6.8E+01	5.2E-02	EPI
68085-85-8	Cyhalothrin	68085-85-8	4.5E+02	PHYSPROP	6.1E-05	1.5E-06	EPI	1.5E-09	PHYSPROP	4.9E+01	PHYSPROP			3.2E-02	3.8E-06	WATER9			3.4E+05	EPI	6.9E+00	PHYSPROP	5.0E-03	PHYSPROP	1.7E+00	3.5E+01	1.4E+02	2.1E-01	EPI
52315-07-8	Cypermethrin	52315-07-8	4.2E+02	PHYSPROP	1.7E-05	4.2E-07	EPI	3.1E-09	PHYSPROP	8.1E+01	PHYSPROP	1.3E+00	CRC89	1.9E-02	4.7E-06	WATER9			8.0E+04	EPI	6.6E+00	PHYSPROP	4.0E-03	PHYSPROP	6.0E-01	2.3E+01	9.1E+01	7.7E-02	EPI
66215-27-8	Cyromazine	66215-27-8	1.7E+02	PHYSPROP	2.3E-12	5.7E-14	EPI	3.4E-09	PHYSPROP	2.2E+02	PHYSPROP			6.3E-02	7.3E-06	WATER9			2.9E+01	EPI	-6.1E-02	PHYSPROP	1.3E+04	PHYSPROP	4.0E-03	9.0E-01	2.2E+00	8.0E-04	EPI
72-54-8	DDD	72-54-8	3.2E+02	PHYSPROP	2.7E-04	6.6E-06	PHYSPROP	1.4E-06	PHYSPROP	1.1E+02	PHYSPROP			4.1E-02	4.7E-06	WATER9			1.2E+05	EPI	6.0E+00	PHYSPROP	9.0E-02	PHYSPROP	1.7E+00	6.5E+00	2.6E+01	2.5E-01	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
72-55-9	DDE, p,p'-	72-55-9	3.2E+02	PHYSPROP	1.7E-03	4.2E-05	PHYSPROP	6.0E-06	EPI	8.9E+01	PHYSPROP	1.4E+00	LookChem	2.3E-02	5.9E-06	WATER9			1.2E+05	EPI	6.5E+00	PHYSPROP	4.0E-02	PHYSPROP	3.7E+00	6.4E+00	2.7E+01	5.5E-01	EPI
50-29-3	DDT	50-29-3	3.5E+02	PHYSPROP	3.4E-04	8.3E-06	PHYSPROP	1.6E-07	PHYSPROP	1.1E+02	PHYSPROP			3.8E-02	4.4E-06	WATER9			1.7E+05	EPI	6.9E+00	PHYSPROP	5.5E-03	PHYSPROP	4.5E+00	1.0E+01	4.4E+01	6.3E-01	EPI
75-99-0	Dalapon	75-99-0	1.4E+02	PHYSPROP	2.3E-06	5.7E-08	EPI	1.5E-01	EPI	-5.0E+00	PHYSPROP	1.4E+00	CRC89	6.0E-02	9.4E-06	WATER9			3.2E+00	EPI	7.8E-01	PHYSPROP	5.0E+05	PHYSPROP	3.7E-03	6.6E-01	1.6E+00	8.2E-04	EPI
1596-84-5	Daminozide	1596-84-5	1.6E+02	PHYSPROP	1.7E-08	4.2E-10	EPI	2.0E-04	PHYSPROP	1.5E+02	PHYSPROP			6.4E-02	7.5E-06	WATER9			1.0E+01	EPI	-1.5E+00	PHYSPROP	1.0E+05	PHYSPROP	9.7E-05	8.3E-01	2.0E+00	2.0E-05	EPI
1163-19-5	Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	9.6E+02	PHYSPROP	4.9E-07	1.2E-08	PHYSPROP	4.7E-12	PHYSPROP	3.1E+02	PHYSPROP	3.0E+00	IRIS Profile	1.9E-02	4.8E-06	WATER9			2.8E+05	EPI	1.2E+01	PHYSPROP	1.0E-04	PHYSPROP	8.6E+00	2.5E+04	1.1E+05	7.3E-01	EPI
8065-48-3	Demeton	8065-48-3	5.2E+02	PHYSPROP	1.6E-04	3.8E-06	PHYSPROP	3.4E-04	PHYSPROP			1.1E+00	PubChem	1.6E-02	3.8E-06	WATER9					3.2E+00	PHYSPROP	6.7E+02	PHYSPROP	6.6E-02	8.2E+01	2.0E+02	7.6E-03	RAGSE
103-23-1	Di(2-ethylhexyl)adipate	103-23-1	3.7E+02	PHYSPROP	1.8E-05	4.3E-07	PHYSPROP	8.5E-07	PHYSPROP	-6.8E+01	PHYSPROP	9.2E-01	CRC89	1.7E-02	4.2E-06	WATER9			3.6E+04	EPI	6.1E+00	PHYSPROP	7.8E-01	PHYSPROP	2.4E+01	1.3E+01	5.8E+01	3.2E+00	EPI
2303-16-4	Diallate	2303-16-4	2.7E+02	PHYSPROP	1.6E-04	3.8E-06	EPI	1.5E-04	PHYSPROP	2.5E+01	PHYSPROP			4.5E-02	5.3E-06	WATER9			6.4E+02	EPI	4.5E+00	PHYSPROP	1.4E+01	PHYSPROP	2.9E-01	3.4E+00	8.2E+00	4.6E-02	EPI
333-41-5	Diazinon	333-41-5	3.0E+02	PHYSPROP	4.6E-06	1.1E-07	PHYSPROP	9.0E-05	PHYSPROP	8.8E+01	EPI	1.1E+00	CRC89	2.1E-02	5.2E-06	WATER9			3.0E+03	EPI	3.8E+00	PHYSPROP	4.0E+01	PHYSPROP	7.0E-02	5.3E+00	1.3E+01	1.0E-02	EPI
132-65-0	Dibenzothiophene	132-65-0	1.8E+02	PHYSPROP	1.4E-03	3.4E-05	EPI	2.1E-04	EPI	9.7E+01	PHYSPROP	1.3E+00	ChemNet	3.6E-02	7.6E-06	WATER9			9.2E+03	EPI	4.4E+00	PHYSPROP	1.5E+00	PHYSPROP	6.2E-01	1.1E+00	4.5E+00	1.2E-01	EPI
96-12-8	Dibromo-3-chloropropane, 1,2-	96-12-8	2.4E+02	PHYSPROP	6.0E-03	1.5E-04	EPI	5.8E-01	PHYSPROP	6.0E+00	PHYSPROP	2.1E+00	CRC89	3.2E-02	8.9E-06	WATER9			1.2E+02	EPI	3.0E+00	PHYSPROP	1.2E+03	PHYSPROP	4.1E-02	2.2E+00	5.3E+00	6.9E-03	EPI
108-36-1	Dibromobenzene, 1,3-	108-36-1	2.4E+02	PHYSPROP	5.1E-02	1.2E-03	EPI	2.7E-01	PHYSPROP	-7.0E+00	PHYSPROP	2.0E+00	CRC89	3.1E-02	8.5E-06	WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	6.8E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.3E-02	EPI
106-37-6	Dibromobenzene, 1,4-	106-37-6	2.4E+02	PHYSPROP	3.7E-02	8.9E-04	EPI	5.8E-02	PHYSPROP	8.7E+01	PHYSPROP	2.3E+00	CRC89	3.3E-02	9.3E-06	WATER9			3.8E+02	EPI	3.8E+00	PHYSPROP	2.0E+01	PHYSPROP	1.4E-01	2.2E+00	5.3E+00	2.5E-02	EPI
124-48-1	Dibromochloromethane	124-48-1	2.1E+02	PHYSPROP	3.2E-02	7.8E-04	PHYSPROP	5.5E+00	PHYSPROP	-2.0E+01	PHYSPROP	2.5E+00	CRC89	3.7E-02	1.1E-05	WATER9			3.2E+01	EPI	2.2E+00	PHYSPROP	2.7E+03	PHYSPROP	1.6E-02	1.5E+00	3.7E+00	2.9E-03	EPI
106-93-4	Dibromoethane, 1,2-	106-93-4	1.9E+02	PHYSPROP	2.7E-02	6.5E-04	PHYSPROP	1.1E+01	PHYSPROP	9.9E+00	PHYSPROP	2.2E+00	CRC89	4.3E-02	1.0E-05	WATER9			4.0E+01	EPI	2.0E+00	PHYSPROP	3.9E+03	PHYSPROP	1.5E-02	1.2E+00	2.8E+00	2.8E-03	EPI
74-95-3 NA	Dibromomethane (Methylene Bromide) Dibutyltin Compounds	74-95-3 NA	1.7E+02	PHYSPROP	3.4E-02	8.2E-04	PHYSPROP	4.4E+01	PHYSPROP	-5.3E+01	PHYSPROP	2.5E+00	CRC89	5.5E-02	1.2E-05	WATER9			2.2E+01	EPI	1.7E+00	PHYSPROP	1.2E+04	PHYSPROP	1.1E-02	9.9E-01	2.4E+00	2.2E-03	EPI
1918-00-9	Dicamba	1918-00-9	2.2E+02	PHYSPROP	8.9E-08	2.2E-09	EPI	1.3E-05	PHYSPROP	1.2E+02	PHYSPROP	1.6E+00	CRC89	2.9E-02	7.8E-06	WATER9			2.9E+01	EPI	2.2E+00	PHYSPROP	8.3E+03	PHYSPROP	1.5E-02	1.8E+00	4.4E+00	2.7E-03	EPI
764-41-0	Dichloro-2-butene, 1,4-	764-41-0	1.3E+02	PHYSPROP	3.5E-01	8.5E-03	PHYSPROP	3.0E+00	EPI	3.5E+00	PHYSPROP	1.2E+00	LANGE	6.7E-02	9.3E-06	WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	5.8E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
1476-11-5	Dichloro-2-butene, cis-1,4-	1476-11-5	1.3E+02	PHYSPROP	2.7E-02	6.6E-04	EPI	4.1E+00	PHYSPROP	-4.8E+01	PHYSPROP	1.2E+00	CRC89	6.7E-02	9.3E-06	WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	5.8E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
110-57-6	Dichloro-2-butene, trans-1,4-	110-57-6	1.3E+02	PHYSPROP	2.7E-02	6.6E-04	EPI	3.4E+00	PHYSPROP	2.0E+00	PHYSPROP	1.2E+00	CRC89	6.6E-02	9.3E-06	WATER9			1.3E+02	EPI	2.6E+00	PHYSPROP	8.5E+02	PHYSPROP	7.1E-02	5.3E-01	1.3E+00	1.7E-02	EPI
79-43-6	Dichloroacetic Acid	79-43-6	1.3E+02	PHYSPROP	3.4E-07	8.4E-09	PHYSPROP	1.8E-01	PHYSPROP	1.4E+01	PHYSPROP	1.6E+00	CRC89	7.2E-02	1.1E-05	WATER9			2.3E+00	EPI	9.2E-01	PHYSPROP	1.0E+06	PHYSPROP	5.3E-03	5.5E-01	1.3E+00	1.2E-03	EPI
95-50-1	Dichlorobenzene, 1,2-	95-50-1	1.5E+02	PHYSPROP	7.8E-02	1.9E-03	PHYSPROP	1.4E+00	PHYSPROP	-1.7E+01	PHYSPROP	1.3E+00	CRC89	5.6E-02	8.9E-06	WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	1.6E+02	PHYSPROP	2.1E-01	7.0E-01	1.7E+00	4.5E-02	EPI
106-46-7	Dichlorobenzene, 1,4-	106-46-7	1.5E+02	PHYSPROP	9.9E-02	2.4E-03	PHYSPROP	1.7E+00	PHYSPROP	5.2E+01	PHYSPROP	1.2E+00	CRC89	5.5E-02	8.7E-06	WATER9			3.8E+02	EPI	3.4E+00	PHYSPROP	8.1E+01	PHYSPROP	2.1E-01	7.0E-01	1.7E+00	4.5E-02	EPI
91-94-1	Dichlorobenzidine, 3,3'-	91-94-1	2.5E+02	PHYSPROP	1.2E-09	2.8E-11	PHYSPROP	2.6E-07	PHYSPROP	1.3E+02	PHYSPROP			4.7E-02	5.5E-06	WATER9			3.2E+03	EPI	3.5E+00	PHYSPROP	3.1E+00	PHYSPROP	7.8E-02	2.8E+00	6.6E+00	1.3E-02	EPI
90-98-2	Dichlorobenzophenone, 4,4'-	90-98-2	2.5E+02	PHYSPROP	4.4E-05	1.1E-06	PHYSPROP	6.4E-06	PHYSPROP	1.5E+02	PHYSPROP	1.5E+00	CRC89	2.6E-02	6.9E-06	WATER9			2.9E+03	EPI	4.4E+00	PHYSPROP	8.3E-01	PHYSPROP	3.3E-01	2.7E+00	6.4E+00	5.4E-02	EPI
75-71-8	Dichlorodifluoromethane	75-71-8	1.2E+02	PHYSPROP	1.4E+01	3.4E-01	PHYSPROP	4.8E+03	PHYSPROP	-1.6E+02	PHYSPROP	1.5E+00	PERRY	7.6E-02	1.1E-05	WATER9			4.4E+01	EPI	2.2E+00	PHYSPROP	2.8E+02	PHYSPROP	3.8E-02	5.0E-01	1.2E+00	9.0E-03	EPI
75-34-3	Dichloroethane, 1,1-	75-34-3	9.9E+01	PHYSPROP	2.3E-01	5.6E-03	PHYSPROP	2.3E+02	PHYSPROP	-9.7E+01	PHYSPROP	1.2E+00	CRC89	8.4E-02	1.1E-05	WATER9			3.2E+01	EPI	1.8E+00	PHYSPROP	5.0E+03	PHYSPROP	2.6E-02	3.8E-01	9.0E-01	6.8E-03	EPI
107-06-2	Dichloroethane, 1,2-	107-06-2	9.9E+01	PHYSPROP	4.8E-02	1.2E-03	PHYSPROP	7.9E+01	PHYSPROP	-3.6E+01	PHYSPROP	1.2E+00	CRC89	8.6E-02	1.1E-05	WATER9			4.0E+01	EPI	1.5E+00	PHYSPROP	8.6E+03	PHYSPROP	1.6E-02	3.8E-01	9.0E-01	4.2E-03	EPI
75-35-4	Dichloroethylene, 1,1-	75-35-4	9.7E+01	PHYSPROP	1.1E+00	2.6E-02	PHYSPROP	6.0E+02	PHYSPROP	-1.2E+02	PHYSPROP	1.2E+00	CRC89	8.6E-02	1.1E-05	WATER9			3.2E+01	EPI	2.1E+00	PHYSPROP	2.4E+03	PHYSPROP	4.4E-02	3.7E-01	8.8E-01	1.2E-02	EPI
156-59-2	Dichloroethylene, 1,2-cis-	156-59-2	9.7E+01	PHYSPROP	1.7E-01	4.1E-03	PHYSPROP	2.0E+02	PHYSPROP	-8.0E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	WATER9			4.0E+01	EPI	1.9E+00	PHYSPROP	6.4E+03	PHYSPROP	4.2E-02	3.7E-01	8.8E-01	1.1E-02	EPI
156-60-5	Dichloroethylene, 1,2-trans-	156-60-5	9.7E+01	PHYSPROP	3.8E-01	9.4E-03	PHYSPROP	3.3E+02	EPI	-5.0E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	WATER9			4.0E+01	EPI	2.1E+00	PHYSPROP	4.5E+03	PHYSPROP	4.2E-02	3.7E-01	8.8E-01	1.1E-02	EPI
120-83-2	Dichlorophenol, 2,4-	120-83-2	1.6E+02	PHYSPROP	1.8E-04	4.3E-06	EPI	9.0E-02	PHYSPROP	4.5E+01	PHYSPROP	1.4E+00	PERRY	4.9E-02	8.7E-06	WATER9			1.5E+02	SSL	3.1E+00	PHYSPROP	5.6E+03	PHYSPROP	1.0E-01	8.6E-01	2.1E+00	2.1E-02	EPI
94-75-7	Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	2.2E+02	PHYSPROP	1.4E-06	3.5E-08	EPI	8.3E-05	PHYSPROP	1.4E+02	PHYSPROP	1.4E+00	PubChem	2.8E-02	7.3E-06	WATER9			3.0E+01	EPI	2.8E+00	PHYSPROP	6.8E+02	PHYSPROP	3.8E-02	1.8E+00	4.4E+00	6.6E-03	EPI
94-82-6	Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	2.5E+02	PHYSPROP	9.4E-08	2.3E-09	PHYSPROP	1.1E-05	PHYSPROP	1.2E+02	PHYSPROP	1.4E+00	ChemNet	2.6E-02	6.7E-06	WATER9			3.7E+02	PubChem	3.5E+00	PHYSPROP	4.6E+01	PHYSPROP	8.4E-02	2.6E+00	6.3E+00	1.4E-02	EPI
78-87-5	Dichloropropane, 1,2-	78-87-5	1.1E+02	PHYSPROP	1.2E-01	2.8E-03	PHYSPROP	5.3E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	PERRY	7.3E-02	9.7E-06	WATER9			6.1E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.1E-02	4.5E-01	1.1E+00	7.5E-03	EPI
142-28-9	Dichloropropane, 1,3-	142-28-9	1.1E+02	PHYSPROP	4.0E-02	9.8E-04	PHYSPROP	1.8E+01	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	7.4E-02	9.8E-06	WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.2E-02	4.5E-01	1.1E+00	7.8E-03	EPI
616-23-9	Dichloropropanol, 2,3-	616-23-9	1.3E+02	PHYSPROP	1.5E-07	3.6E-09	PHYSPROP	1.8E-01	PHYSPROP	-2.5E+01	EPI	1.4E+00	CRC89	6.8E-02	9.9E-06	WATER9			5.6E+00	EPI	7.8E-01	PHYSPROP	6.4E+04	PHYSPROP	4.3E-03	5.5E-01	1.3E+00	9.8E-04	EPI
542-75-6	Dichloropropene, 1,3-	542-75-6	1.1E+02	PHYSPROP	1.5E-01	3.6E-03	PHYSPROP	3.4E+01	PHYSPROP	-5.0E+01	PHYSPROP	1.2E+00	LANGE	7.6E-02	1.0E-05	WATER9			7.2E+01	EPI	2.0E+00	PHYSPROP	2.8E+03	PHYSPROP	3.4E-02	4.4E-01	1.1E+00	8.3E-03	EPI
62-73-7	Dichlorvos	62-73-7	2.2E+02	PHYSPROP	2.4E-05	5.7E-07	EPI	1.6E-02	PHYSPROP	-6.0E+01	PHYSPROP	1.4E+00	CRC89	2.8E-02	7.3E-06	WATER9			5.4E+01	EPI	1.4E+00	PHYSPROP	8.0E+03	PHYSPROP	4.6E-03	1.8E+00	4.4E+00	8.0E-04	EPI
141-66-2	Dicrotophos	141-66-2	2.4E+02	PHYSPROP	2.1E-09	5.0E-11	PHYSPROP	1.6E-04	PHYSPROP	7.9E+01	EPI	1.2E+00	CRC89	2.5E-02	6.4E-06	WATER9			1.7E+01	EPI	0.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.2E+00	5.4E+00	7.3E-05	EPI
77-73-6	Dicyclopentadiene	77-73-6	1.3E+02	PHYSPROP	2.6E+00	6.3E-02	PHYSPROP	2.3E+00	EPI	-1.0E+00	PHYSPROP	9.3E-01	LANGE	5.6E-02	7.8E-06	WATER9			1.5E+03	EPI	3.2E+00	PHYSPROP	2.6E+01	PHYSPROP	1.6E-01	5.8E-01	1.4E+00	3.6E-02	EPI
60-57-1 NA	Dieldrin Diesel Engine Exhaust	60-57-1 NA	3.8E+02	PHYSPROP	4.1E-04	1.0E-05	PHYSPROP	5.9E-06	PHYSPROP	1.8E+02	PHYSPROP	1.8E+00	CRC89	2.3E-02	6.0E-06	WATER9			2.0E+04	EPI	5.4E+00	PHYSPROP	2.0E-01	PHYSPROP	2.4E-01	1.4E+01	3.4E+01	3.3E-02	EPI
111-42-2	Diethanolamine	111-42-2	1.1E+02	PHYSPROP	1.6E-09	3.9E-11	EPI	2.8E-04	PHYSPROP	2.8E+01	PHYSPROP	1.1E+00	CRC89	7.7E-02	9.8E-06	WATER9			1.0E+00	EPI	-1.4E+00	PHYSPROP	1.0E+06	PHYSPROP	1.8E-04	4.1E-01	9.8E-01	4.5E-05	EPI
112-34-5	Diethylene Glycol Monobutyl Ether	112-34-5	1.6E+02	PHYSPROP	2.9E-07	7.2E-09	PHYSPROP	2.2E-02	PHYSPROP	-6.8E+01	PHYSPROP	9.6E-01	CRC89	4.1E-02	7.0E-06	WATER9			1.0E+01	EPI	5.6E-01	PHYSPROP	1.0E+06	PHYSPROP	2.2E-03	8.5E-01	2.0E+00	4.5E-04	EPI
111-90-0	Diethylene Glycol Monoethyl Ether	111-90-0	1.3E+02	PHYSPROP	9.1E-07	2.2E-08	EPI	1.3E-01	PHYSPROP	-7.6E+01	PHYSPROP	9.9E-01	CRC89	5.6E-02	8.0E-06	WATER9			1.0E+00	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	5.4E-04	5.9E-01	1.4E+00	1.2E-04	EPI
617-84-5	Diethylformamide	617-84-5	1.0E+02	PHYSPROP	5.3E-06	1.3E-07	PHYSPROP	1.2E+00	EPI	-7.6E+00	EPI	9.1E-01	CRC89	7.3E-02	9.0E-06	WATER9			2.1E+00	EPI	5.0E-02	PHYSPROP	1.0E+06	PHYSPROP	1.8E-03	3.9E-01	9.3E-01	4.6E-04	EPI
56-53-1	Diethylstilbestrol	56-53-1	2.7E+02	PHYSPROP	2.4E-10	5.8E-12	PHYSPROP	1.4E-08	PHYSPROP	1.7E+02	PHYSPROP			4.6E-02	5.3E-06	WATER9			2.7E+05	EPI	5.1E+00	PHYSPROP	1.2E+01	PHYSPROP	7.2E-01	3.3E+00	1.3E+01	1.1E-01	EPI
43222-48-6	Difenzoquat	43222-48-6	3.6E+02	PHYSPROP				4.1E-12	PHYSPROP	1.6E+02	PHYSPROP			3.8E-02	4.4E-06	WATER9			7.8E+04	EPI	6.5E-01	PHYSPROP	8.2E+05	PHYSPROP	2.9E-04	1.1E+01	2.6E+01	4.0E-05	EPI
35367-38-5	Diflubenzuron	35367-38-5	3.1E+02	PHYSPROP	1.9E-07	4.6E-09	EPI	9.0E-10	PHYSPROP	2.4E+02	PHYSPROP			4.1E-02	4.8E-06	WATER9			4.6E+02	EPI	3.9E+00	PHYSPROP	8.0E-02	PHYSPROP	7.3E-02	5.8E+00	1.4E+01	1.1E-02	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
75-37-6	Difluoroethane, 1,1-	75-37-6	6.6E+01	PHYSPROP	8.3E-01	2.0E-02	PHYSPROP	4.6E+03	PHYSPROP	-1.2E+02	PHYSPROP	9.0E-01	CRC89	1.0E-01	1.2E-05	WATER9			3.2E+01	EPI	7.5E-01	PHYSPROP	3.2E+03	PHYSPROP	6.6E-03	2.5E-01	5.9E-01	2.1E-03	EPI
94-58-6	Dihydrosafrole	94-58-6	1.6E+02	PHYSPROP	5.0E-04	1.2E-05	PHYSPROP	5.6E-02	PHYSPROP	4.4E+01	EPI	1.1E+00	PubChem	4.3E-02	7.4E-06	WATER9			2.1E+02	EPI	3.6E+00	PHYSPROP	5.7E+01	PHYSPROP	2.2E-01	8.7E-01	2.1E+00	4.5E-02	EPI
108-20-3	Diisopropyl Ether	108-20-3	1.0E+02	PHYSPROP	1.0E-01	2.6E-03	PHYSPROP	1.5E+02	PHYSPROP	-8.7E+01	PHYSPROP	7.2E-01	CRC89	6.5E-02	7.8E-06	WATER9			2.3E+01	EPI	1.5E+00	PHYSPROP	8.8E+03	PHYSPROP	1.7E-02	3.9E-01	9.4E-01	4.3E-03	EPI
1445-75-6	Diisopropyl Methylphosphonate	1445-75-6	1.8E+02	PHYSPROP	1.8E-03	4.4E-05	EPI	2.3E-01	PHYSPROP	-2.4E+01	EPI	9.8E-01	ATSDR Profile	3.4E-02	6.6E-06	WATER9			4.2E+01	EPI	1.0E+00	PHYSPROP	1.5E+03	PHYSPROP	3.8E-03	1.1E+00	2.6E+00	7.4E-04	EPI
55290-64-7	Dimethipin	55290-64-7	2.1E+02	PHYSPROP	9.4E-10	2.3E-11	EPI	3.8E-07	PHYSPROP	1.7E+02	PHYSPROP			5.4E-02	6.3E-06	WATER9			1.0E+01	EPI	-1.7E-01	PHYSPROP	4.6E+03	PHYSPROP	4.5E-04	1.6E+00	3.8E+00	8.0E-05	EPI
60-51-5	Dimethoate	60-51-5	2.3E+02	PHYSPROP	9.9E-09	2.4E-10	EPI	1.9E-05	PHYSPROP	5.2E+01	PHYSPROP	1.3E+00	CRC89	2.6E-02	6.7E-06	WATER9			1.3E+01	EPI	7.8E-01	PHYSPROP	2.3E+04	PHYSPROP	1.6E-03	2.0E+00	4.9E+00	2.7E-04	EPI
119-90-4	Dimethoxybenzidine, 3,3'-	119-90-4	2.4E+02	PHYSPROP	1.9E-09	4.7E-11	PHYSPROP	1.3E-07	PHYSPROP	1.4E+02	PHYSPROP			4.9E-02	5.7E-06	WATER9			5.1E+02	EPI	1.8E+00	PHYSPROP	6.0E+01	PHYSPROP	6.4E-03	2.5E+00	5.9E+00	1.1E-03	EPI
756-79-6	Dimethyl methylphosphonate	756-79-6	1.2E+02	PHYSPROP	5.6E-06	1.4E-07	PHYSPROP	8.3E-01	PHYSPROP	-4.8E+01	EPI	1.2E+00	CRC89	6.7E-02	9.2E-06	WATER9			5.4E+00	EPI	-6.1E-01	PHYSPROP	1.0E+06	PHYSPROP	5.3E-04	5.2E-01	1.2E+00	1.2E-04	EPI
60-11-7	Dimethylamino azobenzene [p-]	60-11-7	2.3E+02	PHYSPROP	1.6E-08	4.0E-10	PHYSPROP	7.0E-08	EPI	1.2E+02	PHYSPROP			5.1E-02	6.0E-06	WATER9			2.0E+03	EPI	4.6E+00	PHYSPROP	2.3E-01	PHYSPROP	5.4E-01	1.9E+00	4.6E+00	9.4E-02	EPI
21436-96-4	Dimethylaniline HCl, 2,4-	21436-96-4	1.2E+02	PHYSPROP	9.5E-05	2.3E-06	PHYSPROP	1.8E-01	PHYSPROP	1.6E+02	EPI			7.8E-02	9.1E-06	WATER9			3.5E+02	EPI	2.2E+00	PHYSPROP	3.7E+03	PHYSPROP	8.6E-05	5.0E-01	1.2E+00	2.0E-05	EPI
95-68-1	Dimethylaniline, 2,4-	95-68-1	1.2E+02	PHYSPROP	1.0E-04	2.5E-06	PHYSPROP	1.3E-01	PHYSPROP	-1.4E+01	PHYSPROP	9.7E-01	CRC89	6.3E-02	8.4E-06	WATER9			1.8E+02	EPI	1.7E+00	PHYSPROP	6.1E+03	PHYSPROP	1.8E-02	5.0E-01	1.2E+00	4.3E-03	EPI
121-69-7	Dimethylaniline, N,N-	121-69-7	1.2E+02	PHYSPROP	2.3E-03	5.7E-05	EPI	7.0E-01	PHYSPROP	2.5E+00	PHYSPROP	9.6E-01	CRC89	6.3E-02	8.3E-06	WATER9			7.9E+01	EPI	2.3E+00	PHYSPROP	1.5E+03	PHYSPROP	4.7E-02	5.0E-01	1.2E+00	1.1E-02	EPI
119-93-7	Dimethylbenzidine, 3,3'-	119-93-7	2.1E+02	PHYSPROP	2.6E-09	6.3E-11	PHYSPROP	6.9E-07	PHYSPROP	1.3E+02	PHYSPROP			5.3E-02	6.2E-06	WATER9			3.2E+03	EPI	2.3E+00	PHYSPROP	1.3E+03	PHYSPROP	2.0E-02	1.6E+00	3.9E+00	3.6E-03	EPI
68-12-2	Dimethylformamide	68-12-2	7.3E+01	PHYSPROP	3.0E-06	7.4E-08	PHYSPROP	3.9E+00	PHYSPROP	-6.0E+01	PHYSPROP	9.4E-01	CRC89	9.7E-02	1.1E-05	WATER9			1.0E+00	EPI	-1.0E+00	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	2.7E-01	6.5E-01	1.3E-04	EPI
57-14-7	Dimethylhydrazine, 1,1-	57-14-7	6.0E+01	PHYSPROP	5.3E-04	1.3E-05	PHYSPROP	1.6E+02	PHYSPROP	-5.8E+01	PHYSPROP	7.9E-01	CRC89	1.0E-01	1.1E-05	WATER9			1.2E+01	EPI	-1.2E+00	PHYSPROP	1.0E+06	PHYSPROP	2.2E-04	2.3E-01	5.5E-01	7.3E-05	RAGSE
540-73-8	Dimethylhydrazine, 1,2-	540-73-8	6.0E+01	PHYSPROP	2.8E-06	7.0E-08	PHYSPROP	7.0E+01	PHYSPROP	-9.0E+00	PHYSPROP	8.3E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.5E+01	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	9.5E-04	2.3E-01	5.5E-01	3.2E-04	EPI
105-67-9	Dimethylphenol, 2,4-	105-67-9	1.2E+02	PHYSPROP	3.9E-05	9.5E-07	PHYSPROP	1.0E-01	PHYSPROP	2.5E+01	PHYSPROP	9.7E-01	CRC89	6.2E-02	8.3E-06	WATER9			4.9E+02	EPI	2.3E+00	PHYSPROP	7.9E+03	PHYSPROP	4.6E-02	5.1E-01	1.2E+00	1.1E-02	EPI
576-26-1	Dimethylphenol, 2,6-	576-26-1	1.2E+02	PHYSPROP	2.7E-04	6.7E-06	PHYSPROP	1.7E-01	EPI	4.6E+01	PHYSPROP			7.7E-02	9.0E-06	WATER9			5.0E+02	EPI	2.4E+00	PHYSPROP	6.1E+03	PHYSPROP	5.1E-02	5.1E-01	1.2E+00	1.2E-02	EPI
95-65-8	Dimethylphenol, 3,4-	95-65-8	1.2E+02	PHYSPROP	1.7E-05	4.2E-07	PHYSPROP	3.6E-02	EPI	6.1E+01	PHYSPROP	9.8E-01	CRC89	6.3E-02	8.4E-06	WATER9			4.9E+02	EPI	2.2E+00	PHYSPROP	4.8E+03	PHYSPROP	4.2E-02	5.1E-01	1.2E+00	9.8E-03	EPI
513-37-1	Dimethylvinylchloride	513-37-1	9.1E+01	PHYSPROP	4.8E-02	1.2E-03	CRC89	2.1E+02	PHYSPROP	-1.0E+02	EPI	9.2E-01	CRC89	8.1E-02	9.7E-06	WATER9			6.1E+01	EPI	2.6E+00	PHYSPROP	1.0E+03	PHYSPROP	9.3E-02	3.4E-01	8.1E-01	2.5E-02	EPI
534-52-1	Dinitro-o-cresol, 4,6-	534-52-1	2.0E+02	PHYSPROP	5.7E-05	1.4E-06	PHYSPROP	1.2E-04	PHYSPROP	8.7E+01	PHYSPROP			5.6E-02	6.5E-06	WATER9			7.5E+02	EPI	2.1E+00	PHYSPROP	2.0E+02	PHYSPROP	1.7E-02	1.4E+00	3.2E+00	3.2E-03	EPI
131-89-5	Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	2.7E+02	PHYSPROP	2.3E-06	5.5E-08	PHYSPROP	4.2E-08	PHYSPROP	1.1E+02	PHYSPROP			4.6E-02	5.4E-06	WATER9			1.7E+04	EPI	4.1E+00	PHYSPROP	1.5E+01	PHYSPROP	1.7E-01	3.3E+00	7.8E+00	2.8E-02	EPI
528-29-0	Dinitrobenzene, 1,2-	528-29-0	1.7E+02	PHYSPROP	2.2E-06	5.3E-08	EPI	4.6E-05	EPI	1.2E+02	PHYSPROP	1.3E+00	CRC89	4.5E-02	8.3E-06	WATER9			3.6E+02	EPI	1.7E+00	PHYSPROP	1.3E+02	PHYSPROP	1.2E-02	9.2E-01	2.2E+00	2.4E-03	EPI
99-65-0	Dinitrobenzene, 1,3-	99-65-0	1.7E+02	PHYSPROP	2.0E-06	4.9E-08	PHYSPROP	9.0E-04	EPI	9.0E+01	PHYSPROP	1.6E+00	CRC89	4.8E-02	9.2E-06	WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	5.3E+02	PHYSPROP	8.7E-03	9.2E-01	2.2E+00	1.7E-03	EPI
100-25-4	Dinitrobenzene, 1,4-	100-25-4	1.7E+02	PHYSPROP	3.4E-06	8.4E-08	PHYSPROP	2.6E-05	PHYSPROP	1.7E+02	PHYSPROP	1.6E+00	CRC89	4.9E-02	9.4E-06	WATER9			3.5E+02	EPI	1.5E+00	PHYSPROP	6.9E+01	PHYSPROP	8.3E-03	9.2E-01	2.2E+00	1.7E-03	EPI
51-28-5	Dinitrophenol, 2,4-	51-28-5	1.8E+02	PHYSPROP	3.5E-06	8.6E-08	PHYSPROP	3.9E-04	PHYSPROP	1.1E+02	PHYSPROP	1.7E+00	CRC89	4.1E-02	9.1E-06	WATER9			4.6E+02	EPI	1.7E+00	PHYSPROP	2.8E+03	PHYSPROP	9.8E-03	1.1E+00	2.7E+00	1.9E-03	EPI
NA	Dinitrotoluene Mixture, 2,4/2,6-	NA	1.8E+02	EPI	1.6E-05	4.0E-07	EPI	2.2E-03	EPI	6.0E+01	EPI			5.9E-02	6.9E-06	WATER9			5.9E+02	EPI	2.2E+00	EPI	2.7E+02	EPI	2.2E-02	1.1E+00	2.6E+00	4.2E-03	EPI
121-14-2	Dinitrotoluene, 2,4-	121-14-2	1.8E+02	PHYSPROP	2.2E-06	5.4E-08	PHYSPROP	1.5E-04	PHYSPROP	7.1E+01	PHYSPROP	1.3E+00	CRC89	3.8E-02	7.9E-06	WATER9			5.8E+02	EPI	2.0E+00	PHYSPROP	2.0E+02	PHYSPROP	1.6E-02	1.1E+00	2.6E+00	3.1E-03	EPI
606-20-2	Dinitrotoluene, 2,6-	606-20-2	1.8E+02	PHYSPROP	3.1E-05	7.5E-07	EPI	5.7E-04	PHYSPROP	6.6E+01	PHYSPROP	1.3E+00	CRC89	3.7E-02	7.8E-06	WATER9			5.9E+02	EPI	2.1E+00	PHYSPROP	1.8E+02	PHYSPROP	1.9E-02	1.1E+00	2.6E+00	3.7E-03	EPI
35572-78-2	Dinitrotoluene, 2-Amino-4,6-	35572-78-2	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
19406-51-0	Dinitrotoluene, 4-Amino-2,6-	19406-51-0	2.0E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	1.1E-05	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.6E-06	WATER9			2.8E+02	EPI	1.8E+00	PHYSPROP	1.2E+03	PHYSPROP	1.1E-02	1.3E+00	3.2E+00	2.0E-03	EPI
25321-14-6	Dinitrotoluene, Technical grade	25321-14-6	5.5E+02	PHYSPROP	3.8E-06	9.3E-08	PHYSPROP	4.0E-04	PHYSPROP	6.0E+01	EPI			2.8E-02	3.3E-06	WATER9			5.9E+02	EPI	2.2E+00	PHYSPROP	2.7E+02	PHYSPROP	3.7E-02	1.2E+02	2.9E+02	4.2E-03	EPI
88-85-7	Dinoseb	88-85-7	2.4E+02	PHYSPROP	1.9E-05	4.6E-07	EPI	7.5E-05	PHYSPROP	4.0E+01	PHYSPROP	1.3E+00	CRC89	2.5E-02	6.5E-06	WATER9			4.3E+03	EPI	3.6E+00	PHYSPROP	5.2E+01	PHYSPROP	9.7E-02	2.3E+00	5.6E+00	1.6E-02	EPI
123-91-1	Dioxane, 1,4-	123-91-1	8.8E+01	PHYSPROP	2.0E-04	4.8E-06	PHYSPROP	3.8E+01	PHYSPROP	1.2E+01	PHYSPROP	1.0E+00	CRC89	8.7E-02	1.1E-05	WATER9			2.6E+00	EPI	-2.7E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	3.3E-01	7.9E-01	3.3E-04	EPI
NA	Dioxins ~Hexachlorodibenzo-p-dioxin, Mixture	NA	3.9E+02	EPI	2.3E-04	5.7E-06	EPI	4.4E-11	EPI	2.5E+02	EPI			4.3E-02	4.2E-06	WATER9			7.0E+05	EPI	8.2E+00	EPI	4.0E-06	EPI	2.2E+01	1.6E+01	7.5E+01	2.9E+00	EPI
1746-01-6	~TCDD, 2,3,7,8-	1746-01-6	3.2E+02	PHYSPROP	2.0E-03	5.0E-05	EPI	1.5E-09	EPI	3.1E+02	PHYSPROP	1.8E+00	PubChem	4.7E-02	6.8E-06	WATER9			2.5E+05	EPI	6.8E+00	PHYSPROP	2.0E-04	PHYSPROP	5.6E+00	6.7E+00	2.9E+01	8.1E-01	EPI
957-51-7	Diphenamid	957-51-7	2.4E+02	PHYSPROP	1.5E-09	3.6E-11	EPI	3.0E-08	PHYSPROP	1.4E+02	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	WATER9			4.8E+03	EPI	2.2E+00	PHYSPROP	2.6E+02	PHYSPROP	3.3E-02	2.3E+00	5.5E+00	5.6E-03	EPI
127-63-9	Diphenyl Sulfone	127-63-9	2.2E+02	PHYSPROP	1.0E-05	2.5E-07	PHYSPROP	1.5E-05	PHYSPROP	1.3E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	6.9E-06	WATER9			1.1E+03	EPI	2.4E+00	PHYSPROP	3.1E+02	PHYSPROP	2.1E-02	1.8E+00	4.2E+00	3.7E-03	EPI
122-39-4	Diphenylamine	122-39-4	1.7E+02	PHYSPROP	1.1E-04	2.7E-06	EPI	6.7E-04	PHYSPROP	5.3E+01	PHYSPROP	1.2E+00	CRC89	4.2E-02	7.6E-06	WATER9			8.3E+02	EPI	3.5E+00	PHYSPROP	5.3E+01	PHYSPROP	1.9E-01	9.3E-01	2.2E+00	3.7E-02	EPI
122-66-7	Diphenylhydrazine, 1,2-	122-66-7	1.8E+02	PHYSPROP	2.0E-05	4.8E-07	EPI	4.4E-04	EPI	1.3E+02	PHYSPROP	1.2E+00	CRC89	3.4E-02	7.2E-06	WATER9			1.5E+03	EPI	2.9E+00	PHYSPROP	2.2E+02	PHYSPROP	6.8E-02	1.1E+00	2.7E+00	1.3E-02	EPI
85-00-7	Diquat	85-00-7	3.4E+02	PHYSPROP	5.8E-12	1.4E-13	PHYSPROP	1.8E-06	PHYSPROP	3.4E+02	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.2E-06	WATER9			9.3E+03	EPI	-4.6E+00	PHYSPROP	7.1E+05	PHYSPROP	1.7E-06	8.9E+00	2.1E+01	2.4E-07	EPI
1937-37-7	Direct Black 38	1937-37-7	7.8E+02	PHYSPROP	3.4E-38	8.2E-40	PHYSPROP	1.5E-36	PHYSPROP	3.5E+02	EPI			2.2E-02	2.6E-06	WATER9			2.4E+08	EPI	4.9E+00	PHYSPROP	3.0E+03	PHYSPROP	2.2E-03	2.4E+03	5.9E+03	2.1E-04	EPI
2602-46-2	Direct Blue 6	2602-46-2	9.3E+02	PHYSPROP	3.7E-42	9.1E-44	PHYSPROP	9.5E-39	PHYSPROP	3.5E+02	EPI			2.0E-02	2.3E-06	WATER9			7.9E+08	EPI	2.6E+00	PHYSPROP	1.4E-04	PHYSPROP	2.0E-08	1.8E+04	4.2E+04	1.7E-09	EPI
16071-86-6	Direct Brown 95	16071-86-6	7.6E+02	PHYSPROP				1.4E-41	PHYSPROP	3.5E+02	EPI			2.3E-02	2.7E-06	WATER9			7.0E+06	EPI	-6.5E+00	PHYSPROP	1.0E+06	PHYSPROP	4.1E-11	1.9E+03	4.6E+03	3.9E-12	EPI
298-04-4	Disulfoton	298-04-4	2.7E+02	PHYSPROP	8.8E-05	2.2E-06	EPI	9.8E-05	PHYSPROP	-2.5E+01	PHYSPROP	1.1E+00	CRC89	2.3E-02	5.7E-06	WATER9			8.4E+02	EPI	4.0E+00	PHYSPROP	1.6E+01	PHYSPROP	1.4E-01	3.6E+00	8.7E+00	2.1E-02	EPI
505-29-3	Dithiane, 1,4-	505-29-3	1.2E+02	PHYSPROP	1.7E-03	4.2E-05	EPI	8.0E-02	PHYSPROP	1.1E+02	PHYSPROP	1.1E+00	ChemNet	6.8E-02	9.3E-06	WATER9			1.5E+02	EPI	7.7E-01	PHYSPROP	3.0E+03	PHYSPROP	4.6E-03	5.0E-01	1.2E+00	1.1E-03	EPI
330-54-1	Diuron	330-54-1	2.3E+02	PHYSPROP	2.1E-08	5.0E-10	EPI	6.9E-08	PHYSPROP	1.6E+02	PHYSPROP			5.0E-02	5.9E-06	WATER9			1.1E+02	EPI	2.7E+00	PHYSPROP	4.2E+01	PHYSPROP	2.7E-02	2.1E+00	5.1E+00	4.7E-03	EPI
2439-10-3	Dodine	2439-10-3	2.9E+02	PHYSPROP	3.7E-09	9.0E-11	EPI	1.5E-07	PHYSPROP	1.4E+02	PHYSPROP			4.4E-02	5.1E-06	WATER9			2.5E+03	EPI	1.2E+00	PHYSPROP	6.3E+02	PHYSPROP	1.4E-03	4.3E+00	1.0E+01	2.2E-04	EPI
759-94-4	EPTC	759-94-4	1.9E+02	PHYSPROP	6.5E-04	1.6E-05	EPI	2.4E-02	PHYSPROP	6.1E+01	EPI	9.5E-01	CRC89	2.9E-02	6.4E-06	WATER9			1.6E+02	EPI	3.2E+00	PHYSPROP	3.8E+02	PHYSPROP	9.7E-02	1.2E+00	2.9E+00	1.8E-02	EPI
115-29-7	Endosulfan	115-29-7	4.1E+02	PHYSPROP	2.7E-03	6.5E-05	PHYSPROP	1.7E-07	PHYSPROP	1.1E+02	PHYSPROP	1.7E+00	CRC89	2.2E-02	5.8E-06	WATER9			6.8E+03	EPI	3.8E+00	PHYSPROP	3.3E-01	PHYSPROP	2.2E-02	2.0E+01	4.8E+01	2.9E-03	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
145-73-3	Endothall	145-73-3	1.9E+02	PHYSPROP	1.6E-14	3.9E-16	EPI	1.6E-10	PHYSPROP	1.4E+02	PHYSPROP	1.4E+00	CRC89	3.7E-02	8.2E-06	WATER9			1.9E+01	EPI	1.9E+00	PHYSPROP	1.0E+05	PHYSPROP	1.4E-02	1.2E+00	2.8E+00	2.6E-03	EPI
72-20-8	Endrin	72-20-8	3.8E+02	PHYSPROP	2.6E-04	6.4E-06	PHYSPROP	3.0E-06	PHYSPROP	2.3E+02	PHYSPROP			3.6E-02	4.2E-06	WATER9			2.0E+04	EPI	5.2E+00	PHYSPROP	2.5E-01	PHYSPROP	2.4E-01	1.4E+01	3.4E+01	3.3E-02	EPI
106-89-8	Epichlorohydrin	106-89-8	9.3E+01	PHYSPROP	1.2E-03	3.0E-05	EPI	1.6E+01	PHYSPROP	-5.7E+01	PHYSPROP	1.2E+00	PERRY	8.9E-02	1.1E-05	WATER9			9.9E+00	EPI	4.5E-01	PHYSPROP	6.6E+04	PHYSPROP	3.5E-03	3.5E-01	8.3E-01	9.4E-04	EPI
106-88-7	Epoxybutane, 1,2-	106-88-7	7.2E+01	PHYSPROP	7.4E-03	1.8E-04	EPI	1.8E+02	PHYSPROP	-1.5E+02	PHYSPROP	8.3E-01	CRC89	9.3E-02	1.0E-05	WATER9			9.9E+00	EPI	8.6E-01	PHYSPROP	9.5E+04	PHYSPROP	7.5E-03	2.7E-01	6.4E-01	2.3E-03	EPI
111-77-3	Ethanol, 2-(2-methoxyethoxy)-	111-77-3	1.2E+02	PHYSPROP	6.7E-10	1.7E-11	PHYSPROP	2.5E-01	PHYSPROP	-1.5E+01	EPI			7.8E-02	9.1E-06	WATER9			1.0E+00	EPI	-1.2E+00	PHYSPROP	1.0E+06	PHYSPROP	7.4E-04	5.0E-01	1.2E+00	1.7E-04	RAGSE
16672-87-0	Ethephon	16672-87-0	1.4E+02	PHYSPROP	2.3E-10	5.7E-12	PHYSPROP	9.8E-08	PHYSPROP	7.4E+01	PHYSPROP	1.2E+00	CRC89	5.5E-02	8.6E-06	WATER9			5.0E+00	EPI	-2.2E-01	PHYSPROP	1.0E+06	PHYSPROP	8.0E-04	6.8E-01	1.6E+00	1.7E-04	EPI
563-12-2	Ethion	563-12-2	3.8E+02	PHYSPROP	1.6E-05	3.8E-07	EPI	1.5E-06	PHYSPROP	-1.3E+01	PHYSPROP	1.2E+00	CRC89	1.9E-02	4.8E-06	WATER9			8.8E+02	EPI	5.1E+00	PHYSPROP	2.0E+00	PHYSPROP	1.9E-01	1.5E+01	3.6E+01	2.6E-02	EPI
111-15-9	Ethoxyethanol Acetate, 2-	111-15-9	1.3E+02	PHYSPROP	1.3E-04	3.2E-06	PHYSPROP	2.0E+00	PHYSPROP	-6.2E+01	PHYSPROP	9.7E-01	CRC89	5.7E-02	8.0E-06	WATER9			4.5E+00	EPI	5.9E-01	PHYSPROP	1.9E+05	PHYSPROP	3.1E-03	5.8E-01	1.4E+00	7.0E-04	EPI
110-80-5	Ethoxyethanol, 2-	110-80-5	9.0E+01	PHYSPROP	1.9E-05	4.7E-07	PHYSPROP	5.3E+00	PHYSPROP	-7.0E+01	PHYSPROP	9.3E-01	CRC89	8.2E-02	9.7E-06	WATER9			1.0E+00	EPI	-3.2E-01	PHYSPROP	1.0E+06	PHYSPROP	1.1E-03	3.4E-01	8.1E-01	3.0E-04	EPI
141-78-6	Ethyl Acetate	141-78-6	8.8E+01	PHYSPROP	5.5E-03	1.3E-04	PHYSPROP	9.3E+01	PHYSPROP	-8.4E+01	PHYSPROP	9.0E-01	CRC89	8.2E-02	9.7E-06	WATER9			5.6E+00	EPI	7.3E-01	PHYSPROP	8.0E+04	PHYSPROP	5.5E-03	3.3E-01	7.9E-01	1.5E-03	EPI
140-88-5	Ethyl Acrylate	140-88-5	1.0E+02	PHYSPROP	1.4E-02	3.4E-04	EPI	3.9E+01	PHYSPROP	-7.1E+01	PHYSPROP	9.2E-01	CRC89	7.5E-02	9.1E-06	WATER9			1.1E+01	EPI	1.3E+00	PHYSPROP	1.5E+04	PHYSPROP	1.2E-02	3.8E-01	9.2E-01	3.2E-03	EPI
75-00-3	Ethyl Chloride (Chloroethane)	75-00-3	6.5E+01	PHYSPROP	4.5E-01	1.1E-02	PHYSPROP	1.0E+03	PHYSPROP	-1.4E+02	PHYSPROP	8.9E-01	CRC89	1.0E-01	1.2E-05	WATER9			2.2E+01	EPI	1.4E+00	PHYSPROP	6.7E+03	PHYSPROP	1.9E-02	2.4E-01	5.8E-01	6.1E-03	EPI
60-29-7	Ethyl Ether	60-29-7	7.4E+01	PHYSPROP	5.0E-02	1.2E-03	PHYSPROP	5.4E+02	PHYSPROP	-1.2E+02	PHYSPROP	7.1E-01	CRC89	8.5E-02	9.4E-06	WATER9			9.7E+00	EPI	8.9E-01	PHYSPROP	6.0E+04	PHYSPROP	7.8E-03	2.7E-01	6.6E-01	2.4E-03	EPI
97-63-2	Ethyl Methacrylate	97-63-2	1.1E+02	PHYSPROP	2.3E-02	5.7E-04	EPI	2.1E+01	PHYSPROP	-7.5E+01	PHYSPROP	9.1E-01	CRC89	6.5E-02	8.4E-06	WATER9			1.7E+01	EPI	1.9E+00	PHYSPROP	5.4E+03	PHYSPROP	2.9E-02	4.6E-01	1.1E+00	7.0E-03	EPI
2104-64-5	Ethyl-p-nitrophenyl Phosphonate	2104-64-5	3.2E+02	PHYSPROP	1.8E-05	4.4E-07	EPI	9.5E-07	PHYSPROP	3.6E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.5E-06	WATER9			1.5E+04	EPI	4.8E+00	PHYSPROP	3.1E+00	PHYSPROP	2.5E-01	6.8E+00	1.6E+01	3.6E-02	EPI
100-41-4	Ethylbenzene	100-41-4	1.1E+02	PHYSPROP	3.2E-01	7.9E-03	PHYSPROP	9.6E+00	PHYSPROP	-9.5E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.5E-06	WATER9			4.5E+02	EPI	3.2E+00	PHYSPROP	1.7E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	4.9E-02	EPI
109-78-4	Ethylene Cyanohydrin	109-78-4	7.1E+01	PHYSPROP	3.1E-07	7.5E-09	EPI	8.0E-02	PHYSPROP	-4.6E+01	PHYSPROP	1.0E+00	CRC89	1.0E-01	1.2E-05	WATER9			1.0E+00	EPI	-9.4E-01	PHYSPROP	1.0E+06	PHYSPROP	4.8E-04	2.6E-01	6.3E-01	1.5E-04	EPI
107-15-3	Ethylene Diamine	107-15-3	6.0E+01	PHYSPROP	7.1E-08	1.7E-09	PHYSPROP	1.2E+01	PHYSPROP	1.1E+01	PHYSPROP	9.0E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.5E+01	EPI	-2.0E+00	PHYSPROP	1.0E+06	PHYSPROP	9.5E-05	2.3E-01	5.5E-01	3.2E-05	EPI
107-21-1	Ethylene Glycol	107-21-1	6.2E+01	PHYSPROP	2.5E-06	6.0E-08	PHYSPROP	9.2E-02	PHYSPROP	-1.3E+01	PHYSPROP	1.1E+00	CRC89	1.2E-01	1.4E-05	WATER9			1.0E+00	EPI	-1.4E+00	PHYSPROP	1.0E+06	PHYSPROP	2.7E-04	2.3E-01	5.6E-01	8.8E-05	EPI
111-76-2	Ethylene Glycol Monobutyl Ether	111-76-2	1.2E+02	PHYSPROP	6.5E-05	1.6E-06	PHYSPROP	8.8E-01	PHYSPROP	-7.5E+01	PHYSPROP	9.0E-01	CRC89	6.3E-02	8.1E-06	WATER9			2.8E+00	EPI	8.3E-01	PHYSPROP	1.0E+06	PHYSPROP	5.1E-03	4.8E-01	1.2E+00	1.2E-03	EPI
75-21-8	Ethylene Oxide	75-21-8	4.4E+01	PHYSPROP	6.1E-03	1.5E-04	PHYSPROP	1.3E+03	PHYSPROP	-1.1E+02	PHYSPROP	8.8E-01	CRC89	1.3E-01	1.5E-05	WATER9			3.2E+00	EPI	-3.0E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	1.9E-01	4.5E-01	5.6E-04	EPI
96-45-7	Ethylene Thiourea	96-45-7	1.0E+02	PHYSPROP	5.6E-10	1.4E-11	PHYSPROP	2.0E-06	PHYSPROP	2.0E+02	PHYSPROP			8.7E-02	1.0E-05	WATER9			1.3E+01	EPI	-6.6E-01	PHYSPROP	2.0E+04	PHYSPROP	5.9E-04	3.9E-01	9.4E-01	1.5E-04	EPI
151-56-4	Ethyleneimine	151-56-4	4.3E+01	PHYSPROP	4.9E-04	1.2E-05	EPI	2.1E+02	PHYSPROP	-7.8E+01	PHYSPROP	8.3E-01	CRC89	1.3E-01	1.4E-05	WATER9			9.0E+00	EPI	-2.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.5E-03	1.8E-01	4.4E-01	5.8E-04	EPI
84-72-0	Ethylphthalyl Ethyl Glycolate	84-72-0	2.8E+02	PHYSPROP	2.7E-07	6.6E-09	PHYSPROP	2.2E-04	PHYSPROP	2.3E+01	EPI			4.4E-02	5.2E-06	WATER9			1.0E+03	EPI	2.2E+00	PHYSPROP	2.2E+02	PHYSPROP	7.7E-03	3.9E+00	9.4E+00	1.2E-03	EPI
22224-92-6	Fenamiphos	22224-92-6	3.0E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	1.0E-06	PHYSPROP	4.9E+01	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.4E-06	WATER9			4.0E+02	EPI	3.2E+00	PHYSPROP	3.3E+02	PHYSPROP	2.9E-02	5.3E+00	1.3E+01	4.4E-03	EPI
39515-41-8	Fenpropathrin	39515-41-8	3.5E+02	PHYSPROP	3.1E-04	7.6E-06	EPI	5.5E-06	PHYSPROP	4.7E+01	PHYSPROP			3.8E-02	4.5E-06	WATER9			2.2E+04	EPI	5.7E+00	PHYSPROP	3.3E-01	PHYSPROP	1.2E+00	9.5E+00	3.7E+01	1.7E-01	EPI
51630-58-1	Fenvalerate	51630-58-1	4.2E+02	PHYSPROP	1.4E-06	3.5E-08	EPI	1.5E-09	PHYSPROP	4.0E+01	PHYSPROP	1.2E+00	CRC89	1.8E-02	4.4E-06	WATER9			3.2E+05	EPI	6.2E+00	PHYSPROP	2.4E-02	PHYSPROP	7.4E-01	2.4E+01	9.1E+01	9.4E-02	EPI
2164-17-2	Fluometuron	2164-17-2	2.3E+02	PHYSPROP	1.1E-07	2.6E-09	EPI	9.4E-07	PHYSPROP	1.6E+02	PHYSPROP			5.0E-02	5.9E-06	WATER9			2.9E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	1.9E-02	2.1E+00	5.0E+00	3.2E-03	EPI
16984-48-8	Fluoride	16984-48-8	3.8E+01	EPI						-2.2E+02	EPI						1.5E+02	BAES					1.7E+00	EPI	2.4E-03	1.7E-01	4.1E-01	1.0E-03	RAGSE
7782-41-4	Fluorine (Soluble Fluoride)	7782-41-4	3.8E+01	PHYSPROP						-2.2E+02	PHYSPROP	1.6E+00	CRC89				1.5E+02	BAES					1.7E+00	PHYSPROP	2.4E-03	1.7E-01	4.1E-01	1.0E-03	RAGSE
59756-60-4	Fluridone	59756-60-4	3.3E+02	PHYSPROP	3.3E-07	8.1E-09	EPI	9.8E-08	PHYSPROP	1.5E+02	PHYSPROP			4.0E-02	4.7E-06	WATER9			5.7E+04	EPI	3.2E+00	PHYSPROP	1.2E+01	PHYSPROP	2.0E-02	7.3E+00	1.8E+01	2.8E-03	EPI
56425-91-3	Flurprimidol	56425-91-3	3.1E+02	PHYSPROP	5.4E-08	1.3E-09	EPI	3.6E-07	PHYSPROP	9.5E+01	PHYSPROP			4.1E-02	4.8E-06	WATER9			2.2E+03	EPI	3.3E+00	PHYSPROP	1.1E+02	PHYSPROP	3.1E-02	5.9E+00	1.4E+01	4.6E-03	EPI
85509-19-9	Flusilazole	85509-19-9	3.2E+02	PHYSPROP	9.2E-08	2.3E-09	PHYSPROP	2.9E-07	PHYSPROP	5.4E+01	PHYSPROP			4.1E-02	4.8E-06	WATER9			8.1E+04	EPI	3.7E+00	PHYSPROP	5.4E+01	PHYSPROP	5.2E-02	6.1E+00	1.5E+01	7.7E-03	EPI
66332-96-5	Flutolanil	66332-96-5	3.2E+02	PHYSPROP	1.3E-07	3.2E-09	EPI	4.9E-08	PHYSPROP	1.0E+02	PHYSPROP			4.0E-02	4.7E-06	WATER9			2.6E+03	EPI	3.7E+00	PHYSPROP	6.5E+00	PHYSPROP	4.8E-02	6.8E+00	1.6E+01	6.9E-03	EPI
69409-94-5	Fluvalinate	69409-94-5	5.0E+02	PHYSPROP	5.9E-07	1.5E-08	PHYSPROP	1.0E-07	PHYSPROP	1.6E+02	EPI			3.0E-02	3.5E-06	WATER9			7.3E+05	EPI	6.8E+00	PHYSPROP	5.0E-03	PHYSPROP	6.8E-01	6.9E+01	2.7E+02	7.9E-02	EPI
133-07-3	Folpet	133-07-3	3.0E+02	PHYSPROP	3.1E-06	7.7E-08	EPI	1.6E-07	PHYSPROP	1.8E+02	EPI			4.3E-02	5.0E-06	WATER9			1.8E+01	EPI	2.9E+00	PHYSPROP	8.0E-01	PHYSPROP	1.8E-02	4.8E+00	1.2E+01	2.7E-03	EPI
72178-02-0	Fomesafen	72178-02-0	4.4E+02	PHYSPROP	3.1E-11	7.5E-13	PHYSPROP	7.5E-07	EPI	2.2E+02	PHYSPROP	1.3E+00	CRC89	1.9E-02	4.6E-06	WATER9			1.5E+03	EPI	2.9E+00	PHYSPROP	5.0E+01	PHYSPROP	3.7E-03	3.0E+01	7.2E+01	4.6E-04	EPI
944-22-9	Fonofos	944-22-9	2.5E+02	PHYSPROP	2.9E-04	7.0E-06	EPI	3.4E-04	PHYSPROP	6.6E-01	EPI	1.2E+00	CRC89	2.4E-02	6.1E-06	WATER9			8.6E+02	EPI	3.9E+00	PHYSPROP	1.6E+01	PHYSPROP	1.6E-01	2.5E+00	6.0E+00	2.7E-02	EPI
50-00-0	Formaldehyde	50-00-0	3.0E+01	PHYSPROP	1.4E-05	3.4E-07	PHYSPROP	3.9E+03	EPI	-9.2E+01	PHYSPROP	8.2E-01	CRC89	1.7E-01	1.7E-05	WATER9			1.0E+00	EPI	3.5E-01	PHYSPROP	4.0E+05	PHYSPROP	3.8E-03	1.5E-01	3.7E-01	1.8E-03	EPI
64-18-6	Formic Acid	64-18-6	4.6E+01	PHYSPROP	6.8E-06	1.7E-07	PHYSPROP	4.3E+01	PHYSPROP	8.3E+00	PHYSPROP	1.2E+00	CRC89	1.5E-01	1.7E-05	WATER9			1.0E+00	EPI	-5.4E-01	PHYSPROP	1.0E+06	PHYSPROP	9.9E-04	1.9E-01	4.6E-01	3.8E-04	EPI
39148-24-8	Fosetyl-AL	39148-24-8	3.5E+02	PHYSPROP	1.3E-12	3.2E-14	PHYSPROP	7.5E-11	PHYSPROP	2.2E+02	PHYSPROP			3.8E-02	4.4E-06	WATER9			6.5E+03	EPI	-2.4E+00	PHYSPROP	1.1E+05	PHYSPROP	3.0E-06	1.0E+01	2.4E+01	4.1E-07	EPI
	Furans																												
132-64-9	~Dibenzofuran	132-64-9	1.7E+02	PHYSPROP	8.7E-03	2.1E-04	EPI	2.5E-03	PHYSPROP	8.7E+01	PHYSPROP	1.1E+00	CRC89	6.5E-02	7.4E-06	WATER9			9.2E+03	EPI	4.1E+00	PHYSPROP	3.1E+00	PHYSPROP	4.9E-01	9.2E-01	2.2E+00	9.8E-02	EPI
110-00-9	~Furan	110-00-9	6.8E+01	PHYSPROP	2.2E-01	5.4E-03	EPI	6.0E+02	PHYSPROP	-8.6E+01	PHYSPROP	9.5E-01	CRC89	1.0E-01	1.2E-05	WATER9			8.0E+01	EPI	1.3E+00	PHYSPROP	1.0E+04	PHYSPROP	1.6E-02	2.5E-01	6.1E-01	5.1E-03	EPI
109-99-9	~Tetrahydrofuran	109-99-9	7.2E+01	PHYSPROP	2.9E-03	7.1E-05	PHYSPROP	1.6E+02	PHYSPROP	-1.1E+02	PHYSPROP	8.8E-01	CRC89	9.9E-02	1.1E-05	WATER9			1.1E+01	EPI	4.6E-01	PHYSPROP	1.0E+06	PHYSPROP	4.1E-03	2.7E-01	6.4E-01	1.3E-03	EPI
67-45-8	Furazolidone	67-45-8	2.3E+02	PHYSPROP	1.3E-09	3.3E-11	PHYSPROP	2.6E-06	PHYSPROP	2.6E+02	PHYSPROP			5.1E-02	6.0E-06	WATER9			8.6E+02	EPI	-4.0E-02	PHYSPROP	4.0E+01	PHYSPROP	4.6E-04	1.9E+00	4.6E+00	8.0E-05	EPI
98-01-1	Furfural	98-01-1	9.6E+01	PHYSPROP	1.5E-04	3.8E-06	EPI	2.2E+00	PHYSPROP	-3.8E+01	PHYSPROP	1.2E+00	CRC89	8.5E-02	1.1E-05	WATER9			6.1E+00	EPI	4.1E-01	PHYSPROP	7.4E+04	PHYSPROP	3.2E-03	3.6E-01	8.7E-01	8.5E-04	EPI
531-82-8	Furium	531-82-8	2.5E+02	EPI	5.4E-14	1.3E-15	EPI	8.8E-09	EPI	1.9E+02	EPI			4.7E-02	5.5E-06	WATER9			5.8E+02	EPI	1.8E+00	EPI	4.2E+03	EPI	5.7E-03	2.8E+00	6.6E+00	9.4E-04	EPI
60568-05-0	Furmecyclox	60568-05-0	2.5E+02	PHYSPROP	2.8E-07	6.9E-09	PHYSPROP	8.4E-05	PHYSPROP	3.3E+01	PHYSPROP			4.8E-02	5.6E-06	WATER9			4.3E+02	EPI	4.4E+00	PHYSPROP	3.0E-01	PHYSPROP	3.0E-01	2.7E+00	6.4E+00	5.0E-02	EPI
77182-82-2	Glufosinate, Ammonium	77182-82-2	2.0E+02	PHYSPROP	1.8E-12	4.4E-14	PHYSPROP	9.1E-12	PHYSPROP	2.2E+02	PHYSPROP			5.6E-02	6.5E-06	WATER9			1.0E+01	EPI	-4.8E+00	PHYSPROP	1.4E+06	PHYSPROP	1.9E-07	1.4E+00	3.2E+00	3.4E-08	EPI
111-30-8	Glutaraldehyde	111-30-8	1.0E+02	PHYSPROP	1.3E-06	3.3E-08	PHYSPROP	6.0E-01	PHYSPROP	-3.0E+01	EPI			8.8E-02	1.0E-05	WATER9			1.0E+00	EPI	-3.3E-01	PHYSPROP	2.2E+05	PHYSPROP	1.3E-03	3.8E-01	9.2E-01	3.3E-04	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
765-34-4	Glycidyl	765-34-4	7.2E+01	PHYSPROP	2.1E-05	5.1E-07	PHYSPROP	4.5E+01	PHYSPROP	-6.2E+01	PHYSPROP	1.1E+00	CRC89	1.1E-01	1.3E-05	WATER9			1.0E+00	EPI	-1.2E-01	PHYSPROP	1.0E+06	PHYSPROP	1.7E-03	2.7E-01	6.4E-01	5.2E-04	EPI
1071-83-6	Glyphosate	1071-83-6	1.7E+02	PHYSPROP	8.6E-11	2.1E-12	EPI	9.8E-08	PHYSPROP	1.9E+02	PHYSPROP			6.2E-02	7.3E-06	WATER9			2.1E+03	USDA ARS	-3.4E+00	PHYSPROP	1.1E+04	PHYSPROP	2.3E-07	9.3E-01	2.2E+00	4.5E-08	EPI
113-00-8	Guanidine	113-00-8	5.9E+01	PHYSPROP	9.6E-10	2.3E-11	PHYSPROP	2.2E+00	PHYSPROP	5.0E+01	PHYSPROP	1.6E+00	GuideChem	1.4E-01	1.7E-05	WATER9			1.2E+01	EPI	-1.6E+00	PHYSPROP	1.8E+03	PHYSPROP	1.8E-04	2.3E-01	5.4E-01	6.0E-05	EPI
50-01-1	Guanidine Chloride	50-01-1	9.6E+01	PHYSPROP	8.9E-17	2.2E-18	PHYSPROP	1.8E-06	PHYSPROP	1.8E+02	PHYSPROP	1.4E+00	CRC89	9.2E-02	1.2E-05	WATER9					-3.6E+00	PHYSPROP	1.0E+06	PHYSPROP	1.5E-07	3.6E-01	8.7E-01	3.9E-08	EPI
69806-40-2	Haloxyfop, Methyl	69806-40-2	3.8E+02	PHYSPROP	1.3E-05	3.2E-07	EPI	6.0E-06	PHYSPROP	5.6E+01	PHYSPROP			3.6E-02	4.3E-06	WATER9			5.5E+03	EPI	4.1E+00	PHYSPROP	9.3E+00	PHYSPROP	4.5E-02	1.3E+01	3.2E+01	6.0E-03	EPI
76-44-8	Heptachlor	76-44-8	3.7E+02	PHYSPROP	1.2E-02	2.9E-04	PHYSPROP	4.0E-04	PHYSPROP	9.6E+01	PHYSPROP	1.6E+00	CRC89	2.2E-02	5.7E-06	WATER9			4.1E+04	EPI	6.1E+00	PHYSPROP	1.8E-01	PHYSPROP	1.1E+00	1.3E+01	5.0E+01	1.4E-01	EPI
1024-57-3	Heptachlor Epoxide	1024-57-3	3.9E+02	PHYSPROP	8.6E-04	2.1E-05	PHYSPROP	2.0E-05	PHYSPROP	1.6E+02	PHYSPROP	1.9E+00	LookChem	2.4E-02	6.2E-06	WATER9			1.0E+04	EPI	5.0E+00	PHYSPROP	2.0E-01	PHYSPROP	1.6E-01	1.6E+01	3.8E+01	2.1E-02	EPI
87-82-1	Hexabromobenzene	87-82-1	5.5E+02	PHYSPROP	1.1E-03	2.8E-05	PHYSPROP	1.6E-08	PHYSPROP	3.3E+02	PHYSPROP	3.0E+00	LookChem	2.5E-02	6.6E-06	WATER9			2.8E+03	EPI	6.1E+00	PHYSPROP	1.6E-04	PHYSPROP	1.2E-01	1.3E+02	3.1E+02	1.4E-02	EPI
68631-49-2	Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	6.4E+02	OTHER				5.8E-06	IRIS Profile					2.5E-02	3.0E-06	WATER9							9.0E-04	IRIS Profile		4.2E+02	1.0E+03		
118-74-1	Hexachlorobenzene	118-74-1	2.8E+02	PHYSPROP	7.0E-02	1.7E-03	PHYSPROP	1.8E-05	PHYSPROP	2.3E+02	PHYSPROP	2.0E+00	CRC89	2.9E-02	7.8E-06	WATER9			6.2E+03	EPI	5.7E+00	PHYSPROP	6.2E-03	PHYSPROP	1.6E+00	4.1E+00	1.7E+01	2.5E-01	EPI
87-68-3	Hexachlorobutadiene	87-68-3	2.6E+02	PHYSPROP	4.2E-01	1.0E-02	PHYSPROP	2.2E-01	PHYSPROP	-2.1E+01	PHYSPROP	1.6E+00	CRC89	2.7E-02	7.0E-06	WATER9			8.5E+02	EPI	4.8E+00	PHYSPROP	3.2E+00	PHYSPROP	5.0E-01	3.0E+00	7.3E+00	8.1E-02	EPI
319-84-6	Hexachlorocyclohexane, Alpha-	319-84-6	2.9E+02	PHYSPROP	2.7E-04	6.7E-06	PHYSPROP	3.5E-05	EPI	1.6E+02	PHYSPROP			4.3E-02	5.1E-06	WATER9			2.8E+03	EPI	3.8E+00	PHYSPROP	2.0E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
319-85-7	Hexachlorocyclohexane, Beta-	319-85-7	2.9E+02	PHYSPROP	1.8E-05	4.4E-07	PHYSPROP	3.6E-07	PHYSPROP	3.1E+02	PHYSPROP	1.9E+00	CRC89	2.8E-02	7.4E-06	WATER9			2.8E+03	EPI	3.8E+00	PHYSPROP	2.4E-01	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
58-89-9	Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	2.9E+02	PHYSPROP	2.1E-04	5.1E-06	PHYSPROP	4.2E-05	PHYSPROP	1.1E+02	PHYSPROP			4.3E-02	5.1E-06	WATER9			2.8E+03	EPI	3.7E+00	PHYSPROP	7.3E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
608-73-1	Hexachlorocyclohexane, Technical	608-73-1	2.9E+02	PHYSPROP	2.1E-04	5.1E-06	EPI	3.5E-05	EPI	1.1E+02	EPI			4.3E-02	5.1E-06	WATER9			2.8E+03	EPI	4.1E+00	EPI	8.0E+00	PHYSPROP	1.4E-01	4.5E+00	1.1E+01	2.1E-02	EPI
77-47-4	Hexachlorocyclopentadiene	77-47-4	2.7E+02	PHYSPROP	1.1E+00	2.7E-02	PHYSPROP	6.0E-02	PHYSPROP	-9.0E+00	PHYSPROP	1.7E+00	CRC89	2.7E-02	7.2E-06	WATER9			1.4E+03	EPI	5.0E+00	PHYSPROP	1.8E+00	PHYSPROP	6.5E-01	3.5E+00	1.4E+01	1.0E-01	EPI
67-72-1	Hexachloroethane	67-72-1	2.4E+02	PHYSPROP	1.6E-01	3.9E-03	PHYSPROP	2.1E-01	PHYSPROP	1.9E+02	PHYSPROP	2.1E+00	CRC89	3.2E-02	8.9E-06	WATER9			2.0E+02	EPI	4.1E+00	PHYSPROP	5.0E+01	PHYSPROP	2.5E-01	2.2E+00	5.3E+00	4.2E-02	EPI
70-30-4	Hexachlorophene	70-30-4	4.1E+02	PHYSPROP	2.2E-11	5.5E-13	PHYSPROP	1.0E-10	PHYSPROP	1.7E+02	PHYSPROP			3.5E-02	4.0E-06	WATER9			6.7E+05	EPI	7.5E+00	PHYSPROP	1.4E+02	PHYSPROP	6.5E+00	2.0E+01	8.9E+01	8.4E-01	EPI
121-82-4	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	2.2E+02	PHYSPROP	8.2E-10	2.0E-11	EPI	4.1E-09	EPI	2.1E+02	PHYSPROP	1.8E+00	CRC89	3.1E-02	8.5E-06	WATER9			8.9E+01	EPI	8.7E-01	PHYSPROP	6.0E+01	PHYSPROP	1.9E-03	1.8E+00	4.4E+00	3.4E-04	EPI
822-06-0	Hexamethylene Diisocyanate, 1,6-	822-06-0	1.7E+02	PHYSPROP	2.0E-03	4.8E-05	PHYSPROP	3.0E-02	PHYSPROP	-6.7E+01	PHYSPROP	1.1E+00	CRC89	4.0E-02	7.2E-06	WATER9			4.8E+03	EPI	3.2E+00	PHYSPROP	1.2E+02	PHYSPROP	1.2E-01	9.2E-01	2.2E+00	2.4E-02	EPI
680-31-9	Hexamethylphosphoramide	680-31-9	1.8E+02	PHYSPROP	8.2E-07	2.0E-08	PHYSPROP	4.6E-02	PHYSPROP	7.2E+00	PHYSPROP	1.0E+00	CRC89	3.5E-02	6.9E-06	WATER9			1.0E+01	EPI	2.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	1.1E+00	2.5E+00	2.4E-04	EPI
110-54-3	Hexane, N-	110-54-3	8.6E+01	PHYSPROP	7.4E+01	1.8E+00	EPI	1.5E+02	PHYSPROP	-9.5E+01	PHYSPROP	6.6E-01	CRC89	7.3E-02	8.2E-06	WATER9			1.3E+02	EPI	3.9E+00	PHYSPROP	9.5E+00	PHYSPROP	7.2E-01	3.2E-01	1.2E+00	2.0E-01	EPI
124-04-9	Hexanedioic Acid	124-04-9	1.5E+02	PHYSPROP	1.9E-10	4.7E-12	EPI	3.2E-07	EPI	1.5E+02	PHYSPROP	1.4E+00	CRC89	5.8E-02	9.2E-06	WATER9			2.4E+01	EPI	8.0E-02	PHYSPROP	3.1E+04	PHYSPROP	1.2E-03	6.9E-01	1.7E+00	2.7E-04	EPI
591-78-6	Hexanone, 2-	591-78-6	1.0E+02	PHYSPROP	3.8E-03	9.3E-05	EPI	1.2E+01	PHYSPROP	-5.6E+01	PHYSPROP	8.1E-01	CRC89	7.0E-02	8.4E-06	WATER9			1.5E+01	EPI	1.4E+00	PHYSPROP	1.7E+04	PHYSPROP	1.4E-02	3.8E-01	9.2E-01	3.6E-03	EPI
51235-04-2	Hexazinone	51235-04-2	2.5E+02	PHYSPROP	9.2E-11	2.3E-12	EPI	2.3E-07	EPI	1.2E+02	PHYSPROP	1.3E+00	CRC89	2.5E-02	6.3E-06	WATER9			1.3E+02	EPI	1.9E+00	PHYSPROP	3.3E+04	PHYSPROP	6.2E-03	2.7E+00	6.5E+00	1.0E-03	EPI
78587-05-0	Hexythiazox	78587-05-0	3.5E+02	PHYSPROP	9.7E-07	2.4E-08	EPI	2.6E-08	PHYSPROP	1.1E+02	PHYSPROP			3.8E-02	4.4E-06	WATER9			2.1E+03	EPI	5.6E+00	PHYSPROP	5.0E-01	PHYSPROP	6.0E-01	1.0E+01	2.4E+01	8.3E-02	EPI
67485-29-4	Hydramethylnon	67485-29-4	4.9E+02	PHYSPROP	9.0E-05	2.2E-06	EPI	2.0E-08	PHYSPROP	1.9E+02	PHYSPROP			3.0E-02	3.6E-06	WATER9			1.8E+08	EPI	2.3E+00	PHYSPROP	6.0E-03	PHYSPROP	7.7E-04	6.2E+01	1.5E+02	9.0E-05	EPI
302-01-2	Hydrazine	302-01-2	3.2E+01	PHYSPROP	2.5E-05	6.1E-07	PubChem	1.4E+01	PHYSPROP	2.0E+00	PHYSPROP	1.0E+00	CRC89	1.7E-01	1.9E-05	WATER9					-2.1E+00	PHYSPROP	1.0E+06	PHYSPROP	9.5E-05	1.6E-01	3.8E-01	4.4E-05	RAGSE
10034-93-2	Hydrazine Sulfate	10034-93-2	1.3E+02	EPI						2.5E+02	CRC89	1.4E+00	CRC89										3.1E+04	PERRY	4.4E-03	5.5E-01	1.3E+00	1.0E-03	RAGSE
7647-01-0	Hydrogen Chloride	7647-01-0	3.5E+01	EPI	8.3E+07	2.0E+06	Toxnet HSDB	3.5E+04	PubChem	-1.1E+02	CRC89	1.5E+00	CRC89	1.9E-01	2.3E-05	WATER9							6.7E+05	Toxnet HSDB	2.3E-03	1.7E-01	4.0E-01	1.0E-03	RAGSE
7664-39-3	Hydrogen Fluoride	7664-39-3	2.0E+01	PHYSPROP	4.3E-03	1.0E-04	PHYSPROP	9.2E+02	PHYSPROP	-8.4E+01	PHYSPROP	8.2E-01	CRC89	2.2E-01	2.2E-05	WATER9					2.3E-01	OTHER	1.0E+06	PHYSPROP	1.7E-03	1.4E-01	3.3E-01	1.0E-03	RAGSE
7783-06-4	Hydrogen Sulfide	7783-06-4	3.4E+01	PHYSPROP	3.5E-01	8.6E-03	PhysProp	1.6E+04	PHYSPROP	-8.5E+01	PHYSPROP	1.4E+00	CRC89	1.9E-01	2.2E-05	WATER9					2.3E-01	OTHER	3.7E+03	PHYSPROP	2.2E-03	1.6E-01	3.9E-01	1.0E-03	RAGSE
123-31-9	Hydroquinone	123-31-9	1.1E+02	PHYSPROP	1.9E-09	4.7E-11	EPI	2.4E-05	EPI	1.7E+02	PHYSPROP	1.3E+00	CRC89	8.0E-02	1.1E-05	WATER9			2.4E+02	EPI	5.9E-01	PHYSPROP	7.2E+04	PHYSPROP	3.8E-03	4.3E-01	1.0E+00	9.3E-04	EPI
35554-44-0	Imazalil	35554-44-0	3.0E+02	PHYSPROP	1.1E-07	2.6E-09	EPI	1.2E-06	PHYSPROP	5.3E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	WATER9			8.5E+03	EPI	3.8E+00	PHYSPROP	1.8E+02	PHYSPROP	7.7E-02	4.9E+00	1.2E+01	1.2E-02	EPI
81335-37-7	Imazaquin	81335-37-7	3.1E+02	PHYSPROP	2.8E-16	6.9E-18	PHYSPROP	1.0E-13	PHYSPROP	2.2E+02	PHYSPROP			4.1E-02	4.8E-06	WATER9			2.4E+03	EPI	1.9E+00	PHYSPROP	9.0E+01	PHYSPROP	3.3E-03	5.8E+00	1.4E+01	4.8E-04	EPI
81335-77-5	Imazethapyr	81335-77-5	2.9E+02	PHYSPROP	4.3E-15	1.0E-16	PHYSPROP	2.2E-11	PHYSPROP	1.7E+02	PHYSPROP			4.3E-02	5.1E-06	WATER9			3.4E+02	EPI	1.5E+00	PHYSPROP	1.4E+03	PHYSPROP	1.3E-02	4.4E+00	1.1E+01	2.0E-03	EPI
7553-56-2	Iodine	7553-56-2	2.5E+02	PHYSPROP				2.3E-01	PHYSPROP	1.1E+02	PHYSPROP	4.9E+00	CRC89				6.0E+01	BAES			2.5E+00	PHYSPROP	3.3E+02	PHYSPROP	6.1E-03	2.8E+00	6.7E+00	1.0E-03	RAGSE
36734-19-7	Iprodione	36734-19-7	3.3E+02	PHYSPROP	1.3E-07	3.1E-09	PHYSPROP	3.8E-09	PHYSPROP	1.4E+02	PHYSPROP			4.0E-02	4.6E-06	WATER9			5.3E+01	EPI	3.0E+00	PHYSPROP	1.4E+01	PHYSPROP	1.5E-02	7.4E+00	1.8E+01	2.2E-03	EPI
7439-89-6	Iron	7439-89-6	5.6E+01	PHYSPROP				0.0E+00	NIOSH	1.5E+03	CRC89	7.9E+00	CRC89				2.5E+01	BAES							2.9E-03	2.2E-01	5.2E-01	1.0E-03	RAGSE
78-83-1	Isobutyl Alcohol	78-83-1	7.4E+01	PHYSPROP	4.0E-04	9.8E-06	PHYSPROP	1.0E+01	PHYSPROP	-1.1E+02	PHYSPROP	8.0E-01	CRC89	9.0E-02	1.0E-05	WATER9			2.9E+00	EPI	7.6E-01	PHYSPROP	8.5E+04	PHYSPROP	6.4E-03	2.7E-01	6.6E-01	1.9E-03	EPI
78-59-1	Isophorone	78-59-1	1.4E+02	PHYSPROP	2.7E-04	6.6E-06	EPI	4.4E-01	PHYSPROP	-8.1E+00	PHYSPROP	9.3E-01	CRC89	5.3E-02	7.5E-06	WATER9			6.5E+01	EPI	1.7E+00	PHYSPROP	1.2E+04	PHYSPROP	1.6E-02	6.2E-01	1.5E+00	3.5E-03	EPI
33820-53-0	Isopropalin	33820-53-0	3.1E+02	PHYSPROP	4.5E-03	1.1E-04	EPI	3.0E-05	PHYSPROP	1.5E+02	EPI	1.2E+00	ChemNet	2.1E-02	5.3E-06	WATER9			1.1E+04	EPI	5.8E+00	PHYSPROP	1.1E-01	PHYSPROP	1.4E+00	5.7E+00	2.2E+01	2.1E-01	EPI
67-63-0	Isopropanol	67-63-0	6.0E+01	PHYSPROP	3.3E-04	8.1E-06	PHYSPROP	4.5E+01	PHYSPROP	-9.0E+01	PHYSPROP	7.8E-01	CRC89	1.0E-01	1.1E-05	WATER9			1.5E+00	EPI	5.0E-02	PHYSPROP	1.0E+06	PHYSPROP	2.3E-03	2.3E-01	5.5E-01	7.8E-04	EPI
1832-54-8	Isopropyl Methyl Phosphonic Acid	1832-54-8	1.4E+02	PHYSPROP	2.8E-07	6.9E-09	PHYSPROP	1.2E-02	PHYSPROP	-8.1E+00	EPI			7.1E-02	8.3E-06	WATER9			7.7E+00	EPI	2.7E-01	PHYSPROP	5.0E+04	PHYSPROP	1.8E-03	6.2E-01	1.5E+00	4.0E-04	EPI
82558-50-7	Isoxaben	82558-50-7	3.3E+02	PHYSPROP	5.2E-08	1.3E-09	EPI	4.1E-09	PHYSPROP	1.8E+02	PHYSPROP			4.0E-02	4.6E-06	WATER9			1.3E+03	EPI	3.9E+00	PHYSPROP	1.4E+00	PHYSPROP	6.2E-02	7.6E+00	1.8E+01	8.9E-03	EPI
NA	JP-7	NA			4.1E-01	1.0E-02	EPA HCD	1.1E+01	EPA HCD	-5.5E+01	EPA HCD	7.8E-01	ATSDR Profile								8.0E+00	OTHER	1.0E+01	EPA HCD					
77501-63-4	Lactofen	77501-63-4	4.6E+02	PHYSPROP	1.9E-05	4.7E-07	EPI	7.0E-08	PHYSPROP	4.5E+01	PHYSPROP			3.2E-02	3.7E-06	WATER9			2.3E+04	EPI	4.8E+00	PHYSPROP	1.0E-01	PHYSPROP	5.2E-02	4.1E+01	9.7E+01	6.3E-03	EPI
	Lead Compounds																												
7758-97-6	~Lead Chromate	7758-97-6	3.2E+02	CRC89						8.4E+02	CRC89	6.1E+00	CRC89										1.7E-01	CRC89	6.9E-03	6.8E+00	1.6E+01	1.0E-03	RAGSE
7446-27-7	~Lead Phosphate	7446-27-7	8.1E+02	PHYSPROP						1.0E+03	PHYSPROP	7.0E+00	CRC89										0.0E+00	CRC89	1.1E-02	3.7E+03	8.8E+03	1.0E-03	RAGSE
301-04-2	~Lead acetate	301-04-2	3.3E+02	PHYSPROP				7.2E-04	PHYSPROP	3.3E+02	PHYSPROP	3.3E+00	CRC89	3.3E-02	9.5E-06	WATER9			1.0E+00	EPI	-8.0E-02	PHYSPROP	1.6E+03	PHYSPROP	1.4E-04	7.2E+00	1.7E+01	2.1E-05	EPI
7439-92-1	~Lead and Compounds	7439-92-1	2.1E+02	EPI				0.0E+00	NIOSH	3.3E+02	EPI	1.1E+01	CRC89				9.0E+02	BAES							5.5E-04	1.5E+00	3.7E+00	1.0E-04	RAGSE
1335-32-6	~Lead subacetate	1335-32-6	8.1E+02	PHYSPROP				3.0E-10	PHYSPROP	1.6E+02	EPI			2.2E-02	2.6E-06	WATER9			1.0E+01	EPI	-4.0E+00	PHYSPROP	6.3E+04	PHYSPROP	1.1E-09	3.4E+03	8.2E+03	1.0E-10	EPI
78-00-2	~Tetraethyl Lead	78-00-2	3.2E+02	PHYSPROP	2.3E+01	5.7E-01	PHYSPROP	2.6E-01	PHYSPROP	-1.3E+02	PHYSPROP	1.7E+00	CRC89	2.5E-02	6.4E-06	WATER9			6.5E+02	EPI	4.2E+00	PHYSPROP	2.9E-01	PHYSPROP	9.5E-02	6.8E+00	1.6E+01	1.4E-02	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
541-25-3	Lewisite	541-25-3	2.1E+02	PHYSPROP	8.9E-03	2.2E-04	EPI	5.8E-01	PHYSPROP	1.0E-01	PHYSPROP	1.9E+00	CRC89	3.3E-02	9.1E-06	WATER9			1.1E+02	EPI	2.6E+00	PHYSPROP	5.0E+02	PHYSPROP	3.0E-02	1.5E+00	3.7E+00	5.4E-03	EPI
330-55-2	Linuron	330-55-2	2.5E+02	PHYSPROP	2.6E-07	6.3E-09	EPI	1.4E-06	PHYSPROP	9.3E+01	PHYSPROP			4.8E-02	5.6E-06	WATER9			3.4E+02	EPI	3.2E+00	PHYSPROP	7.5E+01	PHYSPROP	5.1E-02	2.6E+00	6.3E+00	8.4E-03	EPI
7439-93-2	Lithium	7439-93-2	6.9E+00	EPI						1.8E+02	CRC89	5.3E-01	CRC89				3.0E+02	BAES							1.0E-03	1.2E-01	2.8E-01	1.0E-03	RAGSE
94-74-6	MCPA	94-74-6	2.0E+02	PHYSPROP	5.4E-08	1.3E-09	EPI	5.9E-06	PHYSPROP	1.2E+02	PHYSPROP	1.6E+00	PubChem	3.1E-02	8.2E-06	WATER9			3.0E+01	EPI	3.3E+00	PHYSPROP	6.3E+02	PHYSPROP	9.2E-02	1.4E+00	3.4E+00	1.7E-02	EPI
94-81-5	MCPB	94-81-5	2.3E+02	PHYSPROP	1.1E-07	2.7E-09	EPI	4.3E-07	PHYSPROP	1.0E+02	PHYSPROP			5.1E-02	5.9E-06	WATER9			9.8E+01	EPI	2.8E+00	PHYSPROP	4.8E+01	PHYSPROP	1.0E-01	2.0E+00	4.8E+00	1.7E-02	EPI
93-65-2	MCPP	93-65-2	2.1E+02	PHYSPROP	7.4E-07	1.8E-08	PHYSPROP	7.5E-07	PHYSPROP	9.5E+01	PHYSPROP	1.3E+00	PubChem	2.7E-02	7.0E-06	WATER9			4.9E+01	EPI	3.1E+00	PHYSPROP	6.2E+02	PHYSPROP	7.4E-02	1.7E+00	4.0E+00	1.3E-02	EPI
121-75-5	Malathion	121-75-5	3.3E+02	PHYSPROP	2.0E-07	4.9E-09	PHYSPROP	3.4E-06	PHYSPROP	2.8E+00	PHYSPROP	1.2E+00	CRC89	2.1E-02	5.2E-06	WATER9			3.1E+01	EPI	2.4E+00	PHYSPROP	1.4E+02	PHYSPROP	5.7E-03	7.4E+00	1.8E+01	8.1E-04	EPI
108-31-6	Maleic Anhydride	108-31-6	9.8E+01	PHYSPROP	1.6E-04	3.9E-06	PHYSPROP	2.5E-01	EPI	5.3E+01	PHYSPROP	1.3E+00	CRC89	8.8E-02	1.1E-05	WATER9			1.0E+00	EPI	1.6E+00	PHYSPROP	1.6E+05	PERRY	2.0E-02	3.7E-01	8.9E-01	5.3E-03	EPI
123-33-1	Maleic Hydrazide	123-33-1	1.1E+02	PHYSPROP	1.1E-09	2.7E-11	PHYSPROP	2.8E-06	PHYSPROP	3.1E+02	PHYSPROP			8.2E-02	9.5E-06	WATER9			3.3E+00	EPI	-8.4E-01	PHYSPROP	4.5E+03	PHYSPROP	4.2E-04	4.5E-01	1.1E+00	1.0E-04	EPI
109-77-3	Malononitrile	109-77-3	6.6E+01	PHYSPROP	5.4E-06	1.3E-07	EPI	2.0E-01	EPI	3.2E+01	PHYSPROP	1.2E+00	CRC89	1.2E-01	1.4E-05	WATER9			3.3E+00	EPI	-6.0E-01	PHYSPROP	1.3E+05	PHYSPROP	8.3E-04	2.5E-01	5.9E-01	2.7E-04	EPI
8018-01-7	Mancozeb	8018-01-7	5.4E+02	PHYSPROP	6.2E-10	1.5E-11	PHYSPROP	1.3E-10	PHYSPROP	1.7E+02	PhysProp	1.9E+00	PubChem	2.0E-02	5.1E-06	WATER9			6.1E+02	EPI	1.3E+00	PHYSPROP	6.2E+00	PHYSPROP	6.9E-03	1.1E+02	2.7E+02	7.7E-04	EPI
12427-38-2	Maneb	12427-38-2	3.0E+02	PHYSPROP	2.0E-07	4.9E-09	PHYSPROP	7.5E-08	PHYSPROP	2.0E+02	EPI			4.3E-02	5.0E-06	WATER9			6.1E+02	EPI	6.2E-01	PHYSPROP	6.0E+00	PHYSPROP	5.1E-03	4.7E+00	1.1E+01	7.7E-04	EPI
7439-96-5	Manganese (Diet)	7439-96-5	5.5E+01	PHYSPROP				0.0E+00	NIOSH	1.2E+03	PHYSPROP	7.3E+00	CRC89				6.5E+01	BAES							2.9E-03	2.1E-01	5.1E-01	1.0E-03	RAGSE
7439-96-5	Manganese (Non-diet)	7439-96-5	5.5E+01	PHYSPROP				0.0E+00	NIOSH	1.2E+03	PHYSPROP	7.3E+00	CRC89				6.5E+01	BAES							2.9E-03	2.1E-01	5.1E-01	1.0E-03	RAGSE
950-10-7	Mephosfolan	950-10-7	2.7E+02	PHYSPROP	4.9E-09	1.2E-10	PHYSPROP	3.2E-05	PHYSPROP	8.4E+01	EPI			4.6E-02	5.3E-06	WATER9			6.4E+02	EPI	1.0E+00	PHYSPROP	5.7E+01	PHYSPROP	1.5E-03	3.4E+00	8.1E+00	2.4E-04	EPI
24307-26-4	Mepiquat Chloride	24307-26-4	1.5E+02	PHYSPROP	1.8E-10	4.3E-12	PHYSPROP	3.7E-07	PHYSPROP	2.2E+02	PHYSPROP			6.7E-02	7.9E-06	WATER9			6.6E+01	EPI	-2.8E+00	PHYSPROP	5.0E+05	PHYSPROP	1.4E-05	7.2E-01	1.7E+00	3.0E-06	EPI
	Mercury Compounds																												
7487-94-7	~Mercuric Chloride (and other Mercury salts)	7487-94-7	2.7E+02	PHYSPROP						2.8E+02	PHYSPROP	5.6E+00	CRC89								-2.2E-01	PHYSPROP	6.9E+04	PHYSPROP	6.3E-03	3.5E+00	8.4E+00	1.0E-03	RAGSE
7439-97-6	~Mercury (elemental)	7439-97-6	2.0E+02	PHYSPROP	3.5E-01	8.6E-03	PHYSPROP VP/S	2.0E-03	PHYSPROP	-3.9E+01	PHYSPROP	1.4E+01	CRC89	3.1E-02	6.3E-06	WATER9	5.2E+01	SSL			6.2E-01	PHYSPROP	6.0E-02	PHYSPROP	5.4E-03	1.4E+00	3.4E+00	1.0E-03	RAGSE
22967-92-6	~Methyl Mercury	22967-92-6	2.2E+02	OTHER																					5.7E-03	1.7E+00	4.1E+00	1.0E-03	RAGSE
62-38-4	~Phenylmercuric Acetate	62-38-4	3.4E+02	PHYSPROP	2.3E-08	5.7E-10	EPI	6.0E-06	PHYSPROP	1.5E+02	PHYSPROP			3.9E-02	4.6E-06	WATER9			5.6E+01	EPI	7.1E-01	PHYSPROP	4.4E+03	PHYSPROP	4.2E-04	8.1E+00	1.9E+01	6.0E-05	EPI
150-50-5	Merphos	150-50-5	3.0E+02	PHYSPROP	9.3E-04	2.3E-05	PHYSPROP	2.0E-05	PHYSPROP	1.0E+02	PHYSPROP	1.0E+00	CRC89	2.0E-02	5.0E-06	WATER9			4.9E+04	EPI	7.7E+00	PHYSPROP	3.5E-03	PHYSPROP	2.8E+01	4.9E+00	2.3E+01	4.2E+00	EPI
78-48-8	Merphos Oxide	78-48-8	3.1E+02	PHYSPROP	1.2E-05	2.9E-07	PHYSPROP	5.3E-06	PHYSPROP	-2.5E+01	CRC89	1.1E+00	CRC89	2.0E-02	5.0E-06	WATER9			2.4E+03	EPI	5.7E+00	PHYSPROP	2.3E+00	PHYSPROP	1.1E+00	6.1E+00	2.4E+01	1.7E-01	EPI
57837-19-1	Metalaxyl	57837-19-1	2.8E+02	PHYSPROP	1.2E-07	3.0E-09	EPI	5.6E-06	PHYSPROP	7.1E+01	PHYSPROP			4.4E-02	5.2E-06	WATER9			3.9E+01	EPI	1.7E+00	PHYSPROP	8.4E+03	PHYSPROP	3.7E-03	3.9E+00	9.3E+00	5.8E-04	EPI
126-98-7	Methacrylonitrile	126-98-7	6.7E+01	PHYSPROP	1.0E-02	2.5E-04	EPI	7.1E+01	PHYSPROP	-3.6E+01	PHYSPROP	8.0E-01	CRC89	9.6E-02	1.1E-05	WATER9			1.3E+01	EPI	6.8E-01	PHYSPROP	2.5E+04	PHYSPROP	5.9E-03	2.5E-01	6.0E-01	1.9E-03	EPI
10265-92-6	Methamidophos	10265-92-6	1.4E+02	PHYSPROP	3.5E-08	8.7E-10	PHYSPROP	3.5E-05	PHYSPROP	4.6E+01	PHYSPROP	1.3E+00	CRC89	6.0E-02	9.2E-06	WATER9			5.4E+00	EPI	-8.0E-01	PHYSPROP	1.0E+06	PHYSPROP	3.4E-04	6.5E-01	1.6E+00	7.4E-05	EPI
67-56-1	Methanol	67-56-1	3.2E+01	PHYSPROP	1.9E-04	4.6E-06	PHYSPROP	1.3E+02	PHYSPROP	-9.8E+01	PHYSPROP	7.9E-01	CRC89	1.6E-01	1.7E-05	WATER9			1.0E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	6.9E-04	1.6E-01	3.8E-01	3.2E-04	EPI
950-37-8	Methidathion	950-37-8	3.0E+02	PHYSPROP	2.9E-07	7.2E-09	EPI	3.4E-06	PHYSPROP	3.9E+01	PHYSPROP			4.2E-02	4.9E-06	WATER9			2.1E+01	EPI	2.2E+00	PHYSPROP	1.9E+02	PHYSPROP	6.1E-03	5.2E+00	1.2E+01	9.1E-04	EPI
16752-77-5	Methomyl	16752-77-5	1.6E+02	PHYSPROP	8.1E-10	2.0E-11	EPI	5.4E-06	PHYSPROP	7.8E+01	PHYSPROP	1.3E+00	CRC89	4.8E-02	8.4E-06	WATER9			1.0E+01	EPI	6.0E-01	PHYSPROP	5.8E+04	PHYSPROP	2.4E-03	8.5E-01	2.0E+00	4.8E-04	EPI
99-59-2	Methoxy-5-nitroaniline, 2-	99-59-2	1.7E+02	PHYSPROP	5.1E-07	1.3E-08	PHYSPROP	3.2E-04	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	CRC89	4.3E-02	7.8E-06	WATER9			7.1E+01	EPI	1.5E+00	PHYSPROP	1.2E+02	PHYSPROP	8.4E-03	9.2E-01	2.2E+00	1.7E-03	EPI
72-43-5	Methoxychlor	72-43-5	3.5E+02	PHYSPROP	8.3E-06	2.0E-07	PHYSPROP	2.6E-06	PHYSPROP	8.7E+01	PHYSPROP	1.4E+00	CRC89	2.2E-02	5.6E-06	WATER9			2.7E+04	EPI	5.1E+00	PHYSPROP	1.0E-01	PHYSPROP	3.1E-01	9.1E+00	2.2E+01	4.3E-02	EPI
110-49-6	Methoxyethanol Acetate, 2-	110-49-6	1.2E+02	PHYSPROP	1.3E-05	3.1E-07	EPI	7.0E+00	PHYSPROP	-6.5E+01	PHYSPROP	1.0E+00	CRC89	6.6E-02	8.7E-06	WATER9			2.5E+00	EPI	1.0E-01	PHYSPROP	1.0E+06	PHYSPROP	1.7E-03	4.8E-01	1.2E+00	4.0E-04	EPI
109-86-4	Methoxyethanol, 2-	109-86-4	7.6E+01	PHYSPROP	1.4E-05	3.3E-07	PHYSPROP	9.5E+00	PHYSPROP	-8.5E+01	PHYSPROP	9.6E-01	CRC89	9.5E-02	1.1E-05	WATER9			1.0E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	6.0E-04	2.8E-01	6.7E-01	1.8E-04	EPI
79-20-9	Methyl Acetate	79-20-9	7.4E+01	PHYSPROP	4.7E-03	1.2E-04	PHYSPROP	2.2E+02	PHYSPROP	-9.8E+01	PHYSPROP	9.3E-01	CRC89	9.6E-02	1.1E-05	WATER9			3.1E+00	EPI	1.8E-01	PHYSPROP	2.4E+05	PHYSPROP	2.6E-03	2.7E-01	6.6E-01	7.9E-04	EPI
96-33-3	Methyl Acrylate	96-33-3	8.6E+01	PHYSPROP	8.1E-03	2.0E-04	EPI	8.7E+01	PHYSPROP	-7.7E+01	PHYSPROP	9.5E-01	CRC89	8.6E-02	1.0E-05	WATER9			5.8E+00	EPI	8.0E-01	PHYSPROP	4.9E+04	PHYSPROP	6.2E-03	3.2E-01	7.7E-01	1.8E-03	EPI
78-93-3	Methyl Ethyl Ketone (2-Butanone)	78-93-3	7.2E+01	PHYSPROP	2.3E-03	5.7E-05	PHYSPROP	9.1E+01	PHYSPROP	-8.7E+01	PHYSPROP	8.0E-01	CRC89	9.1E-02	1.0E-05	WATER9			4.5E+00	EPI	2.9E-01	PHYSPROP	2.2E+05	PHYSPROP	3.1E-03	2.7E-01	6.4E-01	9.6E-04	EPI
60-34-4	Methyl Hydrazine	60-34-4	4.6E+01	PHYSPROP	1.2E-04	3.0E-06	PHYSPROP	5.0E+01	PHYSPROP	-5.2E+01	PHYSPROP	8.7E-01	LANGE	1.3E-01	1.4E-05	WATER9			1.3E+01	EPI	-1.1E+00	PHYSPROP	1.0E+06	PHYSPROP	4.5E-04	1.9E-01	4.6E-01	1.7E-04	EPI
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	1.0E+02	PHYSPROP	5.6E-03	1.4E-04	EPI	2.0E+01	PHYSPROP	-8.4E+01	PHYSPROP	8.0E-01	CRC89	7.0E-02	8.3E-06	WATER9			1.3E+01	EPI	1.3E+00	PHYSPROP	1.9E+04	PHYSPROP	1.2E-02	3.8E-01	9.2E-01	3.2E-03	EPI
624-83-9	Methyl Isocyanate	624-83-9	5.7E+01	PHYSPROP	3.8E-02	9.3E-04	PHYSPROP	3.5E+02	PHYSPROP	-4.5E+01	PHYSPROP	9.6E-01	CRC89	1.2E-01	1.3E-05	WATER9			4.0E+01	EPI	7.9E-01	PHYSPROP	2.9E+04	PHYSPROP	7.3E-03	2.2E-01	5.3E-01	2.5E-03	EPI
80-62-6	Methyl Methacrylate	80-62-6	1.0E+02	PHYSPROP	1.3E-02	3.2E-04	EPI	3.9E+01	PHYSPROP	-4.8E+01	PHYSPROP	9.4E-01	CRC89	7.5E-02	9.2E-06	WATER9			9.1E+00	EPI	1.4E+00	PHYSPROP	1.5E+04	PHYSPROP	1.4E-02	3.8E-01	9.2E-01	3.6E-03	EPI
298-00-0	Methyl Parathion	298-00-0	2.6E+02	PHYSPROP	4.1E-06	1.0E-07	PHYSPROP	3.5E-06	PHYSPROP	3.6E+01	PHYSPROP	1.4E+00	CRC89	2.5E-02	6.4E-06	WATER9			7.3E+02	EPI	2.9E+00	PHYSPROP	3.8E+01	PHYSPROP	2.6E-02	3.1E+00	7.5E+00	4.2E-03	EPI
993-13-5	Methyl Phosphonic Acid	993-13-5	9.6E+01	PHYSPROP	5.0E-10	1.2E-11	PHYSPROP	3.3E-04	EPI	1.1E+02	PHYSPROP			9.1E-02	1.1E-05	WATER9			1.4E+00	EPI	-7.0E-01	PHYSPROP	2.0E+04	PHYSPROP	3.7E-04	3.6E-01	8.7E-01	9.8E-05	EPI
25013-15-4	Methyl Styrene (Mixed Isomers)	25013-15-4	3.5E+02	PHYSPROP	1.1E-01	2.6E-03	PHYSPROP	1.5E+00	PHYSPROP	-8.6E+01	EPI	8.9E-01	HSDB	1.7E-02	4.2E-06	WATER9			7.2E+02	EPI	3.4E+00	PHYSPROP	8.9E+01	PHYSPROP	4.8E-01	1.0E+01	2.4E+01	6.6E-02	EPI
66-27-3	Methyl methanesulfonate	66-27-3	1.1E+02	PHYSPROP	1.6E-04	4.0E-06	PHYSPROP	3.1E-01	PHYSPROP	2.0E+01	PHYSPROP	1.3E+00	CRC89	7.9E-02	1.1E-05	WATER9			4.3E+00	EPI	-6.6E-01	PHYSPROP	2.0E+05	LANGE	5.6E-04	4.4E-01	1.0E+00	1.4E-04	EPI
1634-04-4	Methyl tert-Butyl Ether (MTBE)	1634-04-4	8.8E+01	PHYSPROP	2.4E-02	5.9E-04	PHYSPROP	2.5E+02	PHYSPROP	-1.1E+02	PHYSPROP	7.4E-01	CRC89	7.5E-02	8.6E-06	WATER9			1.2E+01	EPI	9.4E-01	PHYSPROP	5.1E+04	PHYSPROP	7.6E-03	3.3E-01	7.9E-01	2.1E-03	EPI
615-45-2	Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	2.0E+02	PHYSPROP	2.6E-16	6.4E-18	PHYSPROP	4.1E-12	PHYSPROP	2.4E+02	EPI			5.6E-02	6.6E-06	WATER9			2.0E+02	EPI	-2.1E+00	PHYSPROP	1.0E+06	PHYSPROP	2.9E-05	1.3E+00	3.1E+00	5.4E-06	EPI
99-55-8	Methyl-5-Nitroaniline, 2-	99-55-8	1.5E+02	PHYSPROP	3.4E-07	8.3E-09	PHYSPROP	9.8E-04	PHYSPROP	1.1E+02	PHYSPROP			6.7E-02	7.8E-06	WATER9			1.8E+02	EPI	1.9E+00	PHYSPROP	1.0E+04	PHYSPROP	1.8E-02	7.5E-01	1.8E+00	3.8E-03	EPI
70-25-7	Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	1.5E+02	PHYSPROP	5.0E-11	1.2E-12	PHYSPROP	1.2E-04	PHYSPROP	1.2E+02	EPI			6.8E-02	8.0E-06	WATER9			7.2E+01	EPI	-9.2E-01	PHYSPROP	2.7E+05	PHYSPROP	2.7E-04	7.0E-01	1.7E+00	5.7E-05	EPI
636-21-5	Methylaniline Hydrochloride, 2-	636-21-5	1.4E+02	PHYSPROP	8.6E-05	2.1E-06	PHYSPROP	2.9E-01	PHYSPROP	2.2E+02	PHYSPROP			6.9E-02	8.1E-06	WATER9			1.2E+02	EPI	1.6E+00	PHYSPROP	8.3E+03	PHYSPROP	4.8E-05	6.7E-01	1.6E+00	1.1E-05	EPI
124-58-3	Methylarsonic acid	124-58-3	1.4E+02	PHYSPROP				1.6E-03	PHYSPROP	1.6E+02	PHYSPROP			7.0E-02	8.2E-06	WATER9			4.4E+01	EPI	-1.2E+00	PHYSPROP	2.6E+05	PHYSPROP	1.9E-04	6.4E-01	1.5E+00	4.2E-05	EPI
74612-12-7	Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	1.6E+02	OTHER										6.5E-02	7.6E-06	WATER9										8.1E-01	2.0E+00		
615-50-9	Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	2.2E+02	OTHER										5.2E-02	6.1E-06	WATER9										1.8E+00	4.3E+00		
56-49-5	Methylcholanthrene, 3-	56-49-5	2.7E+02	PHYSPROP	2.1E-04	5.2E-06	EPI	4.3E-08	EPI	1.8E+02	PHYSPROP	1.3E+00	CRC89	2.4E-02	6.1E-06	WATER9			9.6E+05	EPI	6.4E+00	PHYSPROP	2.9E-03	PHYSPROP	5.7E+00	3.3E+00	1.5E+01	9.0E-01	EPI
75-09-2	Methylene Chloride	75-09-2	8.5E+01	PHYSPROP	1.3E-01	3.3E-03	PHYSPROP	4.4E+02	PHYSPROP	-9.5E+01	PHYSPROP	1.3E+00	CRC89	1.0E-01	1.3E-05	WATER9			2.2E+01	EPI	1.3E+00	PHYSPROP	1.3E+04	PHYSPROP	1.3E-02	3.1E-01	7.5E-01	3.5E-03	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	τ_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
101-14-4	Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	2.7E+02	PHYSPROP	1.7E-09	4.1E-11	PHYSPROP	2.9E-07	PHYSPROP	1.1E+02	PHYSPROP			4.6E-02	5.4E-06	WATER9			5.7E+03	EPI	3.9E+00	PHYSPROP	1.4E+01	PHYSPROP	1.2E-01	3.3E+00	7.9E+00	2.0E-02	EPI
101-61-1	Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	2.5E+02	PHYSPROP	4.4E-08	1.1E-09	PHYSPROP	1.8E-05	PHYSPROP	9.2E+01	PHYSPROP			4.7E-02	5.5E-06	WATER9			2.7E+03	EPI	4.4E+00	PHYSPROP	4.1E+00	PHYSPROP	5.2E-01	2.8E+00	6.7E+00	8.4E-02	RAGSE
101-77-9	Methylenebisbenzenamine, 4,4'-	101-77-9	2.0E+02	PHYSPROP	2.2E-09	5.3E-11	PHYSPROP	2.0E-07	PHYSPROP	9.3E+01	PHYSPROP			5.6E-02	6.5E-06	WATER9			2.1E+03	EPI	1.6E+00	PHYSPROP	1.0E+03	PHYSPROP	7.5E-03	1.4E+00	3.3E+00	1.4E-03	EPI
101-68-8	Methylenediphenyl Diisocyanate	101-68-8	2.5E+02	PHYSPROP	3.7E-05	9.0E-07	PHYSPROP	5.0E-06	PHYSPROP	3.8E+01	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	WATER9			2.8E+05	EPI	5.2E+00	PHYSPROP	8.3E-01	PHYSPROP	1.1E+00	2.7E+00	1.0E+01	1.8E-01	EPI
98-83-9	Methylstyrene, Alpha-	98-83-9	1.2E+02	PHYSPROP	1.0E-01	2.6E-03	EPI	1.9E+00	EPI	-2.3E+01	PHYSPROP	9.1E-01	CRC89	6.3E-02	8.2E-06	WATER9			7.0E+02	EPI	3.5E+00	PHYSPROP	1.2E+02	PHYSPROP	2.9E-01	4.8E-01	1.2E+00	7.0E-02	EPI
51218-45-2	Metolachlor	51218-45-2	2.8E+02	PHYSPROP	3.7E-07	9.0E-09	PHYSPROP	3.1E-05	PHYSPROP	-6.2E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.5E-06	WATER9			4.9E+02	EPI	3.1E+00	PHYSPROP	5.3E+02	PHYSPROP	2.2E-02	4.1E+00	9.8E+00	3.4E-03	EPI
21087-64-9	Metribuzin	21087-64-9	2.1E+02	PHYSPROP	4.8E-09	1.2E-10	EPI	4.4E-07	PHYSPROP	1.3E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	7.1E-06	WATER9			5.3E+01	EPI	1.7E+00	PHYSPROP	1.1E+03	PHYSPROP	7.4E-03	1.7E+00	4.0E+00	1.3E-03	EPI
74223-64-6	Metsulfuron-methyl	74223-64-6	3.8E+02	PHYSPROP	5.4E-15	1.3E-16	EPI	2.5E-12	PHYSPROP	1.6E+02	PHYSPROP			3.6E-02	4.2E-06	WATER9			9.3E+01	EPI	2.2E+00	PHYSPROP	9.5E+03	PHYSPROP	2.5E-03	1.4E+01	3.4E+01	3.3E-04	EPI
8012-95-1	Mineral oils	8012-95-1	1.7E+02	EPI	3.3E+02	8.2E+00	EPI	1.4E-01	EPI	-9.6E+00	EPI	8.8E-01	ChemNet	3.6E-02	6.4E-06	WATER9			4.8E+03	EPI	6.1E+00	EPI	3.7E-03	EPI	9.8E+00	9.5E-01	4.3E+00	2.0E+00	EPI
2385-85-5	Mirex	2385-85-5	5.5E+02	PHYSPROP	3.3E-02	8.1E-04	PHYSPROP	8.0E-07	PHYSPROP	4.9E+02	CRC89	2.3E+00	ChemNet	2.2E-02	5.6E-06	WATER9			3.6E+05	EPI	6.9E+00	PHYSPROP	8.5E-02	PHYSPROP	4.6E-01	1.2E+02	2.9E+02	5.2E-02	EPI
2212-67-1	Molinate	2212-67-1	1.9E+02	PHYSPROP	1.7E-04	4.1E-06	PHYSPROP	5.6E-03	PHYSPROP	7.0E+01	EPI	1.1E+00	CRC89	3.2E-02	6.8E-06	WATER9			1.8E+02	EPI	3.2E+00	PHYSPROP	9.7E+02	PHYSPROP	9.9E-02	1.2E+00	2.8E+00	1.9E-02	EPI
7439-98-7	Molybdenum	7439-98-7	9.6E+01	PHYSPROP				0.0E+00	NIOSH	2.6E+03	PHYSPROP	1.0E+01	CRC89				2.0E+01	BAES							3.8E-03	3.6E-01	8.7E-01	1.0E-03	RAGSE
10599-90-3	Monochloramine	10599-90-3	5.1E+01	EPI						-6.6E+01	CRC89														2.8E-03	2.0E-01	4.9E-01	1.0E-03	RAGSE
100-61-8	Monomethylaniline	100-61-8	1.1E+02	PHYSPROP	3.6E-04	8.9E-06	PHYSPROP	4.5E-01	PHYSPROP	-5.7E+01	PHYSPROP	9.9E-01	CRC89	7.2E-02	9.1E-06	WATER9			8.2E+01	EPI	1.7E+00	PHYSPROP	5.6E+03	PHYSPROP	2.0E-02	4.2E-01	1.0E+00	5.0E-03	EPI
88671-89-0	Myclobutanil	88671-89-0	2.7E+02	PHYSPROP	1.7E-07	4.3E-09	EPI	1.6E-06	PHYSPROP	6.6E+01	PHYSPROP			4.5E-02	5.3E-06	WATER9			6.1E+03	EPI	2.9E+00	PHYSPROP	1.4E+02	PHYSPROP	2.1E-02	3.6E+00	8.7E+00	3.4E-03	EPI
74-31-7	N,N'-Diphenyl-1,4-benzenediamine	74-31-7	2.6E+02	PHYSPROP	8.4E-09	2.1E-10	PHYSPROP	6.4E-09	EPI	1.4E+02	PHYSPROP			4.7E-02	5.4E-06	WATER9			5.2E+04	EPI	4.0E+00	PHYSPROP	7.4E+00	PHYSPROP	1.6E-01	3.0E+00	7.2E+00	2.6E-02	EPI
300-76-5	Naled	300-76-5	3.8E+02	PHYSPROP	2.7E-03	6.5E-05	EPI	2.0E-04	PHYSPROP	2.7E+01	PHYSPROP	2.0E+00	CRC89	2.5E-02	6.4E-06	WATER9			1.3E+02	EPI	1.4E+00	PHYSPROP	1.5E+00	PHYSPROP	7.1E-04	1.4E+01	3.4E+01	9.4E-05	EPI
64742-95-6	Naphtha, High Flash Aromatic (HFAN)	64742-95-6			1.8E-02	4.4E-04	EPI	8.5E-02	EPI														3.1E+01	EPI					
91-59-8	Naphthylamine, 2-	91-59-8	1.4E+02	PHYSPROP	3.3E-06	8.1E-08	PHYSPROP	2.6E-04	PHYSPROP	1.1E+02	PHYSPROP	1.6E+00	CRC89	6.4E-02	1.0E-05	WATER9			2.5E+03	EPI	2.3E+00	PHYSPROP	1.9E+02	PHYSPROP	3.7E-02	6.7E-01	1.6E+00	8.1E-03	EPI
15299-99-7	Napropamide	15299-99-7	2.7E+02	PHYSPROP	3.4E-08	8.4E-10	EPI	1.7E-07	PHYSPROP	7.5E+01	PHYSPROP			4.5E-02	5.3E-06	WATER9			3.2E+03	EPI	3.4E+00	PHYSPROP	7.3E+01	PHYSPROP	5.1E-02	3.5E+00	8.3E+00	8.0E-03	EPI
373-02-4	Nickel Acetate	373-02-4	1.8E+02	PHYSPROP				1.8E-05	PHYSPROP			1.8E+00	PERRY	4.6E-02	9.7E-06	WATER9			1.0E+00	EPI	-1.4E+00	PHYSPROP	1.7E+05	PHYSPROP	9.9E-05	1.0E+00	2.5E+00	1.9E-05	EPI
3333-67-3	Nickel Carbonate	3333-67-3	1.2E+02	PHYSPROP				3.6E-06	PHYSPROP					7.9E-02	9.2E-06	WATER9					-2.1E+00	PHYSPROP	9.3E+01	PERRY	5.5E-05	4.9E-01	1.2E+00	1.3E-05	EPI
13463-39-3	Nickel Carbonyl	13463-39-3	1.7E+02	CRC89	2.0E+01	5.0E-01	MSDS	3.2E+02	NIOSH	-1.9E+01	CRC89	1.3E+00	CRC89	4.3E-02	8.2E-06	WATER9							1.8E+02	PERRY		9.5E-01	2.3E+00		
12054-48-7	Nickel Hydroxide	12054-48-7	9.3E+01	OTHER																					3.7E-03	3.5E-01	8.3E-01	1.0E-03	RAGSE
1313-99-1	Nickel Oxide	1313-99-1	7.5E+01	EPI						2.0E+03	CRC89	6.7E+00	CRC89												3.3E-03	2.8E-01	6.6E-01	1.0E-03	RAGSE
NA	Nickel Refinery Dust	NA															1.5E+02	BAES										2.0E-04	RAGSE
7440-02-0	Nickel Soluble Salts	7440-02-0	5.9E+01	PHYSPROP				0.0E+00	NIOSH	1.5E+03	CRC89	8.9E+00	CRC89				6.5E+01	SSL							5.9E-04	2.2E-01	5.4E-01	2.0E-04	RAGSE
12035-72-2	Nickel Subsulfide	12035-72-2	2.4E+02	CRC89						7.9E+02	CRC89	5.9E+00	CRC89												1.2E-03	2.3E+00	5.6E+00	2.0E-04	RAGSE
1271-28-9	Nickelocene	1271-28-9	1.9E+02	CRC89						1.7E+02	CRC89			5.8E-02	6.7E-06	WATER9										1.2E+00	2.9E+00		
14797-55-8	Nitrate	14797-55-8	6.2E+01	EPI																					3.0E-03	2.3E-01	5.6E-01	1.0E-03	RAGSE
NA	Nitrate + Nitrite (as N)	NA																										1.0E-03	RAGSE
14797-65-0	Nitrite	14797-65-0	4.7E+01	EPI																					2.6E-03	1.9E-01	4.6E-01	1.0E-03	RAGSE
88-74-4	Nitroaniline, 2-	88-74-4	1.4E+02	PHYSPROP	2.4E-06	5.9E-08	PHYSPROP	2.8E-03	PHYSPROP	7.1E+01	PHYSPROP	9.0E-01	CRC89	5.2E-02	7.4E-06	WATER9			1.1E+02	EPI	1.9E+00	PHYSPROP	1.5E+03	PHYSPROP	2.0E-02	6.2E-01	1.5E+00	4.5E-03	EPI
100-01-6	Nitroaniline, 4-	100-01-6	1.4E+02	PHYSPROP	5.2E-08	1.3E-09	PHYSPROP	3.2E-06	EPI	1.5E+02	PHYSPROP	1.4E+00	CRC89	6.4E-02	9.8E-06	WATER9			1.1E+02	EPI	1.4E+00	PHYSPROP	7.3E+02	PHYSPROP	1.0E-02	6.2E-01	1.5E+00	2.2E-03	EPI
98-95-3	Nitrobenzene	98-95-3	1.2E+02	PHYSPROP	9.8E-04	2.4E-05	PHYSPROP	2.5E-01	PHYSPROP	5.7E+00	PHYSPROP	1.2E+00	CRC89	6.8E-02	9.4E-06	WATER9			2.3E+02	EPI	1.9E+00	PHYSPROP	2.1E+03	PHYSPROP	2.3E-02	5.1E-01	1.2E+00	5.4E-03	EPI
9004-70-0	Nitrocellulose	9004-70-0	3.9E+02	PHYSPROP	1.3E-21	3.3E-23	PHYSPROP	1.4E-17	PHYSPROP	2.6E+02	EPI			3.6E-02	4.2E-06	WATER9			1.0E+01	EPI	-4.6E+00	PHYSPROP	1.0E+06	PHYSPROP	7.5E-08	1.6E+01	3.7E+01	9.9E-09	EPI
67-20-9	Nitrofurantoin	67-20-9	2.4E+02	PHYSPROP	5.4E-11	1.3E-12	PHYSPROP	2.8E-10	PHYSPROP	2.6E+02	PHYSPROP			4.9E-02	5.8E-06	WATER9			1.2E+02	EPI	-4.7E-01	PHYSPROP	8.0E+01	PHYSPROP	2.1E-04	2.3E+00	5.4E+00	3.5E-05	EPI
59-87-0	Nitrofurazone	59-87-0	2.0E+02	PHYSPROP	1.3E-11	3.1E-13	PHYSPROP	4.3E-06	PHYSPROP	2.4E+02	EPI			5.6E-02	6.5E-06	WATER9			3.5E+02	EPI	2.3E-01	PHYSPROP	2.1E+02	PHYSPROP	9.3E-04	1.4E+00	3.2E+00	1.7E-04	EPI
55-63-0	Nitroglycerin	55-63-0	2.3E+02	PHYSPROP	3.5E-06	8.7E-08	EPI	4.0E-04	EPI	1.4E+01	PHYSPROP	1.6E+00	CRC89	2.9E-02	7.7E-06	WATER9			1.2E+02	EPI	1.6E+00	PHYSPROP	1.4E+03	PHYSPROP	5.8E-03	2.0E+00	4.7E+00	9.9E-04	EPI
556-88-7	Nitroguanidine	556-88-7	1.0E+02	PHYSPROP	1.8E-14	4.5E-16	PHYSPROP	1.4E-11	PHYSPROP	2.4E+02	EPI	2.0E+00	ChemNet	1.0E-01	1.4E-05	WATER9			2.1E+01	EPI	-8.9E-01	PHYSPROP	4.4E+03	PHYSPROP	4.1E-04	4.0E-01	9.7E-01	1.1E-04	EPI
75-52-5	Nitromethane	75-52-5	6.1E+01	PHYSPROP	1.2E-03	2.9E-05	PHYSPROP	3.6E+01	PHYSPROP	-2.9E+01	PHYSPROP	1.1E+00	CRC89	1.2E-01	1.4E-05	WATER9			1.0E+01	EPI	-3.5E-01	PHYSPROP	1.1E+05	PHYSPROP	1.3E-03	2.3E-01	5.5E-01	4.2E-04	EPI
79-46-9	Nitropropane, 2-	79-46-9	8.9E+01	PHYSPROP	4.9E-03	1.2E-04	EPI	1.7E+01	PHYSPROP	-9.1E+01	PHYSPROP	9.8E-01	CRC89	8.5E-02	1.0E-05	WATER9			3.1E+01	EPI	9.3E-01	PHYSPROP	1.7E+04	PHYSPROP	7.5E-03	3.3E-01	8.0E-01	2.1E-03	EPI
759-73-9	Nitroso-N-ethylurea, N-	759-73-9	1.2E+02	PHYSPROP	5.4E-09	1.3E-10	PHYSPROP	1.8E-02	PHYSPROP	9.9E+01	EPI			7.9E-02	9.3E-06	WATER9			2.1E+01	EPI	2.3E-01	PHYSPROP	1.3E+04	PHYSPROP	2.0E-03	4.8E-01	1.1E+00	4.9E-04	EPI
684-93-5	Nitroso-N-methylurea, N-	684-93-5	1.0E+02	PHYSPROP	4.1E-09	9.9E-11	PHYSPROP	2.9E-02	PHYSPROP	1.2E+02	EPI			8.6E-02	1.0E-05	WATER9			1.1E+01	EPI	-3.0E-02	PHYSPROP	1.4E+04	PHYSPROP	1.5E-03	4.0E-01	9.5E-01	4.0E-04	EPI
924-16-3	Nitroso-di-N-butylamine, N-	924-16-3	1.6E+02	PHYSPROP	5.4E-04	1.3E-05	PHYSPROP	4.7E-02	EPI	2.8E+01	EPI	9.0E-01	PubChem	4.2E-02	6.8E-06	WATER9			9.1E+02	EPI	2.6E+00	PHYSPROP	1.3E+03	PHYSPROP	5.5E-02	8.1E-01	1.9E+00	1.1E-02	EPI
621-64-7	Nitroso-di-N-propylamine, N-	621-64-7	1.3E+02	PHYSPROP	2.2E-04	5.4E-06	PHYSPROP	8.6E-02	PHYSPROP	6.8E+00	EPI	9.2E-01	CRC89	5.6E-02	7.8E-06	WATER9			2.8E+02	EPI	1.4E+00	PHYSPROP	1.3E+04	PHYSPROP	1.0E-02	5.6E-01	1.4E+00	2.3E-03	EPI
1116-54-7	Nitrosodiethanolamine, N-	1116-54-7	1.3E+02	PHYSPROP	2.0E-10	4.9E-12	PHYSPROP	5.0E-04	PHYSPROP	8.2E+01	EPI			7.3E-02	8.5E-06	WATER9			1.0E+00	EPI	-1.3E+00	PHYSPROP	1.0E+06	PHYSPROP	1.1E-04	5.9E-01	1.4E+00	2.5E-05	RAGSE
55-18-5	Nitrosodiethylamine, N-	55-18-5	1.0E+02	PHYSPROP	1.5E-04	3.6E-06	PHYSPROP	8.6E-01	PHYSPROP	-1.6E+01	EPI	9.4E-01	CRC89	7.4E-02	9.1E-06	WATER9			8.3E+01	EPI	4.8E-01	PHYSPROP	1.1E+05	PHYSPROP	3.4E-03	3.9E-01	9.4E-01	8.7E-04	EPI
62-75-9	Nitrosodimethylamine, N-	62-75-9	7.4E+01	PHYSPROP	7.4E-05	1.8E-06	PHYSPROP	2.7E+00	PHYSPROP	-3.9E+01	EPI	1.0E+00	CRC89	9.9E-02	1.2E-05	WATER9			2.3E+01	EPI	-5.7E-01	PHYSPROP	1.0E+06	PHYSPROP	8.3E-04	2.7E-01	6.6E-01	2.5E-04	EPI
86-30-6	Nitrosodiphenylamine, N-	86-30-6	2.0E+02	PHYSPROP	5.0E-05	1.2E-06	PHYSPROP	1.0E-01	PHYSPROP	6.7E+01	PHYSPROP			5.6E-02	6.5E-06	WATER9			2.6E+03	EPI	3.1E+00	PHYSPROP	3.5E+01	PHYSPROP	7.9E-02	1.4E+00	3.3E+00	1.5E-02	EPI
10595-95-6	Nitrosomethylethylamine, N-	10595-95-6	8.8E+01	PHYSPROP	5.9E-05	1.4E-06	PHYSPROP	1.1E+00	PHYSPROP	-2.7E+01	EPI	9.4E-01	PubChem	8.4E-02	1.0E-05	WATER9			4.3E+01	EPI	4.0E-02	PHYSPROP	3.0E+05	PHYSPROP	1.9E-03	3.3E-01	7.9E-01	5.3E-04	EPI
59-89-2	Nitrosomorpholine [N-]	59-89-2	1.2E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	3.6E-02	PHYSPROP	2.9E+01	PHYSPROP			8.0E-02	9.3E-06	WATER9			2.3E+01	EPI	-4.4E-01	PHYSPROP	1.0E+06	PHYSPROP	7.4E-04	4.7E-01	1.1E+00	1.8E-04	EPI
100-75-4	Nitrosopiperidine [N-]	100-75-4	1.1E+02	PHYSPROP	3.5E-05	8.4E-07	PHYSPROP	9.2E-02	PHYSPROP	6.8E+00	EPI	1.1E+00	CRC89	7.0E-02	9.2E-06	WATER9			1.7E+02	EPI	3.6E-01	PHYSPROP	7.7E+04	PHYSPROP	2.6E-03	4.6E-01	1.1E+00	6.2E-04	EPI
930-55-2	Nitrosopyrrolidine, N-	930-55-2	1.0E+02	PHYSPROP	2.0E-06	4.9E-08	PHYSPROP	6.0E-02	PHYSPROP	-3.1E+00	EPI	1.1E+00	CRC89	8.0E-02	1.0E-05	WATER9			9.2E+01	EPI	-1.9E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	3.8E-01	9.2E-01	3.2E-04	EPI
99-08-1	Nitrotoluene, m-	99-08-1	1.4E+02	PHYSPROP	3.8E-04	9.3E-06	PHYSPROP	2.1E-01	EPI	1.6E+01	PHYSPROP	1.2E+00	CRC89	5.9E-02	8.7E-06	WATER9			3.6E+02	EPI	2.5E+00	PHYSPROP	5.0E+02	PHYSPROP	5.1E-02	6.2E-01	1.5E+00	1.1E-02	EPI
88-72-2	Nitrotoluene, o-	88-72-2	1.4E+02	PHYSPROP	5.1E-04	1.3E-05	PHYSPROP	1.9E-01	EPI	-1.0E+01	PHYSPROP	1.2E+00	CRC89	5.9E-02	8.7E-06	WATER9			3.7E+02	EPI	2.3E+00	PHYSPROP	6.5E+02	PHYSPROP	4.0E-02	6.2E-01	1.5E+00	9.0E-03	EPI
99-99-0	Nitrotoluene, p-	99-99-0	1.4E+02	PHYSPROP	2.3E-04	5.6E-06	PHYSPROP	1.6E-02	EPI	5.2E+01	PHYSPROP	1.1E+00	CRC89	5.7E-02	8.4E-06	WATER9			3.6E+02	EPI	2.4E+00	PHYSPROP	4.4E+02	PHYSPROP	4.5E-02	6.2E-01	1.5E+00	1.0E-02	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
111-84-2	Nonane, n-	111-84-2	1.3E+02	PHYSPROP	1.4E+02	3.4E+00	EPI	4.5E+00	PHYSPROP	-5.4E+01	PHYSPROP	7.2E-01	CRC89	5.1E-02	6.8E-06	WATER9			8.0E+02	EPI	5.7E+00	PHYSPROP	2.2E-01	PHYSPROP	7.4E+00	5.5E-01	2.5E+00	1.7E+00	EPI
27314-13-2	Norflurazon	27314-13-2	3.0E+02	PHYSPROP	1.4E-08	3.4E-10	EPI	2.9E-08	PHYSPROP	1.8E+02	PHYSPROP			4.2E-02	4.9E-06	WATER9			3.1E+03	EPI	2.3E+00	PHYSPROP	3.4E+01	PHYSPROP	7.0E-03	5.3E+00	1.3E+01	1.1E-03	EPI
32536-52-0	Octabromodiphenyl Ether	32536-52-0	8.0E+02	PHYSPROP	3.1E-06	7.5E-08	PHYSPROP	1.3E-02	EPI	2.0E+02	PHYSPROP			2.2E-02	2.6E-06	WATER9			9.9E+04	EPI	8.7E+00	PHYSPROP	1.1E-08	PHYSPROP	3.3E-01	3.2E+03	7.8E+03	3.1E-02	EPI
2691-41-0	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	3.0E+02	PHYSPROP	3.5E-08	8.7E-10	PHYSPROP	3.3E-14	PHYSPROP	2.9E+02	CRC89			4.3E-02	5.0E-06	WATER9			5.3E+02	EPI	1.6E-01	PHYSPROP	5.0E+00	PHYSPROP	2.9E-04	4.8E+00	1.1E+01	4.4E-05	EPI
152-16-9	Octamethylpyrophosphoramide	152-16-9	2.9E+02	PHYSPROP	1.5E-08	3.8E-10	PHYSPROP	1.0E-03	PHYSPROP	1.7E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	WATER9			2.0E+01	EPI	-1.0E+00	PHYSPROP	1.0E+06	PHYSPROP	5.4E-05	4.2E+00	1.0E+01	8.3E-06	EPI
19044-88-3	Oryzalin	19044-88-3	3.5E+02	PHYSPROP	7.8E-08	1.9E-09	PHYSPROP	9.8E-09	PHYSPROP	1.4E+02	PHYSPROP			3.9E-02	4.5E-06	WATER9			8.3E+02	EPI	3.7E+00	PHYSPROP	2.5E+00	PHYSPROP	3.8E-02	9.2E+00	2.2E+01	5.4E-03	EPI
19666-30-9	Oxadiazon	19666-30-9	3.5E+02	PHYSPROP	3.0E-06	7.3E-08	EPI	1.1E-07	PHYSPROP	9.0E+01	PHYSPROP			3.9E-02	4.5E-06	WATER9			5.0E+03	EPI	4.8E+00	PHYSPROP	7.0E-01	PHYSPROP	2.0E-01	9.0E+00	2.2E+01	2.8E-02	EPI
23135-22-0	Oxamyl	23135-22-0	2.2E+02	PHYSPROP	9.7E-09	2.4E-10	EPI	2.3E-04	PHYSPROP	1.0E+02	PHYSPROP	9.7E-01	CRC89	2.3E-02	5.9E-06	WATER9			1.0E+01	EPI	-4.7E-01	PHYSPROP	2.8E+05	PHYSPROP	2.6E-04	1.8E+00	4.3E+00	4.5E-05	EPI
42874-03-3	Oxyfluorfen	42874-03-3	3.6E+02	PHYSPROP	3.4E-05	8.2E-07	EPI	2.0E-07	PHYSPROP	8.4E+01	PHYSPROP	1.4E+00	CRC89	2.1E-02	5.3E-06	WATER9			4.0E+04	EPI	4.7E+00	PHYSPROP	1.2E-01	PHYSPROP	1.5E-01	1.1E+01	2.7E+01	2.0E-02	EPI
76738-62-0	Paclobutrazol	76738-62-0	2.9E+02	PHYSPROP	3.4E-09	8.3E-11	EPI	7.5E-09	PHYSPROP	1.7E+02	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	WATER9			9.2E+02	EPI	3.2E+00	PHYSPROP	2.6E+01	PHYSPROP	3.1E-02	4.6E+00	1.1E+01	4.7E-03	EPI
1910-42-5	Paraquat Dichloride	1910-42-5	2.6E+02	PHYSPROP	1.3E-11	3.2E-13	PHYSPROP	7.5E-08	PHYSPROP	3.0E+02	EPI			4.7E-02	5.5E-06	WATER9			6.8E+03	EPI	-4.5E+00	PHYSPROP	6.2E+05	PHYSPROP	3.6E-07	2.9E+00	7.0E+00	5.8E-08	EPI
56-38-2	Parathion	56-38-2	2.9E+02	PHYSPROP	1.2E-05	3.0E-07	PHYSPROP	6.7E-06	PHYSPROP	6.1E+00	PHYSPROP	1.3E+00	CRC89	2.3E-02	5.8E-06	WATER9			2.4E+03	EPI	3.8E+00	PHYSPROP	1.1E+01	PHYSPROP	8.4E-02	4.5E+00	1.1E+01	1.3E-02	EPI
1114-71-2	Pebulate	1114-71-2	2.0E+02	PHYSPROP	9.7E-03	2.4E-04	EPI	8.9E-02	PHYSPROP	7.1E+01	EPI	9.5E-01	CRC89	2.4E-02	6.1E-06	WATER9			3.0E+02	EPI	3.8E+00	PHYSPROP	1.0E+02	PHYSPROP	2.2E-01	1.4E+00	3.5E+00	4.0E-02	EPI
40487-42-1	Pendimethalin	40487-42-1	2.8E+02	PHYSPROP	3.5E-05	8.6E-07	EPI	1.5E-05	PHYSPROP	5.6E+01	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.7E-06	WATER9			5.6E+03	EPI	5.2E+00	PHYSPROP	3.3E-01	PHYSPROP	7.4E-01	4.0E+00	1.5E+01	1.2E-01	EPI
32534-81-9	Pentabromodiphenyl Ether	32534-81-9	5.6E+02	PHYSPROP	4.4E-03	1.1E-04	PHYSPROP	3.1E-08	EPI	-5.0E+00	PHYSPROP			2.8E-02	3.2E-06	WATER9			2.2E+04	EPI	6.8E+00	PHYSPROP	2.4E-03	PHYSPROP	3.4E-01	1.5E+02	3.7E+02	3.7E-02	EPI
60348-60-9	Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	5.6E+02	PHYSPROP	4.8E-05	1.2E-06	PHYSPROP	3.1E-08	EPI	-5.0E+00	EPI	2.3E+00	IRIS Profile	2.2E-02	5.6E-06	WATER9			2.2E+04	EPI	7.7E+00	PHYSPROP	7.9E-05	PHYSPROP	3.4E-01	1.5E+02	3.7E+02	3.7E-02	EPI
608-93-5	Pentachlorobenzene	608-93-5	2.5E+02	PHYSPROP	2.9E-02	7.0E-04	PHYSPROP	1.0E-03	EPI	8.6E+01	PHYSPROP	1.8E+00	CRC89	2.9E-02	7.9E-06	WATER9			3.7E+03	EPI	5.2E+00	PHYSPROP	8.3E-01	PHYSPROP	1.0E+00	2.7E+00	1.0E+01	1.7E-01	EPI
76-01-7	Pentachloroethane	76-01-7	2.0E+02	PHYSPROP	7.9E-02	1.9E-03	EPI	3.5E+00	PHYSPROP	-2.9E+01	PHYSPROP	1.7E+00	CRC89	3.2E-02	8.6E-06	WATER9			1.4E+02	EPI	3.2E+00	PHYSPROP	4.9E+02	PHYSPROP	8.6E-02	1.4E+00	3.4E+00	1.6E-02	EPI
82-68-8	Pentachloronitrobenzene	82-68-8	3.0E+02	PHYSPROP	1.8E-03	4.4E-05	EPI	5.0E-05	PHYSPROP	1.4E+02	PHYSPROP	1.7E+00	CRC89	2.6E-02	6.9E-06	WATER9			6.0E+03	EPI	4.6E+00	PHYSPROP	4.4E-01	PHYSPROP	2.8E-01	4.7E+00	1.1E+01	4.2E-02	EPI
87-86-5	Pentachlorophenol	87-86-5	2.7E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	1.1E-04	PHYSPROP	1.7E+02	PHYSPROP	2.0E+00	CRC89	3.0E-02	8.0E-06	WATER9			5.9E+02	SSL	5.1E+00	PHYSPROP	1.4E+01	PHYSPROP	8.0E-01	3.3E+00	1.3E+01	1.3E-01	EPI
78-11-5	Pentaerythritol tetranitrate (PETN)	78-11-5	3.2E+02	PHYSPROP	5.4E-08	1.3E-09	PHYSPROP	5.5E-09	EPI	1.4E+02	PHYSPROP	1.8E+00	CRC89	2.6E-02	6.8E-06	WATER9			6.5E+02	EPI	2.4E+00	PHYSPROP	4.3E+01	PHYSPROP	6.9E-03	6.2E+00	1.5E+01	1.0E-03	EPI
109-66-0	Pentane, n-	109-66-0	7.2E+01	PHYSPROP	5.1E+01	1.3E+00	PHYSPROP	5.1E+02	PHYSPROP	-1.3E+02	PHYSPROP	6.3E-01	CRC89	8.2E-02	8.8E-06	WATER9			7.2E+01	EPI	3.4E+00	PHYSPROP	3.8E+01	PHYSPROP	3.6E-01	2.7E-01	6.4E-01	1.1E-01	EPI
	Perchlorates																												
7790-98-9	~Ammonium Perchlorate	7790-98-9	1.2E+02	PHYSPROP								2.0E+00	CRC89										2.5E+05	PHYSPROP	4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
7791-03-9	~Lithium Perchlorate	7791-03-9	1.1E+02	CRC89						2.4E+02	CRC89	2.4E+00	CRC89										5.9E+05	CRC89	4.0E-03	4.1E-01	1.0E+00	1.0E-03	RAGSE
14797-73-0	~Perchlorate and Perchlorate Salts	14797-73-0	1.2E+02	CRC89																			2.5E+05	CRC89	4.2E-03	4.8E-01	1.1E+00	1.0E-03	RAGSE
7778-74-7	~Potassium Perchlorate	7778-74-7	1.4E+02	PHYSPROP						5.3E+02	PHYSPROP	2.5E+00	CRC89										1.5E+04	PHYSPROP	9.1E-03	6.3E-01	1.5E+00	2.0E-03	RAGSE
7601-89-0	~Sodium Perchlorate	7601-89-0	1.2E+02	PHYSPROP						4.8E+02	EPI	2.5E+00	CRC89										2.1E+06	PHYSPROP	4.3E-03	5.1E-01	1.2E+00	1.0E-03	RAGSE
375-73-5	Perfluorobutane Sulfonate	375-73-5	3.0E+02	PHYSPROP	5.9E-04	1.4E-05	PHYSPROP	5.2E-02	PHYSPROP	3.7E+01	EPI	1.8E+00	LookChem	2.7E-02	7.2E-06	WATER9			1.8E+02	EPI	2.4E+00	PHYSPROP	1.1E+02	PHYSPROP	8.7E-03	5.0E+00	1.2E+01	1.3E-03	EPI
52645-53-1	Permethrin	52645-53-1	3.9E+02	PHYSPROP	7.7E-05	1.9E-06	EPI	2.2E-08	PHYSPROP	3.4E+01	PHYSPROP	1.2E+00	CRC89	1.9E-02	4.8E-06	WATER9			1.2E+05	EPI	6.5E+00	PHYSPROP	6.0E-03	PHYSPROP	1.6E+00	1.6E+01	6.5E+01	2.1E-01	EPI
62-44-2	Phenacetin	62-44-2	1.8E+02	PHYSPROP	8.7E-09	2.1E-10	EPI	6.9E-07	PHYSPROP	1.4E+02	PHYSPROP			6.0E-02	7.0E-06	WATER9			4.1E+01	EPI	1.6E+00	PHYSPROP	7.7E+02	PHYSPROP	8.9E-03	1.1E+00	2.5E+00	1.7E-03	EPI
13684-63-4	Phenmedipham	13684-63-4	3.0E+02	PHYSPROP	3.4E-11	8.4E-13	EPI	1.0E-11	PHYSPROP	1.4E+02	PHYSPROP			4.2E-02	5.0E-06	WATER9			2.6E+03	EPI	3.6E+00	PHYSPROP	4.7E+00	PHYSPROP	5.2E-02	5.1E+00	1.2E+01	7.9E-03	EPI
108-95-2	Phenol	108-95-2	9.4E+01	PHYSPROP	1.4E-05	3.3E-07	PHYSPROP	3.5E-01	PHYSPROP	4.1E+01	PHYSPROP	1.1E+00	CRC89	8.3E-02	1.0E-05	WATER9			1.9E+02	EPI	1.5E+00	PHYSPROP	8.3E+04	PHYSPROP	1.6E-02	3.5E-01	8.5E-01	4.3E-03	EPI
114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	2.1E+02	PHYSPROP	5.8E-08	1.4E-09	EPI	2.1E-05	PHYSPROP	9.0E+01	PHYSPROP	1.1E+00	CRC89	2.6E-02	6.6E-06	WATER9			6.0E+01	EPI	1.5E+00	PHYSPROP	1.9E+03	PHYSPROP	6.0E-03	1.6E+00	3.7E+00	1.1E-03	EPI
92-84-2	Phenothiazine	92-84-2	2.0E+02	PHYSPROP	1.1E-06	2.8E-08	PHYSPROP	8.9E-07	PHYSPROP	1.9E+02	PHYSPROP	1.3E+00	PubChem	2.9E-02	7.5E-06	WATER9			1.5E+03	EPI	4.2E+00	PHYSPROP	1.6E+00	PHYSPROP	3.7E-01	1.4E+00	3.3E+00	6.8E-02	EPI
108-45-2	Phenylenediamine, m-	108-45-2	1.1E+02	PHYSPROP	5.1E-08	1.3E-09	EPI	2.1E-03	EPI	6.4E+01	PHYSPROP	1.0E+00	CRC89	7.2E-02	9.2E-06	WATER9			3.4E+01	EPI	-3.3E-01	PHYSPROP	2.4E+05	PHYSPROP	9.4E-04	4.2E-01	1.0E+00	2.3E-04	EPI
95-54-5	Phenylenediamine, o-	95-54-5	1.1E+02	PHYSPROP	2.9E-07	7.2E-09	EPI	2.1E-03	EPI	1.0E+02	PHYSPROP			8.4E-02	9.8E-06	WATER9			3.5E+01	EPI	1.5E-01	PHYSPROP	4.0E+04	PHYSPROP	1.9E-03	4.2E-01	1.0E+00	4.9E-04	EPI
106-50-3	Phenylenediamine, p-	106-50-3	1.1E+02	PHYSPROP	2.8E-08	6.7E-10	PHYSPROP	5.0E-03	PHYSPROP	1.5E+02	PHYSPROP			8.4E-02	9.8E-06	WATER9			3.4E+01	EPI	-3.0E-01	PHYSPROP	3.7E+04	PHYSPROP	9.8E-04	4.2E-01	1.0E+00	2.5E-04	EPI
90-43-7	Phenylphenol, 2-	90-43-7	1.7E+02	PHYSPROP	4.3E-05	1.1E-06	EPI	2.0E-03	EPI	5.9E+01	PHYSPROP	1.2E+00	CRC89	4.2E-02	7.8E-06	WATER9			6.7E+03	EPI	3.1E+00	PHYSPROP	7.0E+02	PHYSPROP	9.8E-02	9.4E-01	2.3E+00	2.0E-02	EPI
298-02-2	Phorate	298-02-2	2.6E+02	PHYSPROP	1.8E-04	4.4E-06	EPI	6.4E-04	PHYSPROP	-1.5E+01	CRC89	1.2E+00	CRC89	2.3E-02	5.9E-06	WATER9			4.6E+02	EPI	3.6E+00	PHYSPROP	5.0E+01	PHYSPROP	7.8E-02	3.0E+00	7.2E+00	1.3E-02	EPI
75-44-5	Phosgene	75-44-5	9.9E+01	PHYSPROP	6.8E-01	1.7E-02	PHYSPROP	1.4E+03	PHYSPROP	-1.2E+02	PHYSPROP	1.4E+00	CRC89	8.9E-02	1.2E-05	WATER9			1.0E+00	EPI	-7.1E-01	PHYSPROP	6.8E+03	YAWS	5.6E-04	3.8E-01	9.0E-01	1.5E-04	EPI
732-11-6	Phosmet	732-11-6	3.2E+02	PHYSPROP	3.4E-07	8.4E-09	EPI	4.9E-07	PHYSPROP	7.2E+01	PHYSPROP			4.1E-02	4.8E-06	WATER9			1.0E+01	EPI	2.8E+00	PHYSPROP	2.4E+01	PHYSPROP	1.3E-02	6.3E+00	1.5E+01	1.8E-03	EPI
	Phosphates, Inorganic																												
13776-88-0	~Aluminum metaphosphate	13776-88-0	2.6E+02	CRC89								2.8E+00	CRC89												6.2E-03	3.2E+00	7.6E+00	1.0E-03	RAGSE
68333-79-9	~Ammonium polyphosphate	68333-79-9																										1.0E-03	RAGSE
7790-76-3	~Calcium pyrophosphate	7790-76-3	2.5E+02	CRC89						1.2E+03	CRC89	3.1E+00	CRC89												6.1E-03	2.8E+00	6.7E+00	1.0E-03	RAGSE
7783-28-0	~Diammonium phosphate	7783-28-0	1.3E+02	EPI																					4.4E-03	5.8E-01	1.4E+00	1.0E-03	RAGSE
7757-93-9	~Dicalcium phosphate	7757-93-9	1.4E+02	EPI																					4.5E-03	6.1E-01	1.5E+00	1.0E-03	RAGSE
7782-75-4	~Dimagnesium phosphate	7782-75-4	1.7E+02	CRC89								2.1E+00	CRC89												5.1E-03	1.0E+00	2.4E+00	1.0E-03	RAGSE
7758-11-4	~Dipotassium phosphate	7758-11-4	1.7E+02	EPI																					5.1E-03	9.9E-01	2.4E+00	1.0E-03	RAGSE
7558-79-4	~Disodium phosphate	7558-79-4	1.4E+02	EPI																					4.6E-03	6.6E-01	1.6E+00	1.0E-03	RAGSE
13530-50-2	~Monoaluminum phosphate	13530-50-2	3.2E+02	CRC89																					6.9E-03	6.3E+00	1.5E+01	1.0E-03	RAGSE
7722-76-1	~Monoammonium phosphate	7722-76-1	1.2E+02	EPI																					4.1E-03	4.6E-01	1.1E+00	1.0E-03	RAGSE
7758-23-8	~Monocalcium phosphate	7758-23-8	2.3E+02	EPI																					5.9E-03	2.2E+00	5.2E+00	1.0E-03	RAGSE
7757-86-0	~Monomagnesium phosphate	7757-86-0	1.2E+02	CRC89																					4.2E-03	5.0E-01	1.2E+00	1.0E-03	RAGSE
7778-77-0	~Monopotassium phosphate	7778-77-0	1.4E+02	EPI																					4.5E-03	6.1E-01	1.5E+00	1.0E-03	RAGSE
7558-80-7	~Monosodium phosphate	7558-80-7	1.2E+02	PHYSPROP						6.0E+01	PHYSPROP												4.9E+05	PHYSPROP	4.2E-03	4.9E-01	1.2E+00	1.0E-03	RAGSE
8017-16-1	~Polyphosphoric acid	8017-16-1	2.6E+02	EPI																					6.2E-03	2.9E+00	7.0E+00	1.0E-03	RAGSE
13845-36-8	~Potassium tripolyphosphate	13845-36-8	4.5E+02	OTHER																					8.1E-03	3.4E+01	8.2E+01	1.0E-03	RAGSE
7758-16-9	~Sodium acid pyrophosphate	7758-16-9	2.2E+02	EPI																					5.7E-03	1.8E+00	4.4E+00	1.0E-03	RAGSE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
7785-88-8	~Sodium aluminum phosphate (acidic)	7785-88-8	1.4E+02	OTHER																					4.6E-03	6.8E-01	1.6E+00	1.0E-03	RAGSE
10279-59-1	~Sodium aluminum phosphate (anhydrous)	10279-59-1																										1.0E-03	RAGSE
10305-76-7	~Sodium aluminum phosphate (tetrahydrate)	10305-76-7	9.5E+02	OTHER																					1.2E-02	2.2E+04	5.3E+04	1.0E-03	RAGSE
10124-56-8	~Sodium hexametaphosphate	10124-56-8	6.1E+02	CRC89																					9.5E-03	2.8E+02	6.7E+02	1.0E-03	RAGSE
68915-31-1	~Sodium polyphosphate	68915-31-1	3.6E+02	EPI																					7.3E-03	1.1E+01	2.6E+01	1.0E-03	RAGSE
7785-84-4	~Sodium trimetaphosphate	7785-84-4	3.1E+02	EPI																					6.7E-03	5.4E+00	1.3E+01	1.0E-03	RAGSE
7758-29-4	~Sodium tripolyphosphate	7758-29-4	3.7E+02	EPI																					7.4E-03	1.2E+01	2.9E+01	1.0E-03	RAGSE
7320-34-5	~Tetrapotassium phosphate	7320-34-5	3.3E+02	PHYSPROP																					7.0E-03	7.4E+00	1.8E+01	1.0E-03	RAGSE
7722-88-5	~Tetrasodium pyrophosphate	7722-88-5	2.7E+02	PHYSPROP						8.0E+01	PHYSPROP												8.1E+04	PHYSPROP	6.3E-03	3.2E+00	7.8E+00	1.0E-03	RAGSE
15136-87-5	~Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	8.9E+02	OTHER																					1.1E-02	9.9E+03	2.4E+04	1.0E-03	RAGSE
7758-87-4	~Tricalcium phosphate	7758-87-4	3.1E+02	CRC89						1.7E+03	CRC89	3.1E+00	CRC89												6.8E-03	5.7E+00	1.4E+01	1.0E-03	RAGSE
7757-87-1	~Trimagnesium phosphate	7757-87-1	2.6E+02	CRC89						1.2E+03	CRC89														6.2E-03	3.1E+00	7.5E+00	1.0E-03	RAGSE
7778-53-2	~Tripotassium phosphate	7778-53-2	2.1E+02	EPI																					5.6E-03	1.6E+00	3.9E+00	1.0E-03	RAGSE
7601-54-9	~Trisodium phosphate	7601-54-9	1.6E+02	PHYSPROP						7.5E+01	PHYSPROP														4.9E-03	8.7E-01	2.1E+00	1.0E-03	RAGSE
7803-51-2	Phosphine	7803-51-2	3.4E+01	PHYSPROP	1.0E+00	2.4E-02	PHYSPROP	2.9E+04	PHYSPROP	-1.3E+02	PHYSPROP	1.4E+00	CRC89	1.9E-01	2.2E-05	WATER9					-2.7E-01	OTHER	2.6E+05	PERRY	2.2E-03	1.6E-01	3.9E-01	1.0E-03	RAGSE
7664-38-2	Phosphoric Acid	7664-38-2	9.8E+01	PHYSPROP				3.0E-02	NIOSH	4.2E+01	PHYSPROP	1.8E+00	PERRY										5.5E+06	CRC89	3.8E-03	3.7E-01	8.9E-01	1.0E-03	RAGSE
7723-14-0	Phosphorus, White	7723-14-0	1.2E+02	OTHER	8.6E-02	2.1E-03	ATSDR Profile	2.5E-02	ATSDR Profile	4.4E+01	ATSDR Profile	1.8E+00	ATSDR Profile	2.2E-01	2.8E-05	WATER9	3.5E+00	BAES	1.1E+03	ATSDR Profile	3.1E+00	OTHER	3.0E+00	ATSDR Profile	4.3E-03	5.2E-01	1.2E+00	1.0E-03	RAGSE
	Phthalates																												
117-81-7	~Bis(2-ethylhexyl)phthalate	117-81-7	3.9E+02	PHYSPROP	1.1E-05	2.7E-07	EPI	1.4E-07	PHYSPROP	-5.5E+01	PHYSPROP	9.8E-01	CRC89	1.7E-02	4.2E-06	WATER9			1.2E+05	EPI	7.6E+00	PHYSPROP	2.7E-01	PHYSPROP	8.6E+00	1.6E+01	7.3E+01	1.1E+00	EPI
85-68-7	~Butyl Benzyl Phthalate	85-68-7	3.1E+02	PHYSPROP	5.2E-05	1.3E-06	EPI	8.3E-06	PHYSPROP	-3.5E+01	PubChem	1.1E+00	CRC89	2.1E-02	5.2E-06	WATER9			7.2E+03	EPI	4.7E+00	PHYSPROP	2.7E+00	PHYSPROP	2.6E-01	5.9E+00	1.4E+01	3.9E-02	EPI
85-70-1	~Butylphthalyl Butylglycolate	85-70-1	3.4E+02	PHYSPROP	8.4E-07	2.1E-08	PHYSPROP	7.1E-06	PHYSPROP	-3.5E+01	PHYSPROP	1.1E+00	LANGE	2.0E-02	4.9E-06	WATER9			1.1E+04	EPI	4.2E+00	PHYSPROP	8.8E+00	PHYSPROP	8.2E-02	8.0E+00	1.9E+01	1.2E-02	EPI
84-74-2	~Dibutyl Phthalate	84-74-2	2.8E+02	PHYSPROP	7.4E-05	1.8E-06	PHYSPROP	2.0E-05	PHYSPROP	-3.5E+01	PHYSPROP	1.0E+00	CRC89	2.1E-02	5.3E-06	WATER9			1.2E+03	EPI	4.5E+00	PHYSPROP	1.1E+01	PHYSPROP	2.7E-01	3.8E+00	9.1E+00	4.2E-02	EPI
84-66-2	~Diethyl Phthalate	84-66-2	2.2E+02	PHYSPROP	2.5E-05	6.1E-07	EPI	2.1E-03	PHYSPROP	-4.1E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.7E-06	WATER9			1.0E+02	EPI	2.4E+00	PHYSPROP	1.1E+03	PHYSPROP	2.1E-02	1.8E+00	4.4E+00	3.6E-03	EPI
120-61-6	~Dimethylterephthalate	120-61-6	1.9E+02	PHYSPROP	5.5E-03	1.3E-04	EPI	1.0E-02	PHYSPROP	1.4E+02	PHYSPROP	1.1E+00	CRC89	2.9E-02	6.7E-06	WATER9			3.1E+01	EPI	2.3E+00	PHYSPROP	1.9E+01	PHYSPROP	2.1E-02	1.3E+00	3.1E+00	4.0E-03	EPI
117-84-0	~Octyl Phthalate, di-N-	117-84-0	3.9E+02	PHYSPROP	1.1E-04	2.6E-06	EPI	1.0E-07	PHYSPROP	2.5E+01	PHYSPROP			3.6E-02	4.2E-06	WATER9			1.4E+05	EPI	8.1E+00	PHYSPROP	2.2E-02	PHYSPROP	1.8E+01	1.6E+01	7.5E+01	2.4E+00	EPI
100-21-0	~Phthalic Acid, P-	100-21-0	1.7E+02	PHYSPROP	1.6E-11	3.9E-13	PHYSPROP	9.2E-06	EPI	4.0E+02	LANGE	1.5E+00	PERRY	4.9E-02	9.0E-06	WATER9			7.9E+01	EPI	2.0E+00	PHYSPROP	1.5E+01	PHYSPROP	1.9E-02	9.0E-01	2.1E+00	3.9E-03	EPI
85-44-9	~Phthalic Anhydride	85-44-9	1.5E+02	PHYSPROP	6.7E-07	1.6E-08	EPI	5.2E-04	EPI	1.3E+02	PHYSPROP	1.5E+00	CRC89	5.9E-02	9.8E-06	WATER9			1.0E+01	EPI	1.6E+00	PHYSPROP	6.2E+03	PHYSPROP	1.2E-02	7.1E-01	1.7E+00	2.7E-03	EPI
1918-02-1	Picloram	1918-02-1	2.4E+02	PHYSPROP	2.2E-12	5.3E-14	EPI	7.2E-11	PHYSPROP	2.2E+02	PHYSPROP			4.9E-02	5.7E-06	WATER9			3.9E+01	EPI	1.9E+00	PHYSPROP	4.3E+02	PHYSPROP	7.6E-03	2.4E+00	5.7E+00	1.3E-03	EPI
96-91-3	Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	2.0E+02	PHYSPROP	4.0E-10	9.8E-12	PHYSPROP	4.2E-07	PHYSPROP	1.7E+02	PHYSPROP			5.6E-02	6.5E-06	WATER9			2.3E+02	EPI	9.3E-01	PHYSPROP	1.4E+03	PHYSPROP	2.7E-03	1.4E+00	3.3E+00	5.0E-04	EPI
88-89-1	Picric Acid (2,4,6-Trinitrophenol)	88-89-1	2.3E+02	PHYSPROP	7.0E-10	1.7E-11	EPI	7.5E-07	PHYSPROP	1.2E+02	PHYSPROP	1.8E+00	PERRY	3.0E-02	8.2E-06	WATER9			2.3E+03	EPI	1.4E+00	PHYSPROP	1.3E+04	PHYSPROP	3.6E-03	2.0E+00	4.8E+00	6.2E-04	EPI
29232-93-7	Pirimiphos, Methyl	29232-93-7	3.1E+02	PHYSPROP	2.9E-05	7.0E-07	EPI	1.5E-05	PHYSPROP	1.5E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.4E-06	WATER9			3.7E+02	EPI	4.2E+00	PHYSPROP	8.6E+00	PHYSPROP	1.3E-01	5.4E+00	1.3E+01	1.9E-02	EPI
59536-65-1	Polybrominated Biphenyls	59536-65-1																											
	Polychlorinated Biphenyls (PCBs)																												
12674-11-2	~Aroclor 1016	12674-11-2	5.5E+02	PHYSPROP	8.2E-03	2.0E-04	EPI	4.0E-04	PHYSPROP	1.0E+02	EPI	1.4E+00	ATSDR Profile	1.7E-02	4.2E-06	WATER9			4.8E+04	EPI	5.7E+00	PHYSPROP	4.2E-01	PHYSPROP	2.7E+00	1.3E+02	5.3E+02	3.1E-01	EPI
11104-28-2	~Aroclor 1221	11104-28-2	1.9E+02	PHYSPROP	9.3E-03	2.3E-04	PHYSPROP	6.7E-03	PHYSPROP	3.4E+01	EPI	1.2E+00	ATSDR Profile	3.2E-02	7.2E-06	WATER9			8.4E+03	EPI	4.7E+00	PHYSPROP	1.5E+01	PHYSPROP	8.9E-01	1.2E+00	4.6E+00	1.7E-01	EPI
11141-16-5	~Aroclor 1232	11141-16-5	1.9E+02	PHYSPROP	3.0E-02	7.4E-04	EPI	4.1E-03	PHYSPROP	3.4E+01	EPI	1.3E+00	ATSDR Profile	3.3E-02	7.5E-06	WATER9			8.4E+03	EPI	4.4E+00	PHYSPROP	1.5E+00	PHYSPROP	8.9E-01	1.2E+00	4.6E+00	1.7E-01	EPI
53469-21-9	~Aroclor 1242	53469-21-9	2.9E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	8.6E-05	EPI	1.2E+02	EPI	1.4E+00	ATSDR Profile	2.4E-02	6.1E-06	WATER9			7.8E+04	EPI	6.3E+00	PHYSPROP	2.8E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
12672-29-6	~Aroclor 1248	12672-29-6	6.2E+02	PHYSPROP	1.8E-02	4.4E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	1.6E-02	3.9E-06	WATER9			7.7E+04	EPI	6.2E+00	PHYSPROP	1.0E-01	PHYSPROP	4.5E+00	3.1E+02	1.3E+03	4.8E-01	EPI
11097-69-1	~Aroclor 1254	11097-69-1	3.3E+02	PHYSPROP	1.2E-02	2.8E-04	PHYSPROP	7.7E-05	PHYSPROP	1.3E+02	EPI	1.5E+00	ATSDR Profile	2.4E-02	6.1E-06	WATER9			1.3E+05	EPI	6.5E+00	PHYSPROP	4.3E-02	PHYSPROP	5.2E+00	7.1E+00	3.1E+01	7.5E-01	EPI
11096-82-5	~Aroclor 1260	11096-82-5	4.0E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	4.1E-05	PHYSPROP	1.6E+02	EPI	1.6E+00	ATSDR Profile	2.2E-02	5.6E-06	WATER9			3.5E+05	EPI	7.6E+00	PHYSPROP	1.4E-02	PHYSPROP	7.5E+00	1.7E+01	7.7E+01	9.9E-01	EPI
11126-42-4	~Aroclor 5460	11126-42-4	2.9E+02	PHYSPROP	5.1E-03	1.3E-04	PHYSPROP	8.5E-06	PHYSPROP	1.2E+02	EPI	1.6E+00	LookChem	2.6E-02	6.8E-06	WATER9			8.1E+04	EPI	6.3E+00	PHYSPROP	5.3E-02	PHYSPROP	3.8E+00	4.5E+00	2.0E+01	5.8E-01	EPI
39635-31-9	~Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	4.0E+02	PHYSPROP	2.1E-03	5.1E-05	PHYSPROP	1.3E-07	PHYSPROP	1.6E+02	EPI	1.7E+00	LookChem	4.2E-02	5.7E-06	WATER9			3.5E+05	EPI	8.3E+00	PHYSPROP	7.5E-04	PHYSPROP	2.3E+01	1.7E+01	8.0E+01	3.0E+00	EPI
52663-72-6	~Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	3.6E+02	PHYSPROP	2.8E-03	6.9E-05	PHYSPROP	5.8E-07	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	4.4E-02	5.9E-06	WATER9			2.1E+05	EPI	7.5E+00	PHYSPROP	2.2E-03	PHYSPROP	1.0E+01	1.1E+01	5.0E+01	1.4E+00	EPI
69782-90-7	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	3.6E+02	PHYSPROP	6.6E-03	1.6E-04	EPI	5.8E-07	EPI	1.5E+02	EPI	1.6E+00	I	4.4E-02	5.9E-06	WATER9			2.1E+05	EPI	7.6E+00	PHYSPROP	1.6E-03	EPI	1.2E+01	1.1E+01	5.0E+01	1.7E+00	EPI
38380-08-4	~Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 156)	38380-08-4	3.6E+02	PHYSPROP	5.8E-03	1.4E-04	EPI	1.6E-06	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	4.4E-02	5.9E-06	WATER9			2.1E+05	EPI	7.6E+00	PHYSPROP	5.3E-03	PHYSPROP	1.2E+01	1.1E+01	5.0E+01	1.7E+00	EPI
32774-16-6	~Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	3.6E+02	PHYSPROP	2.8E-03	6.9E-05	PHYSPROP	5.8E-07	PHYSPROP	1.5E+02	EPI	1.6E+00	LookChem	4.4E-02	5.9E-06	WATER9			2.1E+05	EPI	7.4E+00	PHYSPROP	5.1E-04	PHYSPROP	9.1E+00	1.1E+01	5.0E+01	1.2E+00	EPI
65510-44-3	~Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	3.3E+02	EPI	7.8E-03	1.9E-04	EPI	5.5E-06	EPI	9.8E+01	EPI	1.5E+00	LookChem	4.7E-02	6.1E-06	WATER9			1.3E+05	EPI	7.0E+00	EPI	1.6E-02	EPI	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
31508-00-6	~Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	3.3E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	9.0E-06	PHYSPROP	1.3E+02	EPI	1.5E+00	LookChem	4.7E-02	6.1E-06	WATER9			1.3E+05	EPI	7.1E+00	PHYSPROP	1.3E-02	PHYSPROP	8.6E+00	7.1E+00	3.2E+01	1.2E+00	EPI
32598-14-4	~Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	3.3E+02	PHYSPROP	1.2E-02	2.8E-04	EPI	6.5E-06	PHYSPROP	1.3E+02	EPI	1.5E+00	LookChem	4.7E-02	6.1E-06	WATER9			1.3E+05	EPI	6.8E+00	PHYSPROP	3.4E-03	PHYSPROP	5.2E+00	7.1E+00	3.1E+01	7.5E-01	EPI
74472-37-0	~Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	3.3E+02	PHYSPROP	3.8E-03	9.2E-05	PHYSPROP	5.5E-06	PHYSPROP	9.8E+01	PHYSPROP	1.5E+00	LookChem	4.7E-02	6.1E-06	WATER9			1.3E+05	EPI	7.0E+00	PHYSPROP	1.6E-02	PHYSPROP	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
57465-28-8	~Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	3.3E+02	EPI	7.8E-03	1.9E-04	EPI	2.2E-06	EPI	1.3E+02	EPI	1.5E+00	LookChem	4.7E-02	6.1E-06	WATER9			1.3E+05	EPI	7.0E+00	EPI	7.3E-03	EPI	6.9E+00	7.1E+00	3.2E+01	1.0E+00	EPI
1336-36-3	~Polychlorinated Biphenyls (high risk)	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
1336-36-3	~Polychlorinated Biphenyls (low risk)	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
1336-36-3	~Polychlorinated Biphenyls (lowest risk)	1336-36-3	2.9E+02	PHYSPROP	1.7E-02	4.2E-04	PHYSPROP	4.9E-04	PHYSPROP	1.2E+02	EPI	1.4E+00	HSDB	2.4E-02	6.3E-06	WATER9			7.8E+04	EPI	7.1E+00	PHYSPROP	7.0E-01	PHYSPROP	3.6E+00	4.5E+00	1.9E+01	5.5E-01	EPI
32598-13-3	~Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	2.9E+02	PHYSPROP	3.8E-04	9.4E-06	PHYSPROP	1.6E-05	PHYSPROP	1.8E+02	CRC89			4.9E-02	5.0E-06	WATER9			7.8E+04	EPI	6.6E+00	PHYSPROP	5.7E-04	PHYSPROP	6.0E+00	4.5E+00	2.0E+01	9.2E-01	EPI
70362-50-4	~Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	2.9E+02	EPI	9.1E-03	2.2E-04	EPI	8.5E-06	EPI	1.2E+02	EPI	1.4E+00	LookChem	4.9E-02	6.3E-06	WATER9			7.8E+04	EPI	6.3E+00	EPI	3.2E-02	EPI	3.8E+00	4.5E+00	2.0E+01	5.8E-01	EPI
9016-87-9	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	5.1E+02	EPI	5.4E-10	1.3E-11	EPI	5.4E-13	EPI	2.5E+02	EPI			3.0E-02	3.5E-06	WATER9			1.0E+10	EPI	1.0E+01	EPI	1.8E-06	EPI	1.6E+02	7.8E+01	3.7E+02	1.9E+01	EPI
	Polynuclear Aromatic Hydrocarbons (PAHs)																												
83-32-9	~Acenaphthene	83-32-9	1.5E+02	PHYSPROP	7.5E-03	1.8E-04	PHYSPROP	2.2E-03	PHYSPROP	9.3E+01	PHYSPROP	1.2E+00	CRC89	5.1E-02	8.3E-06	WATER9			5.0E+03	EPI	3.9E+00	PHYSPROP	3.9E+00	PHYSPROP	4.1E-01	7.7E-01	1.8E+00	8.6E-02	EPI
120-12-7	~Anthracene	120-12-7	1.8E+02	PHYSPROP	2.3E-03	5.6E-05	PHYSPROP	6.5E-06	EPI	2.2E+02	PHYSPROP	1.3E+00	CRC89	3.9E-02	7.9E-06	WATER9			1.6E+04	EPI	4.5E+00	PHYSPROP	4.3E-02	PHYSPROP	7.3E-01	1.0E+00	4.1E+00	1.4E-01	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients							Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
56-55-3	~Benz[a]anthracene	56-55-3	2.3E+02	PHYSPROP	4.9E-04	1.2E-05	PHYSPROP	2.1E-07	PHYSPROP	8.4E+01	PHYSPROP	1.3E+00	PubChem	2.6E-02	6.7E-06	WATER9			1.8E+05	EPI	5.8E+00	PHYSPROP	9.4E-03	PHYSPROP	3.2E+00	2.0E+00	8.5E+00	5.5E-01	EPI
205-82-3	~Benzo(j)fluoranthene	205-82-3	2.5E+02	PHYSPROP	8.3E-06	2.0E-07	PHYSPROP	2.6E-08	PHYSPROP	1.7E+02	PHYSPROP			4.8E-02	5.6E-06	WATER9			6.0E+05	EPI	6.1E+00	PHYSPROP	2.5E-03	PHYSPROP	4.2E+00	2.7E+00	1.2E+01	6.9E-01	EPI
50-32-8	~Benzo[a]pyrene	50-32-8	2.5E+02	PHYSPROP	1.9E-05	4.6E-07	PHYSPROP	5.5E-09	EPI	1.8E+02	PHYSPROP			4.8E-02	5.6E-06	WATER9			5.9E+05	EPI	6.1E+00	PHYSPROP	1.6E-03	PHYSPROP	4.4E+00	2.7E+00	1.2E+01	7.1E-01	EPI
205-99-2	~Benzo[b]fluoranthene	205-99-2	2.5E+02	PHYSPROP	2.7E-05	6.6E-07	PHYSPROP	5.0E-07	PHYSPROP	1.7E+02	PHYSPROP			4.8E-02	5.6E-06	WATER9			6.0E+05	EPI	5.8E+00	PHYSPROP	1.5E-03	PHYSPROP	2.5E+00	2.7E+00	1.1E+01	4.2E-01	EPI
207-08-9	~Benzo[k]fluoranthene	207-08-9	2.5E+02	PHYSPROP	2.4E-05	5.8E-07	PHYSPROP	9.7E-10	EPI	2.2E+02	PHYSPROP			4.8E-02	5.6E-06	WATER9			5.9E+05	EPI	6.1E+00	PHYSPROP	8.0E-04	PHYSPROP	4.2E+00	2.7E+00	1.2E+01	6.9E-01	EPI
91-58-7	~Chloronaphthalene, Beta-	91-58-7	1.6E+02	PHYSPROP	1.3E-02	3.2E-04	PHYSPROP	1.2E-02	EPI	6.1E+01	PHYSPROP	1.1E+00	CRC89	4.5E-02	7.7E-06	WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	1.2E+01	PHYSPROP	3.7E-01	8.6E-01	2.1E+00	7.5E-02	EPI
218-01-9	~Chrysene	218-01-9	2.3E+02	PHYSPROP	2.1E-04	5.2E-06	PHYSPROP	6.2E-09	PHYSPROP	2.6E+02	PHYSPROP	1.3E+00	CRC89	2.6E-02	6.7E-06	WATER9			1.8E+05	EPI	5.8E+00	PHYSPROP	2.0E-03	PHYSPROP	3.5E+00	2.0E+00	8.5E+00	6.0E-01	EPI
53-70-3	~Dibenz[a,h]anthracene	53-70-3	2.8E+02	PHYSPROP	5.8E-06	1.4E-07	EPI	9.6E-10	EPI	2.7E+02	PHYSPROP			4.5E-02	5.2E-06	WATER9			1.9E+06	EPI	6.8E+00	PHYSPROP	2.5E-03	PHYSPROP	6.1E+00	3.8E+00	1.7E+01	9.5E-01	EPI
192-65-4	~Dibenzo(a,e)pyrene	192-65-4	3.0E+02	PHYSPROP	5.8E-07	1.4E-08	PHYSPROP	7.0E-11	PHYSPROP	2.3E+02	PHYSPROP			4.2E-02	4.9E-06	WATER9			6.5E+06	EPI	7.7E+00	EPI	8.0E-05	PHYSPROP	2.8E+01	5.2E+00	2.4E+01	4.2E+00	EPI
57-97-6	~Dimethylbenz(a)anthracene, 7,12-	57-97-6	2.6E+02	PHYSPROP	1.5E-04	3.8E-06	EPI	6.8E-07	PHYSPROP	1.2E+02	PHYSPROP			4.7E-02	5.5E-06	WATER9			4.9E+05	EPI	5.8E+00	PHYSPROP	6.1E-02	PHYSPROP	2.5E+00	2.9E+00	1.2E+01	4.1E-01	EPI
206-44-0	~Fluoranthene	206-44-0	2.0E+02	PHYSPROP	3.6E-04	8.9E-06	PHYSPROP	9.2E-06	PHYSPROP	1.1E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.2E-06	WATER9			5.5E+04	EPI	5.2E+00	PHYSPROP	2.6E-01	PHYSPROP	1.7E+00	1.4E+00	5.7E+00	3.1E-01	EPI
86-73-7	~Fluorene	86-73-7	1.7E+02	PHYSPROP	3.9E-03	9.6E-05	PHYSPROP	6.0E-04	PHYSPROP	1.1E+02	PHYSPROP	1.2E+00	CRC89	4.4E-02	7.9E-06	WATER9			9.2E+03	EPI	4.2E+00	PHYSPROP	1.7E+00	PHYSPROP	5.5E-01	9.0E-01	2.2E+00	1.1E-01	EPI
193-39-5	~Indeno[1,2,3-cd]pyrene	193-39-5	2.8E+02	PHYSPROP	1.4E-05	3.5E-07	PHYSPROP	1.3E-10	PHYSPROP	1.6E+02	PHYSPROP			4.5E-02	5.2E-06	WATER9			2.0E+06	EPI	6.7E+00	PHYSPROP	1.9E-04	PHYSPROP	7.9E+00	3.7E+00	1.7E+01	1.2E+00	EPI
90-12-0	~Methylnaphthalene, 1-	90-12-0	1.4E+02	PHYSPROP	2.1E-02	5.1E-04	PHYSPROP	6.7E-02	PHYSPROP	-3.0E+01	PHYSPROP	1.0E+00	CRC89	5.3E-02	7.8E-06	WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	2.6E+01	PHYSPROP	4.3E-01	6.6E-01	1.6E+00	9.3E-02	EPI
91-57-6	~Methylnaphthalene, 2-	91-57-6	1.4E+02	PHYSPROP	2.1E-02	5.2E-04	PHYSPROP	5.5E-02	PHYSPROP	3.4E+01	PHYSPROP	1.0E+00	CRC89	5.2E-02	7.8E-06	WATER9			2.5E+03	EPI	3.9E+00	PHYSPROP	2.5E+01	PHYSPROP	4.2E-01	6.6E-01	1.6E+00	9.2E-02	EPI
91-20-3	~Naphthalene	91-20-3	1.3E+02	PHYSPROP	1.8E-02	4.4E-04	PHYSPROP	8.5E-02	PHYSPROP	8.0E+01	PHYSPROP	1.0E+00	CRC89	6.0E-02	8.4E-06	WATER9			1.5E+03	EPI	3.3E+00	PHYSPROP	3.1E+01	PHYSPROP	2.0E-01	5.5E-01	1.3E+00	4.7E-02	EPI
57835-92-4	~Nitropyrene, 4-	57835-92-4	2.5E+02	PHYSPROP	1.0E-06	2.5E-08	PHYSPROP	5.5E-08	PHYSPROP	1.9E+02	PHYSPROP			4.8E-02	5.6E-06	WATER9			8.6E+04	EPI	4.8E+00	PHYSPROP	6.8E-02	PHYSPROP	5.6E-01	2.6E+00	6.3E+00	9.2E-02	EPI
129-00-0	~Pyrene	129-00-0	2.0E+02	PHYSPROP	4.9E-04	1.2E-05	PHYSPROP	4.5E-06	PHYSPROP	1.5E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.2E-06	WATER9			5.4E+04	EPI	4.9E+00	PHYSPROP	1.4E-01	PHYSPROP	1.1E+00	1.4E+00	5.5E+00	2.0E-01	EPI
29420-49-3	Potassium Perfluorobutane Sulfonate	29420-49-3	3.4E+02	EPI				1.1E-08	EPI	1.9E+02	EPI			3.9E-02	4.6E-06	WATER9			1.8E+02	EPI	-3.3E-01	EPI	1.4E+00	EPI	2.1E-04	8.2E+00	2.0E+01	3.0E-05	EPI
67747-09-5	Prochloraz	67747-09-5	3.8E+02	PHYSPROP	6.7E-07	1.6E-08	EPI	1.1E-06	PHYSPROP	4.8E+01	PHYSPROP			3.6E-02	4.3E-06	WATER9			2.4E+03	EPI	4.1E+00	PHYSPROP	3.4E+01	PHYSPROP	4.8E-02	1.4E+01	3.2E+01	6.4E-03	EPI
26399-36-0	Profluralin	26399-36-0	3.5E+02	PHYSPROP	1.2E-02	2.9E-04	EPI	6.3E-05	PHYSPROP	3.2E+01	PHYSPROP	1.4E+00	HSDB	2.2E-02	5.5E-06	WATER9			3.1E+04	EPI	5.6E+00	PHYSPROP	1.0E-01	PHYSPROP	6.5E-01	9.3E+00	3.7E+01	9.0E-02	EPI
1610-18-0	Prometon	1610-18-0	2.3E+02	PHYSPROP	3.7E-08	9.1E-10	EPI	2.3E-06	PHYSPROP	9.1E+01	PHYSPROP			5.1E-02	6.0E-06	WATER9			1.4E+02	EPI	3.0E+00	PHYSPROP	7.5E+02	PHYSPROP	4.8E-02	1.9E+00	4.6E+00	8.3E-03	EPI
7287-19-6	Prometryn	7287-19-6	2.4E+02	PHYSPROP	4.9E-07	1.2E-08	EPI	1.2E-06	PHYSPROP	1.2E+02	PHYSPROP	1.2E+00	CRC89	2.4E-02	6.2E-06	WATER9			6.6E+02	EPI	3.5E+00	PHYSPROP	3.3E+01	PHYSPROP	8.9E-02	2.4E+00	5.7E+00	1.5E-02	EPI
1918-16-7	Propachlor	1918-16-7	2.1E+02	PHYSPROP	1.5E-05	3.6E-07	EPI	2.3E-04	PHYSPROP	7.7E+01	PHYSPROP	1.2E+00	CRC89	2.7E-02	7.0E-06	WATER9			2.0E+02	EPI	2.2E+00	PHYSPROP	5.8E+02	PHYSPROP	1.6E-02	1.6E+00	3.9E+00	2.9E-03	EPI
709-98-8	Propanil	709-98-8	2.2E+02	PHYSPROP	7.0E-08	1.7E-09	EPI	9.1E-07	PHYSPROP	9.2E+01	PHYSPROP	1.3E+00	CRC89	2.7E-02	6.9E-06	WATER9			1.8E+02	EPI	3.1E+00	PHYSPROP	1.5E+02	PHYSPROP	5.9E-02	1.8E+00	4.2E+00	1.0E-02	EPI
2312-35-8	Propargite	2312-35-8	3.5E+02	PHYSPROP	2.6E-05	6.4E-07	EPI	3.0E-07	PHYSPROP	1.7E+02	EPI	1.1E+00	CRC89	1.9E-02	4.8E-06	WATER9			3.7E+04	EPI	5.0E+00	PHYSPROP	2.2E-01	PHYSPROP	2.6E-01	9.7E+00	2.3E+01	3.6E-02	EPI
107-19-7	Propargyl Alcohol	107-19-7	5.6E+01	PHYSPROP	4.7E-05	1.2E-06	EPI	1.6E+01	PHYSPROP	-5.0E+01	PHYSPROP	9.5E-01	CRC89	1.2E-01	1.3E-05	WATER9			1.9E+00	EPI	-3.8E-01	PHYSPROP	1.0E+06	PHYSPROP	1.2E-03	2.2E-01	5.2E-01	4.2E-04	EPI
139-40-2	Propazine	139-40-2	2.3E+02	PHYSPROP	1.9E-07	4.6E-09	EPI	1.3E-07	PHYSPROP	2.1E+02	PHYSPROP	1.2E+00	CRC89	2.5E-02	6.4E-06	WATER9			3.4E+02	EPI	2.9E+00	PHYSPROP	8.6E+00	PHYSPROP	4.2E-02	2.0E+00	4.9E+00	7.1E-03	EPI
122-42-9	Propham	122-42-9	1.8E+02	PHYSPROP	7.5E-06	1.8E-07	EPI	1.4E-04	PHYSPROP	8.7E+01	PHYSPROP	1.1E+00	CRC89	3.6E-02	7.1E-06	WATER9			2.2E+02	EPI	2.6E+00	PHYSPROP	1.8E+02	PHYSPROP	4.3E-02	1.1E+00	2.5E+00	8.3E-03	EPI
60207-90-1	Propiconazole	60207-90-1	3.4E+02	PHYSPROP	7.0E-08	1.7E-09	EPI	4.2E-07	PHYSPROP	1.7E+02	EPI	1.3E+00	CRC89	2.1E-02	5.3E-06	WATER9			1.6E+03	EPI	3.7E+00	PHYSPROP	1.1E+02	PHYSPROP	4.0E-02	8.7E+00	2.1E+01	5.6E-03	EPI
123-38-6	Propionaldehyde	123-38-6	5.8E+01	PHYSPROP	3.0E-03	7.3E-05	PHYSPROP	3.2E+02	PHYSPROP	-8.0E+01	PHYSPROP	8.7E-01	CRC89	1.1E-01	1.2E-05	WATER9			1.0E+00	EPI	5.9E-01	PHYSPROP	3.1E+05	PHYSPROP	5.3E-03	2.2E-01	5.3E-01	1.8E-03	EPI
103-65-1	Propyl benzene	103-65-1	1.2E+02	PHYSPROP	4.3E-01	1.1E-02	PHYSPROP	3.4E+00	PHYSPROP	-1.0E+02	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.8E-06	WATER9			8.1E+02	EPI	3.7E+00	PHYSPROP	5.2E+01	PHYSPROP	4.0E-01	5.0E-01	1.2E+00	9.4E-02	EPI
115-07-1	Propylene	115-07-1	4.2E+01	PHYSPROP	8.0E+00	2.0E-01	PHYSPROP	8.7E+03	PHYSPROP	-1.9E+02	PHYSPROP	5.1E-01	CRC89	1.1E-01	1.1E-05	WATER9			2.2E+01	EPI	1.8E+00	PHYSPROP	2.0E+02	PHYSPROP	3.4E-02	1.8E-01	4.3E-01	1.4E-02	EPI
57-55-6	Propylene Glycol	57-55-6	7.6E+01	PHYSPROP	5.3E-07	1.3E-08	EPI	1.3E-01	PHYSPROP	-6.0E+01	PHYSPROP	1.0E+00	CRC89	9.8E-02	1.2E-05	WATER9			1.0E+00	EPI	-9.2E-01	PHYSPROP	1.0E+06	PHYSPROP	4.8E-04	2.8E-01	6.7E-01	1.4E-04	EPI
6423-43-4	Propylene Glycol Dinitrate	6423-43-4	1.7E+02	PHYSPROP	3.9E-05	9.4E-07	PHYSPROP	3.8E-01	PHYSPROP	-9.6E+00	EPI			6.3E-02	7.3E-06	WATER9			6.1E+01	EPI	1.8E+00	PHYSPROP	3.3E+03	EPI	1.0E-02	9.0E-01	2.1E+00	2.1E-03	EPI
107-98-2	Propylene Glycol Monomethyl Ether	107-98-2	9.0E+01	PHYSPROP	3.8E-05	9.2E-07	PHYSPROP	1.3E+01	PHYSPROP	-9.5E+01	PHYSPROP	9.6E-01	CRC89	8.3E-02	1.0E-05	WATER9			1.0E+00	EPI	-4.9E-01	PHYSPROP	1.0E+06	PHYSPROP	1.4E-03	3.4E-01	8.1E-01	3.7E-04	RAGSE
75-56-9	Propylene Oxide	75-56-9	5.8E+01	PHYSPROP	2.8E-03	7.0E-05	EPI	5.4E+02	PHYSPROP	-1.1E+02	PHYSPROP	8.3E-01	PERRY	1.1E-01	1.2E-05	WATER9			5.2E+00	EPI	3.0E-02	PHYSPROP	5.9E+05	PHYSPROP	2.3E-03	2.2E-01	5.3E-01	7.7E-04	EPI
23950-58-5	Propyzamide	23950-58-5	2.6E+02	PHYSPROP	4.0E-07	9.8E-09	EPI	4.4E-07	PHYSPROP	1.6E+02	PHYSPROP			4.7E-02	5.5E-06	WATER9			4.0E+02	EPI	3.4E+00	PHYSPROP	1.5E+01	PHYSPROP	6.7E-02	2.9E+00	6.9E+00	1.1E-02	EPI
110-86-1	Pyridine	110-86-1	7.9E+01	PHYSPROP	4.5E-04	1.1E-05	PHYSPROP	2.1E+01	PHYSPROP	-4.2E+01	PHYSPROP	9.8E-01	CRC89	9.3E-02	1.1E-05	WATER9			7.2E+01	EPI	6.5E-01	PHYSPROP	1.0E+06	PHYSPROP	5.2E-03	2.9E-01	7.0E-01	1.5E-03	EPI
13593-03-8	Quinalphos	13593-03-8	3.0E+02	PHYSPROP	1.9E-06	4.6E-08	EPI	2.6E-06	PHYSPROP	3.2E+01	PHYSPROP			4.3E-02	5.0E-06	WATER9			4.2E+03	EPI	4.4E+00	PHYSPROP	2.2E+01	PHYSPROP	2.0E-01	4.9E+00	1.2E+01	3.0E-02	EPI
91-22-5	Quinoline	91-22-5	1.3E+02	PHYSPROP	6.8E-05	1.7E-06	EPI	6.0E-02	PHYSPROP	-1.5E+01	PHYSPROP	1.1E+00	CRC89	6.2E-02	8.7E-06	WATER9			1.5E+03	EPI	2.0E+00	PHYSPROP	6.1E+03	PHYSPROP	2.9E-02	5.6E-01	1.3E+00	6.6E-03	EPI
76578-14-8	Quizalofop-ethyl	76578-14-8	3.7E+02	PHYSPROP	4.3E-07	1.1E-08	EPI	6.5E-09	PHYSPROP	9.2E+01	PHYSPROP			3.7E-02	4.3E-06	WATER9			7.7E+03	EPI	4.3E+00	PHYSPROP	3.0E-01	PHYSPROP	6.6E-02	1.3E+01	3.1E+01	8.9E-03	EPI
NA	Refractory Ceramic Fibers	NA																										1.0E-03	RAGSE
10453-86-8	Resmethrin	10453-86-8	3.4E+02	PHYSPROP	5.4E-06	1.3E-07	EPI	1.1E-08	PHYSPROP	5.7E+01	PHYSPROP			3.9E-02	4.6E-06	WATER9			3.1E+05	EPI	6.1E+00	PHYSPROP	3.8E-02	PHYSPROP	1.7E+00	8.3E+00	3.3E+01	2.4E-01	EPI
299-84-3	Ronnel	299-84-3	3.2E+02	PHYSPROP	1.3E-03	3.2E-05	EPI	7.5E-05	PHYSPROP	4.1E+01	PHYSPROP	1.4E+00	CRC89	2.3E-02	5.9E-06	WATER9			4.5E+03	EPI	4.9E+00	PHYSPROP	1.0E+00	PHYSPROP	3.0E-01	6.6E+00	1.6E+01	4.3E-02	EPI
83-79-4	Rotenone	83-79-4	3.9E+02	PHYSPROP	4.6E-12	1.1E-13	PHYSPROP	6.9E-10	PHYSPROP	1.8E+02	PHYSPROP			3.5E-02	4.1E-06	WATER9			2.6E+05	EPI	4.1E+00	PHYSPROP	2.0E-01	PHYSPROP	3.9E-02	1.7E+01	4.1E+01	5.1E-03	EPI
94-59-7	Safrole	94-59-7	1.6E+02	PHYSPROP	3.7E-04	9.1E-06	PHYSPROP	6.2E-02	PHYSPROP	1.1E+01	PHYSPROP	1.1E+00	CRC89	4.4E-02	7.6E-06	WATER9			2.1E+02	EPI	3.5E+00	PHYSPROP	1.2E+02	PHYSPROP	5.5E-02	8.5E-01	2.0E+00	1.1E-02	RAGSE
7783-00-8	Selenious Acid	7783-00-8	1.3E+02	PHYSPROP						7.0E+01	EPI	3.0E+00	CRC89										9.0E+05	PERRY	4.4E-03	5.5E-01	1.3E+00	1.0E-03	RAGSE
7782-49-2	Selenium	7782-49-2	7.9E+01	PHYSPROP				1.4E-10	EPI	2.2E+02	PHYSPROP	4.8E+00	CRC89				5.0E+00	SSL							3.4E-03	2.9E-01	7.0E-01	1.0E-03	RAGSE
7446-34-6	Selenium Sulfide	7446-34-6	1.1E+02	EPI																					4.1E-03	4.4E-01	1.1E+00	1.0E-03	RAGSE
74051-80-2	Sethoxydim	74051-80-2	3.3E+02	PHYSPROP	8.8E-10	2.2E-11	PHYSPROP	1.6E-07	PHYSPROP	1.6E+02	EPI	1.0E+00	CRC89	2.0E-02	4.8E-06	WATER9			4.4E+03	EPI	4.4E+00	PHYSPROP	2.5E+01	PHYSPROP	1.3E-01	7.2E+00	1.7E+01	1.9E-02	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
7631-86-9	Silica (crystalline, respirable)	7631-86-9	6.0E+01	EPI						1.7E+03	PERRY	2.3E+00	PERRY												3.0E-03	2.3E-01	5.5E-01	1.0E-03	RAGSE
7440-22-4	Silver	7440-22-4	1.1E+02	PHYSPROP				0.0E+00	NIOSH	9.6E+02	PHYSPROP	1.1E+01	CRC89				8.3E+00	SSL							2.4E-03	4.2E-01	1.0E+00	6.0E-04	RAGSE
122-34-9	Simazine	122-34-9	2.0E+02	PHYSPROP	3.9E-08	9.4E-10	EPI	2.2E-08	PHYSPROP	2.3E+02	PHYSPROP	1.3E+00	CRC89	2.8E-02	7.4E-06	WATER9			1.5E+02	EPI	2.2E+00	PHYSPROP	6.2E+00	PHYSPROP	1.8E-02	1.4E+00	3.4E+00	3.3E-03	EPI
62476-59-9	Sodium Acifluorfen	62476-59-9	3.8E+02	PHYSPROP	2.5E-09	6.1E-11	PHYSPROP	9.8E-09	EPI	2.8E+02	EPI			3.6E-02	4.2E-06	WATER9			3.9E+03	EPI	3.7E-01	PHYSPROP	2.5E+05	PHYSPROP	1.5E-04	1.5E+01	3.6E+01	2.0E-05	EPI
26628-22-8	Sodium Azide	26628-22-8	6.5E+01	EPI						3.0E+02	CRC89	1.8E+00	CRC89										4.1E+05	CRC89	3.1E-03	2.4E-01	5.8E-01	1.0E-03	RAGSE
10588-01-9	Sodium Dichromate	10588-01-9	2.6E+02	CRC89						3.6E+02	CRC89												1.9E+06	CRC89	6.2E-03	3.1E+00	7.4E+00	1.0E-03	RAGSE
148-18-5	Sodium Diethyldithiocarbamate	148-18-5	1.7E+02	PHYSPROP				8.2E-10	PHYSPROP	9.4E+01	PHYSPROP			6.1E-02	7.2E-06	WATER9			2.0E+02	EPI	-1.4E+00	PHYSPROP	3.6E+05	PHYSPROP	9.7E-05	9.7E-01	2.3E+00	1.9E-05	EPI
7681-49-4	Sodium Fluoride	7681-49-4	4.2E+01	PHYSPROP				0.0E+00	NIOSH	9.9E+02	PHYSPROP	2.8E+00	CRC89										4.2E+04	PHYSPROP	2.5E-03	1.8E-01	4.3E-01	1.0E-03	RAGSE
62-74-8	Sodium Fluoroacetate	62-74-8	1.0E+02	PHYSPROP	4.5E-05	1.1E-06	PHYSPROP	6.5E-07	PHYSPROP	2.0E+02	PHYSPROP			8.8E-02	1.0E-05	WATER9			1.4E+00	EPI	-3.8E+00	PHYSPROP	1.1E+06	PHYSPROP	5.1E-06	3.8E-01	9.2E-01	1.3E-06	EPI
13718-26-8	Sodium Metavanadate	13718-26-8	1.2E+02	CRC89						6.3E+02	CRC89												2.1E+05	CRC89	4.2E-03	5.1E-01	1.2E+00	1.0E-03	RAGSE
13472-45-2	Sodium Tungstate	13472-45-2	2.9E+02	CRC89						7.0E+02	CRC89	4.2E+00	CRC89										7.4E+05	CRC89	6.6E-03	4.6E+00	1.1E+01	1.0E-03	RAGSE
10213-10-2	Sodium Tungstate Dihydrate	10213-10-2	3.3E+02	CRC89						1.0E+02	CRC89	3.3E+00	CRC89										7.4E+05	CRC89	7.0E-03	7.4E+00	1.8E+01	1.0E-03	RAGSE
961-11-5	Stirofos (Tetrachlorovinphos)	961-11-5	3.7E+02	PHYSPROP	7.5E-08	1.8E-09	EPI	4.2E-08	PHYSPROP	9.8E+01	PHYSPROP			3.7E-02	4.3E-06	WATER9			1.4E+03	EPI	3.5E+00	PHYSPROP	1.1E+01	PHYSPROP	2.3E-02	1.2E+01	2.8E+01	3.1E-03	EPI
7789-06-2	Strontium Chromate	7789-06-2	2.0E+02	CRC89								3.9E+00	CRC89										1.1E+03	CRC89	5.5E-03	1.5E+00	3.5E+00	1.0E-03	RAGSE
7440-24-6	Strontium, Stable	7440-24-6	8.8E+01	PHYSPROP						7.8E+02	PHYSPROP	2.6E+00	CRC89				3.5E+01	BAES							3.6E-03	3.3E-01	7.8E-01	1.0E-03	RAGSE
57-24-9	Strychnine	57-24-9	3.3E+02	PHYSPROP	3.1E-12	7.6E-14	PHYSPROP	2.9E-09	PHYSPROP	2.9E+02	PHYSPROP	1.4E+00	CRC89	2.2E-02	5.6E-06	WATER9			5.4E+03	EPI	1.9E+00	PHYSPROP	1.6E+02	PHYSPROP	2.8E-03	7.8E+00	1.9E+01	4.0E-04	EPI
100-42-5	Styrene	100-42-5	1.0E+02	PHYSPROP	1.1E-01	2.8E-03	PHYSPROP	6.4E+00	PHYSPROP	-3.1E+01	PHYSPROP	9.0E-01	CRC89	7.1E-02	8.8E-06	WATER9			4.5E+02	EPI	3.0E+00	PHYSPROP	3.1E+02	PHYSPROP	1.5E-01	4.0E-01	9.7E-01	3.7E-02	EPI
NA	Styrene-Acrylonitrile (SAN) Trimer	NA	2.1E+02	OTHER								1.1E+00	PPRTV	2.6E-02	6.5E-06	WATER9					3.1E+00	OTHER	8.5E+01	PPRTV	6.6E-02	1.6E+00	3.8E+00	1.2E-02	RAGSE
126-33-0	Sulfolane	126-33-0	1.2E+02	PHYSPROP	2.0E-04	4.9E-06	PHYSPROP	4.1E-03	EPI	2.8E+01	PHYSPROP	1.3E+00	CRC89	7.2E-02	9.9E-06	WATER9			9.1E+00	EPI	-7.7E-01	PHYSPROP	1.0E+06	PHYSPROP	4.3E-04	5.0E-01	1.2E+00	1.0E-04	EPI
80-07-9	Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	2.9E+02	PHYSPROP	5.6E-06	1.4E-07	PHYSPROP	8.1E-07	PHYSPROP	1.5E+02	PHYSPROP			4.4E-02	5.1E-06	WATER9			2.9E+03	EPI	3.9E+00	PHYSPROP	2.4E+00	PHYSPROP	9.7E-02	4.3E+00	1.0E+01	1.5E-02	EPI
7446-11-9	Sulfur Trioxide	7446-11-9	8.0E+01	PHYSPROP				2.6E+02	PHYSPROP	1.7E+01	PHYSPROP	1.9E+00	CRC89	1.2E-01	1.6E-05	WATER9									3.4E-03	3.0E-01	7.1E-01	1.0E-03	RAGSE
7664-93-9	Sulfuric Acid	7664-93-9	9.8E+01	PHYSPROP				5.9E-05	PHYSPROP	1.0E+01	PHYSPROP	1.8E+00	CRC89										1.0E+06	PHYSPROP	3.8E-03	3.7E-01	8.9E-01	1.0E-03	RAGSE
140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	3.3E+02	PHYSPROP	7.8E-06	1.9E-07	PHYSPROP	2.2E-07	PHYSPROP	-3.2E+01	PHYSPROP	1.1E+00	CRC89	2.0E-02	5.0E-06	WATER9			5.6E+03	EPI	4.8E+00	PHYSPROP	5.9E-01	PHYSPROP	2.3E-01	7.9E+00	1.9E+01	3.3E-02	EPI
21564-17-0	TCMTB	21564-17-0	2.4E+02	PHYSPROP	2.7E-10	6.5E-12	PHYSPROP	3.1E-07	PHYSPROP	1.5E+02	EPI			4.9E-02	5.8E-06	WATER9			3.4E+03	EPI	3.3E+00	PHYSPROP	1.3E+02	PHYSPROP	6.7E-02	2.3E+00	5.5E+00	1.1E-02	EPI
34014-18-1	Tebuthiuron	34014-18-1	2.3E+02	PHYSPROP	4.9E-09	1.2E-10	PHYSPROP	3.0E-07	PHYSPROP	1.6E+02	PHYSPROP			5.1E-02	5.9E-06	WATER9			4.2E+01	EPI	1.8E+00	PHYSPROP	2.5E+03	PHYSPROP	7.4E-03	2.0E+00	4.8E+00	1.3E-03	EPI
3383-96-8	Temephos	3383-96-8	4.7E+02	PHYSPROP	8.0E-08	2.0E-09	PHYSPROP	7.9E-08	PHYSPROP	3.0E+01	PHYSPROP	1.3E+00	CRC89	1.8E-02	4.5E-06	WATER9			9.5E+04	EPI	6.0E+00	PHYSPROP	2.7E-01	PHYSPROP	2.9E-01	4.3E+01	1.0E+02	3.5E-02	EPI
5902-51-2	Terbacil	5902-51-2	2.2E+02	PHYSPROP	4.9E-09	1.2E-10	EPI	4.7E-07	PHYSPROP	1.8E+02	PHYSPROP	1.3E+00	CRC89	2.7E-02	7.2E-06	WATER9			5.0E+01	EPI	1.9E+00	PHYSPROP	7.1E+02	PHYSPROP	9.7E-03	1.7E+00	4.1E+00	1.7E-03	EPI
13071-79-9	Terbufos	13071-79-9	2.9E+02	PHYSPROP	9.8E-04	2.4E-05	EPI	3.2E-04	PHYSPROP	-2.9E+01	PHYSPROP	1.1E+00	CRC89	2.2E-02	5.4E-06	WATER9			1.0E+03	EPI	4.5E+00	PHYSPROP	5.1E+00	PHYSPROP	2.3E-01	4.3E+00	1.0E+01	3.6E-02	EPI
886-50-0	Terbutryn	886-50-0	2.4E+02	PHYSPROP	8.8E-07	2.2E-08	EPI	1.7E-06	PHYSPROP	1.0E+02	PHYSPROP	1.1E+00	CRC89	2.4E-02	6.0E-06	WATER9			6.1E+02	EPI	3.7E+00	PHYSPROP	2.5E+01	PHYSPROP	1.3E-01	2.4E+00	5.7E+00	2.1E-02	EPI
5436-43-1	Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	4.9E+02	PHYSPROP	1.2E-04	3.0E-06	PHYSPROP	7.0E-08	EPI	1.6E+02	EPI			3.1E-02	3.6E-06	WATER9			1.3E+04	EPI	6.8E+00	PHYSPROP	1.5E-03	PHYSPROP	7.9E-01	5.5E+01	2.1E+02	9.3E-02	EPI
95-94-3	Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.2E+02	PHYSPROP	4.1E-02	1.0E-03	PHYSPROP	5.4E-03	EPI	1.4E+02	PHYSPROP	1.9E+00	CRC89	3.2E-02	8.8E-06	WATER9			2.2E+03	EPI	4.6E+00	PHYSPROP	6.0E-01	PHYSPROP	6.6E-01	1.7E+00	6.7E+00	1.2E-01	EPI
630-20-6	Tetrachloroethane, 1,1,1,2-	630-20-6	1.7E+02	PHYSPROP	1.0E-01	2.5E-03	PHYSPROP	1.2E+01	PHYSPROP	-7.0E+01	PHYSPROP	1.5E+00	CRC89	4.8E-02	9.1E-06	WATER9			8.6E+01	EPI	2.9E+00	PHYSPROP	1.1E+03	PHYSPROP	7.9E-02	9.2E-01	2.2E+00	1.6E-02	EPI
79-34-5	Tetrachloroethane, 1,1,2,2-	79-34-5	1.7E+02	PHYSPROP	1.5E-02	3.7E-04	PHYSPROP	4.6E+00	PHYSPROP	-4.4E+01	PHYSPROP	1.6E+00	CRC89	4.9E-02	9.3E-06	WATER9			9.5E+01	EPI	2.4E+00	PHYSPROP	2.8E+03	PHYSPROP	3.5E-02	9.2E-01	2.2E+00	6.9E-03	EPI
127-18-4	Tetrachloroethylene	127-18-4	1.7E+02	PHYSPROP	7.2E-01	1.8E-02	PHYSPROP	1.9E+01	PHYSPROP	-2.2E+01	PHYSPROP	1.6E+00	CRC89	5.0E-02	9.5E-06	WATER9			9.5E+01	EPI	3.4E+00	PHYSPROP	2.1E+02	PHYSPROP	1.7E-01	8.9E-01	2.1E+00	3.3E-02	EPI
58-90-2	Tetrachlorophenol, 2,3,4,6-	58-90-2	2.3E+02	PHYSPROP	3.6E-04	8.8E-06	EPI	6.7E-04	EPI	7.0E+01	PHYSPROP			5.0E-02	5.9E-06	WATER9			2.8E+02	SSL	4.5E+00	PHYSPROP	2.3E+01	PHYSPROP	4.2E-01	2.1E+00	5.0E+00	7.1E-02	EPI
5216-25-1	Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	2.3E+02	PHYSPROP	7.9E-03	1.9E-04	PHYSPROP	3.8E-02	PHYSPROP	4.0E+01	EPI	1.4E+00	CRC89	2.8E-02	7.3E-06	WATER9			1.6E+03	EPI	4.5E+00	PHYSPROP	4.0E+00	PHYSPROP	4.9E-01	2.0E+00	4.9E+00	8.4E-02	EPI
3689-24-5	Tetraethyl Dithiopyrophosphate	3689-24-5	3.2E+02	PHYSPROP	1.8E-04	4.5E-06	EPI	1.1E-04	PHYSPROP	-3.2E+01	EPI	1.2E+00	CRC89	2.1E-02	5.3E-06	WATER9			2.7E+02	EPI	4.0E+00	PHYSPROP	3.0E+01	PHYSPROP	7.5E-02	6.7E+00	1.6E+01	1.1E-02	EPI
811-97-2	Tetrafluoroethane, 1,1,1,2-	811-97-2	1.0E+02	PHYSPROP	2.0E+00	5.0E-02	PHYSPROP	5.0E+03	PHYSPROP	-1.0E+02	PHYSPROP	1.2E+00	CRC89	8.2E-02	1.1E-05	WATER9			8.6E+01	EPI	1.7E+00	PHYSPROP	2.0E+03	PHYSPROP	2.1E-02	3.9E-01	9.4E-01	5.5E-03	EPI
479-45-8	Tetryl (Trinitrophenylmethylnitramine)	479-45-8	2.9E+02	PHYSPROP	1.1E-07	2.7E-09	PHYSPROP	5.7E-08	PHYSPROP	1.3E+02	PHYSPROP	1.6E+00	CRC89	2.6E-02	6.7E-06	WATER9			4.6E+03	EPI	1.6E+00	PHYSPROP	7.4E+01	PHYSPROP	3.1E-03	4.3E+00	1.0E+01	4.7E-04	EPI
1314-32-5	Thallic Oxide	1314-32-5	4.6E+02	CRC89						8.3E+02	CRC89	1.0E+01	CRC89												8.2E-03	3.8E+01	9.1E+01	1.0E-03	RAGSE
10102-45-1	Thallium (I) Nitrate	10102-45-1	2.7E+02	PHYSPROP						2.1E+02	PHYSPROP	5.6E+00	CRC89										9.6E+04	PHYSPROP	6.3E-03	3.3E+00	7.9E+00	1.0E-03	RAGSE
7440-28-0	Thallium (Soluble Salts)	7440-28-0	2.1E+02	PHYSPROP						3.0E+02	PHYSPROP	1.2E+01	CRC89				7.1E+01	SSL							5.5E-03	1.5E+00	3.6E+00	1.0E-03	RAGSE
563-68-8	Thallium Acetate	563-68-8	2.6E+02	PHYSPROP				1.5E+01	PHYSPROP	1.3E+02	CRC89	3.7E+00	CRC89	3.9E-02	1.2E-05	WATER9			1.5E+00	EPI	-1.7E-01	PHYSPROP	2.8E+04	PHYSPROP	2.5E-04	3.1E+00	7.5E+00	4.0E-05	EPI
6533-73-9	Thallium Carbonate	6533-73-9	4.7E+02	PHYSPROP				5.8E+00	PHYSPROP	2.7E+02	PHYSPROP	7.1E+00	CRC89	3.9E-02	1.2E-05	WATER9			2.9E+00	EPI	-8.6E-01	PHYSPROP	5.2E+04	PHYSPROP	8.2E-06	4.4E+01	1.1E+02	9.8E-07	EPI
7791-12-0	Thallium Chloride	7791-12-0	2.4E+02	PHYSPROP						4.3E+02	PHYSPROP	7.0E+00	CRC89	5.2E-02	1.8E-05	WATER9							2.9E+03	PHYSPROP	6.0E-03	2.3E+00	5.6E+00	1.0E-03	RAGSE
12039-52-0	Thallium Selenite	12039-52-0	2.8E+02	EPI						3.3E+02	CRC89														6.5E-03	4.1E+00	9.7E+00	1.0E-03	RAGSE
7446-18-6	Thallium Sulfate	7446-18-6	5.0E+02	PHYSPROP						6.3E+02	PHYSPROP	6.8E+00	CRC89										5.5E+04	CRC89	8.6E-03	7.1E+01	1.7E+02	1.0E-03	RAGSE
79277-27-3	Thifensulfuron-methyl	79277-27-3	3.9E+02	PHYSPROP	1.7E-12	4.1E-14	PHYSPROP	1.3E-10	PHYSPROP	1.8E+02	PHYSPROP			3.6E-02	4.2E-06	WATER9			5.1E+01	EPI	1.6E+00	PHYSPROP	2.2E+03	PHYSPROP	8.6E-04	1.6E+01	3.7E+01	1.1E-04	EPI
28249-77-6	Thiobencarb	28249-77-6	2.6E+02	PHYSPROP	1.1E-05	2.7E-07	EPI	2.2E-05	PHYSPROP	3.3E+00	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.9E-06	WATER9			1.6E+03	EPI	3.4E+00	PHYSPROP	2.8E+01	PHYSPROP	6.3E-02	2.9E+00	7.0E+00	1.0E-02	EPI
111-48-8	Thiodiglycol	111-48-8	1.2E+02	PHYSPROP	7.6E-08	1.9E-09	PHYSPROP	3.2E-03	PHYSPROP	-1.0E+01	PHYSPROP	1.2E+00	CRC89	6.8E-02	9.4E-06	WATER9			1.0E+00	EPI	-6.3E-01	PHYSPROP	1.0E+06	PHYSPROP	5.2E-04	5.1E-01	1.2E+00	1.2E-04	EPI
39196-18-4	Thiofanox	39196-18-4	2.2E+02	PHYSPROP	3.8E-07	9.4E-09	EPI	1.7E-04	PHYSPROP	5.7E+01	PHYSPROP			5.2E-02	6.1E-06	WATER9			7.2E+01	EPI	2.2E+00	PHYSPROP	5.2E+03	PHYSPROP	3.6E-02	1.8E+00	4.2E+00	6.3E-03	EPI
23564-05-8	Thiophanate, Methyl	23564-05-8	3.4E+02	PHYSPROP	4.9E-08	1.2E-09	EPI	7.1E-08	PHYSPROP	1.7E+02	EPI			3.9E-02	4.5E-06	WATER9			3.3E+02	EPI	1.4E+00	PHYSPROP	2.7E+01	PHYSPROP	1.1E-03	8.7E+00	2.1E+01	1.6E-04	EPI
137-26-8	Thiram	137-26-8	2.4E+02	PHYSPROP	7.4E-06	1.8E-07	EPI	1.7E-05	PHYSPROP	1.6E+02	PHYSPROP	1.3E+00	PERRY	2.6E-02	6.6E-06	WATER9			6.1E+02	EPI	1.7E+00	PHYSPROP	3.0E+01	PHYSPROP	5.9E-03	2.3E+00	5.6E+00	9.9E-04	EPI
7440-31-5	Tin	7440-31-5	1.2E+02	CRC89				0.0E+00	NIOSH	1.3E+01	CRC89	7.3E+00	CRC89				2.5E+02	BAES							4.2E-03	4.9E-01	1.2E+00	1.0E-03	RAGSE
7550-45-0	Titanium Tetrachloride	7550-45-0	1.9E+02	CRC89				1.0E+01	ATSDR Profile	-2.4E+01	CRC89	1.7E+00	CRC89	3.8E-02	9.1E-06	WATER9									5.3E-03	1.2E+00	2.9E+00	1.0E-03	RAGSE
108-88-3	Toluene	108-88-3	9.2E+01	PHYSPROP	2.7E-01	6.6E-03	PHYSPROP	2.8E+01	PHYSPROP	-9.5E+01	PHYSPROP	8.6E-01	CRC89	7.8E-02	9.2E-06	WATER9			2.3E+02	EPI	2.7E+00	PHYSPROP	5.3E+02	PHYSPROP	1.1E-01	3.5E-01	8.3E-01	3.1E-02	EPI
584-84-9	Toluene-2,4-diisocyante	584-84-9	1.7E+02	EPI	4.5E-04	1.1E-05	EPI	8.0E-03	EPI	2.1E+01	EPI	1.2E+00	CRC89	4.0E-02	7.8E-06	WATER9			7.4E+03	EPI	3.7E+00	EPI	3.8E+01	EPI	2.6E+00	9.9E-01	4.1E+00	5.1E-01	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_w and D_{ia} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
95-70-5	Toluene-2,5-diamine	95-70-5	1.2E+02	PHYSPROP	3.0E-07	7.4E-09	PHYSPROP	3.4E-03	PHYSPROP	6.4E+01	PHYSPROP			7.7E-02	9.0E-06	WATER9			5.5E+01	EPI	1.6E-01	PHYSPROP	7.7E+04	PHYSPROP	1.7E-03	5.1E-01	1.2E+00	4.1E-04	EPI
91-08-7	Toluene-2,6-diisocyante	91-08-7	1.7E+02	EPI	4.5E-04	1.1E-05	EPI	2.1E-02	EPI	1.8E+01	EPI			6.1E-02	7.1E-06	WATER9			7.6E+03	EPI	3.7E+00	EPI	3.8E+01	EPI	2.6E-01	9.9E-01	2.4E+00	5.1E-02	EPI
95-53-4	Toluidine, o- (Methylaniline, 2-)	95-53-4	1.1E+02	PHYSPROP	8.1E-05	2.0E-06	PHYSPROP	2.6E-01	PHYSPROP	-1.4E+01	PHYSPROP	1.0E+00	CRC89	7.2E-02	9.2E-06	WATER9			1.2E+02	EPI	1.3E+00	PHYSPROP	1.7E+04	PHYSPROP	1.2E-02	4.2E-01	1.0E+00	3.0E-03	EPI
106-49-0	Toluidine, p-	106-49-0	1.1E+02	PHYSPROP	8.3E-05	2.0E-06	PHYSPROP	2.9E-01	PHYSPROP	4.4E+01	PHYSPROP	9.6E-01	CRC89	7.1E-02	9.0E-06	WATER9			1.1E+02	EPI	1.4E+00	PHYSPROP	6.5E+03	PHYSPROP	1.3E-02	4.2E-01	1.0E+00	3.3E-03	EPI
NA	Total Petroleum Hydrocarbons (Aliphatic High)	NA	1.7E+02	EPI	3.3E+02	8.2E+00	EPI	1.4E-01	EPI	-9.6E+00	EPI			6.2E-02	7.2E-06	WATER9			4.8E+03	EPI	6.1E+00	EPI	3.7E-03	EPI	9.8E+00	9.5E-01	4.3E+00	2.0E+00	EPI
NA	Total Petroleum Hydrocarbons (Aliphatic Low)	NA	8.6E+01	EPI	7.4E+01	1.8E+00	EPI	1.5E+02	EPI	-9.5E+01	EPI	6.6E-01	CRC89	7.3E-02	8.2E-06	WATER9			1.3E+02	EPI	3.9E+00	EPI	9.5E+00	EPI	7.2E-01	3.2E-01	1.2E+00	2.0E-01	EPI
NA	Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	1.3E+02	EPI	1.4E+02	3.4E+00	EPI	4.5E+00	EPI	-5.4E+01	EPI	7.2E-01	CRC89	5.1E-02	6.8E-06	WATER9			8.0E+02	EPI	5.7E+00	EPI	2.2E-01	EPI	7.4E+00	5.5E-01	2.5E+00	1.7E+00	EPI
NA	Total Petroleum Hydrocarbons (Aromatic High)	NA	2.0E+02	EPI	3.6E-04	8.9E-06	EPI	9.2E-06	EPI	1.1E+02	EPI	1.3E+00	CRC89	2.8E-02	7.2E-06	WATER9			5.5E+04	EPI	5.2E+00	EPI	2.6E-01	EPI	1.7E+00	1.4E+00	5.7E+00	3.1E-01	EPI
NA	Total Petroleum Hydrocarbons (Aromatic Low)	NA	7.8E+01	EPI	2.3E-01	5.6E-03	EPI	9.5E+01	EPI	5.5E+00	EPI	8.8E-01	CRC89	9.0E-02	1.0E-05	WATER9			1.5E+02	EPI	2.1E+00	EPI	1.8E+03	EPI	5.1E-02	2.9E-01	6.9E-01	1.5E-02	EPI
NA	Total Petroleum Hydrocarbons (Aromatic Medium)	NA	1.4E+02	EPI	2.0E-02	4.8E-04	EPI	7.0E-02	EPI	5.7E+01	EPI	1.0E+00	CRC89	5.6E-02	8.1E-06	WATER9			2.0E+03	EPI	3.6E+00	EPI	2.8E+01	EPI	3.1E-01	6.0E-01	1.4E+00	6.9E-02	EPI
8001-35-2	Toxaphene	8001-35-2	4.5E+02	PHYSPROP	2.5E-04	6.0E-06	PHYSPROP	6.7E-06	PHYSPROP	7.7E+01	PHYSPROP			3.2E-02	3.8E-06	WATER9			7.7E+04	EPI	5.9E+00	PHYSPROP	5.5E-01	PHYSPROP	4.2E-01	3.4E+01	8.2E+01	5.2E-02	EPI
66841-25-6	Tralomethrin	66841-25-6	6.7E+02	PHYSPROP	1.6E-08	3.9E-10	EPI	3.6E-11	PHYSPROP	1.4E+02	PHYSPROP			2.5E-02	2.9E-06	WATER9			1.9E+05	EPI	7.6E+00	PHYSPROP	8.0E-02	PHYSPROP	3.0E-01	5.6E+02	1.3E+03	3.1E-02	EPI
688-73-3	Tri-n-butyltin	688-73-3	2.9E+02	PHYSPROP	6.2E+01	1.5E+00	PHYSPROP	4.0E-02	PHYSPROP	2.9E+01	EPI	1.1E+00	CRC89	2.1E-02	5.4E-06	WATER9			8.1E+03	EPI	4.1E+00	PHYSPROP	7.3E-03	PHYSPROP	1.3E-01	4.5E+00	1.1E+01	1.9E-02	EPI
102-76-1	Triacetin	102-76-1	2.2E+02	PHYSPROP	5.0E-07	1.2E-08	EPI	2.5E-03	PHYSPROP	7.8E+01	PHYSPROP	1.2E+00	CRC89	2.6E-02	6.6E-06	WATER9			4.1E+01	EPI	2.5E-01	PHYSPROP	5.8E+04	PHYSPROP	7.8E-04	1.8E+00	4.2E+00	1.4E-04	EPI
43121-43-3	Triadimefon	43121-43-3	2.9E+02	PHYSPROP	3.3E-09	8.1E-11	EPI	1.5E-08	PHYSPROP	8.2E+01	PHYSPROP	1.2E+00	CRC89	2.2E-02	5.7E-06	WATER9			3.0E+02	EPI	2.8E+00	PHYSPROP	7.2E+01	PHYSPROP	1.6E-02	4.6E+00	1.1E+01	2.4E-03	EPI
2303-17-5	Triallate	2303-17-5	3.0E+02	PHYSPROP	4.9E-04	1.2E-05	EPI	1.2E-04	PHYSPROP	2.9E+01	PHYSPROP	1.3E+00	CRC89	2.2E-02	5.7E-06	WATER9			1.0E+03	EPI	4.6E+00	PHYSPROP	4.0E+00	PHYSPROP	2.3E-01	5.3E+00	1.3E+01	3.5E-02	EPI
82097-50-5	Triasulfuron	82097-50-5	4.0E+02	PHYSPROP	1.3E-11	3.2E-13	PHYSPROP	5.5E-12	PHYSPROP	1.9E+02	PHYSPROP			3.5E-02	4.1E-06	WATER9			4.3E+02	EPI	1.1E+00	PHYSPROP	3.2E+01	PHYSPROP	3.6E-04	1.9E+01	4.5E+01	4.7E-05	EPI
101200-48-0	Tribenuron-methyl	101200-48-0	4.0E+02	PHYSPROP	4.2E-12	1.0E-13	PHYSPROP	3.9E-10	PHYSPROP	1.4E+02	PHYSPROP			3.5E-02	4.1E-06	WATER9			9.5E+01	EPI	7.8E-01	PHYSPROP	5.0E+01	PHYSPROP	3.6E-03	1.7E+01	4.1E+01	4.7E-04	EPI
615-54-3	Tribromobenzene, 1,2,4-	615-54-3	3.1E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	5.5E-03	PHYSPROP	4.5E+01	PHYSPROP	2.3E+00	ChemNet	2.9E-02	7.9E-06	WATER9			6.1E+02	EPI	4.7E+00	PHYSPROP	4.9E+00	PHYSPROP	2.3E-01	6.1E+00	1.5E+01	3.4E-02	EPI
126-73-8	Tributyl Phosphate	126-73-8	2.7E+02	PHYSPROP	5.8E-05	1.4E-06	EPI	1.1E-03	PHYSPROP	-7.9E+01	PHYSPROP	9.7E-01	CRC89	2.1E-02	5.2E-06	WATER9			2.4E+03	EPI	4.0E+00	PHYSPROP	2.8E+02	PHYSPROP	1.4E-01	3.3E+00	7.8E+00	2.3E-02	EPI
NA	Tributyltin Compounds	NA																											
56-35-9	Tributyltin Oxide	56-35-9	6.0E+02	PHYSPROP	1.2E-05	3.0E-07	EPI	7.5E-06	PHYSPROP	-4.5E+01	PHYSPROP	1.2E+00	CRC89	1.5E-02	3.6E-06	WATER9			2.6E+07	EPI	4.1E+00	PHYSPROP	2.0E+01	PHYSPROP	2.4E-03	2.3E+02	5.5E+02	2.5E-04	EPI
76-13-1	Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	1.9E+02	PHYSPROP	2.2E+01	5.3E-01	EPI	3.6E+02	PHYSPROP	-3.5E+01	PHYSPROP	1.6E+00	CRC89	3.8E-02	8.6E-06	WATER9			2.0E+02	EPI	3.2E+00	PHYSPROP	1.7E+02	PHYSPROP	9.2E-02	1.2E+00	2.8E+00	1.8E-02	EPI
76-03-9	Trichloroacetic Acid	76-03-9	1.6E+02	PHYSPROP	5.5E-07	1.4E-08	PHYSPROP	6.0E-02	EPI	5.8E+01	PHYSPROP	1.6E+00	CRC89	5.2E-02	9.5E-06	WATER9			3.2E+00	EPI	1.3E+00	PHYSPROP	5.5E+04	PHYSPROP	7.1E-03	8.6E-01	2.1E+00	1.5E-03	EPI
33663-50-2	Trichloroaniline HCl, 2,4,6-	33663-50-2	2.3E+02	EPI	2.9E-12	7.2E-14	EPI	6.1E-08	EPI	1.8E+02	EPI			5.0E-02	5.9E-06	WATER9			1.3E+03	EPI	-6.7E-01	EPI	2.1E+01	EPI	1.6E-04	2.1E+00	5.1E+00	2.8E-05	EPI
634-93-5	Trichloroaniline, 2,4,6-	634-93-5	2.0E+02	PHYSPROP	5.5E-05	1.3E-06	PHYSPROP	4.4E-03	PHYSPROP	7.9E+01	PHYSPROP			5.6E-02	6.6E-06	WATER9			4.4E+03	EPI	3.5E+00	PHYSPROP	4.0E+01	PHYSPROP	1.5E-01	1.3E+00	3.2E+00	2.7E-02	EPI
87-61-6	Trichlorobenzene, 1,2,3-	87-61-6	1.8E+02	PHYSPROP	5.1E-02	1.3E-03	PHYSPROP	2.1E-01	PHYSPROP	5.4E+01	PHYSPROP	1.5E+00	CRC89	4.0E-02	8.4E-06	WATER9			1.4E+03	EPI	4.1E+00	PHYSPROP	1.8E+01	PHYSPROP	3.8E-01	1.1E+00	2.6E+00	7.4E-02	EPI
120-82-1	Trichlorobenzene, 1,2,4-	120-82-1	1.8E+02	PHYSPROP	5.8E-02	1.4E-03	PHYSPROP	4.6E-01	PHYSPROP	1.7E+01	PHYSPROP	1.5E+00	CRC89	4.0E-02	8.4E-06	WATER9			1.4E+03	EPI	4.0E+00	PHYSPROP	4.9E+01	PHYSPROP	3.7E-01	1.1E+00	2.6E+00	7.1E-02	EPI
71-55-6	Trichloroethane, 1,1,1-	71-55-6	1.3E+02	PHYSPROP	7.0E-01	1.7E-02	PHYSPROP	1.2E+02	PHYSPROP	-3.0E+01	PHYSPROP	1.3E+00	CRC89	6.5E-02	9.6E-06	WATER9			4.4E+01	EPI	2.5E+00	PHYSPROP	1.3E+03	PHYSPROP	5.6E-02	5.9E-01	1.4E+00	1.3E-02	EPI
79-00-5	Trichloroethane, 1,1,2-	79-00-5	1.3E+02	PHYSPROP	3.4E-02	8.2E-04	PHYSPROP	2.3E+01	PHYSPROP	-3.7E+01	PHYSPROP	1.4E+00	CRC89	6.7E-02	1.0E-05	WATER9			6.1E+01	EPI	1.9E+00	PHYSPROP	4.6E+03	PHYSPROP	2.2E-02	5.9E-01	1.4E+00	5.0E-03	EPI
79-01-6	Trichloroethylene	79-01-6	1.3E+02	PHYSPROP	4.0E-01	9.9E-03	PHYSPROP	6.9E+01	PHYSPROP	-8.5E+01	PHYSPROP	1.5E+00	CRC89	6.9E-02	1.0E-05	WATER9			6.1E+01	EPI	2.4E+00	PHYSPROP	1.3E+03	PHYSPROP	5.1E-02	5.7E-01	1.4E+00	1.2E-02	EPI
75-69-4	Trichlorofluoromethane	75-69-4	1.4E+02	PHYSPROP	4.0E+00	9.7E-02	PHYSPROP	8.0E+02	PHYSPROP	-1.1E+02	PHYSPROP	1.5E+00	CRC89	6.5E-02	1.0E-05	WATER9			4.4E+01	EPI	2.5E+00	PHYSPROP	1.1E+03	PHYSPROP	5.7E-02	6.2E-01	1.5E+00	1.3E-02	EPI
95-95-4	Trichlorophenol, 2,4,5-	95-95-4	2.0E+02	PHYSPROP	6.6E-05	1.6E-06	EPI	7.5E-03	EPI	6.9E+01	PHYSPROP	1.5E+00	PERRY	3.1E-02	8.1E-06	WATER9			1.6E+03	SSL	3.7E+00	PHYSPROP	1.2E+03	PHYSPROP	2.0E-01	1.3E+00	3.2E+00	3.6E-02	EPI
88-06-2	Trichlorophenol, 2,4,6-	88-06-2	2.0E+02	PHYSPROP	1.1E-04	2.6E-06	EPI	8.0E-03	EPI	6.9E+01	PHYSPROP	1.5E+00	CRC89	3.1E-02	8.1E-06	WATER9			3.8E+02	SSL	3.7E+00	PHYSPROP	8.0E+02	PHYSPROP	1.9E-01	1.3E+00	3.2E+00	3.5E-02	EPI
93-76-5	Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	2.6E+02	PHYSPROP	3.5E-07	8.7E-09	PHYSPROP	3.8E-05	EPI	1.5E+02	PHYSPROP	1.8E+00	PubChem	2.9E-02	7.8E-06	WATER9			1.1E+02	EPI	3.3E+00	PHYSPROP	2.8E+02	PHYSPROP	5.6E-02	2.8E+00	6.8E+00	9.1E-03	EPI
93-72-1	Trichlorophenoxypropionic acid, -2,4,5	93-72-1	2.7E+02	PHYSPROP	3.7E-07	9.1E-09	PHYSPROP	1.0E-05	PHYSPROP	1.8E+02	PHYSPROP	1.2E+00	PubChem	2.3E-02	5.9E-06	WATER9			1.8E+02	EPI	3.8E+00	PHYSPROP	7.1E+01	PHYSPROP	1.0E-01	3.4E+00	8.2E+00	1.6E-02	EPI
598-77-6	Trichloropropane, 1,1,2-	598-77-6	1.5E+02	PHYSPROP	1.3E-02	3.2E-04	EPI	3.1E+00	PHYSPROP	-6.5E+01	EPI	1.4E+00	CRC89	5.7E-02	9.2E-06	WATER9			9.5E+01	EPI	2.4E+00	PHYSPROP	1.9E+03	PHYSPROP	4.5E-02	7.0E-01	1.7E+00	9.6E-03	EPI
96-18-4	Trichloropropane, 1,2,3-	96-18-4	1.5E+02	PHYSPROP	1.4E-02	3.4E-04	PHYSPROP	3.7E+00	PHYSPROP	-1.5E+01	PHYSPROP	1.4E+00	CRC89	5.7E-02	9.2E-06	WATER9			1.2E+02	EPI	2.3E+00	PHYSPROP	1.8E+03	PHYSPROP	3.5E-02	7.0E-01	1.7E+00	7.5E-03	EPI
96-19-5	Trichloropropene, 1,2,3-	96-19-5	1.5E+02	PHYSPROP	7.2E-01	1.8E-02	PHYSPROP	4.4E+00	PHYSPROP	-5.6E+01	EPI	1.4E+00	CRC89	5.9E-02	9.4E-06	WATER9			1.2E+02	EPI	2.8E+00	PHYSPROP	3.3E+02	PHYSPROP	7.8E-02	6.9E-01	1.6E+00	1.7E-02	EPI
1330-78-5	Tricresyl Phosphate (TCP)	1330-78-5	3.7E+02	PHYSPROP	3.3E-05	8.1E-07	EPI	6.0E-07	EPI	-3.3E+01	PHYSPROP	1.2E+00	Yaws	1.9E-02	4.8E-06	WATER9			4.7E+04	EPI	5.1E+00	PHYSPROP	3.6E-01	PHYSPROP	2.5E-01	1.2E+01	2.9E+01	3.3E-02	EPI
58138-08-2	Tridiphane	58138-08-2	3.2E+02	PHYSPROP	1.7E-05	4.1E-07	PHYSPROP	3.9E-04	PHYSPROP	4.3E+01	PHYSPROP			4.1E-02	4.7E-06	WATER9			3.4E+03	EPI	5.2E+00	PHYSPROP	1.1E+00	PHYSPROP	4.7E-01	6.6E+00	1.6E+01	6.9E-02	EPI
121-44-8	Triethylamine	121-44-8	1.0E+02	PHYSPROP	6.1E-03	1.5E-04	PHYSPROP	5.7E+01	PHYSPROP	-1.1E+02	PHYSPROP	7.3E-01	CRC89	6.6E-02	7.9E-06	WATER9			5.1E+01	EPI	1.5E+00	PHYSPROP	6.9E+04	PHYSPROP	1.5E-02	3.9E-01	9.3E-01	3.9E-03	EPI
112-27-6	Triethylene Glycol	112-27-6	1.5E+02	PHYSPROP	1.3E-09	3.2E-11	PHYSPROP	1.3E-03	PHYSPROP	-7.0E+00	PHYSPROP	1.1E+00	CRC89	5.1E-02	8.1E-06	WATER9			1.0E+01	EPI	-1.8E+00	PHYSPROP	1.0E+06	PHYSPROP	7.3E-05	7.3E-01	1.8E+00	1.6E-05	EPI
420-46-2	Trifluoroethane, 1,1,1-	420-46-2	8.4E+01	PHYSPROP	3.1E+01	7.7E-01	PHYSPROP	9.5E+03	PHYSPROP	-1.1E+02	PHYSPROP			9.9E-02	1.2E-05	WATER9			4.4E+01	EPI	1.7E+00	PHYSPROP	7.6E+02	PHYSPROP	2.7E-02	3.1E-01	7.5E-01	7.6E-03	EPI
1582-09-8	Trifluralin	1582-09-8	3.4E+02	PHYSPROP	4.2E-03	1.0E-04	PHYSPROP	4.6E-05	PHYSPROP	4.9E+01	PHYSPROP	1.4E+00	PubChem	2.2E-02	5.6E-06	WATER9			1.6E+04	EPI	5.3E+00	PHYSPROP	1.8E-01	PHYSPROP	5.1E-01	7.9E+00	1.9E+01	7.3E-02	EPI
512-56-1	Trimethyl Phosphate	512-56-1	1.4E+02	PHYSPROP	2.9E-07	7.2E-09	PHYSPROP	8.5E-01	EPI	-4.6E+01	PHYSPROP	1.2E+00	CRC89	5.8E-02	8.8E-06	WATER9			1.1E+01	EPI	-6.5E-01	PHYSPROP	5.0E+05	PHYSPROP	4.3E-04	6.4E-01	1.5E+00	9.5E-05	EPI
526-73-8	Trimethylbenzene, 1,2,3-	526-73-8	1.2E+02	PHYSPROP	1.8E-01	4.4E-03	PHYSPROP	1.7E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.9E-01	CRC89	6.1E-02	8.0E-06	WATER9			6.3E+02	EPI	3.7E+00	PHYSPROP	7.5E+01	PHYSPROP	3.8E-01	5.0E-01	1.2E+00	9.0E-02	EPI
95-63-6	Trimethylbenzene, 1,2,4-	95-63-6	1.2E+02	PHYSPROP	2.5E-01	6.2E-03	PHYSPROP	2.1E+00	PHYSPROP	-4.4E+01	PHYSPROP	8.8E-01	CRC89	6.1E-02	7.9E-06	WATER9			6.1E+02	EPI	3.6E+00	PHYSPROP	5.7E+01	PHYSPROP	3.6E-01	5.0E-01	1.2E+00	8.6E-02	EPI
108-67-8	Trimethylbenzene, 1,3,5-	108-67-8	1.2E+02	PHYSPROP	3.6E-01	8.8E-03	PHYSPROP	2.5E+00	PHYSPROP	-4.5E+01	PHYSPROP	8.6E-01	CRC89	6.0E-02	7.8E-06	WATER9			6.0E+02	EPI	3.4E+00	PHYSPROP	4.8E+01	PHYSPROP	2.6E-01	5.0E-01	1.2E+00	6.2E-02	EPI
25167-70-8	Trimethylpentene, 2,4,4-	25167-70-8	1.1E+02	PHYSPROP	3.0E+01	7.5E-01	PHYSPROP	7.1E+01	PHYSPROP	-8.4E+01	EPI	7.2E-01	PubChem	6.0E-02	7.3E-06	WATER9			2.4E+02	EPI	4.1E+00	PHYSPROP	4.0E+00	PHYSPROP	7.7E-01	4.5E-01	1.7E+00	1.9E-01	RAGSE
99-35-4	Trinitrobenzene, 1,3,5-	99-35-4	2.1E+02	PHYSPROP	2.7E-07	6.5E-09	EPI	6.4E-06	EPI	1.2E+02	PHYSPROP	1.5E+00	CRC89	2.9E-02	7.7E-06	WATER9			1.7E+03	EPI	1.2E+00	PHYSPROP	2.8E+02	PHYSPROP	3.4E-03	1.6E+00	3.9E+00	6.1E-04	EPI
118-96-7	Trinitrotoluene, 2,4,6-	118-96-7	2.3E+02	PHYSPROP	8.5E-07	2.1E-08	EPI	8.0E-06	PHYSPROP	8.0E+01	PHYSPROP	1.7E+00	CRC89	3.0E-02	7.9E-06	WATER9			2.8E+03	EPI	1.6E+00	PHYSPROP	1.2E+02	PHYSPROP	5.6E-03	2.0E+00	4.7E+00	9.6E-04	EPI
791-28-6	Triphenylphosphine Oxide	791-28-6	2.8E+02	PHYSPROP	2.2E-08	5.3E-10	PHYSPROP	2.6E-09	EPI	1.6E+02	PHYSPROP	1.2E+00	CRC89	2.3E-02	5.8E-06	WATER9			2.0E+03	EPI	2.8E+00	PHYSPROP	6.3E+01	PHYSPROP	2.1E-02	3.8E+00	9.1E+00	3.3E-03	EPI
13674-87-8	Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	4.3E+02	PHYSPROP	1.1E-07	2.6E-09	PHYSPROP	7.4E-08	PHYSPROP	2.7E+01	PHYSPROP			3.3E-02	3.9E-06	WATER9			1.1E+04	EPI	3.7E+00	PHYSPROP	7.0E+00	PHYSPROP	1.3E-02	2.7E+01	6.5E+01	1.6E-03	EPI

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Contaminant		Molecular Weight		Volatility Parameters					Melting Point		Density		Diffusivity in Air and Water			Partition Coefficients						Water Solubility		Tapwater Dermal Parameters				
CAS No.	Analyte	CAS No.	MW	MW Ref	H' (unitless)	HLC (atm-m^3/mole)	H' and HLC Ref	VP	VP Ref	MP	MP Ref	Density (g/cm^3)	Density Ref	Dia (cm^2/s)	Diw (cm^2/s)	D_{ia} and D_{iw} Ref	K_d (L/kg)	K_d Ref	K_{oc} (L/kg)	K_{oc} Ref	log K_{ow} (unitless)	log K_{ow} Ref	S (mg/L)	S Ref	B (unitless)	T_{event} (hr/event)	t* (hr)	K_p (cm/hr)	K Ref
13674-84-5	Tris(1-chloro-2-propyl)phosphate	13674-84-5	3.3E+02	PHYSPROP	2.4E-06	6.0E-08	PHYSPROP	2.0E-05	PHYSPROP	-4.0E+01	PHYSPROP			4.0E-02	4.7E-06	WATER9			1.6E+03	EPI	2.6E+00	PHYSPROP	1.2E+03	PHYSPROP	8.4E-03	7.2E+00	1.7E+01	1.2E-03	EPI
126-72-7	Tris(2,3-dibromopropyl)phosphate	126-72-7	7.0E+02	PHYSPROP	8.9E-04	2.2E-05	EPI	1.9E-04	PHYSPROP	5.5E+00	PHYSPROP	2.3E+00	PubChem	1.9E-02	4.9E-06	WATER9			9.7E+03	EPI	4.3E+00	PHYSPROP	8.0E+00	PHYSPROP	1.4E-03	8.5E+02	2.0E+03	1.4E-04	EPI
115-96-8	Tris(2-chloroethyl)phosphate	115-96-8	2.9E+02	PHYSPROP	1.3E-04	3.3E-06	EPI	6.1E-02	PHYSPROP	-5.5E+01	PHYSPROP	1.4E+00	CRC89	2.4E-02	6.2E-06	WATER9			3.9E+02	EPI	1.4E+00	PHYSPROP	7.0E+03	PHYSPROP	2.3E-03	4.2E+00	1.0E+01	3.6E-04	EPI
78-42-2	Tris(2-ethylhexyl)phosphate	78-42-2	4.3E+02	PHYSPROP	3.2E-06	7.9E-08	EPI	8.3E-08	PHYSPROP	-7.4E+01	PHYSPROP	9.9E-01	CRC89	1.6E-02	3.9E-06	WATER9			2.5E+06	EPI	9.5E+00	PHYSPROP	6.0E-01	PHYSPROP	9.3E+01	2.9E+01	1.3E+02	1.2E+01	EPI
7440-33-7	Tungsten	7440-33-7	1.8E+02	PHYSPROP				0.0E+00	NIOSH	3.4E+03	PHYSPROP	1.9E+01	CRC89				1.5E+02	BAES							5.2E-03	1.1E+00	2.7E+00	1.0E-03	RAGSE
NA	Uranium (Soluble Salts)	NA	2.4E+02	CRC89				0.0E+00	NIOSH	1.1E+03	CRC89	1.9E+01	CRC89				4.5E+02	BAES							5.9E-03	2.3E+00	5.4E+00	1.0E-03	RAGSE
51-79-6	Urethane	51-79-6	8.9E+01	PHYSPROP	2.6E-06	6.4E-08	EPI	2.6E-01	EPI	4.9E+01	PHYSPROP	9.9E-01	CRC89	8.5E-02	1.0E-05	WATER9			1.2E+01	EPI	-1.5E-01	PHYSPROP	4.8E+05	PHYSPROP	1.4E-03	3.3E-01	8.0E-01	3.9E-04	EPI
1314-62-1	Vanadium Pentoxide	1314-62-1	1.8E+02	EPI				0.0E+00	NIOSH	6.8E+02	CRC89	3.4E+00	CRC89										7.0E+02	CRC89	5.2E-03	1.1E+00	2.6E+00	1.0E-03	RAGSE
7440-62-2	Vanadium and Compounds	7440-62-2	5.1E+01	EPI						1.9E+03	CRC89	6.0E+00	CRC89				1.0E+03	SSL							2.7E-03	2.0E-01	4.9E-01	1.0E-03	RAGSE
1929-77-7	Vernolate	1929-77-7	2.0E+02	PHYSPROP	1.3E-03	3.1E-05	EPI	1.0E-02	PHYSPROP	7.1E+01	EPI	9.5E-01	CRC89	2.4E-02	6.1E-06	WATER9			3.0E+02	EPI	3.8E+00	PHYSPROP	9.0E+01	PHYSPROP	2.2E-01	1.4E+00	3.5E+00	4.0E-02	EPI
50471-44-8	Vinclozolin	50471-44-8	2.9E+02	PHYSPROP	7.1E-07	1.7E-08	EPI	1.2E-07	PHYSPROP	1.1E+02	PHYSPROP	1.5E+00	CRC89	2.5E-02	6.5E-06	WATER9			2.8E+02	EPI	3.1E+00	PHYSPROP	2.6E+00	PHYSPROP	2.9E-02	4.2E+00	1.0E+01	4.5E-03	EPI
108-05-4	Vinyl Acetate	108-05-4	8.6E+01	PHYSPROP	2.1E-02	5.1E-04	EPI	9.0E+01	PHYSPROP	-9.3E+01	PHYSPROP	9.3E-01	CRC89	8.5E-02	1.0E-05	WATER9			5.6E+00	EPI	7.3E-01	PHYSPROP	2.0E+04	PHYSPROP	5.6E-03	3.2E-01	7.7E-01	1.6E-03	EPI
593-60-2	Vinyl Bromide	593-60-2	1.1E+02	PHYSPROP	5.0E-01	1.2E-02	PHYSPROP	1.0E+03	PHYSPROP	-1.4E+02	PHYSPROP	1.5E+00	CRC89	8.6E-02	1.2E-05	WATER9			2.2E+01	EPI	1.6E+00	PHYSPROP	7.6E+03	PHYSPROP	1.7E-02	4.2E-01	1.0E+00	4.4E-03	EPI
75-01-4	Vinyl Chloride	75-01-4	6.2E+01	PHYSPROP	1.1E+00	2.8E-02	PHYSPROP	3.0E+03	EPI	-1.5E+02	PHYSPROP	9.1E-01	CRC89	1.1E-01	1.2E-05	WATER9			2.2E+01	EPI	1.4E+00	CRC89	8.8E+03	PHYSPROP	2.5E-02	2.4E-01	5.7E-01	8.4E-03	EPI
81-81-2	Warfarin	81-81-2	3.1E+02	PHYSPROP	1.1E-07	2.8E-09	EPI	1.2E-07	PHYSPROP	1.6E+02	PHYSPROP			4.2E-02	4.9E-06	WATER9			4.3E+02	EPI	2.7E+00	PHYSPROP	1.7E+01	PHYSPROP	1.2E-02	5.6E+00	1.3E+01	1.8E-03	EPI
106-42-3	Xylene, P-	106-42-3	1.1E+02	PHYSPROP	2.8E-01	6.9E-03	PHYSPROP	8.8E+00	PHYSPROP	1.3E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.6E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	4.9E-02	EPI
108-38-3	Xylene, m-	108-38-3	1.1E+02	PHYSPROP	2.9E-01	7.2E-03	PHYSPROP	8.3E+00	PHYSPROP	-4.8E+01	PHYSPROP	8.6E-01	CRC89	6.8E-02	8.4E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.6E+02	PHYSPROP	2.1E-01	4.1E-01	9.9E-01	5.3E-02	EPI
95-47-6	Xylene, o-	95-47-6	1.1E+02	PHYSPROP	2.1E-01	5.2E-03	PHYSPROP	6.6E+00	PHYSPROP	-2.5E+01	PHYSPROP	8.8E-01	CRC89	6.9E-02	8.5E-06	WATER9			3.8E+02	EPI	3.1E+00	PHYSPROP	1.8E+02	PHYSPROP	1.9E-01	4.1E-01	9.9E-01	4.7E-02	EPI
1330-20-7	Xylenes	1330-20-7	1.1E+02	PHYSPROP	2.7E-01	6.6E-03	PHYSPROP	8.0E+00	PHYSPROP	-2.5E+01	EPI	8.6E-01	ATSDR Profile	6.9E-02	8.5E-06	WATER9			3.8E+02	EPI	3.2E+00	PHYSPROP	1.1E+02	PHYSPROP	2.0E-01	4.1E-01	9.9E-01	5.0E-02	EPI
1314-84-7	Zinc Phosphide	1314-84-7	2.6E+02	CRC89						1.2E+03	CRC89	4.6E+00	CRC89												3.7E-03	2.9E+00	7.0E+00	6.0E-04	RAGSE
7440-66-6	Zinc and Compounds	7440-66-6	6.5E+01	PHYSPROP						4.2E+02	PHYSPROP	7.1E+00	CRC89				6.2E+01	SSL							1.9E-03	2.4E-01	5.9E-01	6.0E-04	RAGSE
12122-67-7	Zineb	12122-67-7	2.8E+02	PHYSPROP	1.1E-07	2.7E-09	PHYSPROP	7.5E-08	PHYSPROP	1.6E+02	EPI			4.5E-02	5.2E-06	WATER9			1.3E+03	EPI	1.3E+00	PHYSPROP	1.0E+01	PHYSPROP	2.1E-03	3.7E+00	8.8E+00	3.3E-04	EPI
7440-67-7	Zirconium	7440-67-7	9.1E+01	EPI				0.0E+00	NIOSH	1.9E+03	CRC89	6.5E+00	CRC89				3.0E+03	BAES							3.7E-03	3.4E-01	8.2E-01	1.0E-03	RAGSE

1 CAS #	2 Chemical Name	3 CAS #	4 RfDi Inhalation Reference Dose (mg/kg-day)	5 Source	6 CPFi Inhalation Cancer Potency Factor (kg-day/mg)	7 Source	8 RfDo Oral Reference Dose (mg/kg-day)	9 Source	10 CPFo Oral Cancer Potency Factor (kg-day/mg)	11 Source
83-32-9	acenaphthene	83-32-9					6.00E-02	I		
208-96-8	acenaphthylene	208-96-8								
30560-19-1	acephate	30560-19-1					4.00E-03	I	8.70E-03	I
75-07-0	acetaldehyde	75-07-0	2.57E-03	I	7.70E-03	I				
34256-82-1	acetochlor	34256-82-1					2.00E-02	I		
67-64-1	acetone	67-64-1	8.86E+00	A			9.00E-01	I		
75-86-5	acetone cyanohydrin	75-86-5	5.71E-04	X						
75-05-8	acetonitrile	75-05-8	1.71E-02	I						
98-86-2	acetophenone	98-86-2					1.00E-01	I		
62476-59-9	acifluorfen, sodium	62476-59-9					1.30E-02	I		
107-02-8	acrolein	107-02-8	5.71E-06	I			5.00E-04	I		
79-06-1	acrylamide	79-06-1	1.71E-03	I	3.50E-01	I	2.00E-03	I	5.00E-01	I
79-10-7	acrylic acid	79-10-7	2.86E-04	I			5.00E-01	I		
107-13-1	acrylonitrile	107-13-1	5.71E-04	I	2.38E-01	I	4.00E-02	A	5.40E-01	I
15972-60-8	alachlor	15972-60-8					1.00E-02	I	5.60E-02	C
1596-84-5	alar	1596-84-5			1.79E-02	C	1.50E-01	I	1.80E-02	C
116-06-3	aldicarb	116-06-3					1.00E-03	I		
1646-88-4	aldicarb sulfone	1646-88-4					1.00E-03	I		
309-00-2	aldrin	309-00-2			1.72E+01	I	3.00E-05	I	1.70E+01	I
74223-64-6	ally	74223-64-6					2.50E-01	I		
107-18-6	allyl alcohol	107-18-6	2.86E-05	X			5.00E-03	I		
107-05-1	allyl chloride	107-05-1	2.86E-04	I	2.10E-02	C			2.10E-02	C
7429-90-5	aluminum	7429-90-5	1.43E-03	P			1.00E+00	P		
20859-73-8	aluminum phosphide	20859-73-8					4.00E-04	I		
67485-29-4	amdro	67485-29-4					3.00E-04	I		
834-12-8	ametryn	834-12-8					9.00E-03	I		
591-27-5	aminophenol;m-	591-27-5					8.00E-02	P		
504-24-5	aminopyridine;4-	504-24-5								
33089-61-1	amitraz	33089-61-1					2.50E-03	I		
7664-41-7	ammonia	7664-41-7	2.86E-02	I						
7790-98-9	ammonium perchlorate	7790-98-9					7.00E-04	I		
7773-06-0	ammonium sulfamate	7773-06-0					2.00E-01	I		
62-53-3	aniline	62-53-3	2.86E-04	I	5.60E-03	C	7.00E-03	P	5.70E-03	I
120-12-7	anthracene	120-12-7					3.00E-01	I		
7440-36-0	antimony	7440-36-0					4.00E-04	I		
1314-60-9	antimony pentoxide	1314-60-9					5.00E-04	H		
28300-74-5	antimony potassium tartrate	28300-74-5					9.00E-04	H		
1332-81-6	antimony tetroxide	1332-81-6					4.00E-04	H		
1309-64-4	antimony trioxide	1309-64-4	5.71E-05	I						
74115-24-5	apollo	74115-24-5					1.30E-02	I		
140-57-8	aramite	140-57-8			2.49E-02	I	5.00E-02	H	2.50E-02	I
12674-11-2	aroclor 1016	12674-11-2			7.00E-02	S	7.00E-05	I	7.00E-02	S
11097-69-1	aroclor 1254	11097-69-1			2.00E+00	S	2.00E-05	I	2.00E+00	S
11096-82-5	aroclor 1260	11096-82-5			2.00E+00	S			2.00E+00	S
7440-38-2	arsenic, inorganic	7440-38-2	4.29E-06	C	1.51E+01	I	3.00E-04	I	1.50E+00	I
7784-42-1	arsine	7784-42-1	1.43E-05	I			3.50E-06	C		
76578-14-8	assure	76578-14-8					9.00E-03	I		
3337-71-1	asulam	3337-71-1					5.00E-02	I		
1912-24-9	atrazine	1912-24-9					3.50E-02	I	2.30E-01	C
65195-55-3	avermectin B1	65195-55-3					4.00E-04	I		
103-33-3	azobenzene	103-33-3			1.09E-01	I			1.10E-01	I
7440-39-3	barium and compounds	7440-39-3	1.43E-04	H			2.00E-01	I		
542-62-1	barium cyanide	542-62-1								
114-26-1	baygon	114-26-1					4.00E-03	I		
43121-43-3	bayleton	43121-43-3					3.00E-02	I		
68359-37-5	baythroid	68359-37-5					2.50E-02	I		
1861-40-1	benefin	1861-40-1					3.00E-01	I		
17804-35-2	benomyl	17804-35-2					5.00E-02	I		
25057-89-0	bentazon	25057-89-0					3.00E-02	I		
100-52-7	benzaldehyde	100-52-7					1.00E-01	I		
71-43-2	benzene	71-43-2	8.57E-03	I	2.73E-02	I	4.00E-03	I	5.50E-02	I
108-98-5	benzenethiol	108-98-5					1.00E-03	P		
92-87-5	benzidine	92-87-5			2.35E+02	I	3.00E-03	I	2.30E+02	I
191-24-2	benzo(g,h,i)perylene	191-24-2								
56-55-3	benzo[a]anthracene	56-55-3			3.85E-01	C			7.30E-01	E
50-32-8	benzo[a]pyrene	50-32-8			3.85E+00	C			7.30E+00	I
205-99-2	benzo[b]fluoranthene	205-99-2			3.85E-01	C			7.30E-01	E
207-08-9	benzo[k]fluoranthene	207-08-9			3.85E-01	C			7.30E-02	E
65-85-0	benzoic acid	65-85-0					4.00E+00	I		
98-07-7	benzotrichloride	98-07-7							1.30E+01	I
100-51-6	benzyl alcohol	100-51-6					1.00E-01	P		
100-44-7	benzyl chloride	100-44-7	2.86E-04	P	1.72E-01	C	2.00E-03	P	1.70E-01	I
7440-41-7	beryllium	7440-41-7	5.71E-06	I	8.40E+00	I	2.00E-03	I		
91-58-7	beta-chloronaphthalene	91-58-7					8.00E-02	I		
141-66-2	bidrin	141-66-2					1.00E-04	I		
82657-04-3	biphenthrin	82657-04-3					1.50E-02	I		
92-52-4	biphenyl;1,1-	92-52-4	1.14E-04	X			5.00E-01	I	8.00E-03	I
108-60-1	bis(2-chloro-1-methyl-ethyl)ether	108-60-1			3.50E-02	H	4.00E-02	I	7.00E-02	H
111-44-4	bis(2-chloroethyl)ether	111-44-4			1.16E+00	I			1.10E+00	I
39638-32-9	bis(2-chloroisopropyl) ether	39638-32-9								
117-81-7	bis(2-ethylhexyl) phthalate	117-81-7			8.40E-03	C	2.00E-02	I	1.40E-02	I
542-88-1	bis(chloromethyl)ether	542-88-1			2.17E+02	I			2.20E+02	I
80-05-7	bisphenol a	80-05-7					5.00E-02	I		
7440-42-8	boron	7440-42-8	5.71E-03	H			2.00E-01	I		
15541-45-4	bromate	15541-45-4					4.00E-03	I	7.00E-01	I
75-27-4	bromodichloromethane	75-27-4			1.30E-01	C	2.00E-02	I	6.20E-02	I
593-60-2	bromoethene	593-60-2	8.57E-04	I	1.12E-01	H				
75-25-2	bromoform	75-25-2			3.85E-03	I	2.00E-02	I	7.90E-03	I
74-83-9	bromomethane	74-83-9	1.43E-03	I			1.40E-03	I		
2104-96-3	bromophos	2104-96-3					5.00E-03	H		
1689-84-5	bromoxynil	1689-84-5					2.00E-02	I		
1689-99-2	bromoxynil octanoate	1689-99-2					2.00E-02	I		
106-99-0	butadiene;1,3-	106-99-0	5.71E-04	I	1.05E-01	I			3.40E+00	C
71-36-3	butanol;n-	71-36-3					1.00E-01	I		
85-68-7	butyl benzyl phthalate	85-68-7					2.00E-01	I	1.90E-03	P
2008-41-5	butylate	2008-41-5					5.00E-02	I		
85-70-1	butylphthalyl butylglycolate	85-70-1					1.00E+00	I		
94-81-5	butyric acid;4-(2-methyl-4-chlorophenoxy)-	94-81-5					1.00E-02	I		
75-60-5	cacodylic acid	75-60-5					2.00E-02	A		
7440-43-9a	cadmium (soil and nonpotable surface water)	7440-43-9a	2.86E-06	A	6.30E+00	I	1.00E-03	I		
7440-43-9	cadmium (potable groundwater and surface water)	7440-43-9	2.86E-06	A	6.30E+00	I	5.00E-04	I		
592-01-8	calcium cyanide	592-01-8					1.00E-03	I		
105-60-2	caprolactam	105-60-2	6.29E-04	C			5.00E-01	I		
2425-06-1	captafol	2425-06-1			1.51E-01	C	2.00E-03	I	1.50E-01	C
133-06-2	captan	133-06-2			2.31E-03	C	1.30E-01	I	2.30E-03	C
63-25-2	carbaryl	63-25-2					1.00E-01	I		
86-74-8	carbazole	86-74-8								
1563-66-2	carbofuran	1563-66-2					5.00E-03	I		
75-15-0	carbon disulfide	75-15-0	2.00E-01	I			1.00E-01	I		
56-23-5	carbon tetrachloride	56-23-5	2.86E-02	I	2.10E-02	I	4.00E-03	I	7.00E-02	I
786-19-6	carbophenothion	786-19-6								
55285-14-8	carbosulfan	55285-14-8					1.00E-02	I		
5234-68-4	carboxin	5234-68-4					1.00E-01	I		
75-87-6	chloral	75-87-6								
302-17-0	chloral hydrate	302-17-0					1.00E-01	I		
133-90-4	chloramben	133-90-4					1.50E-02	I		
118-75-2	chloranil	118-75-2							4.00E-01	H
57-74-9	chlordane	57-74-9	2.00E-04	I	3.50E-01	I	5.00E-04	I	3.50E-01	I
16887-00-6	chloride	16887-00-6								
90982-32-4	chlorimuron-ethyl	90982-32-4					2.00E-02	I		
7782-50-5	chlorine	7782-50-5	4.29E-05	A			1.00E-01	I		
506-77-4	chlorine cyanide	506-77-4					5.00E-02	I		
10049-04-4	chlorine dioxide	10049-04-4	5.71E-05	I			3.00E-02	I		
7758-19-2	chlorite	7758-19-2					3.00E-02	I		
75-68-3	chloro-1,1-difluoroethane;1-	75-68-3	1.43E+01	I						
126-99-8	chloro-1,3-butadiene;2-	126-99-8	5.71E-03	I	1.05E+00	I	2.00E-02	H		
3165-93-3	chloro-2-methylaniline hydrochloride;4-	3165-93-3							4.60E-01	H
95-69-2	chloro-2-methylaniline;4-	95-69-2			2.70E-01	C	3.00E-03	X	1.00E-01	P
79-11-8	chloroacetic acid	79-11-8					2.00E-03	H		
532-27-4	chloroacetophenone;2-	532-27-4	8.57E-06	I						
106-47-8	chloroaniline;p-	106-47-8					4.00E-03	I	2.00E-01	P
108-90-7	chlorobenzene	108-90-7	1.43E-02	P			2.00E-02	I		
510-15-6	chlorobenzilate	510-15-6			1.09E-01	C	2.00E-02	I	1.10E-01	C
74-11-3	chlorobenzoic acid;p-	74-11-3					3.00E-02	X		
98-56-6	chlorobenzotrifluoride;4-	98-56-6	8.57E-02	P			3.00E-03	P		
109-69-3	chlorobutane;1-	109-69-3					4.00E-02	P		
75-45-6	chlorodifluoromethane	75-45-6	1.43E+01	I						
67-66-3	chloroform	67-66-3	2.80E-02	A	8.05E-02	I	1.00E-02	I	3.10E-02	C
74-87-3	chloromethane	74-87-3	2.57E-02	I						
107-30-2	chloromethyl methyl ether	107-30-2			2.42E+00	C			2.40E+00	C
88-73-3	chloronitrobenzene;o-	88-73-3	2.86E-06	X			3.00E-03	P	3.00E-01	P
100-00-5	chloronitrobenzene;p-	100-00-5	1.71E-04	P			1.00E-03	P	6.30E-03	P
95-57-8	chlorophenol;2-	95-57-8					5.00E-03	I		
123-09-1	chlorophenyl methyl sulfide;p-	123-09-1								
98-57-7	chlorophenyl methyl sulfone;p-	98-57-7								
934-73-6	chlorophenyl methyl sulfoxide;p-	934-73-6								
75-29-6	chloropropane;2-	75-29-6								
1897-45-6	chlorothalonil	1897-45-6			3.12E-03	C	1.50E-02	I	3.10E-03	C
95-49-8	chlorotoluene;o-	95-49-8					2.00E-02	I		
101-21-3	chlorpropham	101-21-3					2.00E-01	I		
2921-88-2	chlorpyrifos	2921-88-2					1.00E-03	A		
5598-13-0	chlorpyrifos-methyl	5598-13-0					1.00E-02	H		
64902-72-3	chlorsulfuron	64902-72-3					5.00E-02	I		
21923-23-9	chlorthiophos	21923-23-9					8.00E-04	H		
7440-47-3	chromium (total)	7440-47-3								
16065-83-1	chromium(III)	16065-83-1					1.50E+00	I		
18540-29-9	chromium(VI)	18540-29-9	2.86E-05	I	2.94E+02	S	3.00E-03	I		
218-01-9	chrysene	218-01-9			3.85E-02	C			7.30E-03	E
8007-45-2	coke oven emissions	8007-45-2			2.17E+00	I				
8001-58-9	coal tar creosote	8001-58-9								
7440-50-8	copper	7440-50-8					4.00E-02	H		
544-92-3	copper cyanide	544-92-3					5.00E-03	I		
108-39-4	cresol;m-	108-39-4	1.71E-01	C			5.00E-02	I		
95-48-7	cresol;o-	95-48-7	1.71E-01	C			5.00E-02	I		
106-44-5	cresol;p-	106-44-5	1.71E-01	C			1.00E-01	A		
123-73-9	crotonaldehyde	123-73-9					1.00E-03	P	1.90E+00	H
98-82-8	cumene	98-82-8	1.14E-01	I			1.00E-01	I		
21725-46-2	cyanazine	21725-46-2					2.00E-03	H	8.40E-01	H
57-12-5	cyanide	57-12-5	2.29E-04	S			6.00E-04	I		
460-19-5	cyanogen	460-19-5					1.00E-03	I		
506-68-3	cyanogen bromide	506-68-3					9.00E-02	I		
110-82-7	cyclohexane	110-82-7	1.71E+00	I						
108-94-1	cyclohexanone	108-94-1	2.00E-01	P			5.00E+00	I		
108-91-8	cyclohexylamine	108-91-8					2.00E-01	I		
542-92-7	cyclopentadiene	542-92-7								
68085-85-8	cyhalothrin/karate	68085-85-8					5.00E-03	I		
52315-07-8	cypermethrin	52315-07-8					1.00E-02	I		
66215-27-8	cyromazine	66215-27-8					7.50E-03	I		
1861-32-1	dacthal	1861-32-1					1.00E-02	I		
75-99-0	dalapon, sodium salt	75-99-0					3.00E-02	I		
39515-41-8	danitol	39515-41-8					2.50E-02	I		
94-82-6	db;2,4-	94-82-6					8.00E-03	I		
72-54-8	ddd	72-54-8			2.42E-01	C			2.40E-01	I
72-55-9	dde	72-55-9			3.40E-01	C			3.40E-01	I
50-29-3	ddt	50-29-3			3.40E-01	I	5.00E-04	I	3.40E-01	I
1163-19-5	decabromodiphenyl ether	1163-19-5					7.00E-03	I	7.00E-04	I

CAS #	Chemical Name	Soil Method A Unrestricted Land Use (mg/kg)	Soil Method B Non cancer (mg/kg)	Soil Method B Cancer (mg/kg)	Soil Protective of Groundwater Vadose @ 25 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Vadose @ 13 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Saturated see guidance (mg/kg)	Soil Method A Industrial Properties (mg/kg)	Soil Method C Non cancer (mg/kg)	Soil Method C Cancer (mg/kg)
83-32-9	acenaphthene		4.80E+03		9.79E+01	9.79E+01	4.98E+00		2.10E+05	
208-96-8	acenaphthylene									
30560-19-1	acephate		3.20E+02	1.15E+02					1.40E+04	1.51E+04
75-07-0	acetaldehyde									
34256-82-1	acetochlor		1.60E+03						7.00E+04	
67-64-1	acetone		7.20E+04		2.89E+01	2.89E+01	2.07E+00		3.15E+06	
75-86-5	acetone cyanohydrin									
75-05-8	acetonitrile									
98-86-2	acetophenone		8.00E+03						3.50E+05	
62476-59-9	acifluorfen, sodium		1.04E+03						4.55E+04	
107-02-8	acrolein		4.00E+01						1.75E+03	
79-06-1	acrylamide		1.60E+02	2.00E+00					7.00E+03	2.63E+02
79-10-7	acrylic acid		4.00E+04						1.75E+06	
107-13-1	acrylonitrile		3.20E+03	1.85E+00					1.40E+05	2.43E+02
15972-60-8	alachlor		8.00E+02	1.79E+01					3.50E+04	2.34E+03
1596-84-5	alar		1.20E+04	5.56E+01					5.25E+05	7.29E+03
116-06-3	aldicarb		8.00E+01						3.50E+03	
1646-88-4	aldicarb sulfone		8.00E+01						3.50E+03	
309-00-2	aldrin		2.40E+00	5.88E-02	2.52E-03	2.52E-03	1.26E-04		1.05E+02	7.72E+00
74223-64-6	ally		2.00E+04						8.75E+05	
107-18-6	allyl alcohol		4.00E+02						1.75E+04	
107-05-1	allyl chloride			4.76E+01						6.25E+03
7429-90-5	aluminum		8.00E+04						3.50E+06	
20859-73-8	aluminum phosphide		3.20E+01						1.40E+03	
67485-29-4	amdro		2.40E+01						1.05E+03	
834-12-8	ametryn		7.20E+02						3.15E+04	
591-27-5	aminophenol;m-		6.40E+03						2.80E+05	
504-24-5	aminopyridine;4-									
33089-61-1	amitraz		2.00E+02						8.75E+03	
7664-41-7	ammonia									
7790-98-9	ammonium perchlorate		5.60E+01						2.45E+03	
7773-06-0	ammonium sulfamate		1.60E+04						7.00E+05	
62-53-3	aniline		5.60E+02	1.75E+02					2.45E+04	2.30E+04
120-12-7	anthracene		2.40E+04		2.27E+03		1.14E+02		1.05E+06	
7440-36-0	antimony		3.20E+01		5.42E+00	5.42E+00	2.72E-01		1.40E+03	
1314-60-9	antimony pentoxide		4.00E+01						1.75E+03	
28300-74-5	antimony potassium tartrate		7.20E+01						3.15E+03	
1332-81-6	antimony tetroxide		3.20E+01						1.40E+03	
1309-64-4	antimony trioxide									
74115-24-5	apollo		1.04E+03						4.55E+04	
140-57-8	aramite		4.00E+03	4.00E+01					1.75E+05	5.25E+03
12674-11-2	aroclor 1016		5.60E+00	1.43E+01					2.45E+02	1.88E+03
11097-69-1	aroclor 1254		1.60E+00	5.00E-01					7.00E+01	6.56E+01
11096-82-5	aroclor 1260			5.00E-01						6.56E+01
7440-38-2	arsenic, inorganic	2.00E+01	2.40E+01	6.67E-01	2.92E+00	2.92E+00	1.46E-01	2.00E+01	1.05E+03	8.75E+01
7784-42-1	arsine		2.80E-01						1.23E+01	
76578-14-8	assure		7.20E+02						3.15E+04	
3337-71-1	asulam		4.00E+03						1.75E+05	
1912-24-9	atrazine		2.80E+03	4.35E+00					1.23E+05	5.71E+02
65195-55-3	avermectin B1		3.20E+01						1.40E+03	
103-33-3	azobenzene			9.09E+00						1.19E+03
7440-39-3	barium and compounds		1.60E+04		1.65E+03	1.65E+03	8.26E+01		7.00E+05	
542-62-1	barium cyanide									
114-26-1	baygon		3.20E+02						1.40E+04	
43121-43-3	bayleton		2.40E+03						1.05E+05	
68359-37-5	baythroid		2.00E+03						8.75E+04	
1861-40-1	benefin		2.40E+04						1.05E+06	
17804-35-2	benomyl		4.00E+03						1.75E+05	
25057-89-0	bentazon		2.40E+03						1.05E+05	
100-52-7	benzaldehyde		8.00E+03						3.50E+05	
71-43-2	benzene	3.00E-02	3.20E+02	1.82E+01	2.82E-02	2.74E-02	1.74E-03	3.00E-02	1.40E+04	2.39E+03
108-98-5	benzenethiol		8.00E+01						3.50E+03	
92-87-5	benzidine		2.40E+02	4.35E-03					1.05E+04	5.71E-01
191-24-2	benzo(g,h,i)perylene									
56-55-3	benzo[a]anthracene			1.37E+00	8.58E-01		4.29E-02			1.80E+02
50-32-8	benzo[a]pyrene	1.00E-01		1.37E-01	2.33E+00		1.16E-01	2.00E+00		1.80E+01
205-99-2	benzo[b]fluoranthene			1.37E+00	2.95E+00	2.95E+00	1.47E-01			1.80E+02
207-08-9	benzo[k]fluoranthene			1.37E+01	2.95E+01		1.47E+00			1.80E+03
65-85-0	benzoic acid		3.20E+05		2.57E+02		1.84E+01		1.40E+07	
98-07-7	benzotrichloride			7.69E-02						1.01E+01
100-51-6	benzyl alcohol		8.00E+03						3.50E+05	
100-44-7	benzyl chloride		1.60E+02	5.88E+00					7.00E+03	7.72E+02
7440-41-7	beryllium		1.60E+02		6.32E+01	6.32E+01	3.16E+00		7.00E+03	
91-58-7	beta-chloronaphthalene		6.40E+03						2.80E+05	
141-66-2	bidrin		8.00E+00						3.50E+02	
82657-04-3	biphenthrin		1.20E+03						5.25E+04	
92-52-4	biphenyl;1,1-		4.00E+03	1.25E+02					1.75E+06	1.64E+04
108-60-1	bis(2-chloro-1-methyl-ethyl)ether		3.20E+03	1.43E+01					1.40E+05	1.88E+03
111-44-4	bis(2-chloroethyl)ether			9.09E-01	2.20E-04	2.20E-04	1.44E-05			1.19E+02
39638-32-9	bis(2-chloroisopropyl) ether									
117-81-7	bis(2-ethylhexyl) phthalate		1.60E+03	7.14E+01	1.34E+01		6.68E-01		7.00E+04	9.38E+03
542-88-1	bis(chloromethyl)ether			4.55E-03						5.97E-01
80-05-7	bisphenol a		4.00E+03						1.75E+05	
7440-42-8	boron		1.60E+04						7.00E+05	
15541-45-4	bromate		3.20E+02	1.43E+00					1.40E+04	1.88E+02
75-27-4	bromodichloromethane		1.60E+03	1.61E+01	3.96E-02	3.92E-02	2.60E-03		7.00E+04	2.12E+03
593-60-2	bromoethene									
75-25-2	bromoform		1.60E+03	1.27E+02	3.63E-01	3.62E-01	2.29E-02		7.00E+04	1.66E+04
74-83-9	bromomethane		1.12E+02		5.18E-02	5.03E-02	3.31E-03		4.90E+03	
2104-96-3	bromophos		4.00E+02						1.75E+04	
1689-84-5	bromoxynil		1.60E+03						7.00E+04	
1689-99-2	bromoxynil octanoate		1.60E+03						7.00E+04	
106-99-0	butadiene;1,3-			2.94E-01						3.86E+01
71-36-3	butanol;n-		8.00E+03		3.31E+00		2.35E-01		3.50E+05	
85-68-7	butyl benzyl phthalate		1.60E+04	5.26E+02	1.28E+01		6.46E-01		7.00E+05	6.91E+04
2008-41-5	butylate		4.00E+03						1.75E+05	
85-70-1	butylphthalyl butylglycolate		8.00E+04						3.50E+06	
94-81-5	butyric acid;4-(2-methyl-4-chlorophenoxy)-		8.00E+02						3.50E+04	
75-60-5	cacodylic acid		1.60E+03						7.00E+04	
7440-43-9a	cadmium (soil and nonpotable surface water)	2.00E+00	8.00E+01					2.00E+00	3.50E+03	
7440-43-9	cadmium (potable groundwater and surface water)				6.90E-01	6.90E-01	3.49E-02			
592-01-8	calcium cyanide		8.00E+01						3.50E+03	
105-60-2	caprolactam		4.00E+04						1.75E+06	
2425-06-1	captafol		1.60E+02	6.67E+00					7.00E+03	8.75E+02
133-06-2	captan		1.04E+04	4.35E+02					4.55E+05	5.71E+04
63-25-2	carbaryl		8.00E+03						3.50E+05	
86-74-8	carbazole									
1563-66-2	carbofuran		4.00E+02						1.75E+04	
75-15-0	carbon disulfide		8.00E+03		5.65E+00	5.04E+00	2.66E-01		3.50E+05	
56-23-5	carbon tetrachloride		3.20E+02	1.43E+01	4.60E-02	4.16E-02	2.19E-03		1.40E+04	1.88E+03
786-19-6	carbophenothion									
55285-14-8	carbosulfan		8.00E+02						3.50E+04	
5234-68-4	carboxin		8.00E+03						3.50E+05	
75-87-6	chloral									
302-17-0	chloral hydrate		8.00E+03						3.50E+05	
133-90-4	chloramben		1.20E+03						5.25E+04	
118-75-2	chloranil			2.50E+00						3.28E+02
57-74-9	chlordane		4.00E+01	2.86E+00	2.06E+00	2.06E+00	1.03E-01		1.75E+03	3.75E+02
16887-00-6	chloride									
90982-32-4	chlorimuron-ethyl		1.60E+03						7.00E+04	
7782-50-5	chlorine		8.00E+03						3.50E+05	
506-77-4	chlorine cyanide		4.00E+03						1.75E+05	
10049-04-4	chlorine dioxide		2.40E+03						1.05E+05	
7758-19-2	chlorite		2.40E+03						1.05E+05	
75-68-3	chloro-1,1-difluoroethane;1-									
126-99-8	chloro-1,3-butadiene;2-		1.60E+03						7.00E+04	
3165-93-3	chloro-2-methylaniline hydrochloride;4-			2.17E+00						2.85E+02
95-69-2	chloro-2-methylaniline;4-		2.40E+02	1.00E+01					1.05E+04	1.31E+03
79-11-8	chloroacetic acid		1.60E+02						7.00E+03	
532-27-4	chloroacetophenone;2-									
106-47-8	chloroaniline;p-		3.20E+02	5.00E+00	1.16E-03		7.72E-05		1.40E+04	6.56E+02
108-90-7	chlorobenzene		1.60E+03		8.74E-01	8.62E-01	5.11E-02		7.00E+04	
510-15-6	chlorobenzilate		1.60E+03	9.09E+00					7.00E+04	1.19E+03
74-11-3	chlorobenzoic acid;p-		2.40E+03						1.05E+05	
98-56-6	chlorobenzotrifluoride;4-		2.40E+02						1.05E+04	
109-69-3	chlorobutane;1-		3.20E+03						1.40E+05	
75-45-6	chlorodifluoromethane									
67-66-3	chloroform		8.00E+02	3.23E+01	7.50E-02	7.36E-02	4.79E-03		3.50E+04	4.23E+03
74-87-3	chloromethane									
107-30-2	chloromethyl methyl ether			4.17E-01						5.47E+01
88-73-3	chloronitrobenzene;o-		2.40E+02	3.33E+00					1.05E+04	4.38E+02
100-00-5	chloronitrobenzene;p-		8.00E+01	1.59E+02					3.50E+03	2.08E+04
95-57-8	chlorophenol;2-		4.00E+02		4.72E-01	4.71E-01	2.70E-02		1.75E+04	
123-09-1	chlorophenyl methyl sulfide;p-									
98-57-7	chlorophenyl methyl sulfone;p-									
934-73-6	chlorophenyl methyl sulfoxide;p-									
75-29-6	chloropropane;2-									
1897-45-6	chlorothalonil		1.20E+03	3.23E+02					5.25E+04	4.23E+04
95-49-8	chlorotoluene;o-		1.60E+03						7.00E+04	
101-21-3	chlorpropham		1.60E+04						7.00E+05	
2921-88-2	chlorpyrifos		8.00E+01						3.50E+03	
5598-13-0	chlorpyrifos-methyl		8.00E+02						3.50E+04	
64902-72-3	chlorsulfuron		4.00E+03						1.75E+05	
21923-23-9	chlorthiophos		6.40E+01						2.80E+03	
7440-47-3	chromium (total)									
16065-83-1	chromium(III)	2.00E+03	1.20E+05		4.80E+05	4.80E+05	2.40E+04	2.00E+03	5.25E+06	
18540-29-9	chromium(VI)	1.90E+01	2.40E+02		1.84E+01	1.84E+01	9.26E-01	1.90E+01	1.05E+04	
218-01-9	chrysene			1.37E+02	9.55E+01	9.55E+01	4.77E+00			1.80E+04
8007-45-2	coke oven emissions									
8001-58-9	coal tar creosote									
7440-50-8	copper		3.20E+03		2.84E+02	2.84E+02	1.43E+01		1.40E+05	
544-92-3	copper cyanide		4.00E+02						1.75E+04	
108-39-4	cresol;m-		4.00E+03						1.75E+05	
95-48-7	cresol;o-		4.00E+03		2.33E+00		1.51E-01		1.75E+05	
106-44-5	cresol;p-		8.00E+03						3.50E+05	
123-73-9	crotonaldehyde		8.00E+01	5.26E-01					3.50E+03	6.91E+01
98-82-8	cumene		8.00E+03						3.50E+05	
21725-46-2	cyanazine		1.60E+02	1.19E+00					7.00E+03	1.56E+02
57-12-5	cyanide		4.80E+01						2.10E+03	
460-19-5	cyanogen		8.00E+01						3.50E+03	
506-68-3	cyanogen bromide		7.20E+03						3.15E+05	
110-82-7	cyclohexane									
108-94-1	cyclohexanone		4.00E+05						1.75E+07	
108-91-8	cyclohexylamine		1.60E+04						7.00E+05	
542-92-7	cyclopentadiene									
68085-85-8	cyhalothrin/karate		4.00E+02						1.75E+04	
52315-07-8	cypermethrin		8.00E+02						3.50E+04	
66215-27-8	cyromazine		6.00E+02						2.63E+04	
1861-32-1	dacthal		8.00E+02						3.50E+04	
75-99-0	dalapon, sodium salt		2.40E+03						1.05E+05	
39515-41-8	danitol		2.00E+03						8.75E+04	
94-82-6	db;2,4-		6.40E+02						2.80E+04	
72-54-8	ddd			4.17E+00	3.35E-01		1.68E-02			5.47E+02
72-55-9	dde			2.94E+00	4.46E-01	4.46E-01	2.23E-02			3.86E+02
50-29-3	ddt	3.00E+00	4.00E+01	2.94E+00	3.49E+00		1.75E-01	4.00E+00	1.75E+03	3.86E+02
1163-19-5	decabromodiphenyl ether		5.60E+02	1.43E+03					2.45E+04	1.88E+05

CAS #	Chemical Name	Ground Water Method A (µg/L)	Ground Water Method B Non cancer (µg/L)	Ground Water Method B Cancer (µg/L)	Ground Water Method C Non cancer (µg/L)	Ground Water Method C Cancer (µg/L)	Ground Water Maximum Contaminant Level Goal (µg/L)	Ground Water Maximum Contaminant Level (µg/L)	Ground Water WA Maximum Contaminant Level (µg/L)
83-32-9	acenaphthene		9.60E+02		2.10E+03				
208-96-8	acenaphthylene								
30560-19-1	acephate		6.40E+01	1.01E+01	1.40E+02	1.01E+02			
75-07-0	acetaldehyde								
34256-82-1	acetochlor		3.20E+02		7.00E+02				
67-64-1	acetone		7.20E+03		1.58E+04				
75-86-5	acetone cyanohydrin								
75-05-8	acetonitrile								
98-86-2	acetophenone		8.00E+02		1.75E+03				
62476-59-9	acifluorfen, sodium		1.04E+02		2.28E+02				
107-02-8	acrolein		4.00E+00		8.75E+00				
79-06-1	acrylamide		1.60E+01	8.75E-02	3.50E+01	8.75E-01	0.00E+00	1.00E+03	
79-10-7	acrylic acid		4.00E+03		8.75E+03				
107-13-1	acrylonitrile		3.20E+02	8.10E-02	7.00E+02	8.10E-01			
15972-60-8	alachlor		1.60E+02	1.56E+00	3.50E+02	1.56E+01	0.00E+00	2.00E+00	2.00E+00
1596-84-5	alar		2.40E+03	4.86E+00	5.25E+03	4.86E+01			
116-06-3	aldicarb		1.60E+01		3.50E+01				
1646-88-4	aldicarb sulfone		1.60E+01		3.50E+01				
309-00-2	aldrin		2.40E-01	2.57E-03	5.25E-01	2.57E-02			
74223-64-6	ally		4.00E+03		8.75E+03				
107-18-6	allyl alcohol		4.00E+01		8.75E+01				
107-05-1	allyl chloride			2.08E+00		2.08E+01			
7429-90-5	aluminum		1.60E+04		3.50E+04				
20859-73-8	aluminum phosphide		6.40E+00		1.40E+01				
67485-29-4	amdro		4.80E+00		1.05E+01				
834-12-8	ametryn		1.44E+02		3.15E+02				
591-27-5	aminophenol;m-		1.28E+03		2.80E+03				
504-24-5	aminopyridine;4-								
33089-61-1	amitraz		4.00E+01		8.75E+01				
7664-41-7	ammonia								
7790-98-9	ammonium perchlorate		1.12E+01		2.45E+01				
7773-06-0	ammonium sulfamate		3.20E+03		7.00E+03				
62-53-3	aniline		5.60E+01	7.68E+00	1.23E+02	7.68E+01			
120-12-7	anthracene		4.80E+03		1.05E+04				
7440-36-0	antimony		6.40E+00		1.40E+01		6.00E+00	6.00E+00	6.00E+00
1314-60-9	antimony pentoxide		8.00E+00		1.75E+01				
28300-74-5	antimony potassium tartrate		1.44E+01		3.15E+01				
1332-81-6	antimony tetroxide		6.40E+00		1.40E+01				
1309-64-4	antimony trioxide								
74115-24-5	apollo		2.08E+02		4.55E+02				
140-57-8	aramite		8.00E+02	3.50E+00	1.75E+03	3.50E+01			
12674-11-2	aroclor 1016		1.12E+00	1.25E+00	2.45E+00	1.25E+01			
11097-69-1	aroclor 1254		3.20E-01	4.38E-02	7.00E-01	4.38E-01			
11096-82-5	aroclor 1260			4.38E-02		4.38E-01			
7440-38-2	arsenic, inorganic	5.00E+00	4.80E+00	5.83E-02	1.05E+01	5.83E-01	0.00E+00	1.00E+01	1.00E+01
7784-42-1	arsine		2.80E-02		6.13E-02				
76578-14-8	assure		1.44E+02		3.15E+02				
3337-71-1	asulam		8.00E+02		1.75E+03				
1912-24-9	atrazine		5.60E+02	3.80E-01	1.23E+03	3.80E+00	3.00E+00	3.00E+00	3.00E+00
65195-55-3	avermectin B1		6.40E+00		1.40E+01				
103-33-3	azobenzene			7.95E-01		7.95E+00			
7440-39-3	barium and compounds		3.20E+03		7.00E+03		2.00E+03	2.00E+03	2.00E+03
542-62-1	barium cyanide								
114-26-1	baygon		6.40E+01		1.40E+02				
43121-43-3	bayleton		4.80E+02		1.05E+03				
68359-37-5	baythroid		4.00E+02		8.75E+02				
1861-40-1	benefin		2.40E+03		5.25E+03				
17804-35-2	benomyl		8.00E+02		1.75E+03				
25057-89-0	bentazon		4.80E+02		1.05E+03				
100-52-7	benzaldehyde		8.00E+02		1.75E+03				
71-43-2	benzene	5.00E+00	3.20E+01	7.95E-01	7.00E+01	7.95E+00	0.00E+00	5.00E+00	5.00E+00
108-98-5	benzenethiol		8.00E+00		1.75E+01				
92-87-5	benzidine		4.80E+01	3.80E-04	1.05E+02	3.80E-03			
191-24-2	benzo(g,h,i)perylene								
56-55-3	benzo[a]anthracene			1.20E-01		1.20E+00			
50-32-8	benzo[a]pyrene	1.00E-01		1.20E-02		1.20E-01	0.00E+00	2.00E-01	2.00E-01
205-99-2	benzo[b]fluoranthene			1.20E-01		1.20E+00			
207-08-9	benzo[k]fluoranthene			1.20E+00		1.20E+01			
65-85-0	benzoic acid		6.40E+04		1.40E+05				
98-07-7	benzotrichloride			3.37E-03		3.37E-02			
100-51-6	benzyl alcohol		8.00E+02		1.75E+03				
100-44-7	benzyl chloride		1.60E+01	2.57E-01	3.50E+01	2.57E+00			
7440-41-7	beryllium		3.20E+01		7.00E+01		4.00E+00	4.00E+00	4.00E+00
91-58-7	beta-chloronaphthalene		6.40E+02		1.40E+03				
141-66-2	bidrin		1.60E+00		3.50E+00				
82657-04-3	biphenthrin		2.40E+02		5.25E+02				
92-52-4	biphenyl;1,1-		4.00E+03	5.47E+00	8.75E+03	5.47E+01			
108-60-1	bis(2-chloro-1-methyl-ethyl)ether		3.20E+02	6.25E-01	7.00E+02	6.25E+00			
111-44-4	bis(2-chloroethyl)ether			3.98E-02		3.98E-01			
39638-32-9	bis(2-chloroisopropyl) ether								
117-81-7	bis(2-ethylhexyl) phthalate		3.20E+02	6.25E+00	7.00E+02	6.25E+01	0.00E+00	6.00E+00	6.00E+00
542-88-1	bis(chloromethyl)ether			1.99E-04		1.99E-03			
80-05-7	bisphenol a		8.00E+02		1.75E+03				
7440-42-8	boron		3.20E+03		7.00E+03				
15541-45-4	bromate		6.40E+01	1.25E-01	1.40E+02	1.25E+00	0.00E+00	1.00E+01	1.00E+01
75-27-4	bromodichloromethane		1.60E+02	7.06E-01	3.50E+02	7.06E+00	0.00E+00	8.00E+01	8.00E-02
593-60-2	bromoethene								
75-25-2	bromoform		1.60E+02	5.54E+00	3.50E+02	5.54E+01	0.00E+00	8.00E+01	8.00E+01
74-83-9	bromomethane		1.12E+01		2.45E+01				
2104-96-3	bromophos		8.00E+01		1.75E+02				
1689-84-5	bromoxynil		3.20E+02		7.00E+02				
1689-99-2	bromoxynil octanoate		3.20E+02		7.00E+02				
106-99-0	butadiene;1,3-			1.29E-02		1.29E-01			
71-36-3	butanol;n-		8.00E+02		1.75E+03				
85-68-7	butyl benzyl phthalate		3.20E+03	4.61E+01	7.00E+03	4.61E+02			
2008-41-5	butylate		4.00E+02		8.75E+02				
85-70-1	butylphthalyl butylglycolate		1.60E+04		3.50E+04				
94-81-5	butyric acid;4-(2-methyl-4-chlorophenoxy)-		1.60E+02		3.50E+02				
75-60-5	cacodylic acid		3.20E+02		7.00E+02				
7440-43-9a	cadmium (soil and nonpotable surface water)								
7440-43-9	cadmium (potable groundwater and surface water)	5.00E+00	8.00E+00		1.75E+01		5.00E+00	5.00E+00	5.00E+00
592-01-8	calcium cyanide		1.60E+01		3.50E+01				
105-60-2	caprolactam		8.00E+03		1.75E+04				
2425-06-1	captafol		3.20E+01	5.83E-01	7.00E+01	5.83E+00			
133-06-2	captan		2.08E+03	3.80E+01	4.55E+03	3.80E+02			
63-25-2	carbaryl		1.60E+03		3.50E+03				
86-74-8	carbazole								
1563-66-2	carbofuran		8.00E+01		1.75E+02		4.00E+01	4.00E+01	4.00E+01
75-15-0	carbon disulfide		8.00E+02		1.75E+03				
56-23-5	carbon tetrachloride		3.20E+01	6.25E-01	7.00E+01	6.25E+00	0.00E+00	5.00E+00	5.00E+00
786-19-6	carbophenothion								
55285-14-8	carbosulfan		1.60E+02		3.50E+02				
5234-68-4	carboxin		1.60E+03		3.50E+03				
75-87-6	chloral								
302-17-0	chloral hydrate		8.00E+02		1.75E+03				
133-90-4	chloramben		2.40E+02		5.25E+02				
118-75-2	chloranil			2.19E-01		2.19E+00			
57-74-9	chlordane		8.00E+00	2.50E-01	1.75E+01	2.50E+00	0.00E+00	2.00E+00	2.00E+00
16887-00-6	chloride								
90982-32-4	chlorimuron-ethyl		3.20E+02		7.00E+02				
7782-50-5	chlorine		8.00E+02		1.75E+03		4.00E+03	4.00E+03	4.00E+00
506-77-4	chlorine cyanide		4.00E+02		8.75E+02				
10049-04-4	chlorine dioxide		2.40E+02		5.25E+02		8.00E+02	8.00E+02	8.00E+01
7758-19-2	chlorite		4.80E+02		1.05E+03		8.00E+02	1.00E+03	1.00E+03
75-68-3	chloro-1,1-difluoroethane;1-								
126-99-8	chloro-1,3-butadiene;2-		1.60E+02		3.50E+02				
3165-93-3	chloro-2-methylaniline hydrochloride;4-			1.90E-01		1.90E+00			
95-69-2	chloro-2-methylaniline;4-		4.80E+01	8.75E-01	1.05E+02	8.75E+00			
79-11-8	chloroacetic acid		1.60E+01		3.50E+01			6.00E+01	
532-27-4	chloroacetophenone;2-								
106-47-8	chloroaniline;p-		3.20E+01	2.19E-01	7.00E+01	2.19E+00			
108-90-7	chlorobenzene		1.60E+02		3.50E+02		1.00E+02	1.00E+02	1.00E+02
510-15-6	chlorobenzilate		3.20E+02	7.95E-01	7.00E+02	7.95E+00			
74-11-3	chlorobenzoic acid;p-		4.80E+02		1.05E+03				
98-56-6	chlorobenzotrifluoride;4-		2.40E+01		5.25E+01				
109-69-3	chlorobutane;1-		3.20E+02		7.00E+02				
75-45-6	chlorodifluoromethane								
67-66-3	chloroform		8.00E+01	1.41E+00	1.75E+02	1.41E+01	7.00E+01	8.00E+01	8.00E+01
74-87-3	chloromethane								
107-30-2	chloromethyl methyl ether			1.82E-02		1.82E-01			
88-73-3	chloronitrobenzene;o-		4.80E+01	2.92E-01	1.05E+02	2.92E+00			
100-00-5	chloronitrobenzene;p-		8.00E+00	6.94E+00	1.75E+01	6.94E+01			
95-57-8	chlorophenol;2-		4.00E+01		8.75E+01				
123-09-1	chlorophenyl methyl sulfide;p-								
98-57-7	chlorophenyl methyl sulfone;p-								
934-73-6	chlorophenyl methyl sulfoxide;p-								
75-29-6	chloropropane;2-								
1897-45-6	chlorothalonil		2.40E+02	2.82E+01	5.25E+02	2.82E+02			
95-49-8	chlorotoluene;o-		1.60E+02		3.50E+02				
101-21-3	chlorpropham		3.20E+03		7.00E+03				
2921-88-2	chlorpyrifos		1.60E+01		3.50E+01				
5598-13-0	chlorpyrifos-methyl		1.60E+02		3.50E+02				
64902-72-3	chlorsulfuron		8.00E+02		1.75E+03				
21923-23-9	chlorthiophos		1.28E+01		2.80E+01				
7440-47-3	chromium (total)	5.00E+01					1.00E+02	1.00E+02	1.00E+02
16065-83-1	chromium(III)		2.40E+04		5.25E+04				
18540-29-9	chromium(VI)		4.80E+01		1.05E+02				
218-01-9	chrysene			1.20E+01		1.20E+02			
8007-45-2	coke oven emissions								
8001-58-9	coal tar creosote								
7440-50-8	copper		6.40E+02		1.40E+03		1.30E+03	1.30E+03	1.30E+03
544-92-3	copper cyanide		8.00E+01		1.75E+02				
108-39-4	cresol;m-		4.00E+02		8.75E+02				
95-48-7	cresol;o-		4.00E+02		8.75E+02				
106-44-5	cresol;p-		8.00E+02		1.75E+03				
123-73-9	crotonaldehyde		8.00E+00	2.30E-02	1.75E+01	2.30E-01			
98-82-8	cumene		8.00E+02		1.75E+03				
21725-46-2	cyanazine		3.20E+01	1.04E-01	7.00E+01	1.04E+00			
57-12-5	cyanide		9.60E+00		2.10E+01		2.00E+02	2.00E+02	2.00E+02
460-19-5	cyanogen		8.00E+00		1.75E+01				
506-68-3	cyanogen bromide		7.20E+02		1.58E+03				
110-82-7	cyclohexane								
108-94-1	cyclohexanone		4.00E+04		8.75E+04				
108-91-8	cyclohexylamine		1.60E+03		3.50E+03				
542-92-7	cyclopentadiene								
68085-85-8	cyhalothrin/karate		8.00E+01		1.75E+02				
52315-07-8	cypermethrin		1.60E+02		3.50E+02				
66215-27-8	cyromazine		1.20E+02		2.63E+02				
1861-32-1	dacthal		1.60E+02		3.50E+02				
75-99-0	dalapon, sodium salt		2.40E+02		5.25E+02		2.00E+02	2.00E+02	2.00E+02
39515-41-8	danitol		4.00E+02		8.75E+02				
94-82-6	db;2,4-		1.28E+02		2.80E+02				
72-54-8	ddd			3.65E-01		3.65E+00			
72-55-9	dde			2.57E-01		2.57E+00			
50-29-3	ddt	3.00E-01	8.00E+00	2.57E-01	1.75E+01	2.57E+00			
1163-19-5	decabromodiphenyl ether		1.12E+02	1.25E+02	2.45E+02	1.25E+03			

CAS #	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Method C Non cancer (µg/L)	Surface Water Method C Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)
83-32-9	acenaphthene	6.48E+02		1.62E+03							
107-13-1	acrylonitrile	3.46E+03	4.00E-01	8.64E+03	1.00E+01						
309-00-2	aldrin	1.65E-02	8.11E-05	4.14E-02	2.03E-03	2.50E+00	3.00E+00	3.00E+00	1.90E-03		
7429-90-5	aluminum						7.50E+02			8.70E+01	
120-12-7	anthracene	2.59E+04		6.48E+04							
7440-36-0	antimony	1.04E+03		2.59E+03							
12674-11-2	aroclor 1016	5.85E-03	2.99E-03	1.46E-02	7.47E-02						1.40E-02
11097-69-1	aroclor 1254	1.67E-03	1.05E-04	4.18E-03	2.61E-03						1.40E-02
11096-82-5	aroclor 1260										1.40E-02
7440-38-2	arsenic, inorganic	1.77E+01	9.82E-02	4.42E+01	2.46E+00	3.60E+02	3.40E+02	3.60E+02	1.90E+02	1.50E+02	1.90E+02
71-43-2	benzene	1.99E+03	2.27E+01	4.99E+03	5.67E+02						
92-87-5	benzidine	8.84E+01	3.20E-04	2.21E+02	8.01E-03						
56-55-3	benzo[a]anthracene		2.96E-01		7.40E+00						
50-32-8	benzo[a]pyrene		2.96E-02		7.40E-01						
205-99-2	benzo[b]fluoranthene		2.96E-01		7.40E+00						
207-08-9	benzo[k]fluoranthene		2.96E+00		7.40E+01						
7440-41-7	beryllium	2.73E+02		6.82E+02							
91-58-7	beta-chloronaphthalene	1.04E+03		2.59E+03							
108-60-1	bis(2-chloro-1-methyl-ethyl)ether	4.15E+04	3.70E+01	1.04E+05	9.26E+02						
111-44-4	bis(2-chloroethyl)ether		8.54E-01		2.13E+01						
117-81-7	bis(2-ethylhexyl) phthalate	3.99E+02	3.56E+00	9.97E+02	8.90E+01						
75-27-4	bromodichloromethane	1.36E+04	2.75E+01	3.41E+04	6.88E+02						
75-25-2	bromoform	1.36E+04	2.16E+02	3.41E+04	5.40E+03						
74-83-9	bromomethane	9.55E+02		2.39E+03							
85-68-7	butyl benzyl phthalate	1.26E+03	8.32E+00	3.16E+03	2.08E+02						
7440-43-9a	cadmium (soil and nonpotable surface water)	4.05E+01		1.01E+02		8.20E-01	2.00E+00	3.90E+00	3.70E-01	2.50E-01	1.00E+00
56-23-5	carbon tetrachloride	5.46E+02	4.87E+00	1.36E+03	1.22E+02						
57-74-9	chlordane	9.26E-02	1.32E-03	2.31E-01	3.31E-02	2.40E+00	2.40E+00	2.40E+00	4.30E-03	4.30E-03	4.30E-03
16887-00-6	chloride					8.60E+05	8.60E+05		2.30E+05	2.30E+05	
7782-50-5	chlorine					1.90E+01	1.90E+01		1.10E+01	1.10E+01	
108-90-7	chlorobenzene	5.19E+03		1.30E+04							
67-66-3	chloroform	6.82E+03	5.50E+01	1.71E+04	1.38E+03						
95-57-8	chlorophenol;2-	9.97E+01		2.49E+02							
2921-88-2	chlorpyrifos					8.30E-02	8.30E-02		4.10E-02	4.10E-02	
16065-83-1	chromium(III)	2.43E+05		6.08E+05		1.76E+02	5.70E+02	5.50E+02	5.72E+01	7.40E+01	1.80E+02
18540-29-9	chromium(VI)	4.86E+02		1.22E+03		1.50E+01	1.60E+01	1.50E+01	1.00E+01	1.10E+01	1.00E+01
218-01-9	chrysene		2.96E+01		7.40E+02						
7440-50-8	copper	2.88E+03		7.23E+03		4.61E+00	1.30E+01	1.70E+01	3.47E+00	9.00E+00	1.10E+01
57-12-5	cyanide	1.56E+03		3.89E+03		2.20E+01	2.20E+01	2.20E+01	5.20E+00	5.20E+00	5.20E+00
72-54-8	ddd		5.00E-04		1.25E-02	1.10E+00			1.00E-03		
72-55-9	dde		3.53E-04		8.83E-03	1.10E+00			1.00E-03		
50-29-3	ddt	2.40E-02	3.53E-04	6.00E-02	8.83E-03	1.10E+00	1.10E+00	1.10E+00	1.00E-03	1.00E-03	1.00E-03
1163-19-5	decabromodiphenyl ether	5.67E+03	2.89E+03	1.42E+04	7.23E+04						

CAS #	Chemical Name	Surface Water Aquatic Life Marine/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Marine/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Surface Water Human Health Marine Waters CWA §304 (µg/L)	Surface Water Human Health Marine Waters NTR 40 CFR 131 (µg/L)
83-32-9	acenaphthene							6.70E+02		9.90E+02	
107-02-8	acrolein							1.90E+02	3.20E+02	2.90E+02	7.80E+02
107-13-1	acrylonitrile							5.10E-02	5.90E-02	2.50E-01	6.60E-01
309-00-2	aldrin	7.10E-01	1.30E+00	1.30E+00	1.90E-03			4.90E-05	1.30E-04	5.00E-05	1.40E-04
7790-98-9	ammonium perchlorate	2.33E+02			3.50E+01						
120-12-7	anthracene							8.30E+03	9.60E+03	4.00E+04	1.10E+05
7440-36-0	antimony							5.60E+00	1.40E+01	6.40E+02	4.30E+03
12674-11-2	aroclor 1016						3.00E-02				
11097-69-1	aroclor 1254						3.00E-02				
11096-82-5	aroclor 1260						3.00E-02				
7440-38-2	arsenic, inorganic	6.90E+01	6.90E+01	6.90E+01	3.60E+01	3.60E+01	3.60E+01	1.80E-02	1.80E-02	1.40E-01	1.40E-01
7440-39-3	barium and compounds							1.00E+03			
71-43-2	benzene							2.20E+00	1.20E+00	5.10E+01	7.10E+01
92-87-5	benzidine							8.60E-05	1.20E-04	2.00E-04	5.40E-04
56-55-3	benzo[a]anthracene							3.80E-03	2.80E-03	1.80E-02	3.11E-02
50-32-8	benzo[a]pyrene							3.80E-03	2.80E-03	1.80E-02	3.11E-02
205-99-2	benzo[b]fluoranthene							3.80E-03	2.80E-03	1.80E-02	3.11E-02
207-08-9	benzo[k]fluoranthene							3.80E-03	2.80E-03	1.80E-02	3.11E-02
91-58-7	beta-chloronaphthalene							1.00E+03		1.60E+03	
111-44-4	bis(2-chloroethyl)ether							3.00E-02	3.10E-02	5.30E-01	1.40E+00
39638-32-9	bis(2-chloroisopropyl) ether							1.40E+03	1.40E+03	6.50E+04	1.70E+05
117-81-7	bis(2-ethylhexyl) phthalate							1.20E+00	1.80E+00	2.20E+00	5.90E+00
542-88-1	bis(chloromethyl)ether							1.00E-04		2.90E-04	
75-27-4	bromodichloromethane							5.50E-01	2.70E-01	1.70E+01	2.20E+01
75-25-2	bromoform							4.30E+00	4.30E+00	1.40E+02	3.60E+02
74-83-9	bromomethane							4.70E+01	4.80E+01	1.50E+03	4.00E+03
85-68-7	butyl benzyl phthalate							1.50E+03		1.90E+03	
7440-43-9a	cadmium (soil and nonpotable surface water)	4.20E+01	4.00E+01	4.20E+01	9.30E+00	8.80E+00	9.30E+00				
56-23-5	carbon tetrachloride							2.30E-01	2.50E-01	1.60E+00	4.40E+00
57-74-9	chlordane	9.00E-02	9.00E-02	9.00E-02	4.00E-03	4.00E-03	4.00E-03	8.00E-04	5.70E-04	8.10E-04	5.90E-04
7782-50-5	chlorine	1.30E+01	1.30E+01		7.50E+00	7.50E+00					
108-90-7	chlorobenzene							1.30E+02	6.80E+02	1.60E+03	2.10E+04
67-66-3	chloroform							5.70E+00	5.70E+00	4.70E+02	4.70E+02
2921-88-2	chlorpyrifos	1.10E-02	1.10E-02		5.60E-03	6.00E-03					
18540-29-9	chromium(VI)	1.10E+03	1.10E+03	1.10E+03	5.00E+01	5.00E+01	5.00E+01				
218-01-9	chrysene							3.80E-03	2.80E-03	1.80E-02	3.11E-02
7440-50-8	copper	4.80E+00	4.80E+00	2.40E+00	3.10E+00	3.10E+00	2.40E+00				
57-12-5	cyanide	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.40E+02	7.00E+02	1.60E+04	2.20E+05
72-54-8	ddd	1.30E-01			1.00E-03			3.10E-04	8.30E-04	3.10E-04	8.40E-04
72-55-9	dde	1.30E-01			1.00E-03			2.20E-04	5.90E-04	2.20E-04	5.90E-04
50-29-3	ddt	1.30E-01	1.30E-01	1.30E-01	1.00E-03	1.00E-03	1.00E-03	2.20E-04	5.90E-04	2.20E-04	5.90E-04

CAS #	Chemical Name	Air Method B Non cancer (µg/m³)	Air Method B Cancer (µg/m³)	Air Method C Non cancer (µg/m³)	Air Method C Cancer (µg/m³)	S (Aqueous Solubility) (mg/L)	BCF (Bioconcentration Factor) (L/kg)	Hcc (Henry's Law Constant) (unitless)	INH (Inhalation Correction Factor) (unitless)	Kd (Distribution Factor for metals) (L/kg)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)
83-32-9	acenaphthene					4.24E+00	2.42E+02	6.36E-03	1		4.90E+03
208-96-8	acenaphthylene								1		
30560-19-1	acephate								1		
75-07-0	acetaldehyde	4.11E+00	1.14E+00	9.00E+00	1.14E+01				2		
34256-82-1	acetochlor								1		
67-64-1	acetone	1.42E+04		3.10E+04		1.00E+06		1.59E-03	2		5.75E-01
75-86-5	acetone cyanohydrin	9.14E-01		2.00E+00					2		
75-05-8	acetonitrile	2.74E+01		6.00E+01					2		
98-86-2	acetophenone								2		
62476-59-9	acifluorfen, sodium								2		
107-02-8	acrolein	9.14E-03		2.00E-02					2		
79-06-1	acrylamide	2.74E+00	2.50E-02	6.00E+00	2.50E-01				2		
79-10-7	acrylic acid	4.57E-01		1.00E+00					2		
107-13-1	acrylonitrile	9.14E-01	3.68E-02	2.00E+00	3.68E-01		3.00E+01		2		
15972-60-8	alachlor								1		
1596-84-5	alar		4.90E-01		4.90E+00				1		
116-06-3	aldicarb								1		
1646-88-4	aldicarb sulfone								1		
309-00-2	aldrin		5.10E-04		5.10E-03	1.80E-01	4.67E+03	6.97E-03	2		4.87E+04
74223-64-6	ally								1		
107-18-6	allyl alcohol	4.57E-02		1.00E-01					2		
107-05-1	allyl chloride	4.57E-01	4.17E-01	1.00E+00	4.17E+00				2		
7429-90-5	aluminum	2.29E+00		5.00E+00				0.00E+00	1		
20859-73-8	aluminum phosphide								1		
67485-29-4	amdro								1		
834-12-8	ametryn								1		
591-27-5	aminophenol;m-								1		
504-24-5	aminopyridine;4-								1		
33089-61-1	amitraz								1		
7664-41-7	ammonia	4.57E+01		1.00E+02					2		
7790-98-9	ammonium perchlorate								1		
7773-06-0	ammonium sulfamate								1		
62-53-3	aniline	4.57E-01	1.56E+00	1.00E+00	1.56E+01				2		
120-12-7	anthracene					4.34E-02	3.00E+01	2.67E-03	1		2.35E+04
7440-36-0	antimony						1.00E+00	0.00E+00	1	4.50E+01	
1314-60-9	antimony pentoxide								1		
28300-74-5	antimony potassium tartrate								1		
1332-81-6	antimony tetroxide								1		
1309-64-4	antimony trioxide	9.14E-02		2.00E-01					1		
74115-24-5	apollo								1		
140-57-8	aramite		3.52E-01		3.52E+00				1		
12674-11-2	aroclor 1016		1.25E-01		1.25E+00		3.12E+04		1		1.07E+05
11097-69-1	aroclor 1254		4.39E-03		4.39E-02		3.12E+04		1		
11096-82-5	aroclor 1260		4.39E-03		4.39E-02				1		8.22E+05
7440-38-2	arsenic, inorganic	6.86E-03	5.81E-04	1.50E-02	5.81E-03		4.40E+01	0.00E+00	1	2.90E+01	
7784-42-1	arsine	2.29E-02		5.00E-02					2		
76578-14-8	assure								1		
3337-71-1	asulam								1		
1912-24-9	atrazine								1		
65195-55-3	avermectin B1								1		
103-33-3	azobenzene		8.06E-02		8.06E-01				1		
7440-39-3	barium and compounds	2.29E-01		5.00E-01				0.00E+00	1	4.10E+01	
542-62-1	barium cyanide								1		
114-26-1	baygon								1		
43121-43-3	bayleton								1		
68359-37-5	baythroid								1		
1861-40-1	benefin								2		
17804-35-2	benomyl								1		
25057-89-0	bentazon								1		
100-52-7	benzaldehyde								2		
71-43-2	benzene	1.37E+01	3.21E-01	3.00E+01	3.21E+00	1.75E+03	5.20E+00	2.28E-01	2		6.20E+01
108-98-5	benzenethiol								2		
92-87-5	benzidine		3.73E-05		3.73E-04		8.75E+01		1		
191-24-2	benzo(g,h,i)perylene								1		
56-55-3	benzo[a]anthracene		2.27E-02		2.27E-01	9.40E-03	3.00E+01	1.37E-04	1		3.58E+05
50-32-8	benzo[a]pyrene		2.27E-03		2.27E-02	1.62E-03	3.00E+01	4.63E-05	1		9.69E+05
205-99-2	benzo[b]fluoranthene		2.27E-02		2.27E-01	1.50E-03	3.00E+01	4.55E-03	1		1.23E+06
207-08-9	benzo[k]fluoranthene		2.27E-02		2.27E-01	8.00E-04	3.00E+01	3.40E-05	1		1.23E+06
65-85-0	benzoic acid					3.50E+03		6.31E-05	1		6.00E-01
98-07-7	benzotrichloride								2		
100-51-6	benzyl alcohol								2		
100-44-7	benzyl chloride	4.57E-01	5.10E-02	1.00E+00	5.10E-01				2		
7440-41-7	beryllium	9.14E-03	1.04E-03	2.00E-02	1.04E-02		1.90E+01	0.00E+00	1	7.90E+02	
91-58-7	beta-chloronaphthalene						2.02E+02		2		
141-66-2	bidrin								1		
82657-04-3	biphenthrin								1		
92-52-4	biphenyl;1,1-	1.83E-01		4.00E-01					2		
108-60-1	bis(2-chloro-1-methyl-ethyl)ether		2.50E-01		2.50E+00		2.47E+00		2		
111-44-4	bis(2-chloroethyl)ether		7.58E-03		7.58E-02	1.72E+04	6.90E+00	7.38E-04	2		7.60E+01
39638-32-9	bis(2-chloroisopropyl) ether						2.47E+00		2		
117-81-7	bis(2-ethylhexyl) phthalate		1.04E+00		1.04E+01	3.40E-01	1.30E+02	4.18E-06	1		1.11E+05
542-88-1	bis(chloromethyl)ether		4.03E-05		4.03E-04				2		
80-05-7	bisphenol a								1		
7440-42-8	boron	9.14E+00		2.00E+01				0.00E+00	1		
15541-45-4	bromate								1		
75-27-4	bromodichloromethane		6.76E-02		6.76E-01	6.74E+03	3.75E+00	6.56E-02	2		5.50E+01
593-60-2	bromoethene	1.37E+00	7.81E-02	3.00E+00	7.81E-01				2		
75-25-2	bromoform		2.27E+00		2.27E+01	3.10E+03	3.75E+00	2.19E-02	2		1.26E+02
74-83-9	bromomethane	2.29E+00		5.00E+00		1.52E+04	3.75E+00	2.56E-01	2		9.00E+00
2104-96-3	bromophos								1		
1689-84-5	bromoxynil								1		
1689-99-2	bromoxynil octanoate								1		
106-99-0	butadiene;1,3-	9.14E-01	8.33E-02	2.00E+00	8.33E-01				2		
71-36-3	butanol;n-					7.40E+04		3.61E-04	2		6.92E+00
85-68-7	butyl benzyl phthalate					2.69E+00	4.14E+02	5.17E-05	1		1.37E+04
2008-41-5	butylate								2		
85-70-1	butylphthalyl butylglycolate								1		
94-81-5	butyric acid;4-(2-methyl-4-chlorophenoxy)-								1		
75-60-5	cacodylic acid								1		
7440-43-9a	cadmium (soil and nonpotable surface water)	4.57E-03	1.39E-03	1.00E-02	1.39E-02		6.40E+01	0.00E+00	1	6.70E+00	
7440-43-9	cadmium (potable groundwater and surface water)	4.57E-03	1.39E-03	1.00E-02	1.39E-02		6.40E+01	0.00E+00	1		
592-01-8	calcium cyanide								1		
105-60-2	caprolactam	1.01E+00		2.20E+00					1		
2425-06-1	captafol		5.81E-02		5.81E-01				1		
133-06-2	captan		3.79E+00		3.79E+01				1		
63-25-2	carbaryl								1		
86-74-8	carbazole					7.48E+00		6.26E-07	1		3.39E+03
1563-66-2	carbofuran								1		
75-15-0	carbon disulfide	3.20E+02		7.00E+02		1.19E+03		1.24E+00	2		4.57E+01
56-23-5	carbon tetrachloride	4.57E+01	4.17E-01	1.00E+02	4.17E+00	7.93E+02	1.88E+01	1.25E+00	2		1.52E+02
786-19-6	carbophenothion								1		
55285-14-8	carbosulfan								1		
5234-68-4	carboxin								1		
75-87-6	chloral								2		
302-17-0	chloral hydrate								2		
133-90-4	chloramben								1		
118-75-2	chloranil								1		
57-74-9	chlordane	3.20E-01	2.50E-02	7.00E-01	2.50E-01	5.60E-02	1.41E+04	1.99E-03	1		5.13E+04
16887-00-6	chloride								1		
90982-32-4	chlorimuron-ethyl								1		
7782-50-5	chlorine	6.86E-02		1.50E-01					2		
506-77-4	chlorine cyanide								2		
10049-04-4	chlorine dioxide	9.14E-02		2.00E-01					2		
7758-19-2	chlorite								1		
75-68-3	chloro-1,1-difluoroethane;1-	2.29E+04		5.00E+04					2		
126-99-8	chloro-1,3-butadiene;2-	9.14E+00	8.33E-03	2.00E+01	8.33E-02				2		
3165-93-3	chloro-2-methylaniline hydrochloride;4-								1		
95-69-2	chloro-2-methylaniline;4-		3.25E-02		3.25E-01				1		
79-11-8	chloroacetic acid								2		
532-27-4	chloroacetophenone;2-	1.37E-02		3.00E-02					1		
106-47-8	chloroaniline;p-					5.30E+03		1.36E-05	2		6.61E+01
108-90-7	chlorobenzene	2.29E+01		5.00E+01		4.72E+02	1.03E+01	1.52E-01	2		2.24E+02
510-15-6	chlorobenzilate		8.06E-02		8.06E-01				1		
74-11-3	chlorobenzoic acid;p-								1		
98-56-6	chlorobenzotrifluoride;4-	1.37E+02		3.00E+02					2		
109-69-3	chlorobutane;1-								2		
75-45-6	chlorodifluoromethane	2.29E+04		5.00E+04					2		
67-66-3	chloroform	4.48E+01	1.09E-01	9.80E+01	1.09E+00	7.92E+03	3.75E+00	1.50E-01	2		5.30E+01
74-87-3	chloromethane	4.11E+01		9.00E+01			3.75E+00		2		6.00E+00
107-30-2	chloromethyl methyl ether		3.62E-03		3.62E-02				2		
88-73-3	chloronitrobenzene;o-	4.57E-03		1.00E-02					1		
100-00-5	chloronitrobenzene;p-	2.74E-01		6.00E-01					2		
95-57-8	chlorophenol;2-					2.20E+04	1.34E+02	1.60E-02	2		3.88E+02
123-09-1	chlorophenyl methyl sulfide;p-								1		
98-57-7	chlorophenyl methyl sulfone;p-								1		
934-73-6	chlorophenyl methyl sulfoxide;p-								1		
75-29-6	chloropropane;2-								2		
1897-45-6	chlorothalonil		2.81E+00		2.81E+01				1		
95-49-8	chlorotoluene;o-								2		
101-21-3	chlorpropham								1		
2921-88-2	chlorpyrifos								1		
5598-13-0	chlorpyrifos-methyl								1		
64902-72-3	chlorsulfuron								1		
21923-23-9	chlorthiophos								1		
7440-47-3	chromium (total)								1		
16065-83-1	chromium(III)						1.60E+01	0.00E+00	1	1.00E+03	
18540-29-9	chromium(VI)	4.57E-02	2.98E-05	1.00E-01	2.98E-04		1.60E+01	0.00E+00	1	1.90E+01	
218-01-9	chrysene		2.27E-01		2.27E+00	1.60E-03	3.00E+01	3.88E-03	1		3.98E+05
8007-45-2	coke oven emissions		4.03E-03		4.03E-02				1		
8001-58-9	coal tar creosote								2		
7440-50-8	copper						3.60E+01	0.00E+00	1	2.20E+01	
544-92-3	copper cyanide								1		
108-39-4	cresol;m-	2.74E+02		6.00E+02					2		
95-48-7	cresol;o-	2.74E+02		6.00E+02		2.60E+04		4.92E-05	2		9.12E+01
106-44-5	cresol;p-	2.74E+02		6.00E+02					2		
123-73-9	crotonaldehyde								2		
98-82-8	cumene	1.83E+02		4.00E+02					2		
21725-46-2	cyanazine								1		
57-12-5	cyanide	3.66E-01		8.00E-01			1.00E+00		1		
460-19-5	cyanogen								2		
506-68-3	cyanogen bromide								2		
110-82-7	cyclohexane	2.74E+03		6.00E+03					1		
108-94-1	cyclohexanone	3.20E+02		7.00E+02					2		
108-91-8	cyclohexylamine								2		
542-92-7	cyclopentadiene								2		
68085-85-8	cyhalothrin/karate								1		
52315-07-8	cypermethrin								1		
66215-27-8	cyromazine								1		
1861-32-1	dacthal								1		
75-99-0	dalapon, sodium salt								2		
39515-41-8	danitol								1		
94-82-6	db;2,4-								1		
72-54-8	ddd		3.62E-02		3.62E-01	9.00E-02	5.36E+04	1.64E-04	1		4.58E+04
72-55-9	dde		2.58E-02		2.58E-01	1.20E-01	5.36E+04	8.61E-04	1		8.64E+04
50-29-3	ddt		2.58E-02		2.58E-01	2.50E-02	5.36E+04	3.32E-04	1		6.78E+05
1163-19-5	decabromodiphenyl ether						3.20E+00		1		

1	2	3	4	5	6	7	8	9	10	11
CAS #	Chemical Name	CAS #	RfDi Inhalation Reference Dose (mg/kg-day)	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	Source	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source
8065-48-3	demeton	8065-48-3					4.00E-05	I		
103-23-1	di(2-ethylhexyl)adipate	103-23-1					6.00E-01	I	1.20E-03	I
2303-16-4	diallate	2303-16-4							6.10E-02	H
333-41-5	diazinon	333-41-5					7.00E-04	A		
53-70-3	dibenzo[a,h]anthracene	53-70-3			4.20E+00	C			7.30E+00	E
132-64-9	dibenzofuran	132-64-9					1.00E-03	X		
96-12-8	dibromo-3-chloropropane;1,2-	96-12-8	5.71E-05	I	2.10E+01	P	2.00E-04	P	8.00E-01	P
106-37-6	dibromobenzene;1,4-	106-37-6					1.00E-02	I		
124-48-1	dibromochloromethane	124-48-1			9.45E-02	C	2.00E-02	I	8.40E-02	I
84-74-2	di-butyl phthalate	84-74-2					1.00E-01	I		
1918-00-9	dicamba	1918-00-9					3.00E-02	I		
764-41-0	dichloro-2-butene;1,4-	764-41-0			1.47E+01	P				
95-50-1	dichlorobenzene;1,2-	95-50-1	5.71E-02	H			9.00E-02	I		
541-73-1	dichlorobenzene;1,3-	541-73-1								
106-46-7	dichlorobenzene;1,4-	106-46-7	2.29E-01	I	3.85E-02	C	7.00E-02	A	5.40E-03	C
91-94-1	dichlorobenzidine;3,3'-	91-94-1			1.19E+00	C			4.50E-01	I
75-71-8	dichlorodifluoromethane	75-71-8	2.86E-02	X			2.00E-01	I		
75-34-3	dichloroethane;1,1-	75-34-3			5.60E-03	C	2.00E-01	P	5.70E-03	C
107-06-2	dichloroethane;1,2-	107-06-2	2.00E-03	P	9.10E-02	I	6.00E-03	X	9.10E-02	I
540-59-0	dichloroethylene,1,2- (mixed isomers)	540-59-0					9.00E-03	H		
75-35-4	dichloroethylene;1,1-	75-35-4	5.71E-02	I			5.00E-02	I		
156-59-2	dichloroethylene;1,2-,cis	156-59-2					2.00E-03	I		
156-60-5	dichloroethylene;1,2-,trans	156-60-5					2.00E-02	I		
120-83-2	dichlorophenol;2,4-	120-83-2					3.00E-03	I		
94-75-7	dichlorophenoxyacetic acid;2,4-	94-75-7					1.00E-02	I		
78-87-5	dichloropropane;1,2-	78-87-5	1.14E-03	I	3.50E-02	C	9.00E-02	A	3.60E-02	C
616-23-9	dichloropropanol;2,3-	616-23-9					3.00E-03	I		
542-75-6	dichloropropene;1,3-	542-75-6	5.71E-03	I	1.40E-02	I	3.00E-02	I	1.00E-01	I
62-73-7	dichlorvos	62-73-7	1.43E-04	I	2.91E-01	C	5.00E-04	I	2.90E-01	I
115-32-2	dicofol	115-32-2								
77-73-6	dicyclopentadiene	77-73-6	2.00E-03	P			8.00E-03	P		
60-57-1	dieldrin	60-57-1			1.61E+01	I	5.00E-05	I	1.60E+01	I
84-66-2	diethyl phthalate	84-66-2					8.00E-01	I		
111-46-6	diethylene glycol	111-46-6								
693-21-0	diethylene glycol dinitrate	693-21-0								
112-34-5	diethylene glycol monobutyl ether	112-34-5	2.86E-05	P			3.00E-02	P		
111-90-0	diethylene glycol monoethyl ether	111-90-0	8.57E-05	P			6.00E-02	P		
617-84-5	diethylformamide	617-84-5					1.00E-03	P		
311-45-5	diethyl-p-nitrophenylphosphate	311-45-5								
56-53-1	diethylstilbesterol	56-53-1			3.50E+02	C			3.50E+02	C
43222-48-6	difenzoquat	43222-48-6					8.00E-02	I		
35367-38-5	diflubenzuron	35367-38-5					2.00E-02	I		
75-37-6	difluoroethane;1,1-	75-37-6	1.14E+01	I						
1445-75-6	diisopropyl methylphosphonate	1445-75-6					8.00E-02	I		
55290-64-7	dimethipin	55290-64-7					2.00E-02	I		
60-51-5	dimethoate	60-51-5					2.00E-04	I		
119-90-4	dimethoxybenzidine;3,3'-	119-90-4							1.60E+00	P
131-11-3	dimethyl phthalate	131-11-3								
120-61-6	dimethyl terephthalate	120-61-6					1.00E-01	I		
124-40-3	dimethylamine	124-40-3								
21436-96-4	dimethylaniline hydrochloride;2,4-	21436-96-4							5.80E-01	H
95-68-1	dimethylaniline;2,4-	95-68-1					2.00E-03	X	2.00E-01	P
121-69-7	dimethylaniline;N,N-	121-69-7					2.00E-03	I		
119-93-7	dimethylbenzidine;3,3'-	119-93-7							1.10E+01	P
68-12-2	dimethylformamide;N,N-	68-12-2	8.57E-03	I			1.00E-01	P		
57-14-7	dimethylhydrazine;1,1-	57-14-7	5.71E-07	X			1.00E-04	X		
540-73-8	dimethylhydrazine;1,2-	540-73-8			5.60E+02	C			5.50E+02	C
105-67-9	dimethylphenol;2,4-	105-67-9					2.00E-02	I		
576-26-1	dimethylphenol;2,6-	576-26-1					6.00E-04	I		
95-65-8	dimethylphenol;3,4-	95-65-8					1.00E-03	I		
99-65-0	dinitrobenzene;m-	99-65-0					1.00E-04	I		
528-29-0	dinitrobenzene;o-	528-29-0					1.00E-04	P		
100-25-4	dinitrobenzene;p-	100-25-4					1.00E-04	P		
131-89-5	dinitro-o-cyclohexyl phenol;4,6-	131-89-5					2.00E-03	I		
51-28-5	dinitrophenol;2,4-	51-28-5					2.00E-03	I		
25321-14-6	dinitrotoluene mixture; 2,4-/2,6-	25321-14-6					9.00E-04	X	4.50E-01	X
121-14-2	dinitrotoluene;2,4-	121-14-2			3.12E-01	C	2.00E-03	I	3.10E-01	C
606-20-2	dinitrotoluene;2,6-	606-20-2					3.00E-04	X	1.50E+00	P
117-84-0	di-n-octyl phthalate	117-84-0					1.00E-02	P		
88-85-7	dinoseb	88-85-7					1.00E-03	I		
123-91-1	dioxane;1,4-	123-91-1	8.57E-03	I	1.75E-02	I	3.00E-02	I	1.00E-01	I
957-51-7	diphenamid	957-51-7					3.00E-02	I		
122-39-4	diphenylamine	122-39-4					2.50E-02	I		
122-66-7	diphenylhydrazine;1,2-	122-66-7			7.70E-01	I			8.00E-01	I
85-00-7	diquat	85-00-7					2.20E-03	I		
1937-37-7	direct black 38	1937-37-7			4.90E+02	C			7.10E+00	C
2602-46-2	direct blue 6	2602-46-2			4.90E+02	C			7.40E+00	C
16071-86-6	direct brown 95	16071-86-6			4.90E+02	C			6.70E+00	C
2610-05-1	direct sky blue	2610-05-1								
298-04-4	disulfoton	298-04-4					4.00E-05	I		
505-29-3	dithiane;1,4-	505-29-3					1.00E-02	I		
330-54-1	diuron	330-54-1					2.00E-03	I		
2439-10-3	dodine	2439-10-3					4.00E-03	I		
115-29-7	endosulfan	115-29-7					6.00E-03	I		
145-73-3	endothall	145-73-3					2.00E-02	I		
72-20-8	endrin	72-20-8					3.00E-04	I		
106-89-8	epichlorohydrin	106-89-8	2.86E-04	I	4.20E-03	I	6.00E-03	P	9.90E-03	I
106-88-7	epoxybutane	106-88-7	5.71E-03	I						
16672-87-0	ethephon	16672-87-0					5.00E-03	I		
563-12-2	ethion	563-12-2					5.00E-04	I		
111-15-9	ethoxyethanol acetate;2-	111-15-9	1.71E-02	P			1.00E-01	P		
110-80-5	ethoxyethanol;2-	110-80-5	5.71E-02	I			9.00E-02	P		
141-78-6	ethyl acetate	141-78-6	2.00E-02	P			9.00E-01	I		
140-88-5	ethyl acrylate	140-88-5	2.30E-03	P			5.00E-03	P	4.80E-02	H
75-00-3	ethyl chloride	75-00-3	2.86E+00	I						
759-94-4	ethyl dipropylthiocarbamate;S-	759-94-4					2.50E-02	I		
60-29-7	ethyl ether	60-29-7					2.00E-01	I		
97-63-2	ethyl methacrylate	97-63-2	8.57E-02	P			9.00E-02	H		
2104-64-5	ethyl p-nitrophenyl phenylphosphorothioate	2104-64-5					1.00E-05	I		
100-41-4	ethylbenzene	100-41-4	2.86E-01	I			1.00E-01	I		
109-78-4	ethylene cyanohydrin	109-78-4					7.00E-02	P		
107-15-3	ethylene diamine	107-15-3					9.00E-02	P		
106-93-4	ethylene dibromide (EDB)	106-93-4	2.57E-03	I	2.10E+00	I	9.00E-03	I	2.00E+00	I
107-21-1	ethylene glycol	107-21-1	1.14E-01	C			2.00E+00	I		
111-76-2	ethylene glycol monobutyl ether (EGBE)	111-76-2	4.57E-01	I			1.00E-01	I		
75-21-8	ethylene oxide	75-21-8	8.57E-03	C	3.08E-01	C			3.10E-01	C
96-45-7	ethylene thiourea	96-45-7			4.55E-02	C	8.00E-05	I	4.50E-02	C
84-72-0	ethylphthalyl ethylglycolate	84-72-0					3.00E+00	I		
101200-48-0	express	101200-48-0					8.00E-03	I		
22224-92-6	fenamiphos	22224-92-6					2.50E-04	I		
115-90-2	fensulfothion	115-90-2								
2164-17-2	fluometuron	2164-17-2					1.30E-02	I		
206-44-0	fluoranthene	206-44-0					4.00E-02	I		
86-73-7	fluorene	86-73-7					4.00E-02	I		
16984-48-8	fluoride	16984-48-8	3.71E-03	C			4.00E-02	C		
7782-41-4	fluorine, soluble fluoride	7782-41-4	3.71E-03	C			6.00E-02	I		
59756-60-4	fluridone	59756-60-4					8.00E-02	I		
56425-91-3	flurprimidol	56425-91-3					2.00E-02	I		
66332-96-5	flutolanil	66332-96-5					6.00E-02	I		
69409-94-5	fluvalinate	69409-94-5					1.00E-02	I		
133-07-3	folpet	133-07-3					1.00E-01	I	3.50E-03	I
72178-02-0	fomesafen	72178-02-0							1.90E-01	I
944-22-9	fonfos	944-22-9					2.00E-03	I		
50-00-0	formaldehyde	50-00-0	2.80E-03	A	4.55E-02	I	2.00E-01	I		
64-18-6	formic acid	64-18-6	8.57E-05	X			9.00E-01	P		
39148-24-8	fosetyl-al	39148-24-8					3.00E+00	I		
110-00-9	furan	110-00-9					1.00E-03	I		
67-45-8	furazolidone	67-45-8							3.80E+00	H
98-01-1	furfural	98-01-1	1.43E-02	H			3.00E-03	I		
531-82-8	furium	531-82-8			1.51E+00	C			1.50E+00	C
60568-05-0	furmecyclox	60568-05-0			3.01E-02	C			3.00E-02	I
77182-82-2	glufosinate-ammonium	77182-82-2					4.00E-04	I		
765-34-4	glycidaldehyde	765-34-4	2.86E-04	H			4.00E-04	I		
1071-83-6	glyphosate	1071-83-6					1.00E-01	I		
unavailable20	gross alpha particle activity	unavailable20								
unavailable21	gross beta particle activity	unavailable21								
69806-40-2	haloxyfop-methyl	69806-40-2					5.00E-05	I		
79277-27-3	harmony	79277-27-3					1.30E-02	I		
76-44-8	heptachlor	76-44-8			4.55E+00	I	5.00E-04	I	4.50E+00	I
1024-57-3	heptachlor epoxide	1024-57-3			9.10E+00	I	1.30E-05	I	9.10E+00	I
142-82-5	heptane;n-	142-82-5								
87-82-1	hexabromobenzene	87-82-1					2.00E-03	I		
68631-49-2	hexabromodiphenyl ether; 2,2',4,4',5,5'-	68631-49-2					2.00E-04	I		
118-74-1	hexachlorobenzene	118-74-1			1.61E+00	I	8.00E-04	I	1.60E+00	I
87-68-3	hexachlorobutadiene	87-68-3			7.70E-02	I	1.00E-03	P	7.80E-02	I
319-84-6	hexachlorocyclohexane;alpha	319-84-6			6.30E+00	I	8.00E-03	A	6.30E+00	I
319-85-7	hexachlorocyclohexane;beta-	319-85-7			1.86E+00	I			1.80E+00	I
319-86-8	hexachlorocyclohexane;delta-	319-86-8								
608-73-1	hexachlorocyclohexane;technical	608-73-1			1.79E+00	I			1.80E+00	I
77-47-4	hexachlorocyclopentadiene	77-47-4	5.71E-05	I			6.00E-03	I		
19408-74-3	hexachlorodibenzo-p-dioxin, mixture	19408-74-3			4.55E+03	I			6.20E+03	I
67-72-1	hexachloroethane	67-72-1	8.57E-03	I	3.85E-02	C	7.00E-04	I	4.00E-02	I
70-30-4	hexachlorophene	70-30-4					3.00E-04	I		
822-06-0	hexamethylene diisocyanate;1,6-	822-06-0	2.86E-06	I						
110-54-3	hexane;n-	110-54-3	2.00E-01	I			6.00E-02	H		
51235-04-2	hexazinone	51235-04-2					3.30E-02	I		
302-01-2	hydrazine	302-01-2	8.57E-06	P	1.72E+01	I			3.00E+00	I
10034-93-2	hydrazine sulfate	10034-93-2			1.72E+01	I			3.00E+00	I
7647-01-0	hydrogen chloride	7647-01-0	5.71E-03	I						
74-90-8	hydrogen cyanide	74-90-8	2.29E-04	I			6.00E-04	I		
7783-06-4	hydrogen sulfide	7783-06-4	5.71E-04	I						
123-31-9	hydroquinone	123-31-9					4.00E-02	P	6.00E-02	P
35554-44-0	imazalil	35554-44-0					1.30E-02	I		
81335-37-7	imazaquin	81335-37-7					2.50E-01	I		
193-39-5	indeno[1,2,3-cd]pyrene	193-39-5			3.85E-01	C			7.30E-01	E
36734-19-7	iprodione	36734-19-7					4.00E-02	I		
7439-89-6	iron	7439-89-6					7.00E-01	P		
78-83-1	isobutyl alcohol	78-83-1					3.00E-01	I		
78-59-1	isophorone	78-59-1	5.71E-01	C			2.00E-01	I	9.50E-04	I
33820-53-0	isopropalin	33820-53-0					1.50E-02	I		
1832-54-8	isopropyl methyl phosphonic acid	1832-54-8					1.00E-01	I		
82558-50-7	isoxaben (not in HSDB)	82558-50-7					5.00E-02	I		
77501-63-4	lactofen	77501-63-4					2.00E-03	I		
7439-92-1	lead	7439-92-1								
unavailable02	lead alkyls	unavailable02								
58-89-9	lindane	58-89-9			1.09E+00	C	3.00E-04	I	1.10E+00	C
330-55-2	linuron	330-55-2					2.00E-03	I		
7791-03-9	lithium perchlorate	7791-03-9					7.00E-04	I		
83055-99-6	londax	83055-99-6					2.00E-01	I		
121-75-5	malathion	121-75-5					2.00E-02	I		
108-31-6	maleic anhydride	108-31-6	2.00E-04	C			1.00E-01	I		
123-33-1	maleic hydrazide	123-33-1					5.00E-01	I		
109-77-3	malononitrile	109-77-3					1.00E-04	P		
8018-01-7	mancozeb	8018-01-7					3.00E-02	H		
12427-38-2	maneb	12427-38-2					5.00E-03	I		
7439-96-5	manganese	7439-96-5	1.43E-05	I			1.40E-01	I		

CAS #	Soil Method A Unrestricted Land Use (mg/kg)	Soil Method B Non cancer (mg/kg)	Soil Method B Cancer (mg/kg)	Soil Protective of Groundwater Vadose @ 25 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Vadose @ 13 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Saturated see guidance (mg/kg)	Soil Method A Industrial Properties (mg/kg)	Soil Method C Non cancer (mg/kg)	Soil Method C Cancer (mg/kg)	Ground Water Method A (µg/L)	Ground Water Method B Non cancer (µg/L)	Ground Water Method B Cancer (µg/L)	Ground Water Method C Non cancer (µg/L)	Ground Water Method C Cancer (µg/L)	Ground Water Maximum Contaminant Level Goal (µg/L)	Ground Water Maximum Contaminant Level (µg/L)	Ground Water WA Maximum Contaminant Level (µg/L)
8065-48-3		3.20E+00						1.40E+02			6.40E-01		1.40E+00				
103-23-1		4.80E+04	8.33E+02					2.10E+06	1.09E+05		9.60E+03	7.29E+01	2.10E+04	7.29E+02	4.00E+02	4.00E+02	4.00E+02
2303-16-4			1.64E+01						2.15E+03			1.43E+00		1.43E+01			
333-41-5		5.60E+01						2.45E+03			1.12E+01		2.45E+01				
53-70-3			1.37E-01	4.29E-01		2.14E-02			1.80E+01			1.20E-02		1.20E-01			
132-64-9		8.00E+01						3.50E+03			1.60E+01		3.50E+01				
96-12-8		1.60E+01	1.25E+00					7.00E+02	1.64E+02		1.60E+00	5.47E-02	3.50E+00	5.47E-01	0.00E+00	2.00E-01	2.00E-01
106-37-6		8.00E+02						3.50E+04			8.00E+01		1.75E+02				
124-48-1		1.60E+03	1.19E+01	2.77E-02	2.76E-02	1.82E-03		7.00E+04	1.56E+03		1.60E+02	5.21E-01	3.50E+02	5.21E+00	6.00E+01	8.00E+01	8.00E+01
84-74-2		8.00E+03		5.65E+01		2.97E+00		3.50E+05			1.60E+03		3.50E+03				
1918-00-9		2.40E+03						1.05E+05			4.80E+02		1.05E+03				
95-50-1		7.20E+03		7.03E+00	6.98E+00	3.99E-01		3.15E+05			7.20E+02		1.58E+03		6.00E+02	6.00E+02	6.00E+02
106-46-7		5.60E+03	1.85E+02	1.24E+00	1.23E+00	6.77E-02		2.45E+05	2.43E+04		5.60E+02	8.10E+00	1.23E+03	8.10E+01	7.50E+01	7.50E+01	7.50E+01
91-94-1			2.22E+00	3.59E-03		1.97E-04			2.92E+02			1.94E-01		1.94E+00			
75-71-8		1.60E+04						7.00E+05			1.60E+03		3.50E+03				
75-34-3		1.60E+04	1.75E+02	4.19E-02	4.07E-02	2.61E-03		7.00E+05	2.30E+04		1.60E+03	7.68E+00	3.50E+03	7.68E+01			
107-06-2		4.80E+02	1.10E+01	2.32E-02	2.31E-02	1.56E-03		2.10E+04	1.44E+03	5.00E+00	4.80E+01	4.81E-01	1.05E+02	4.81E+00	0.00E+00	5.00E+00	5.00E+00
540-59-0		7.20E+02						3.15E+04			7.20E+01		1.58E+02				
75-35-4		4.00E+03		5.01E-02	4.57E-02	2.46E-03		1.75E+05			4.00E+02		8.75E+02		7.00E+00	7.00E+00	7.00E+00
156-59-2		1.60E+02		8.00E-02	7.81E-02	5.15E-03		7.00E+03			1.60E+01		3.50E+01		7.00E+01	7.00E+01	7.00E+01
156-60-5		1.60E+03		5.43E-01	5.18E-01	3.25E-02		7.00E+04			1.60E+02		3.50E+02		1.00E+02	1.00E+02	1.00E+02
120-83-2		2.40E+02		1.67E-01		1.04E-02		1.05E+04			2.40E+01		5.25E+01				
94-75-7		8.00E+02						3.50E+04			1.60E+02		3.50E+02		7.00E+01	7.00E+01	7.00E+01
78-87-5		7.20E+03	2.78E+01	2.57E-02	2.53E-02	1.67E-03		3.15E+05	3.65E+03		7.20E+02	1.22E+00	1.58E+03	1.22E+01	0.00E+00	5.00E+00	5.00E+00
616-23-9		2.40E+02						1.05E+04			2.40E+01		5.25E+01				
542-75-6		2.40E+03	1.00E+01	2.54E-03	2.29E-03	1.37E-04		1.05E+05	1.31E+03		2.40E+02	4.38E-01	5.25E+02	4.38E+00			
62-73-7		4.00E+01	3.45E+00					1.75E+03	4.53E+02		4.00E+00	1.51E-01	8.75E+00	1.51E+00			
77-73-6		6.40E+02						2.80E+04			6.40E+01		1.40E+02				
60-57-1		4.00E+00	6.25E-02	2.82E-03	2.82E-03	1.41E-04		1.75E+02	8.20E+00		8.00E-01	5.47E-03	1.75E+00	5.47E-02			
84-66-2		6.40E+04		7.22E+01		4.72E+00		2.80E+06			1.28E+04		2.80E+04				
112-34-5		2.40E+03						1.05E+05			2.40E+02		5.25E+02				
111-90-0		4.80E+03						2.10E+05			4.80E+02		1.05E+03				
617-84-5		8.00E+01						3.50E+03			1.60E+01		3.50E+01				
56-53-1			2.86E-03						3.75E-01			2.50E-04		2.50E-03			
43222-48-6		6.40E+03						2.80E+05			1.28E+03		2.80E+03				
35367-38-5		1.60E+03						7.00E+04			3.20E+02		7.00E+02				
1445-75-6		6.40E+03						2.80E+05			6.40E+02		1.40E+03				
55290-64-7		1.60E+03						7.00E+04			3.20E+02		7.00E+02				
60-51-5		1.60E+01						7.00E+02			3.20E+00		7.00E+00				
119-90-4			6.25E-01						8.20E+01			5.47E-02		5.47E-01			
120-61-6		8.00E+03						3.50E+05			8.00E+02		1.75E+03				
21436-96-4			1.72E+00						2.26E+02			1.51E-01		1.51E+00			
95-68-1		1.60E+02	5.00E+00					7.00E+03	6.56E+02		1.60E+01	2.19E-01	3.50E+01	2.19E+00			
121-69-7		1.60E+02						7.00E+03			1.60E+01		3.50E+01				
119-93-7			9.09E-02						1.19E+01			7.95E-03		7.95E-02			
68-12-2		8.00E+03						3.50E+05			8.00E+02		1.75E+03				
57-14-7		8.00E+00						3.50E+02			8.00E-01		1.75E+00				
540-73-8			1.82E-03						2.39E-01			7.95E-05		7.95E-04			
105-67-9		1.60E+03		1.31E+00		7.93E-02		7.00E+04			1.60E+02		3.50E+02				
576-26-1		4.80E+01						2.10E+03			4.80E+00		1.05E+01				
95-65-8		8.00E+01						3.50E+03			8.00E+00		1.75E+01				
99-65-0		8.00E+00						3.50E+02			1.60E+00		3.50E+00				
528-29-0		8.00E+00						3.50E+02			1.60E+00		3.50E+00				
100-25-4		8.00E+00						3.50E+02			1.60E+00		3.50E+00				
131-89-5		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
51-28-5		1.60E+02		1.28E-01		9.17E-03		7.00E+03			3.20E+01		7.00E+01				
25321-14-6		7.20E+01	2.22E+00					3.15E+03	2.92E+02		1.44E+01	1.94E-01	3.15E+01	1.94E+00			
121-14-2		1.60E+02	3.23E+00	1.67E-03		1.08E-04		7.00E+03	4.23E+02		3.20E+01	2.82E-01	7.00E+01	2.82E+00			
606-20-2		2.40E+01	6.67E-01	3.14E-04		2.08E-05		1.05E+03	8.75E+01		4.80E+00	5.83E-02	1.05E+01	5.83E-01			
117-84-0		8.00E+02		2.66E+05		1.33E+04		3.50E+04			1.60E+02		3.50E+02				
88-85-7		8.00E+01						3.50E+03			1.60E+01		3.50E+01		7.00E+00	7.00E+00	7.00E+00
123-91-1		2.40E+03	1.00E+01					1.05E+05	1.31E+03		2.40E+02	4.38E-01	5.25E+02	4.38E+00			
957-51-7		2.40E+03						1.05E+05			4.80E+02		1.05E+03				
122-39-4		2.00E+03						8.75E+04			4.00E+02		8.75E+02				
122-66-7			1.25E+00						1.64E+02			1.09E-01		1.09E+00			
85-00-7		1.76E+02						7.70E+03			3.52E+01		7.70E+01		2.00E+01	2.00E+01	2.00E+01
1937-37-7			1.40E-01						1.85E+01			1.20E-02		1.20E-01			
2602-46-2			1.40E-01						1.77E+01			1.20E-02		1.20E-01			
16071-86-6			1.50E-01						1.96E+01			1.30E-02		1.30E-01			
298-04-4		3.20E+00						1.40E+02			6.40E-01		1.40E+00				
505-29-3		8.00E+02						3.50E+04			1.60E+02		3.50E+02				
330-54-1		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
2439-10-3		3.20E+02						1.40E+04			6.40E+01		1.40E+02				
115-29-7		4.80E+02		4.30E+00	4.30E+00	2.23E-01		2.10E+04			9.60E+01		2.10E+02				
145-73-3		1.60E+03						7.00E+04			3.20E+02		7.00E+02		1.00E+02	1.00E+02	1.00E+02
72-20-8		2.40E+01		4.40E-01		2.22E-02		1.05E+03			4.80E+00		1.05E+01		2.00E+00	2.00E+00	2.00E+00
106-89-8		4.80E+02	1.01E+02					2.10E+04	1.33E+04		4.80E+01	4.42E+00	1.05E+02	4.42E+01	0.00E+00	2.00E+04	
16672-87-0		4.00E+02						1.75E+04			8.00E+01		1.75E+02				
563-12-2		4.00E+01						1.75E+03			8.00E+00		1.75E+01				
111-15-9		8.00E+03						3.50E+05			8.00E+02		1.75E+03				
110-80-5		7.20E+03						3.15E+05			7.20E+02		1.58E+03				
141-78-6		7.20E+04						3.15E+06			7.20E+03		1.58E+04				
140-88-5		4.00E+02	2.08E+01					1.75E+04	2.73E+03		4.00E+01	9.11E-01	8.75E+01	9.11E+00			
759-94-4		2.00E+03						8.75E+04			2.00E+02		4.38E+02				
60-29-7		1.60E+04						7.00E+05			1.60E+03		3.50E+03				
97-63-2		7.20E+03						3.15E+05			7.20E+02		1.58E+03				
2104-64-5		8.00E-01						3.50E+01			1.60E-01		3.50E-01				
100-41-4	6.00E+00	8.00E+03		6.05E+00		3.43E-01	6.00E+00	3.50E+05		7.00E+02	8.00E+02		1.75E+03		7.00E+02	7.00E+02	7.00E+01
109-78-4		5.60E+03						2.45E+05			5.60E+02		1.23E+03				
107-15-3		7.20E+03						3.15E+05			7.20E+02		1.58E+03				
106-93-4	5.00E-03	7.20E+02	5.00E-01				5.00E-03	3.15E+04	6.56E+01	1.00E-02	7.20E+01	2.19E-02	1.58E+02	2.19E-01	0.00E+00	5.00E-02	5.00E-02
107-21-1		1.60E+05						7.00E+06			1.60E+04		3.50E+04				
111-76-2		8.00E+03						3.50E+05			8.00E+02		1.75E+03				
75-21-8			3.23E+00						4.23E+02			1.41E-01		1.41E+00			
96-45-7		6.40E+00	2.22E+01					2.80E+02	2.92E+03		1.28E+00	1.94E+00	2.80E+00	1.94E+01			
84-72-0		2.40E+05						1.05E+07			4.80E+04		1.05E+05				
101200-48-0		6.40E+02						2.80E+04			1.28E+02		2.80E+02				
22224-92-6		2.00E+01						8.75E+02			4.00E+00		8.75E+00				
2164-17-2		1.04E+03						4.55E+04			2.08E+02		4.55E+02				
206-44-0		3.20E+03		6.31E+02		3.16E+01		1.40E+05			6.40E+02		1.40E+03				
86-73-7		3.20E+03		1.01E+02	1.01E+02	5.12E+00		1.40E+05			6.40E+02		1.40E+03				
16984-48-8		3.20E+03						1.40E+05			6.40E+02		1.40E+03		4.00E+03	4.00E+03	4.00E+03
7782-41-4		4.80E+03						2.10E+05			4.80E+02		1.05E+03				
59756-60-4		6.40E+03						2.80E+05			1.28E+03		2.80E+03				
56425-91-3		1.60E+03						7.00E+04			3.20E+02		7.00E+02				
66332-96-5		4.80E+03						2.10E+05			9.60E+02		2.10E+03				
69409-94-5		8.00E+02						3.50E+04			1.60E+02		3.50E+02				
133-07-3		8.00E+03	2.86E+02					3.50E+05	3.75E+04		1.60E+03	2.50E+01	3.50E+03	2.50E+02			
72178-02-0			5.26E+00						6.91E+02			4.61E-01		4.61E+00			
944-22-9		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
50-00-0		1.60E+04						7.00E+05			1.60E+03		3.50E+03				
64-18-6		7.20E+04						3.15E+06			7.20E+03		1.58E+04				
39148-24-8		2.40E+05						1.05E+07			4.80E+04		1.05E+05				
110-00-9		8.00E+01						3.50E+03			8.00E+00		1.75E+01				
67-45-8			2.63E-01						3.45E+01			2.30E-02		2.30E-01			
98-01-1		2.40E+02						1.05E+04			2.40E+01		5.25E+01				
531-82-8			6.67E-01						8.75E+01			5.83E-02		5.83E-01			
60568-05-0			3.33E+01						4.38E+03			2.92E+00		2.92E+01			
77182-82-2		3.20E+01						1.40E+03			6.40E+00		1.40E+01				
765-34-4		3.20E+01						1.40E+03			3.20E+00		7.00E+00				
1071-83-6		8.00E+03						3.50E+05			1.60E+03		3.50E+03		7.00E+02	7.00E+02	7.00E+01
unavailable20										1.50E+01					0.00E+00	5.00E+03	
unavailable21										4.00E+00					0.00E+00	4.00E+03	
69806-40-2		4.00E+00						1.75E+02			8.00E-01		1.75E+00				
79277-27-3		1.04E+03						4.55E+04			2.08E+02		4.55E+02				
76-44-8		4.00E+01	2.22E-01	3.78E-02		1.90E-03		1.75E+03	2.92E+01		8.00E+00	1.94E-02	1.75E+01	1.94E-01	0.00E+00	4.00E-01	4.00E-01
1024-57-3		1.04E+00	1.10E-01	8.02E-02		4.02E-03		4.55E+01	1.44E+01		1.04E-01	4.81E-03	2.28E-01	4.81E-02	0.00E+00	2.00E-01	2.00E-01
87-82-1		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
68631-49-2		1.60E+01						7.00E+02			3.20E+00		7.00E+00				
118-74-1		6.40E+01	6.25E-01	8.77E-01	8.77E-01	4.39E-02		2.80E+03	8.20E+01		1.28E+01	5.47E-02	2.80E+01	5.47E-01	0.00E+00	1.00E+00	1.00E+00
87-68-3		8.00E+01	1.28E+01	6.05E-01	6.05E-01	3.03E-02		3.50E+03	1.68E+03		8.00E+00	5.61E-01	1.75E+01	5.61E+00			
319-84-6		6.40E+02	1.59E-01	5.45E-04	5.45E-04	2.85E-05		2.80E+04	2.08E+01		1.28E+02	1.39E-02	2.80E+02	1.39E-01			
319-85-7			5.56E-01	2.27E-03		1.18E-04			7.29E+01			4.86E-02		4.86E-01			
608-73-1			5.56E-01						7.29E+01			4.86E-02		4.86E-01			
77-47-4		4.80E+02		1.92E+02	1.92E+02	9.61E+00		2.10E+04			4.80E+01		1.05E+02		5.00E+01	5.00E+01	5.00E+01
19408-74-3			1.61E-04						2.12E-02			1.41E-05		1.41E-04			
67-72-1		5.60E+01	2.50E+01	4.36E-02	4.34E-02	2.26E-03		2.45E+03	3.28E+03		5.60E+00	1.09E+00	1.23E+01	1.09E+01			
70-30-4		2.40E+01						1.05E+03			4.80E+00		1.05E+01				
110-54-3		4.80E+03		9.62E+01	6.89E+01	1.77E+00		2.10E+05			4.80E+02		1.05E+03				
51235-04-2		2.64E+03						1.16E+05			5.28E+02		1.16E+03				
302-01-2			3.33E-01						4.38E+01			1.46E-02		1.46E-01			
10034-93-2			3.33E-01						4.38E+01			2.92E-02		2.92E-01			
74-90-8		4.80E+01						2.10E+03			4.80E+00		1.05E+01				
123-31-9		3.20E+03	1.67E+01					1.40E+05	2.19E+03		6.40E+02	1.46E+00	1.40E+03	1.46E+01			
35554-44-0		1.04E+03						4.55E+04			2.08E+02		4.55E+02				
81335-37-7		2.00E+04						8.75E+05			4.00E+03		8.75E+03				
193-39-5			1.37E+00	8.32E+00		4.16E-01			1.80E+02			1.20E-01		1.20E+00			
36734-19-7		3.20E+03						1.40E+05			6.40E+02		1.40E+03				
7439-89-6		5.60E+04						2.45E+06			1.12E+04		2.45E+04				
78-83-1		2.40E+04						1.05E+06			2.40E+03		5.25E+03				
78-59-1		1.60E+04	1.05E+03	2.27E-01		1.54E-02		7.00E+05	1.38E+05		1.60E+03	4.61E+01	3.50E+03	4.61E+02			
33820-53-0		1.20E+03						5.25E+04			2.40E+02		5.25E+02				
1832-54-8		8.00E+03						3.50E+05			1.60E+03		3.50E+03				
82558-50-7		4.00E+03						1.75E+05			8.00E+02		1.75E+03				
77501-63-4		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
7439-92-1	2.50E+02			3.00E+03	3.00E+03	1.50E+02	1.00E+03			1.50E+01					0.00E+00	1.50E+01	1.50E+01
58-89-9	1.00E-02	2.40E+01	9.09E-01	6.21E-03	6.21E-03	3.28E-04	1.00E-02	1.05E+03	1.19E+02	2.00E-01	4.80E+00	7.95E-02	1.05E+01	7.95E-01	2.00E-01	2.00E-01	2.00E-01
330-55-2		1.60E+02						7.00E+03			3.20E+01		7.00E+01				
7791-03-9		5.60E+01						2.45E+03			1.12E+01		2.45E+01				
83055-99-6		1.60E+04						7.00E+05			3.20E+03		7.00E+03				
121-75-5		1.60E+03						7.00E+04			3.20E+02		7.00E+02				
108-31-6		8.00E+03						3.50E+05			8.00E+02		1.75E+03				
123-33-1		4.00E+04						1.75E+06			8.00E+03		1.75E+04				
109-77-3		8.00E+00						3.50E+02			8.00E-01		1.75E+00				
8018-01-7		2.40E+03						1.05E+05			4.80E+02		1.05E+03				
12427-38-2		4.00E+02						1.75E+04			8.00E+01		1.75E+02				
7439-96-5		1.12E+04						4.90E+05			2.24E+03		4.90E+03				

CAS #	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Method C Non cancer (µg/L)	Surface Water Method C Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Marine/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Marine/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Surface Water Human Health Marine Waters CWA §304 (µg/L)	Surface Water Human Health Marine Waters NTR 40 CFR 131 (µg/L)
8065-48-3									1.00E-01						1.00E-01					
53-70-3		2.96E-02		7.40E-01													3.80E-03	2.80E-03	1.80E-02	3.11E-02
124-48-1	1.36E+04	2.03E+01	3.41E+04	5.08E+02													4.00E-01	4.10E-01	1.30E+01	3.40E+01
84-74-2	2.91E+03		7.28E+03														2.00E+03	2.70E+03	4.50E+03	1.20E+04
95-50-1	4.17E+03		1.04E+04														4.20E+02	2.70E+03	1.30E+03	1.70E+04
541-73-1																	3.20E+02	4.00E+02	9.60E+02	2.60E+03
106-46-7	3.24E+03	2.14E+01	8.10E+03	5.36E+02													6.30E+01	4.00E+02	1.90E+02	2.60E+03
91-94-1		4.65E-02		1.16E+00													2.10E-02	4.00E-02	2.80E-02	7.70E-02
107-06-2	1.30E+04	5.94E+01	3.24E+04	1.48E+03													3.80E-01	3.80E-01	3.70E+01	9.90E+01
75-35-4	2.31E+04		5.79E+04														3.30E+02	5.70E-02	7.10E+03	3.20E+00
156-60-5	3.24E+04		8.10E+04														1.40E+05		1.00E+04	
120-83-2	1.90E+02		4.74E+02														7.70E+01	9.30E+01	2.90E+02	7.90E+02
94-75-7																	1.00E+02			
78-87-5	5.69E+04	4.39E+01	1.42E+05	1.10E+03													5.00E-01		1.50E+01	
542-75-6	4.09E+04	3.41E+01	1.02E+05	8.53E+02													3.40E-01	1.00E+01	2.10E+01	1.70E+03
60-57-1	2.76E-02	8.62E-05	6.90E-02	2.15E-03	2.50E+00	2.40E-01	2.50E+00	1.90E-03	5.60E-02	1.90E-03	7.10E-01	7.10E-01	7.10E-01	1.90E-03	1.90E-03	1.90E-03	5.20E-05	1.40E-04	5.40E-05	1.40E-04
84-66-2	2.84E+04		7.10E+04														1.70E+04	2.30E+04	4.40E+04	1.20E+05
131-11-3																	2.70E+05	3.13E+05	1.10E+06	2.90E+06
105-67-9	5.52E+02		1.38E+03														3.80E+02		8.50E+02	
51-28-5	3.46E+03		8.64E+03														6.90E+01	7.00E+01	5.30E+03	1.40E+04
121-14-2	1.36E+03	5.50E+00	3.41E+03	1.38E+02													1.10E-01	1.10E-01	3.40E+00	9.10E+00
122-39-4	2.16E+03		5.40E+03																	
122-66-7		3.24E-01		8.10E+00													3.60E-02	4.00E-02	2.00E-01	5.40E-01
115-29-7	5.76E+01		1.44E+02		2.20E-01		2.20E-01	5.60E-02		5.60E-02	3.40E-02		3.40E-02	8.70E-03		8.70E-03				
72-20-8	1.94E-01		4.86E-01		1.80E-01	8.60E-02	1.80E-01	2.30E-03	3.60E-02	2.30E-03	3.70E-02	3.70E-02	3.70E-02	2.30E-03	2.30E-03	2.30E-03	5.90E-02	7.60E-01	6.00E-02	8.10E-01
100-41-4	6.82E+03		1.71E+04														5.30E+02	3.10E+03	2.10E+03	2.90E+04
206-44-0	8.64E+01		2.16E+02														1.30E+02	3.00E+02	1.40E+02	3.70E+02
86-73-7	3.46E+03		8.64E+03														1.10E+03	1.30E+03	5.30E+03	1.40E+04
76-44-8	1.18E-01	1.31E-04	2.95E-01	3.27E-03	5.20E-01	5.20E-01	5.20E-01	3.80E-03	3.80E-03	3.80E-03	5.30E-02	5.30E-02	5.30E-02	3.60E-03	3.60E-03	3.60E-03	7.90E-05	2.10E-04	7.90E-05	2.10E-04
1024-57-3	3.06E-03	6.48E-05	7.66E-03	1.62E-03		5.20E-01	5.20E-01		3.80E-03	3.80E-03		5.30E-02	5.30E-02		3.60E-03	3.60E-03	3.90E-05	1.00E-04	3.90E-05	1.10E-04
118-74-1	2.38E-01	4.66E-04	5.96E-01	1.16E-02													2.80E-04	7.50E-04	2.90E-04	7.70E-04
87-68-3	9.26E+02	2.97E+01	2.31E+03	7.42E+02													4.40E-01	4.40E-01	1.80E+01	5.00E+01
319-84-6	1.60E+02	7.91E-03	3.99E+02	1.98E-01													2.60E-03	3.90E-03	4.90E-03	1.30E-02
319-85-7		2.77E-02		6.92E-01													9.10E-03	1.40E-02	1.70E-02	4.60E-02
319-86-8																	1.23E-02		4.14E-02	
608-73-1																	1.23E-02		4.14E-02	
77-47-4	3.62E+03		9.04E+03														4.00E+01	2.40E+02	1.10E+03	1.70E+04
67-72-1	2.09E+01	1.86E+00	5.21E+01	4.66E+01													1.40E+00	1.90E+00	3.30E+00	8.90E+00
7783-06-4									2.00E+00						2.00E+00					
193-39-5		2.96E-01		7.40E+00													3.80E-03	2.80E-03	1.80E-02	3.11E-02
7439-89-6									1.00E+03								3.00E+02			
78-59-1	1.18E+05	1.55E+03	2.95E+05	3.88E+04													3.50E+01	8.40E+00	9.60E+02	6.00E+02
7439-92-1					1.39E+01	6.50E+01	6.50E+01	5.40E-01	2.50E+00	2.50E+00	2.10E+02	2.10E+02	2.10E+02	8.10E+00	8.10E+00	8.10E+00				
58-89-9	5.98E+00	4.53E-02	1.50E+01	1.13E+00	2.00E+00	9.50E-01	2.00E+00	8.00E-02		8.00E-02	1.60E-01	1.60E-01	1.60E-01				9.80E-01	1.90E-02	1.80E+00	6.30E-02
121-75-5									1.00E-01						1.00E-01					
7439-96-5																	5.00E+01		1.00E+02	

CAS #	Air Method B Non cancer (µg/m³)	Air Method B Cancer (µg/m³)	Air Method C Non cancer (µg/m³)	Air Method C Cancer (µg/m³)	S (Aqueous Solubility) (mg/L)	BCF (Bioconcentration Factor) (L/kg)	Hcc (Henry's Law Constant) (unitless)	INH (Inhalation Correction Factor) (unitless)	Kd (Distribution Factor for metals) (L/kg)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)
8065-48-3								1		
103-23-1								1		
2303-16-4								1		
333-41-5								1		
53-70-3		2.08E-03		2.08E-02	2.49E-03	3.00E+01	6.03E-07	1		1.79E+06
132-64-9								1		
96-12-8	9.14E-02	4.17E-04	2.00E-01	4.17E-03				2		
106-37-6								2		
124-48-1		9.26E-02		9.26E-01	2.60E+03	3.75E+00	3.21E-02	2		6.31E+01
84-74-2					1.12E+01	8.90E+01	3.85E-08	1		1.57E+03
1918-00-9								1		
764-41-0		5.95E-04		5.95E-03				2		
95-50-1	9.14E+01		2.00E+02		1.56E+02	5.56E+01	7.79E-02	2		3.79E+02
541-73-1								2		
106-46-7	3.66E+02	2.27E-01	8.00E+02	2.27E+00	7.38E+01	5.56E+01	9.96E-02	2		6.16E+02
91-94-1		7.35E-03		7.35E-02	3.11E+00	3.12E+02	1.64E-07	1		7.24E+02
75-71-8	4.57E+01		1.00E+02					2		
75-34-3		1.56E+00		1.56E+01	5.06E+03		2.30E-01	2		5.30E+01
107-06-2	3.20E+00	9.62E-02	7.00E+00	9.62E-01	8.52E+03	1.20E+00	4.01E-02	2		3.80E+01
540-59-0								2		
75-35-4	9.14E+01		2.00E+02		2.25E+03	5.60E+00	1.07E+00	2		6.50E+01
156-59-2					3.50E+03		1.67E-01	2		3.55E+01
156-60-5					6.30E+03	1.58E+00	3.85E-01	2		3.80E+01
120-83-2					4.50E+03	4.07E+01	1.30E-04	2		1.47E+02
94-75-7								1		
78-87-5	1.83E+00	2.50E-01	4.00E+00	2.50E+00	2.80E+03	4.11E+00	1.15E-01	2		4.70E+01
616-23-9								2		
542-75-6	9.14E+00	6.25E-01	2.00E+01	6.25E+00	2.80E+03	1.91E+00	7.26E-01	2		2.70E+01
62-73-7	2.29E-01	3.01E-02	5.00E-01	3.01E-01				2		
115-32-2								1		
77-73-6	3.20E+00		7.00E+00					2		
60-57-1		5.43E-04		5.43E-03	1.95E-01	4.67E+03	6.19E-04	1		2.55E+04
84-66-2					1.08E+03	7.30E+01	1.85E-05	1		8.20E+01
111-46-6								1		
693-21-0								1		
112-34-5	4.57E-02		1.00E-01					2		
111-90-0	1.37E-01		3.00E-01					2		
617-84-5								1		
311-45-5								1		
56-53-1		2.50E-05		2.50E-04				1		
43222-48-6								1		
35367-38-5								1		
75-37-6	1.83E+04		4.00E+04					2		
1445-75-6								2		
55290-64-7								1		
60-51-5								1		
119-90-4								1		
131-11-3						3.60E+01		1		
120-61-6								2		
124-40-3								2		
21436-96-4								1		
95-68-1								2		
121-69-7								2		
119-93-7								1		
68-12-2	1.37E+01		3.00E+01					2		
57-14-7	9.14E-04		2.00E-03					2		
540-73-8		1.56E-05		1.56E-04				2		
105-67-9					7.87E+03	9.38E+01	8.20E-05	2		2.09E+02
576-26-1								2		
95-65-8								2		
99-65-0								1		
528-29-0								1		
100-25-4								1		
131-89-5								1		
51-28-5					2.79E+03	1.50E+00	1.82E-05	1		1.00E-02
25321-14-6								1		
121-14-2		2.81E-02		2.81E-01	2.70E+02	3.80E+00	3.80E-06	1		9.55E+01
606-20-2					1.82E+02		3.06E-05	1		6.92E+01
117-84-0					2.00E-02		2.74E-03	1		8.32E+07
88-85-7								1		
123-91-1	1.37E+01	5.00E-01	3.00E+01	5.00E+00				2		
957-51-7								1		
122-39-4						3.00E+01		1		
122-66-7		1.14E-02		1.14E-01		2.49E+01		1		
85-00-7								1		
1937-37-7		1.78E-05		1.78E-04				1		
2602-46-2		1.78E-05		1.78E-04				1		
16071-86-6		1.78E-05		1.78E-04				1		
2610-05-1								1		
298-04-4								1		
505-29-3								1		
330-54-1								1		
2439-10-3								1		
115-29-7					5.10E-01	2.70E+02	4.59E-04	1		2.04E+03
145-73-3								1		
72-20-8					2.50E-01	3.97E+03	3.08E-04	1		1.08E+04
106-89-8	4.57E-01	2.08E+00	1.00E+00	2.08E+01				2		
106-88-7	9.14E+00		2.00E+01					2		
16672-87-0								1		
563-12-2								1		
111-15-9	2.74E+01		6.00E+01					2		
110-80-5	9.14E+01		2.00E+02					2		
141-78-6	3.20E+01		7.00E+01					2		
140-88-5	3.66E+00		8.00E+00					2		
75-00-3	4.57E+03		1.00E+04					2		
759-94-4								2		
60-29-7								2		
97-63-2	1.37E+02		3.00E+02					2		
2104-64-5								1		
100-41-4	4.57E+02		1.00E+03		1.69E+02	3.75E+01	3.23E-01	2		2.04E+02
109-78-4								2		
107-15-3								2		
106-93-4	4.11E+00	4.17E-03	9.00E+00	4.17E-02				2		6.60E+01
107-21-1	1.83E+02		4.00E+02					2		
111-76-2	7.31E+02		1.60E+03					2		
75-21-8	1.37E+01	2.84E-02	3.00E+01	2.84E-01				2		
96-45-7		1.92E-01		1.92E+00				1		
84-72-0								1		
101200-48-0								1		
22224-92-6								1		
115-90-2								1		
2164-17-2								1		
206-44-0					2.06E-01	1.15E+03	6.60E-04	1		4.91E+04
86-73-7					1.98E+00	3.00E+01	2.61E-03	1		7.71E+03
16984-48-8	5.94E+00		1.30E+01					1		
7782-41-4	5.94E+00		1.30E+01					2		
59756-60-4								1		
56425-91-3								1		
66332-96-5								1		
69409-94-5								1		
133-07-3								1		
72178-02-0								1		
944-22-9								1		
50-00-0	4.48E+00	1.92E-01	9.80E+00	1.92E+00				2		
64-18-6	1.37E-01		3.00E-01					2		
39148-24-8								1		
110-00-9								2		
67-45-8								1		
98-01-1	2.29E+01		5.00E+01					2		
531-82-8		5.81E-03		5.81E-02				1		
60568-05-0		2.91E-01		2.91E+00				1		
77182-82-2								1		
765-34-4	4.57E-01		1.00E+00					2		
1071-83-6								1		
unavailable20								1		
unavailable21								1		
69806-40-2								1		
79277-27-3								1		
76-44-8		1.92E-03		1.92E-02	1.80E-01	1.12E+04	4.47E-02	1		9.53E+03
1024-57-3		9.62E-04		9.62E-03	2.00E-01	1.12E+04	3.90E-04	2		8.32E+04
142-82-5								2		
87-82-1								1		
68631-49-2								1		
118-74-1		5.43E-03		5.43E-02	6.20E+00	8.69E+03	5.41E-02	1		8.00E+04
87-68-3		1.14E-01		1.14E+00	3.23E+00	2.78E+00	3.34E-01	2		5.37E+04
319-84-6		1.39E-03		1.39E-02	2.00E+00	1.30E+02	4.35E-04	1		1.76E+03
319-85-7		4.72E-03		4.72E-02	2.40E-01	1.30E+02	3.05E-05	1		2.14E+03
319-86-8								1		
608-73-1		4.90E-03		4.90E-02				1		
77-47-4	9.14E-02		2.00E-01		1.80E+00	4.34E+00	1.11E+00	2		2.00E+05
19408-74-3		1.92E-06		1.92E-05				1		
67-72-1	1.37E+01	2.27E-01	3.00E+01	2.27E+00	5.00E+01	8.69E+01	1.59E-01	2		1.78E+03
70-30-4								1		
822-06-0	4.57E-03		1.00E-02					2		
110-54-3	3.20E+02		7.00E+02		9.50E+00		7.40E+01	2		3.41E+03
51235-04-2								1		
302-01-2	1.37E-02	5.10E-04	3.00E-02	5.10E-03				2		
10034-93-2		5.10E-04		5.10E-03				1		
7647-01-0	9.14E+00		2.00E+01					2		
74-90-8	3.66E-01		8.00E-01					2		
7783-06-4	9.14E-01		2.00E+00					2		
123-31-9								1		
35554-44-0								1		
81335-37-7								1		
193-39-5		2.27E-02		2.27E-01	2.20E-05	3.00E+01	6.56E-05	1		3.47E+06
36734-19-7								1		
7439-89-6							0.00E+00	1		
78-83-1								2		
78-59-1	9.14E+02		2.00E+03		1.20E+04	4.38E+00	2.72E-04	2		4.68E+01
33820-53-0								1		
1832-54-8								1		
82558-50-7								1		
77501-63-4								1		
7439-92-1							0.00E+00	1	1.00E+04	
unavailable02								1		
58-89-9		8.06E-03		8.06E-02	6.80E+00	1.30E+02	5.74E-04	1		1.35E+03
330-55-2								1		
7791-03-9								1		
83055-99-6								1		
121-75-5								1		
108-31-6	3.20E-01		7.00E-01					2		
123-33-1								1		
109-77-3								2		
8018-01-7								1		
12427-38-2								1		
7439-96-5	2.29E-02		5.00E-02				0.00E+00	1		

1 CAS #	2 Chemical Name	3 CAS #	4 RfDi Inhalation Reference Dose (mg/kg-day)	5 Source	6 CPFi Inhalation Cancer Potency Factor (kg-day/mg)	7 Source	8 RfDo Oral Reference Dose (mg/kg-day)	9 Source	10 CPFo Oral Cancer Potency Factor (kg-day/mg)	11 Source	Soil Method A Unrestricted Land Use (mg/kg)	Soil Method B Non cancer (mg/kg)	Soil Method B Cancer (mg/kg)	Soil Protective of Groundwater Vadose @ 25 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Vadose @ 13 degrees C see guidance (mg/kg)	Soil Protective of Groundwater Saturated see guidance (mg/kg)	Soil Method A Industrial Properties (mg/kg)	Soil Method C Non cancer (mg/kg)	Soil Method C Cancer (mg/kg)
950-10-7	mephosfolan	950-10-7					9.00E-05	H				7.20E+00						3.15E+02	
24307-26-4	mepiquat chloride	24307-26-4					3.00E-02	I				2.40E+03						1.05E+05	
7487-94-7	mercuric chloride	7487-94-7	8.57E-05	S			3.00E-04	I				2.40E+01						1.05E+03	
7439-97-6	mercury	7439-97-6	8.57E-05	I							2.00E+00			2.09E+00	2.09E+00	1.05E-01	2.00E+00		
150-50-5	merphos	150-50-5					3.00E-05	I				2.40E+00						1.05E+02	
57837-19-1	metalaxyl	57837-19-1					6.00E-02	I				4.80E+03						2.10E+05	
126-98-7	methacrylonitrile	126-98-7	8.57E-03	P			1.00E-04	I				8.00E+00						3.50E+02	
10265-92-6	methamidosphos	10265-92-6					5.00E-05	I				4.00E+00						1.75E+02	
67-56-1	methanol	67-56-1	5.71E+00	I			2.00E+00	I				1.60E+05						7.00E+06	
950-37-8	methidathion	950-37-8					1.00E-03	I				8.00E+01						3.50E+03	
16752-77-5	methomyl	16752-77-5					2.50E-02	I				2.00E+03						8.75E+04	
99-59-2	methoxy-5-nitroaniline;2-	99-59-2			4.90E-02	C			4.90E-02	C			2.04E+01						2.68E+03
72-43-5	methoxychlor	72-43-5					5.00E-03	I				4.00E+02		6.42E+01	6.24E+01	3.21E+00		1.75E+04	
110-49-6	methoxyethanol acetate;2-	110-49-6	2.86E-04	P			8.00E-03	P				6.40E+02						2.80E+04	
109-86-4	methoxyethanol;2-	109-86-4	5.71E-03	I			5.00E-03	P				4.00E+02						1.75E+04	
79-20-9	methyl acetate	79-20-9					1.00E+00	X				8.00E+04						3.50E+06	
96-33-3	methyl acrylate	96-33-3	5.71E-03	P			3.00E-02	H				2.40E+03						1.05E+05	
78-93-3	methyl ethyl ketone	78-93-3	1.43E+00	I			6.00E-01	I				4.80E+04						2.10E+06	
108-10-1	methyl isobutyl ketone	108-10-1	8.57E-01	I			8.00E-02	H				6.40E+03						2.80E+05	
22967-92-6	methyl mercury	22967-92-6					1.00E-04	I				8.00E+00						3.50E+02	
80-62-6	methyl methacrylate	80-62-6	2.00E-01	I			1.40E+00	I				1.12E+05						4.90E+06	
90-12-0	methyl naphthalene;1-	90-12-0					7.00E-02	A	2.90E-02	P		5.60E+03	3.45E+01					2.45E+05	4.53E+03
91-57-6	methyl naphthalene;2-	91-57-6					4.00E-03	I				3.20E+02						1.40E+04	
298-00-0	methyl parathion	298-00-0					2.50E-04	I				2.00E+01						8.75E+02	
25013-15-4	methyl styrene	25013-15-4	1.14E-02	H			6.00E-03	H				4.80E+02						2.10E+04	
98-83-9	methyl styrene, alpha	98-83-9					7.00E-02	H				5.60E+03						2.45E+05	
1634-04-4	methyl tert-butyl ether	1634-04-4	8.57E-01	I	9.10E-04	C			1.80E-03	C	1.00E-01		5.56E+02	1.03E-01	1.03E-01	7.23E-03	1.00E-01		7.29E+04
94-74-6	methyl-4-chlorophenoxy-acetic acid;2-	94-74-6					5.00E-04	I				4.00E+01						1.75E+03	
99-55-8	methyl-5-nitroaniline;2-	99-55-8					2.00E-02	X	9.00E-03	P		1.60E+03	1.11E+02					7.00E+04	1.46E+04
636-21-5	methylaniline hydrochloride;2-	636-21-5			1.30E-01	C			1.30E-01	C			7.69E+00						1.01E+03
95-53-4	methylaniline;2-	95-53-4																	
108-87-2	methylcyclohexane	108-87-2																	
101-14-4	methylene bis(2-chloroaniline);4,4'-	101-14-4			1.51E+00	C	2.00E-03	P	1.00E-01	P		1.60E+02	1.00E+01					7.00E+03	1.31E+03
101-61-1	methylene bis(n,n'-dimethyl)aniline;4,4'-	101-61-1			4.55E-02	C			4.60E-02	I			2.17E+01						2.85E+03
74-95-3	methylene bromide	74-95-3	1.14E-03	X			1.00E-02	H				8.00E+02						3.50E+04	
75-09-2	methylene chloride	75-09-2	1.71E-01	I	3.50E-05	I	6.00E-03	I	2.00E-03	I	2.00E-02	4.80E+02	5.00E+02	2.18E-02	2.15E-02	1.48E-03	2.00E-02	2.10E+04	6.56E+04
101-68-8	methylene diphenyl diisocyanate (MDI)	101-68-8	1.71E-04	I															
9016-87-9	methylene diphenyl diisocyanate (PMDI)	9016-87-9	1.71E-04	I															
101-77-9	methylenebisbenzenamine;4,4-	101-77-9	5.71E-03	C	1.61E+00	C			1.60E+00	C			6.25E-01						8.20E+01
60-34-4	methylhydrazine	60-34-4	5.71E-06	X	3.50E+00	X	1.00E-03	P				8.00E+01						3.50E+03	
51218-45-2	metolachlor	51218-45-2					1.50E-01	I				1.20E+04						5.25E+05	
21087-64-9	metribuzin	21087-64-9					2.50E-02	I				2.00E+03						8.75E+04	
7786-34-7	mevinphos	7786-34-7																	
2385-85-5	mirex	2385-85-5			1.79E+01	C	2.00E-04	I	1.80E+01	C		1.60E+01	5.56E-02					7.00E+02	7.29E+00
2212-67-1	molinate	2212-67-1					2.00E-03	I				1.60E+02						7.00E+03	
7439-98-7	molybdenum	7439-98-7					5.00E-03	I				4.00E+02						1.75E+04	
10599-90-3	monochloramine	10599-90-3					1.00E-01	I				8.00E+03						3.50E+05	
unavailable03	monochlorobutanes (not in HSDB)	unavailable03																	
300-76-5	naled	300-76-5					2.00E-03	I				1.60E+02						7.00E+03	
91-20-3	naphthalene	91-20-3	8.57E-04	I	1.19E-01	C	2.00E-02	I			5.00E+00	1.60E+03		4.46E+00	4.45E+00	2.36E-01	5.00E+00	7.00E+04	
15299-99-7	napropamide	15299-99-7					1.00E-01	I				8.00E+03						3.50E+05	
104-51-8	n-butylbenzene	104-51-8					5.00E-02	P				4.00E+03						1.75E+05	
2429-74-5	niagara blue 4B	2429-74-5																	
unavailable04	nickel refinery dust	unavailable04	4.00E-06	C	8.40E-01	I	1.10E-02	C				8.80E+02						3.85E+04	
7440-02-0	nickel soluble salts	7440-02-0	2.57E-05	A	9.10E-01	C	2.00E-02	I				1.60E+03		1.30E+02	1.30E+02	6.53E+00		7.00E+04	
12035-72-2	nickel subsulfide	12035-72-2	4.00E-06	C	1.68E+00	I	1.10E-02	C	1.70E+00	C		8.80E+02	5.88E-01					3.85E+04	7.72E+01
14797-55-8	nitrate	14797-55-8					1.60E+00	I				1.28E+05						5.60E+06	
10102-43-9	nitric oxide	10102-43-9																	
14797-65-0	nitrite	14797-65-0					1.00E-01	I				8.00E+03						3.50E+05	
88-74-4	nitroaniline, 2-	88-74-4	1.43E-05	X			1.00E-02	X				8.00E+02						3.50E+04	
98-95-3	nitrobenzene	98-95-3	2.57E-03	I	1.40E-01	I	2.00E-03	I				1.60E+02		1.02E-01	1.02E-01	6.49E-03		7.00E+03	
67-20-9	nitrofurantoin	67-20-9					7.00E-02	H				5.60E+03						2.45E+05	
59-87-0	nitrofurazone	59-87-0			1.30E+00	C			1.30E+00	C			7.69E-01						1.01E+02
10102-44-0	nitrogen dioxide	10102-44-0																	
556-88-7	nitroguanidine	556-88-7					1.00E-01	I				8.00E+03						3.50E+05	
79-46-9	nitropropane;2-	79-46-9	5.71E-03	I	9.45E+00	H													
1116-54-7	nitrosodiethanolamine;N-	1116-54-7			2.80E+00	C			2.80E+00	I			3.57E-01						4.69E+01
55-18-5	nitrosodiethylamine;N-	55-18-5			1.51E+02	I			1.50E+02	I			6.67E-03						8.75E-01
62-75-9	nitrosodimethylamine;N-	62-75-9	1.14E-05	X	4.90E+01	I	8.00E-06	P	5.10E+01	I		6.40E-01	1.96E-02					2.80E+01	2.57E+00
924-16-3	nitroso-di-n-butylamine;N-	924-16-3			5.60E+00	I			5.40E+00	I			1.85E-01						2.43E+01
621-64-7	nitroso-di-n-propylamine;N-	621-64-7			7.00E+00	C			7.00E+00	I			1.43E-01	5.60E-05		3.88E-06			1.88E+01
86-30-6	nitrosodiphenylamine;N-	86-30-6			9.10E-03	C			4.90E-03	I			2.04E+02	5.32E-01		2.82E-02			2.68E+04
4549-40-0	nitrosomethylvinylamine,n-	4549-40-0																	
759-73-9	nitroso-n-ethylurea;n-	759-73-9			2.70E+01	C			2.70E+01	C			3.70E-02						4.86E+00
10595-95-6	nitroso-N-methylethylamine;N-	10595-95-6			2.21E+01	C			2.20E+01	I			4.55E-02						5.97E+00
684-93-5	nitroso-n-methylurea,n-	684-93-5			1.19E+02	C			1.20E+02	C			8.33E-03						1.09E+00
930-55-2	nitrosopyrrolidine;N-	930-55-2			2.14E+00	I			2.10E+00	I			4.76E-01						6.25E+01
99-08-1	nitrotoluene, m-	99-08-1					1.00E-04	X				8.00E+00						3.50E+02	
88-72-2	nitrotoluene, o-	88-72-2					9.00E-04	P	2.20E-01	P		7.20E+01	4.55E+00					3.15E+03	5.97E+02
99-99-0	nitrotoluene, p-	99-99-0					4.00E-03	P	1.60E-02	P		3.20E+02	6.25E+01					1.40E+04	8.20E+03
1321-12-6	nitrotoluenes;o-,m-,p-	1321-12-6																	
27314-13-2	norflurazon	27314-13-2					4.00E-02	I				3.20E+03						1.40E+05	
85509-19-9	nustar	85509-19-9					7.00E-04	I				5.60E+01						2.45E+03	
32536-52-0	octabromodiphenyl ether	32536-52-0					3.00E-03	I				2.40E+02						1.05E+04	
2691-41-0	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine	2691-41-0					5.00E-02	I				4.00E+03						1.75E+05	
152-16-9	octamethylpyrophosphoramide	152-16-9					2.00E-03	H				1.60E+02						7.00E+03	
19044-88-3	oryzalin	19044-88-3					5.00E-02	I				4.00E+03						1.75E+05	
19666-30-9	oxadiazon	19666-30-9					5.00E-03	I				4.00E+02						1.75E+04	
23135-22-0	oxamyl	23135-22-0					2.50E-02	I				2.00E+03						8.75E+04	
42874-03-3	oxyfluorfen	42874-03-3					3.00E-03	I				2.40E+02						1.05E+04	
76738-62-0	paclobutrazol	76738-62-0					1.30E-02	I				1.04E+03						4.55E+04	
unavailable05	pah	unavailable05																	
4685-14-7	paraquat	4685-14-7																	
56-38-2	parathion	56-38-2					6.00E-03	H				4.80E+02						2.10E+04	
1114-71-2	pebulate	1114-71-2					5.00E-02	H				4.00E+03						1.75E+05	
40487-42-1	pendimethalin	40487-42-1					4.00E-02	I				3.20E+03						1.40E+05	
87-84-3	pentabromo-6-chloro-cyclohexane;1,2,3,4,5-	87-84-3							2.30E-02	H			4.35E+01						5.71E+03
60348-60-9	pentabromodiphenyl ether; 2,2',4,4',5-	60348-60-9					1.00E-04	I				8.00E+00						3.50E+02	
32534-81-9	pentabromodiphenyl ethers	32534-81-9					2.00E-03	I				1.60E+02						7.00E+03	
608-93-5	pentachlorobenzene	608-93-5					8.00E-04	I				6.40E+01						2.80E+03	
82-68-8	pentachloronitrobenzene	82-68-8					3.00E-03	I	2.60E-01	H		2.40E+02	3.85E+00					1.05E+04	5.05E+02
87-86-5	pentachlorophenol	87-86-5			1.79E-02	C	5.00E-03	I	4.00E-01	I		4.00E+02	2.50E+00	1.58E-02		8.79E-04		1.75E+04	3.28E+02
7601-90-3	perchlorate and perchlorate salts	7601-90-3					7.00E-04	I				5.60E+01						2.45E+03	
52645-53-1	permethrin	52645-53-1					5.00E-02	I				4.00E+03						1.75E+05	
72-56-0	perthane	72-56-0																	
unavailable19	pH	unavailable19																	
85-01-8	phenanthrene	85-01-8																	
13684-63-4	phenmedipham	13684-63-4					2.50E-01	I				2.00E+04						8.75E+05	
108-95-2	phenol	108-95-2	5.71E-02	C			3.00E-01	I				2.40E+04		1.10E+01		7.57E-01		1.05E+06	
106-50-3	phenylenediamine, p-	106-50-3					1.90E-01	H				1.52E+04						6.65E+05	
108-45-2	phenylenediamine;m-	108-45-2					6.00E-03	I				4.80E+02						2.10E+04	
95-54-5	phenylenediamine;o-	95-54-5							4.70E-02	H			2.13E+01						2.79E+03
62-38-4	phenylmercuric acetate	62-38-4					8.00E-05	I				6.40E+00						2.80E+02	
90-43-7	phenylphenol;2-	90-43-7							1.90E-03	H			5.26E+02						6.91E+04
298-02-2	phorate	298-02-2					2.00E-04	H				1.60E+01						7.00E+02	
732-11-6	phosmet	732-11-6					2.00E-02	I				1.60E+03						7.00E+04	
7803-51-2	phosphine	7803-51-2	8.57E-05	I			3.00E-04	I				2.40E+01						1.05E+03	
7664-38-2	phosphoric acid	7664-38-2	2.86E-03	I			4.90E+01	P				3.92E+06						1.72E+08	
7723-14-0	phosphorus	7723-14-0					2.00E-05	I				1.60E+00						7.00E+01	
100-21-0	phthalic acid;p-	100-21-0					1.00E+00	H				8.00E+04						3.50E+06	
85-44-9	phthalic anhydride	85-44-9	5.71E-03	C			2.00E+00	I				1.60E+05						7.00E+06	
1918-02-1	picloram	1918-02-1					7.00E-02	I				5.60E+03						2.45E+05	
29232-93-7	pirimiphos-methyl	29232-93-7					1.00E-02	I				8.00E+02						3.50E+04	
67774-32-7	polybrominated biphenyls	67774-32-7			3.01E+01	C	7.00E-06	H	3.00E+01	C		5.60E-01	3.33E-02					2.45E+01	4.38E+00
1336-36-3	polychlorinated biphenyls (PCBs)	1336-36-3			2.00E+00	I			2.00E+00	I	1.00E+00		5.00E-01				1.00E+01		6.56E+01
151-50-8	potassium cyanide	151-50-8					2.00E-03	I				1.60E+02						7.00E+03	
7778-74-7	potassium perchlorate	7778-74-7					7.00E-04	I				5.60E+01						2.45E+03	
506-61-6	potassium silver cyanide	506-61-6					5.00E-03	I				4.00E+02						1.75E+04	
67747-09-5	prochloraz (not in HSDB)	67747-09-5					9.00E-03	I	1.50E-01	I		7.20E+02	6.67E+00					3.15E+04	8.75E+02
26399-36-0	profluralin	26399-36-0					6.00E-03	H				4.80E+02						2.10E+04	
1610-18-0	prometon	1610-18-0					1.50E-02	I				1.20E+03						5.25E+04	
7287-19-6	prometryn	7287-19-6					4.00E-03	I				3.20E+02						1.40E+04	
23950-58-5	pronamide	23950-58-5					7.50E-02	I				6.00E+03						2.63E+05	
1918-16-7	propachlor	1918-16-7					1.30E-02	I				1.04E+03						4.55E+04	
709-98-8	propanil	709-98-8					5.00E-03	I				4.00E+02						1.75E+04	
2312-35-8	propargite	2312-35-8					2.00E-02	I				1.60E+03						7.00E+04	
107-19-7	propargyl alcohol	107-19-7					2.00E-03	I				1.60E+02						7.00E+03	
139-40-2	propazine	139-40-2					2.00E-02	I				1.60E+03						7.00E+04	
122-42-9	propham	122-42-9					2.00E-02	I				1.60E+03						7.00E+04	
60207-90-1	propiconazole	60207-90-1					1.30E-02	I				1.04E+03						4.55E+04	
93-65-2	propionic acid;(2-methyl-4-chlorophenoxy)2-	93-65-2					1.00E-03	I				8.00E+01						3.50E+03	
103-65-1	propylbenzene;n-	103-65-1	2.86E-01	X			1.00E-01	X				8.00E+03						3.50E+05	
57-55-6	propylene glycol	57-55-6					2.00E+01	P				1.60E+06						7.00E+07	
6423-43-4	propylene glycol dinitrate;1,2-	6423-43-4	7.71E-05	A															
52125-53-8	propylene glycol monoethyl ether	52125-53-8					7.00E-01	H				5.60E+04						2.45E+06	
107-98-2	propylene glycol monomethyl ether	107-98-2	5.71E-01	I			7.00E-01	H				5.60E+04						2.45E+06	
75-56-9	propylene oxide	75-56-9	8.57E-03	I	1.30E-02	I			2.40E-01	I			4.17E+00						5.47E+02
81335-77-5	pursuit	81335-77-5					2.50E-01	I				2.00E+04						8.75E+05	
51630-58-1	pydrin	51630-58-1					2.50E-02	I				2.00E+03						8.75E+04	
129-00-0	pyrene	129-00-0					3.00E-02	I				2.40E+03		6.55E+02	6.55E+02	3.28E+01		1.05E+05	
110-86-1	pyridine	110-86-1					1.00E-03	I				8.00E+01						3.50E+03	
13593-03-8	quinalphos	13593-03-8					5.00E-04	I				4.00E+01						1.75E+03	
91-22-5	quinoline	91-22-5							3.00E+00	I			3.33E-01						4.38E+01
unavailable24	radium 226	unavailable24																	
unavailable23	radium 226 and 228	unavailable23																	
121-82-4	rdx	121-82-4					3.00E-03	I	1.10E-01	I		2.40E+02	9.09E+00					1.05E+04	1.19E+03
unavailable07	refractory ceramic fibers	unavailable07	8.57E-03	A															
10453-86-8	resmethrin	10453-86-8					3.00E-02	I				2.40E+03						1.05E+05	
299-84-3	ronnel	299-84-3					5.00E-02	H				4.00E+03						1.75E+05	
83-79-4	rotenone	83-79-4					4.00E-03	I				3.20E+02						1.40E+04	
78-48-8	s,s,s-tributylphosphorotrithioate	78-48-8					3.00E-05	I				2.40E+00						1.05E+02	
78587-05-0	savey	78587-05-0					2.50E-02	I				2.00E+03						8.75E+04	
135-98-8	sec-butylbenzene	135-98-8					1.00E-01	X				8.00E+03						3.50E+05	
7783-00-8	selenious acid	7783-00-8					5.00E-03	I				4.00E+02						1.75E+04	
7782-49-2	selenium and compounds	7782-49-2	5.71E-03	C			5.00E-03	I				4.00E+02		5.20E+00	5.20E+00	2.64E-01		1.75E+04	
630-10-4	selenourea	630-10-4																	
74051-80-2	sethoxydim	74051-80-2					9.00E-02	I				7.20E+03						3.15E+05	
7440-22-4	silver	7440-22-4					5.00E-03	I				4.00E+02		1.36E+01	1.36E+01	6.87E-01		1.75E+04	
506-64-9	silver cyanide	506-64-9					1.00E-01	I				8.00E+03						3.50E+05	
122-34-9	simazine	122-34-9					5.00E-03	I	1.20E-01	H		4.00E+02	8.33E+00					1.75E+04	1.09E+03
26628-22-8	sodium azide	26628-22-8					4.00E-03	I				3.20E+02						1.40E+04	
143-33-9	sodium cyanide	143-33-9					1.00E-03	I				8.00E+01						3.50E+03	
148-18-5	sodium diethyldithiocarbamate	148-18-5					3.00E-02	I	2.70E-01	H		2.40E+03	3.70E+00					1.05E+05	4.86E+02
62-74-8	sodium fluoroacetate	62-74-8					2.00E-05	I				1.60E+00						7.00E+01	
13718-26-8	sodium metavanadate	13718-26-8					1.00E-03	H				8.00E+01						3.50E+03	
7601-89-0	sodium perchlorate	7601-89-0					7.00E-04	I				5.60E+01						2.45E+03	
7440-24-6	strontium	7440-24-6					6.00E-01	I				4.80E+04						2.10E+06	
57-24-9	strychnine	57-24-9					3.00E-04	I				2.40E+01						1.05E+03	
100-42-5	styrene	100-42-5	2.86E-01	I			2.00E-01	I				1.60E+04		2.24E+00	2.23E+00	1.20E-01		7.00E+05	
unavailable17	sulfate	unavailable17																	
88671-89-0	systhane	88671-89-0					2.50E-02	I				2.00E+03						8.75E+04	
1746-01-6	tcdd;2,3,7,8- (Low organic) (dioxin)	1746-01-6	1.14E-08	C	1.33E+05	C	7.00E-10	I	1.30E+05	C		9.30E-05	1.28E-05					4.08E-03	1.68E-03
34014-18-1	tebuthiuron	34014-18-1					7.00E-02	I				5.60E+03						2.45E+05	
3383-96-8	temephos	3383-96-8					2.00E-02	H				1.60E+03						7.00E+04	
5902-51-2	terbacil	5902-51-2					1.30E-02	I				1.04E+03						4.55E+04	
13071-79-9	terbufos	13071-79-9					2.50E-05	H				2.00E+00						8.75E+01	

CAS #	Chemical Name	Ground Water Method A (µg/L)	Ground Water Method B Non cancer (µg/L)	Ground Water Method B Cancer (µg/L)	Ground Water Method C Non cancer (µg/L)	Ground Water Method C Cancer (µg/L)	Ground Water Maximum Contaminant Level Goal (µg/L)	Ground Water Maximum Contaminant Level (µg/L)	Ground Water WA Maximum Contaminant Level (µg/L)
950-10-7	mephosfolan		1.44E+00		3.15E+00				
24307-26-4	mepiquat chloride		4.80E+02		1.05E+03				
7487-94-7	mercuric chloride		4.80E+00		1.05E+01				
7439-97-6	mercury	2.00E+00					2.00E+00	2.00E+00	2.00E+00
150-50-5	merphos		4.80E-01		1.05E+00				
57837-19-1	metalaxyl		9.60E+02		2.10E+03				
126-98-7	methacrylonitrile		8.00E-01		1.75E+00				
10265-92-6	methamidosphos		8.00E-01		1.75E+00				
67-56-1	methanol		1.60E+04		3.50E+04				
950-37-8	methidathion		1.60E+01		3.50E+01				
16752-77-5	methomyl		4.00E+02		8.75E+02				
99-59-2	methoxy-5-nitroaniline;2-			1.79E+00		1.79E+01			
72-43-5	methoxychlor		8.00E+01		1.75E+02		4.00E+01	4.00E+01	4.00E+01
110-49-6	methoxyethanol acetate;2-		6.40E+01		1.40E+02				
109-86-4	methoxyethanol;2-		4.00E+01		8.75E+01				
79-20-9	methyl acetate		8.00E+03		1.75E+04				
96-33-3	methyl acrylate		2.40E+02		5.25E+02				
78-93-3	methyl ethyl ketone		4.80E+03		1.05E+04				
108-10-1	methyl isobutyl ketone		6.40E+02		1.40E+03				
22967-92-6	methyl mercury		1.60E+00		3.50E+00				
80-62-6	methyl methacrylate		1.12E+04		2.45E+04				
90-12-0	methyl naphthalene;1-		5.60E+02	1.51E+00	1.23E+03	1.51E+01			
91-57-6	methyl naphthalene;2-		3.20E+01		7.00E+01				
298-00-0	methyl parathion		4.00E+00		8.75E+00				
25013-15-4	methyl styrene		4.80E+01		1.05E+02				
98-83-9	methyl styrene, alpha		5.60E+02		1.23E+03				
1634-04-4	methyl tert-butyl ether	2.00E+01		2.43E+01		2.43E+02			
94-74-6	methyl-4-chlorophenoxy-acetic acid;2-		8.00E+00		1.75E+01				
99-55-8	methyl-5-nitroaniline;2-		3.20E+02	9.72E+00	7.00E+02	9.72E+01			
636-21-5	methylaniline hydrochloride;2-			6.73E-01		6.73E+00			
95-53-4	methylaniline;2-								
108-87-2	methylcyclohexane								
101-14-4	methylene bis(2-chloroaniline);4,4'-		3.20E+01	8.75E-01	7.00E+01	8.75E+00			
101-61-1	methylene bis(n,n'-dimethyl)aniline;4,4'-			1.90E+00		1.90E+01			
74-95-3	methylene bromide		8.00E+01		1.75E+02				
75-09-2	methylene chloride	5.00E+00	4.80E+01	2.19E+01	1.05E+02	2.19E+02	0.00E+00	5.00E+00	5.00E+00
101-68-8	methylene diphenyl diisocyanate (MDI)								
9016-87-9	methylene diphenyl diisocyanate (PMDI)								
101-77-9	methylenebisbenzenamine;4,4-			5.47E-02		5.47E-01			
60-34-4	methylhydrazine		8.00E+00		1.75E+01				
51218-45-2	metolachlor		2.40E+03		5.25E+03				
21087-64-9	metribuzin		4.00E+02		8.75E+02				
7786-34-7	mevinphos								
2385-85-5	mirex		3.20E+00	4.86E-03	7.00E+00	4.86E-02			
2212-67-1	molinate		3.20E+01		7.00E+01				
7439-98-7	molybdenum		8.00E+01		1.75E+02				
10599-90-3	monochloramine		1.60E+03		3.50E+03		4.00E+03	4.00E+03	
unavailable03	monochlorobutanes (not in HSDB)								
300-76-5	naled		3.20E+01		7.00E+01				
91-20-3	naphthalene	1.60E+02	1.60E+02		3.50E+02				
15299-99-7	napropamide		1.60E+03		3.50E+03				
104-51-8	n-butylbenzene		4.00E+02		8.75E+02				
2429-74-5	niagara blue 4B								
unavailable04	nickel refinery dust		1.76E+02		3.85E+02				
7440-02-0	nickel soluble salts		3.20E+02		7.00E+02				1.00E+02
12035-72-2	nickel subsulfide		1.76E+02	5.15E-02	3.85E+02	5.15E-01			
14797-55-8	nitrate		2.56E+04		5.60E+04		1.00E+04	1.00E+04	1.00E+04
10102-43-9	nitric oxide								
14797-65-0	nitrite		1.60E+03		3.50E+03		1.00E+03	1.00E+03	1.00E+03
88-74-4	nitroaniline, 2-		1.60E+02		3.50E+02				
98-95-3	nitrobenzene		1.60E+01		3.50E+01				
67-20-9	nitrofurantoin		1.12E+03		2.45E+03				
59-87-0	nitrofurazone			6.73E-02		6.73E-01			
10102-44-0	nitrogen dioxide								
556-88-7	nitroguanidine		1.60E+03		3.50E+03				
79-46-9	nitropropane;2-								
1116-54-7	nitrosodiethanolamine;N-			3.13E-02		3.13E-01			
55-18-5	nitrosodiethylamine;N-			2.92E-04		2.92E-03			
62-75-9	nitrosodimethylamine;N-		6.40E-02	8.58E-04	1.40E-01	8.58E-03			
924-16-3	nitroso-di-n-butylamine;N-			8.10E-03		8.10E-02			
621-64-7	nitroso-di-n-propylamine;N-			1.25E-02		1.25E-01			
86-30-6	nitrosodiphenylamine;N-			1.79E+01		1.79E+02			
4549-40-0	nitrosomethylvinylamine,n-								
759-73-9	nitroso-n-ethylurea;n-			3.24E-03		3.24E-02			
10595-95-6	nitroso-N-methylethylamine;N-			3.98E-03		3.98E-02			
684-93-5	nitroso-n-methylurea,n-			7.29E-04		7.29E-03			
930-55-2	nitrosopyrrolidine;N-			2.08E-02		2.08E-01			
99-08-1	nitrotoluene, m-		8.00E-01		1.75E+00				
88-72-2	nitrotoluene, o-		7.20E+00	1.99E-01	1.58E+01	1.99E+00			
99-99-0	nitrotoluene, p-		3.20E+01	2.73E+00	7.00E+01	2.73E+01			
1321-12-6	nitrotoluenes;o-,m-,p-								
27314-13-2	norflurazon		6.40E+02		1.40E+03				
85509-19-9	nustar		1.12E+01		2.45E+01				
32536-52-0	octabromodiphenyl ether		4.80E+01		1.05E+02				
2691-41-0	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine		8.00E+02		1.75E+03				
152-16-9	octamethylpyrophosphoramide		3.20E+01		7.00E+01				
19044-88-3	oryzalin		8.00E+02		1.75E+03				
19666-30-9	oxadiazon		8.00E+01		1.75E+02				
23135-22-0	oxamyl		4.00E+02		8.75E+02		2.00E+02	2.00E+02	2.00E+02
42874-03-3	oxyfluorfen		4.80E+01		1.05E+02				
76738-62-0	paclobutrazol		2.08E+02		4.55E+02				
unavailable05	pah								
4685-14-7	paraquat								
56-38-2	parathion		9.60E+01		2.10E+02				
1114-71-2	pebulate		4.00E+02		8.75E+02				
40487-42-1	pendimethalin		6.40E+02		1.40E+03				
87-84-3	pentabromo-6-chloro-cyclohexane;1,2,3,4,5-			3.80E+00		3.80E+01			
60348-60-9	pentabromodiphenyl ether; 2,2',4,4',5-		1.60E+00		3.50E+00				
32534-81-9	pentabromodiphenyl ethers		3.20E+01		7.00E+01				
608-93-5	pentachlorobenzene		1.28E+01		2.80E+01				
82-68-8	pentachloronitrobenzene		4.80E+01	3.37E-01	1.05E+02	3.37E+00			
87-86-5	pentachlorophenol		8.00E+01	2.19E-01	1.75E+02	2.19E+00	0.00E+00	1.00E+00	1.00E+00
7601-90-3	perchlorate and perchlorate salts		1.12E+01		2.45E+01				
52645-53-1	permethrin		8.00E+02		1.75E+03				
72-56-0	perthane								
unavailable19	pH								
85-01-8	phenanthrene								
13684-63-4	phenmedipham		4.00E+03		8.75E+03				
108-95-2	phenol		2.40E+03		5.25E+03				
106-50-3	phenylenediamine, p-		3.04E+03		6.65E+03				
108-45-2	phenylenediamine;m-		9.60E+01		2.10E+02				
95-54-5	phenylenediamine;o-			1.86E+00		1.86E+01			
62-38-4	phenylmercuric acetate		1.28E+00		2.80E+00				
90-43-7	phenylphenol;2-			4.61E+01		4.61E+02			
298-02-2	phorate		3.20E+00		7.00E+00				
732-11-6	phosmet		3.20E+02		7.00E+02				
7803-51-2	phosphine		2.40E+00		5.25E+00				
7664-38-2	phosphoric acid		3.92E+05		8.58E+05				
7723-14-0	phosphorus		1.60E-01		3.50E-01				
100-21-0	phthalic acid;p-		1.60E+04		3.50E+04				
85-44-9	phthalic anhydride		3.20E+04		7.00E+04				
1918-02-1	picloram		1.12E+03		2.45E+03		5.00E+02	5.00E+02	5.00E+02
29232-93-7	pirimiphos-methyl		1.60E+02		3.50E+02				
67774-32-7	polybrominated biphenyls		1.12E-01	2.92E-03	2.45E-01	2.92E-02			
1336-36-3	polychlorinated biphenyls (PCBs)	1.00E-01		4.38E-02		4.38E-01	0.00E+00	5.00E-01	5.00E-01
151-50-8	potassium cyanide		3.20E+01		7.00E+01				
7778-74-7	potassium perchlorate		1.12E+01		2.45E+01				
506-61-6	potassium silver cyanide		8.00E+01		1.75E+02				
67747-09-5	prochloraz (not in HSDB)		1.44E+02	5.83E-01	3.15E+02	5.83E+00			
26399-36-0	profluralin		9.60E+01		2.10E+02				
1610-18-0	prometon		2.40E+02		5.25E+02				
7287-19-6	prometryn		6.40E+01		1.40E+02				
23950-58-5	pronamide		1.20E+03		2.63E+03				
1918-16-7	propachlor		2.08E+02		4.55E+02				
709-98-8	propanil		8.00E+01		1.75E+02				
2312-35-8	propargite		1.60E+02		3.50E+02				
107-19-7	propargyl alcohol		1.60E+01		3.50E+01				
139-40-2	propazine		3.20E+02		7.00E+02				
122-42-9	propham		3.20E+02		7.00E+02				
60207-90-1	propiconazole		2.08E+02		4.55E+02				
93-65-2	propionic acid;(2-methyl-4-chlorophenoxy)2-		1.60E+01		3.50E+01				
103-65-1	propylbenzene;n-		8.00E+02		1.75E+03				
57-55-6	propylene glycol		1.60E+05		3.50E+05				
6423-43-4	propylene glycol dinitrate;1,2-								
52125-53-8	propylene glycol monoethyl ether		5.60E+03		1.23E+04				
107-98-2	propylene glycol monomethyl ether		5.60E+03		1.23E+04				
75-56-9	propylene oxide			1.82E-01		1.82E+00			
81335-77-5	pursuit		4.00E+03		8.75E+03				
51630-58-1	pydrin		4.00E+02		8.75E+02				
129-00-0	pyrene		4.80E+02		1.05E+03				
110-86-1	pyridine		8.00E+00		1.75E+01				
13593-03-8	quinalphos		8.00E+00		1.75E+01				
91-22-5	quinoline			1.46E-02		1.46E-01			
unavailable24	radium 226	3.00E+00							
unavailable23	radium 226 and 228	5.00E+00					0.00E+00	5.00E+03	
121-82-4	rdx		4.80E+01	7.95E-01	1.05E+02	7.95E+00			
unavailable07	refractory ceramic fibers								
10453-86-8	resmethrin		4.80E+02		1.05E+03				
299-84-3	ronnel		8.00E+02		1.75E+03				
83-79-4	rotenone		6.40E+01		1.40E+02				
78-48-8	s,s,s-tributylphosphorotrithioate		4.80E-01		1.05E+00				
78587-05-0	savey		4.00E+02		8.75E+02				
135-98-8	sec-butylbenzene		8.00E+02		1.75E+03				
7783-00-8	selenious acid		8.00E+01		1.75E+02				
7782-49-2	selenium and compounds		8.00E+01		1.75E+02		5.00E+01	5.00E+01	5.00E+01
630-10-4	selenourea								
74051-80-2	sethoxydim		1.44E+03		3.15E+03				
7440-22-4	silver		8.00E+01		1.75E+02				
506-64-9	silver cyanide		1.60E+03		3.50E+03				
122-34-9	simazine		8.00E+01	7.29E-01	1.75E+02	7.29E+00	4.00E+00	4.00E+00	4.00E+00
26628-22-8	sodium azide		3.20E+01		7.00E+01				
143-33-9	sodium cyanide		1.60E+01		3.50E+01				
148-18-5	sodium diethyldithiocarbamate		4.80E+02	3.24E-01	1.05E+03	3.24E+00			
62-74-8	sodium fluoroacetate		3.20E-01		7.00E-01				
13718-26-8	sodium metavanadate		1.60E+01		3.50E+01				
7601-89-0	sodium perchlorate		1.12E+01		2.45E+01				
7440-24-6	strontium		9.60E+03		2.10E+04				
57-24-9	strychnine		4.80E+00		1.05E+01				
100-42-5	styrene		1.60E+03		3.50E+03		1.00E+02	1.00E+02	1.00E+02
unavailable17	sulfate								
88671-89-0	systhane		4.00E+02		8.75E+02				
1746-01-6	tcdd;2,3,7,8- (Low organic) (dioxin)		1.12E-05	6.73E-07	2.45E-05	6.73E-06	0.00E+00	3.00E-05	3.00E-05
34014-18-1	tebuthiuron		1.12E+03		2.45E+03				
3383-96-8	temephos		3.20E+02		7.00E+02				
5902-51-2	terbacil		2.08E+02		4.55E+02				
13071-79-9	terbufos		4.00E-01		8.75E-01				

CAS #	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Method C Non cancer (µg/L)	Surface Water Method C Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Marine/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Marine/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Marine/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Marine/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Surface Water Human Health Marine Waters CWA §304 (µg/L)	Surface Water Human Health Marine Waters NTR 40 CFR 131 (µg/L)
7439-97-6	mercury					2.10E+00	1.40E+00	2.10E+00	1.20E-02	7.70E-01	1.20E-02	1.80E+00	1.80E+00	2.10E+00	2.50E-02	9.40E-01	2.50E-02		1.40E-01	3.00E-01	1.50E-01
72-43-5	methoxychlor	8.10E+00		2.03E+01						3.00E-02						3.00E-02		1.00E+02			
22967-92-6	methyl mercury						1.40E+00			7.70E-01			1.80E+00			9.40E-01				3.00E-01	
74-95-3	methylene bromide																		4.80E+01		
75-09-2	methylene chloride	1.73E+04	3.60E+03	4.32E+04	9.00E+04													4.60E+00	4.70E+00	5.90E+02	1.60E+03
2385-85-5	mirex									1.00E-03						1.00E-03					
91-20-3	naphthalene	4.71E+03		1.18E+04																	
7440-02-0	nickel soluble salts	1.10E+03		2.76E+03		4.38E+02	4.70E+02	1.40E+03	4.87E+01	5.20E+01	1.60E+02	7.40E+01	7.40E+01	7.40E+01	8.20E+00	8.20E+00	8.20E+00	6.10E+02	6.10E+02	4.60E+03	4.60E+03
14797-55-8	nitrate																	1.00E+04			
98-95-3	nitrobenzene	1.79E+03		4.47E+03														1.70E+01	1.70E+01	6.90E+02	1.90E+03
55-18-5	nitrosodiethylamine;N-																	8.00E-04		1.24E+00	
62-75-9	nitrosodimethylamine;N-	7.98E+02	4.89E+00	1.99E+03	1.22E+02													6.90E-04	6.90E-04	3.00E+00	8.10E+00
924-16-3	nitroso-di-n-butylamine;N-																	6.30E-03		2.20E-01	
621-64-7	nitroso-di-n-propylamine;N-		8.42E-01		2.10E+01													5.00E-03		5.10E-01	
86-30-6	nitrosodiphenylamine;N-		9.45E+00		2.36E+02													3.30E+00	5.00E+00	6.00E+00	1.60E+01
930-55-2	nitrosopyrrolidine;N-																	1.60E-02		3.40E+01	
32536-52-0	octabromodiphenyl ether	2.43E+03		6.08E+03																	
56-38-2	parathion					6.50E-02	6.50E-02		1.30E-02	1.30E-02											
60348-60-9	pentabromodiphenyl ether; 2,2',4,4',5-	3.20E-02		8.00E-02																	
608-93-5	pentachlorobenzene																	1.40E+00		1.50E+00	
87-86-5	pentachlorophenol	1.18E+03	1.47E+00	2.95E+03	3.68E+01	2.03E+01	1.90E+01	2.00E+01	1.28E+01	1.50E+01	1.30E+01	1.30E+01	1.30E+01	1.30E+01	7.90E+00	7.90E+00	7.90E+00	2.70E-01	2.80E-01	3.00E+00	8.20E+00
108-95-2	phenol	5.56E+05		1.39E+06														2.10E+04	2.10E+04	1.70E+06	4.60E+06
7723-14-0	phosphorus															1.00E-01					
1336-36-3	polychlorinated biphenyls (PCBs)		1.05E-04		2.61E-03	2.00E+00			1.40E-02	1.40E-02	1.40E-01	1.00E+01			3.00E-02	3.00E-02	3.00E-02	6.40E-05	1.70E-04	6.40E-05	1.70E-04
129-00-0	pyrene	2.59E+03		6.48E+03														8.30E+02	9.60E+02	4.00E+03	1.10E+04
7782-49-2	selenium and compounds	2.70E+03		6.75E+03		2.00E+01		2.00E+01	5.00E+00	5.00E+00	5.00E+00	2.90E+02	2.90E+02	2.90E+02	7.10E+01	7.10E+01	7.10E+01	1.70E+02		4.20E+03	
7440-22-4	silver	2.59E+04		6.48E+04		3.20E-01	3.20E+00	3.40E+00				1.90E+00	1.90E+00	1.90E+00							
1746-01-6	tcdd;2,3,7,8- (Low organic) (dioxin)	3.63E-07	9.97E-09	9.07E-07	2.49E-07													5.00E-09	1.30E-08	5.10E-09	1.40E-08

CAS #	Chemical Name	Air Method B Non cancer (µg/m³)	Air Method B Cancer (µg/m³)	Air Method C Non cancer (µg/m³)	Air Method C Cancer (µg/m³)	S (Aqueous Solubility) (mg/L)	BCF (Bioconcentration Factor) (L/kg)	Hcc (Henry's Law Constant) (unitless)	INH (Inhalation Correction Factor) (unitless)	Kd (Distribution Factor for metals) (L/kg)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)
950-10-7	mephosfolan								1		
24307-26-4	mepiquat chloride								1		
7487-94-7	mercuric chloride	1.37E-01		3.00E-01					1		
7439-97-6	mercury	1.37E-01		3.00E-01				4.70E-01	1	5.20E+01	
150-50-5	merphos								1		
57837-19-1	metalaxyl								1		
126-98-7	methacrylonitrile	1.37E+01		3.00E+01					2		
10265-92-6	methamidosphos								1		
67-56-1	methanol	9.14E+03		2.00E+04					2		
950-37-8	methidathion								1		
16752-77-5	methomyl								1		
99-59-2	methoxy-5-nitroaniline;2-		1.79E-01		1.79E+00				1		
72-43-5	methoxychlor					4.50E-02	1.55E+03	6.48E-04	1		8.00E+04
110-49-6	methoxyethanol acetate;2-	4.57E-01		1.00E+00					2		
109-86-4	methoxyethanol;2-	9.14E+00		2.00E+01					2		
79-20-9	methyl acetate								2		
96-33-3	methyl acrylate	9.14E+00		2.00E+01					2		
78-93-3	methyl ethyl ketone	2.29E+03		5.00E+03					2		
108-10-1	methyl isobutyl ketone	1.37E+03		3.00E+03					2		
22967-92-6	methyl mercury								1		
80-62-6	methyl methacrylate	3.20E+02		7.00E+02					2		
90-12-0	methyl naphthalene;1-								2		
91-57-6	methyl naphthalene;2-								2		
298-00-0	methyl parathion								1		
25013-15-4	methyl styrene	1.83E+01		4.00E+01					2		
98-83-9	methyl styrene, alpha								2		
1634-04-4	methyl tert-butyl ether	1.37E+03	9.62E+00	3.00E+03	9.62E+01	5.00E+04		1.80E-02	2		1.09E+01
94-74-6	methyl-4-chlorophenoxy-acetic acid;2-								1		
99-55-8	methyl-5-nitroaniline;2-								1		
636-21-5	methylaniline hydrochloride;2-		6.76E-02		6.76E-01				1		
95-53-4	methylaniline;2-								2		
108-87-2	methylcyclohexane								2		
101-14-4	methylene bis(2-chloroaniline);4,4'-		5.81E-03		5.81E-02				1		
101-61-1	methylene bis(n,n'-dimethyl)aniline;4,4'-		1.92E-01		1.92E+00				1		
74-95-3	methylene bromide	1.83E+00		4.00E+00					2		
75-09-2	methylene chloride	2.74E+02	2.50E+02	6.00E+02	2.50E+03	1.30E+04	9.00E-01	8.98E-02	2		1.00E+01
101-68-8	methylene diphenyl diisocyanate (MDI)	2.74E-01		6.00E-01					1		
9016-87-9	methylene diphenyl diisocyanate (PMDI)	2.74E-01		6.00E-01					1		
101-77-9	methylenebisbenzenamine;4,4-	9.14E+00	5.43E-03	2.00E+01	5.43E-02				1		
60-34-4	methylhydrazine	9.14E-03	2.50E-03	2.00E-02	2.50E-02				2		
51218-45-2	metolachlor								1		
21087-64-9	metribuzin								1		
7786-34-7	mevinphos								1		
2385-85-5	mirex		4.90E-04		4.90E-03				1		
2212-67-1	molinate								1		
7439-98-7	molybdenum							0.00E+00	1		
10599-90-3	monochloramine								1		
unavailable03	monochlorobutanes (not in HSDB)								1		
300-76-5	naled								1		
91-20-3	naphthalene	1.37E+00	7.35E-02	3.00E+00	7.35E-01	3.10E+01	1.05E+01	1.98E-02	2		1.19E+03
15299-99-7	napropamide								1		
104-51-8	n-butylbenzene								2		
2429-74-5	niagara blue 4B								1		
unavailable04	nickel refinery dust	6.40E-03	1.04E-02	1.40E-02	1.04E-01			0.00E+00	1		
7440-02-0	nickel soluble salts	4.11E-02	9.62E-03	9.00E-02	9.62E-02		4.70E+01	0.00E+00	1	6.50E+01	
12035-72-2	nickel subsulfide	6.40E-03	5.21E-03	1.40E-02	5.21E-02				1		
14797-55-8	nitrate								1		
10102-43-9	nitric oxide								2		
14797-65-0	nitrite								1		
88-74-4	nitroaniline, 2-	2.29E-02		5.00E-02					1		
98-95-3	nitrobenzene	4.11E+00	6.25E-02	9.00E+00	6.25E-01	2.90E+03	2.89E+00	9.84E-04	2		1.19E+02
67-20-9	nitrofurantoin								1		
59-87-0	nitrofurazone		6.76E-03		6.76E-02				1		
10102-44-0	nitrogen dioxide								2		
556-88-7	nitroguanidine								1		
79-46-9	nitropropane;2-	9.14E+00	9.26E-04	2.00E+01	9.26E-03				2		
1116-54-7	nitrosodiethanolamine;N-		3.13E-03		3.13E-02				1		
55-18-5	nitrosodiethylamine;N-		5.81E-05		5.81E-04				2		
62-75-9	nitrosodimethylamine;N-	1.83E-02	1.79E-04	4.00E-02	1.79E-03		2.60E-02		2		
924-16-3	nitroso-di-n-butylamine;N-		1.56E-03		1.56E-02				2		
621-64-7	nitroso-di-n-propylamine;N-		1.25E-03		1.25E-02	9.89E+03	1.13E+00	9.23E-05	1		2.40E+01
86-30-6	nitrosodiphenylamine;N-		9.62E-01		9.62E+00	3.51E+01	1.36E+02	2.05E-04	1		1.29E+03
4549-40-0	nitrosomethylvinylamine,n-								1		
759-73-9	nitroso-n-ethylurea;n-		3.25E-04		3.25E-03				1		
10595-95-6	nitroso-N-methylethylamine;N-		3.97E-04		3.97E-03				1		
684-93-5	nitroso-n-methylurea,n-		7.35E-05		7.35E-04				1		
930-55-2	nitrosopyrrolidine;N-		4.10E-03		4.10E-02				2		
99-08-1	nitrotoluene, m-								2		
88-72-2	nitrotoluene, o-								2		
99-99-0	nitrotoluene, p-								2		
1321-12-6	nitrotoluenes;o-,m-,p-								2		
27314-13-2	norflurazon								1		
85509-19-9	nustar								1		
32536-52-0	octabromodiphenyl ether						3.20E+00		1		
2691-41-0	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine								1		
152-16-9	octamethylpyrophosphoramide								1		
19044-88-3	oryzalin								1		
19666-30-9	oxadiazon								1		
23135-22-0	oxamyl								1		
42874-03-3	oxyfluorfen								1		
76738-62-0	paclobutrazol								1		
unavailable05	pah								1		
4685-14-7	paraquat								1		
56-38-2	parathion								1		
1114-71-2	pebulate								2		
40487-42-1	pendimethalin								1		
87-84-3	pentabromo-6-chloro-cyclohexane;1,2,3,4,5-								1		
60348-60-9	pentabromodiphenyl ether; 2,2',4,4',5-						8.10E+03		1		
32534-81-9	pentabromodiphenyl ethers								1		
608-93-5	pentachlorobenzene								1		3.21E+04
82-68-8	pentachloronitrobenzene								1		
87-86-5	pentachlorophenol		4.90E-01		4.90E+00	1.95E+03	1.10E+01	1.00E-06	1		5.92E+02
7601-90-3	perchlorate and perchlorate salts								1		
52645-53-1	permethrin								1		
72-56-0	perthane								1		
unavailable19	pH								1		
85-01-8	phenanthrene								1		
13684-63-4	phenmedipham								1		
108-95-2	phenol	9.14E+01		2.00E+02		8.28E+04	1.40E+00	1.63E-05	2		2.88E+01
106-50-3	phenylenediamine, p-								1		
108-45-2	phenylenediamine;m-								1		
95-54-5	phenylenediamine;o-								1		
62-38-4	phenylmercuric acetate								1		
90-43-7	phenylphenol;2-								1		
298-02-2	phorate								1		
732-11-6	phosmet								1		
7803-51-2	phosphine	1.37E-01		3.00E-01					2		
7664-38-2	phosphoric acid	4.57E+00		1.00E+01					2		
7723-14-0	phosphorus								2		
100-21-0	phthalic acid;p-								1		
85-44-9	phthalic anhydride	9.14E+00		2.00E+01					1		
1918-02-1	picloram								1		
29232-93-7	pirimiphos-methyl								1		
67774-32-7	polybrominated biphenyls		2.91E-04		2.91E-03				1		
1336-36-3	polychlorinated biphenyls (PCBs)		4.39E-03		4.39E-02	7.00E-01	3.12E+04		1		3.09E+05
151-50-8	potassium cyanide								1		
7778-74-7	potassium perchlorate								1		
506-61-6	potassium silver cyanide								1		
67747-09-5	prochloraz (not in HSDB)								1		
26399-36-0	profluralin								1		
1610-18-0	prometon								1		
7287-19-6	prometryn								1		
23950-58-5	pronamide								1		
1918-16-7	propachlor								1		
709-98-8	propanil								1		
2312-35-8	propargite								2		
107-19-7	propargyl alcohol								2		
139-40-2	propazine								1		
122-42-9	propham								1		
60207-90-1	propiconazole								1		
93-65-2	propionic acid;(2-methyl-4-chlorophenoxy)2-								1		
103-65-1	propylbenzene;n-	4.57E+02		1.00E+03					2		
57-55-6	propylene glycol								2		
6423-43-4	propylene glycol dinitrate;1,2-	1.23E-01		2.70E-01					2		
52125-53-8	propylene glycol monoethyl ether								2		
107-98-2	propylene glycol monomethyl ether	9.14E+02		2.00E+03					2		
75-56-9	propylene oxide	1.37E+01	6.76E-01	3.00E+01	6.76E+00				2		
81335-77-5	pursuit								1		
51630-58-1	pydrin								1		
129-00-0	pyrene					1.35E-01	3.00E+01	4.51E-04	1		6.80E+04
110-86-1	pyridine								2		
13593-03-8	quinalphos								1		
91-22-5	quinoline								2		
unavailable24	radium 226							0.00E+00	1		
unavailable23	radium 226 and 228							0.00E+00	1		
121-82-4	rdx								1		
unavailable07	refractory ceramic fibers	1.37E+01		3.00E+01					1		
10453-86-8	resmethrin								1		
299-84-3	ronnel								1		
83-79-4	rotenone								1		
78-48-8	s,s,s-tributylphosphorotrithioate								1		
78587-05-0	savey								1		
135-98-8	sec-butylbenzene								2		
7783-00-8	selenious acid								1		
7782-49-2	selenium and compounds	9.14E+00		2.00E+01			4.80E+00	0.00E+00	1	5.00E+00	
630-10-4	selenourea								1		
74051-80-2	sethoxydim								1		
7440-22-4	silver						5.00E-01	0.00E+00	1	8.30E+00	
506-64-9	silver cyanide								1		
122-34-9	simazine								1		
26628-22-8	sodium azide								2		
143-33-9	sodium cyanide								1		
148-18-5	sodium diethyldithiocarbamate								1		
62-74-8	sodium fluoroacetate								1		
13718-26-8	sodium metavanadate								1		
7601-89-0	sodium perchlorate								1		
7440-24-6	strontium							0.00E+00	1		
57-24-9	strychnine								1		
100-42-5	styrene	4.57E+02		1.00E+03		3.10E+02		1.13E-01	2		9.12E+02
unavailable17	sulfate								1		
88671-89-0	systhane								1		
1746-01-6	tcdd;2,3,7,8- (Low organic) (dioxin)	1.83E-05	6.58E-08	4.00E-05	6.58E-07		5.00E+03		1		
34014-18-1	tebuthiuron								1		
3383-96-8	temephos								1		
5902-51-2	terbacil								1		
13071-79-9	terbufos								1		

1 CAS #	2 Chemical Name	3 CAS #	4 RfDi Inhalation Reference Dose	5 Source	6 CPFi Inhalation Cancer Potency Factor	7 Source	8 RfDo Oral Reference Dose	9 Source	10 CPFo Oral Cancer Potency Factor	11 Source
			(mg/kg-day)		(kg-day/mg)		(mg/kg-day)		(kg-day/mg)	
886-50-0	terbutryn	886-50-0					1.00E-03	I		
98-06-6	tert-butylbenzene	98-06-6					1.00E-01	X		
5436-43-1	tetrabromodiphenyl ether 2,2',4,4'	5436-43-1					1.00E-04	I		
95-94-3	tetrachlorobenzene;1,2,4,5-	95-94-3					3.00E-04	I		
630-20-6	tetrachloroethane;1,1,1,2-	630-20-6			2.59E-02	I	3.00E-02	I	2.60E-02	I
79-34-5	tetrachloroethane;1,1,2,2-	79-34-5			2.03E-01	C	2.00E-02	I	2.00E-01	I
127-18-4	tetrachloroethylene (PCE)	127-18-4	1.14E-02	I	9.10E-04	I	6.00E-03	I	2.10E-03	I
58-90-2	tetrachlorophenol;2,3,4,6-	58-90-2					3.00E-02	I		
5216-25-1	tetrachlorotoluene;p,a,a,a,-	5216-25-1							2.00E+01	H
961-11-5	tetrachlorvinphos	961-11-5					3.00E-02	I	2.40E-02	H
3689-24-5	tetraethyl dithiopyrophosphate	3689-24-5					5.00E-04	I		
78-00-2	tetraethyl lead	78-00-2					1.00E-07	I		
811-97-2	tetrafluoroethane;1,1,1,2-	811-97-2	2.29E+01	I						
1314-32-5	thallic oxide	1314-32-5								
563-68-8	thallium acetate	563-68-8					6.00E-06	X		
6533-73-9	thallium carbonate	6533-73-9					2.00E-05	X		
7791-12-0	thallium chloride	7791-12-0					6.00E-06	X		
10102-45-1	thallium nitrate	10102-45-1					7.00E-06	X		
12039-52-0	thallium selenite	12039-52-0								
7446-18-6	thallium(I) sulfate	7446-18-6					2.00E-05	X		
7440-28-0	thallium, soluble salts	7440-28-0					1.00E-05	X		
28249-77-6	thiobencarb	28249-77-6					1.00E-02	I		
21564-17-0	thiocyanomethylthiobenzothiazole;2-	21564-17-0					3.00E-02	H		
39196-18-4	thiofanox	39196-18-4					3.00E-04	H		
23564-05-8	thiophanate-methyl	23564-05-8					8.00E-02	I		
137-26-8	thiram	137-26-8					5.00E-03	I		
7440-31-5	tin	7440-31-5					6.00E-01	H		
118-96-7	tnt	118-96-7					5.00E-04	I	3.00E-02	I
108-88-3	toluene	108-88-3	1.43E+00	I			8.00E-02	I		
26471-62-5	toluene diisocyanate mixture;2,4-/2,6-	26471-62-5								
95-80-7	toluenediamine;2,4-	95-80-7								
95-70-5	toluenediamine;2,5-	95-70-5					2.00E-04	X	1.80E-01	X
823-40-5	toluenediamine;2,6-	823-40-5								
106-49-0	toluidine;p-	106-49-0					4.00E-03	X	3.00E-02	P
unavailable18	total dissolved solids	unavailable18								
8001-35-2	toxaphene	8001-35-2			1.12E+00	I			1.10E+00	I
93-72-1	tp;2,4,5-	93-72-1					8.00E-03	I		
unavailable09	tph, diesel range organics	unavailable09								
unavailable10	tph, heavy oils	unavailable10								
unavailable11	tph, mineral oil	unavailable11								
unavailable25	tph: gasoline range organics, benzene present	unavailable25								
unavailable08	tph: gasoline range organics, no detectable benzene	unavailable08								
66841-25-6	tralomethrin	66841-25-6					7.50E-03	I		
2303-17-5	triallate	2303-17-5					1.30E-02	I		
82097-50-5	triasulfuron	82097-50-5					1.00E-02	I		
615-54-3	tribromobenzene;1,2,4-	615-54-3					5.00E-03	I		
56-35-9	tributyltin oxide	56-35-9					3.00E-04	I		
76-13-1	trichloro-1,2,2-trifluoroethane;1,1,2-	76-13-1	8.57E+00	H			3.00E+01	I		
33663-50-2	trichloroaniline hydrochloride;2,4,6-	33663-50-2							2.90E-02	H
634-93-5	trichloroaniline;2,4,6-	634-93-5					3.00E-05	X	7.00E-03	X
120-82-1	trichlorobenzene;1,2,4-	120-82-1	5.71E-04	P			1.00E-02	I	2.90E-02	P
71-55-6	trichloroethane;1,1,1-	71-55-6	1.43E+00	I			2.00E+00	I		
79-00-5	trichloroethane;1,1,2-	79-00-5	5.71E-05	X	5.60E-02	I	4.00E-03	I	5.70E-02	I
79-01-6	trichloroethylene (TCE)	79-01-6	5.71E-04	I	Guidance	I	5.00E-04	I	Guidance	I
75-69-4	trichlorofluoromethane	75-69-4	2.00E-01	H			3.00E-01	I		
95-95-4	trichlorophenol;2,4,5-	95-95-4					1.00E-01	I		
88-06-2	trichlorophenol;2,4,6-	88-06-2			1.09E-02	I	1.00E-03	P	1.10E-02	I
93-76-5	trichlorophenoxyacetic acid;2,4,5-	93-76-5					1.00E-02	I		
598-77-6	trichloropropane;1,1,2-	598-77-6					5.00E-03	I		
96-18-4	trichloropropane;1,2,3-	96-18-4	8.57E-05	I			4.00E-03	I	3.00E+01	I
96-19-5	trichloropropene;1,2,3-	96-19-5	8.57E-05	P			3.00E-03	X		
58138-08-2	tridiphane	58138-08-2					3.00E-03	I		
121-44-8	triethylamine	121-44-8	2.00E-03	I						
1582-09-8	trifluralin	1582-09-8					7.50E-03	I	7.70E-03	I
unavailable13	trihalomethanes, total (TTHMs)	unavailable13								
512-56-1	trimethyl phosphate	512-56-1					1.00E-02	P	2.00E-02	P
95-63-6	trimethylbenzene;1,2,4-	95-63-6	2.00E-03	P						
108-67-8	trimethylbenzene;1,3,5-	108-67-8					1.00E-02	X		
99-35-4	trinitrobenzene;1,3,5-	99-35-4					3.00E-02	I		
479-45-8	trinitrophenylmethylnitramine	479-45-8					2.00E-03	P		
unavailable12	uranium, soluble salts	unavailable12	1.14E-05	A			3.00E-03	I		
7440-62-2	vanadium	7440-62-2	2.86E-05	A			5.00E-03	S		
1314-62-1	vanadium pentoxide	1314-62-1	2.00E-06	P	2.91E+01	P	9.00E-03	I		
27774-13-6	vanadyl sulfate	27774-13-6								
1929-77-7	vernam	1929-77-7					1.00E-03	I		
50471-44-8	vinclozolin	50471-44-8					2.50E-02	I		
108-05-4	vinyl acetate	108-05-4	5.71E-02	I			1.00E+00	H		
75-01-4	vinyl chloride	75-01-4	2.86E-02	I	Guidance	I	3.00E-03	I	Guidance	I
81-81-2	warfarin	81-81-2					3.00E-04	I		
8012-95-1	white mineral oil	8012-95-1					3.00E+00	P		
108-38-3	xylene;m-	108-38-3	2.86E-02	S			2.00E-01	S		
95-47-6	xylene;o-	95-47-6	2.86E-02	S			2.00E-01	S		
106-42-3	xylene;p-	106-42-3	2.86E-02	S			2.00E-01	S		
1330-20-7	xylenes	1330-20-7	2.86E-02	I			2.00E-01	I		
7440-66-6	zinc	7440-66-6					3.00E-01	I		
557-21-1	zinc cyanide	557-21-1					5.00E-02	I		
1314-84-7	zinc phosphide	1314-84-7					3.00E-04	I		
12122-67-7	zineb	12122-67-7					5.00E-02	I		

CAS #	Soil Method A Unrestricted Land Use	Soil Method B Non cancer	Soil Method B Cancer	Soil Protective of Groundwater Vadose @ 25 degrees C see guidance	Soil Protective of Groundwater Vadose @ 13 degrees C see guidance	Soil Protective of Groundwater Saturated see guidance	Soil Method A Industrial Properties	Soil Method C Non cancer	Soil Method C Cancer
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
886-50-0		8.00E+01						3.50E+03	
98-06-6		8.00E+03						3.50E+05	
5436-43-1		8.00E+00						3.50E+02	
95-94-3		2.40E+01						1.05E+03	
630-20-6		2.40E+03	3.85E+01					1.05E+05	5.05E+03
79-34-5		1.60E+03	5.00E+00	1.23E-03	1.22E-03	8.00E-05		7.00E+04	6.56E+02
127-18-4	5.00E-02	4.80E+02	4.76E+02	5.30E-02	4.99E-02	2.76E-03	5.00E-02	2.10E+04	6.25E+04
58-90-2		2.40E+03						1.05E+05	
5216-25-1			5.00E-02						6.56E+00
961-11-5		2.40E+03	4.17E+01					1.05E+05	5.47E+03
3689-24-5		4.00E+01						1.75E+03	
78-00-2		8.00E-03						3.50E-01	
811-97-2									
1314-32-5									
563-68-8		4.80E-01						2.10E+01	
6533-73-9		1.60E+00						7.00E+01	
7791-12-0		4.80E-01						2.10E+01	
10102-45-1		5.60E-01						2.45E+01	
12039-52-0									
7446-18-6		1.60E+00						7.00E+01	
7440-28-0		8.00E-01		2.28E-01	2.28E-01	1.14E-02		3.50E+01	
28249-77-6		8.00E+02						3.50E+04	
21564-17-0		2.40E+03						1.05E+05	
39196-18-4		2.40E+01						1.05E+03	
23564-05-8		6.40E+03						2.80E+05	
137-26-8		4.00E+02						1.75E+04	
7440-31-5		4.80E+04						2.10E+06	
118-96-7		4.00E+01	3.33E+01					1.75E+03	4.38E+03
108-88-3	7.00E+00	6.40E+03		4.65E+00	4.52E+00	2.73E-01	7.00E+00	2.80E+05	
26471-62-5									
95-80-7									
95-70-5		1.60E+01	5.56E+00					7.00E+02	7.29E+02
823-40-5									
106-49-0		3.20E+02	3.33E+01					1.40E+04	4.38E+03
unavailable18									
8001-35-2			9.09E-01	1.53E+00		7.64E-02			1.19E+02
93-72-1		6.40E+02						2.80E+04	
unavailable09	2.00E+03						2.00E+03		
unavailable10	2.00E+03						2.00E+03		
unavailable11	4.00E+03						4.00E+03		
unavailable25	3.00E+01						3.00E+01		
unavailable08	1.00E+02						1.00E+02		
66841-25-6		6.00E+02						2.63E+04	
2303-17-5		1.04E+03						4.55E+04	
82097-50-5		8.00E+02						3.50E+04	
615-54-3		4.00E+02						1.75E+04	
56-35-9		2.40E+01						1.05E+03	
76-13-1		2.40E+06						1.05E+08	
33663-50-2			3.45E+01						4.53E+03
634-93-5		2.40E+00	1.43E+02					1.05E+02	1.88E+04
120-82-1		8.00E+02	3.45E+01	5.63E-01	5.62E-01	2.94E-02		3.50E+04	4.53E+03
71-55-6	2.00E+00	1.60E+05		1.58E+00	1.49E+00	8.43E-02	2.00E+00	7.00E+06	
79-00-5		3.20E+02	1.75E+01	2.78E-02	2.77E-02	1.81E-03		1.40E+04	2.30E+03
79-01-6	3.00E-02	4.00E+01	1.20E+01	2.64E-02	2.52E-02	1.52E-03	3.00E-02	1.75E+03	2.85E+03
75-69-4		2.40E+04						1.05E+06	
95-95-4		8.00E+03		2.88E+01		1.51E+00		3.50E+05	
88-06-2		8.00E+01	9.09E+01	4.62E-02		2.66E-03		3.50E+03	1.19E+04
93-76-5		8.00E+02						3.50E+04	
598-77-6		4.00E+02						1.75E+04	
96-18-4		3.20E+02	3.33E-02					1.40E+04	4.38E+00
96-19-5		2.40E+02						1.05E+04	
58138-08-2		2.40E+02						1.05E+04	
121-44-8									
1582-09-8		6.00E+02	1.30E+02					2.63E+04	1.70E+04
unavailable13									
512-56-1		8.00E+02	5.00E+01					3.50E+04	6.56E+03
95-63-6									
108-67-8		8.00E+02						3.50E+04	
99-35-4		2.40E+03						1.05E+05	
479-45-8		1.60E+02						7.00E+03	
unavailable12		2.40E+02						1.05E+04	
7440-62-2		4.00E+02		1.60E+03	1.60E+03	8.00E+01		1.75E+04	
1314-62-1		7.20E+02						3.15E+04	
27774-13-6									
1929-77-7		8.00E+01						3.50E+03	
50471-44-8		2.00E+03						8.75E+04	
108-05-4		8.00E+04		3.31E+01	3.30E+01	2.34E+00		3.50E+06	
75-01-4		2.40E+02	Guidance	1.83E-03	1.67E-03	8.85E-05		1.05E+04	Guidance
81-81-2		2.40E+01						1.05E+03	
8012-95-1		2.40E+05						1.05E+07	
108-38-3		1.60E+04		1.35E+01	1.31E+01	7.72E-01		7.00E+05	
95-47-6		1.60E+04		1.47E+01	1.44E+01	8.44E-01		7.00E+05	
106-42-3		1.60E+04		1.72E+01	1.68E+01	9.56E-01		7.00E+05	
1330-20-7	9.00E+00	1.60E+04		1.46E+01		8.31E-01	9.00E+00	7.00E+05	
7440-66-6		2.40E+04		5.97E+03	5.97E+03	2.99E+02		1.05E+06	
557-21-1		4.00E+03						1.75E+05	
1314-84-7		2.40E+01						1.05E+03	
12122-67-7		4.00E+03						1.75E+05	

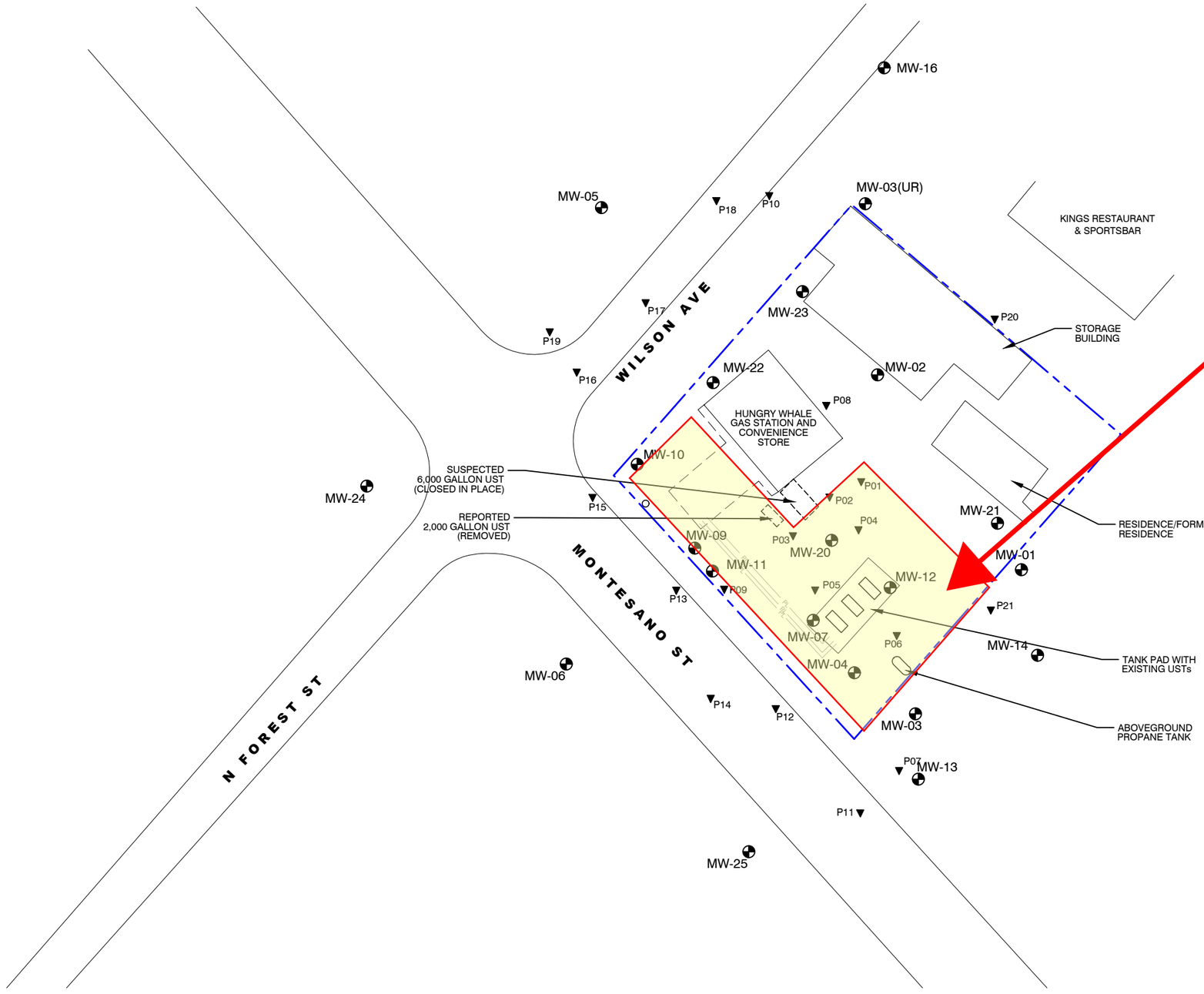
CAS #	Ground Water Method A	Ground Water Method B Non cancer	Ground Water Method B Cancer	Ground Water Method C Non cancer	Ground Water Method C Cancer	Ground Water Maximum Contaminant Level Goal	Ground Water Maximum Contaminant Level	Ground Water WA Maximum Contaminant Level
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
886-50-0		1.60E+01		3.50E+01				
98-06-6		8.00E+02		1.75E+03				
5436-43-1		1.60E+00		3.50E+00				
95-94-3		4.80E+00		1.05E+01				
630-20-6		2.40E+02	1.68E+00	5.25E+02	1.68E+01			
79-34-5		1.60E+02	2.19E-01	3.50E+02	2.19E+00			
127-18-4	5.00E+00	4.80E+01	2.08E+01	1.05E+02	2.08E+02	0.00E+00	5.00E+00	5.00E+00
58-90-2		4.80E+02		1.05E+03				
5216-25-1			4.38E-03		4.38E-02			
961-11-5		4.80E+02	3.65E+00	1.05E+03	3.65E+01			
3689-24-5		8.00E+00		1.75E+01				
78-00-2		8.00E-04		1.75E-03				
811-97-2								
1314-32-5								
563-68-8		9.60E-02		2.10E-01				
6533-73-9		3.20E-01		7.00E-01				
7791-12-0		9.60E-02		2.10E-01				
10102-45-1		1.12E-01		2.45E-01				
12039-52-0								
7446-18-6		3.20E-01		7.00E-01				
7440-28-0		1.60E-01		3.50E-01		5.00E-01	2.00E+00	2.00E+00
28249-77-6		1.60E+02		3.50E+02				
21564-17-0		4.80E+02		1.05E+03				
39196-18-4		4.80E+00		1.05E+01				
23564-05-8		1.28E+03		2.80E+03				
137-26-8		4.00E+01		8.75E+01				
7440-31-5		9.60E+03		2.10E+04				
118-96-7		8.00E+00	2.92E+00	1.75E+01	2.92E+01			
108-88-3	1.00E+03	6.40E+02		1.40E+03		1.00E+03	1.00E+03	1.00E+03
26471-62-5								
95-80-7								
95-70-5		3.20E+00	4.86E-01	7.00E+00	4.86E+00			
823-40-5								
106-49-0		3.20E+01	1.46E+00	7.00E+01	1.46E+01			
unavailable18								
8001-35-2			7.95E-02		7.95E-01	0.00E+00	3.00E+00	3.00E+00
93-72-1		1.28E+02		2.80E+02		5.00E+01	5.00E+01	5.00E+01
unavailable09	5.00E+02							
unavailable10	5.00E+02							
unavailable11	5.00E+02							
unavailable25	8.00E+02							
unavailable08	1.00E+03							
66841-25-6		1.20E+02		2.63E+02				
2303-17-5		2.08E+02		4.55E+02				
82097-50-5		1.60E+02		3.50E+02				
615-54-3		8.00E+01		1.75E+02				
56-35-9		4.80E+00		1.05E+01				
76-13-1		2.40E+05		5.25E+05				
33663-50-2			3.02E+00		3.02E+01			
634-93-5		4.80E-01	1.25E+01	1.05E+00	1.25E+02			
120-82-1		8.00E+01	1.51E+00	1.75E+02	1.51E+01	7.00E+01	7.00E+01	7.00E+01
71-55-6	2.00E+02	1.60E+04		3.50E+04		2.00E+02	2.00E+02	2.00E+02
79-00-5		3.20E+01	7.68E-01	7.00E+01	7.68E+00	3.00E+00	5.00E+00	5.00E+00
79-01-6	5.00E+00	4.00E+00	5.40E-01	8.75E+00	9.51E+00	0.00E+00	5.00E+00	5.00E+00
75-69-4		2.40E+03		5.25E+03				
95-95-4		8.00E+02		1.75E+03				
88-06-2		8.00E+00	3.98E+00	1.75E+01	3.98E+01			
93-76-5		1.60E+02		3.50E+02				
598-77-6		4.00E+01		8.75E+01				
96-18-4		3.20E+01	1.46E-03	7.00E+01	1.46E-02			
96-19-5		2.40E+01		5.25E+01				
58138-08-2		4.80E+01		1.05E+02				
121-44-8								
1582-09-8		1.20E+02	1.14E+01	2.63E+02	1.14E+02			
unavailable13							8.00E+01	8.00E+01
512-56-1		8.00E+01	2.19E+00	1.75E+02	2.19E+01			
95-63-6								
108-67-8		8.00E+01		1.75E+02				
99-35-4		4.80E+02		1.05E+03				
479-45-8		1.60E+01		3.50E+01				
unavailable12		4.80E+01		1.05E+02		0.00E+00	3.00E+01	3.00E+01
7440-62-2		8.00E+01		1.75E+02				
1314-62-1		1.44E+02		3.15E+02				
27774-13-6								
1929-77-7		8.00E+00		1.75E+01				
50471-44-8		4.00E+02		8.75E+02				
108-05-4		8.00E+03		1.75E+04				
75-01-4	2.00E-01	2.40E+01	Guidance	5.25E+01	Guidance	0.00E+00	2.00E+00	2.00E+00
81-81-2		2.40E+00		5.25E+00				
8012-95-1		4.80E+04		1.05E+05				
108-38-3		1.60E+03		3.50E+03				
95-47-6		1.60E+03		3.50E+03				
106-42-3		1.60E+03		3.50E+03				
1330-20-7	1.00E+03	1.60E+03		3.50E+03		1.00E+04	1.00E+04	1.00E+04
7440-66-6		4.80E+03		1.05E+04				
557-21-1		8.00E+02		1.75E+03				
1314-84-7		4.80E+00		1.05E+01				
12122-67-7		8.00E+02		1.75E+03				

CAS #	Surface Water Method B Non cancer	Surface Water Method B Cancer	Surface Water Method C Non cancer	Surface Water Method C Cancer	Surface Water Aquatic Life Fresh/Acute 173-201A WAC	Surface Water Aquatic Life Fresh/Acute CWA §304	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC	Surface Water Aquatic Life Fresh/Chronic CWA §304	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131	Surface Water Aquatic Life Marine/Acute 173-201A WAC	Surface Water Aquatic Life Marine/Acute CWA §304	Surface Water Aquatic Life Marine/Acute NTR 40 CFR 131	Surface Water Aquatic Life Marine/Chronic 173-201A WAC	Surface Water Aquatic Life Marine/Chronic CWA §304	Surface Water Aquatic Life Marine/Chronic NTR 40 CFR 131	Surface Water Human Health Fresh Water CWA §304	Surface Water Human Health Fresh Water NTR 40 CFR 131	Surface Water Human Health Marine Waters CWA §304	Surface Water Human Health Marine Waters NTR 40 CFR 131
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
886-50-0																				
98-06-6																				
5436-43-1																				
95-94-3																	9.70E-01		1.10E+00	
630-20-6																				
79-34-5	1.04E+04	6.48E+00	2.59E+04	1.62E+02													1.70E-01	1.70E-01	4.00E+00	1.10E+01
127-18-4	5.02E+02	9.96E+01	1.25E+03	2.49E+03													6.90E-01	8.00E-01	3.30E+00	8.85E+00
58-90-2																				
5216-25-1																				
961-11-5																				
3689-24-5																				
78-00-2																				
811-97-2																				
1314-32-5																				
563-68-8																				
6533-73-9																				
7791-12-0																				
10102-45-1																				
12039-52-0																				
7446-18-6																				
7440-28-0	2.16E-01		5.40E-01														2.40E-01	1.70E+00	4.70E-01	6.30E+00
28249-77-6																				
21564-17-0																				
39196-18-4																				
23564-05-8																				
137-26-8																				
7440-31-5																				
118-96-7																				
108-88-3	1.89E+04		4.71E+04														1.30E+03	6.80E+03	1.50E+04	2.00E+05
26471-62-5																				
95-80-7																				
95-70-5																				
823-40-5																				
106-49-0																				
unavailable18																				
8001-35-2		4.53E-04		1.13E-02	7.30E-01	7.30E-01	7.30E-01	2.00E-04	2.00E-04	2.00E-04	2.10E-01	2.00E-01	2.10E-01	2.00E-04	2.00E-04	2.00E-04	2.80E-04	7.30E-04	2.80E-04	7.50E-04
93-72-1																	1.00E+01			
unavailable09																				
unavailable10																				
unavailable11																				
unavailable25																				
unavailable08																				
66841-25-6																				
2303-17-5																				
82097-50-5																				
615-54-3																				
56-35-9						4.60E-01			6.30E-02			3.70E-01			1.00E-02					
76-13-1																				
33663-50-2																				
634-93-5																				
120-82-1	2.36E+02	2.03E+00	5.89E+02	5.08E+01													3.50E+01		7.00E+01	
71-55-6	9.26E+05		2.31E+06																	
79-00-5	2.30E+03	2.53E+01	5.76E+03	6.32E+02													5.90E-01	6.00E-01	1.60E+01	4.20E+01
79-01-6	1.18E+02	1.28E+01	2.95E+02	3.20E+02													2.50E+00	2.70E+00	3.00E+01	8.10E+01
75-69-4																				
95-95-4																	1.80E+03		3.60E+03	
88-06-2	1.73E+01	3.93E+00	4.32E+01	9.82E+01													1.40E+00	2.10E+00	2.40E+00	6.50E+00
93-76-5																				
598-77-6																				
96-18-4																				
96-19-5																				
58138-08-2																				
121-44-8																				
1582-09-8																				
unavailable13																				
512-56-1																				
95-63-6																				
108-67-8																				
99-35-4																				
479-45-8																				
unavailable12																				
7440-62-2																				
1314-62-1																				
27774-13-6																				
1929-77-7																				
50471-44-8																				
108-05-4																				
75-01-4	6.48E+03	Guidance	1.62E+04	Guidance													2.50E-02	2.00E+00	2.40E+00	5.25E+02
81-81-2																				
8012-95-1																				
108-38-3																				
95-47-6																				
106-42-3																				
1330-20-7																				
7440-66-6	1.65E+04		4.14E+04		3.54E+01	1.20E+02	1.10E+02	3.23E+01	1.20E+02	1.00E+02	9.00E+01	9.00E+01	9.00E+01	8.10E+01	8.10E+01	8.10E+01	7.40E+03		2.60E+04	
557-21-1																				
1314-84-7																				
12122-67-7																				

CAS #	Air Method B Non cancer	Air Method B Cancer	Air Method C Non cancer	Air Method C Cancer	S (Aqueous Solubility)	BCF (Bioconcentration Factor)	Hcc (Henry's Law Constant)	INH (Inhalation Correction Factor)	Kd (Distribution Factor for metals)	Koc (Soil Organic Carbon-Water Partitioning Coefficient)
	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(mg/L)	(L/kg)	(unitless)	(unitless)	(L/kg)	(L/kg)
886-50-0								1		
98-06-6								2		
5436-43-1								1		
95-94-3								1		
630-20-6		3.38E-01		3.38E+00				2		
79-34-5		4.31E-02		4.31E-01	2.97E+03	5.00E+00	1.41E-02	2		7.90E+01
127-18-4	1.83E+01	9.62E+00	4.00E+01	9.62E+01	2.00E+02	3.10E+01	7.54E-01	2		2.65E+02
58-90-2								1		2.80E+02
5216-25-1								1		
961-11-5								1		
3689-24-5								1		
78-00-2								2		
811-97-2	3.66E+04		8.00E+04					2		
1314-32-5								1		
563-68-8								1		
6533-73-9								1		
7791-12-0								1		
10102-45-1								1		
12039-52-0								1		
7446-18-6								1		
7440-28-0						1.16E+02	0.00E+00	1	7.10E+01	
28249-77-6								1		
21564-17-0								1		
39196-18-4								1		
23564-05-8								1		
137-26-8								2		
7440-31-5							0.00E+00	1		
118-96-7								1		
108-88-3	2.29E+03		5.00E+03		5.26E+02	1.07E+01	2.72E-01	2		1.40E+02
26471-62-5								2		
95-80-7								1		
95-70-5								1		
823-40-5								1		
106-49-0								2		
unavailable18								1		
8001-35-2		7.81E-03		7.81E-02	7.40E-01	1.31E+04	2.46E-04	1		9.58E+04
93-72-1								1		
unavailable09								1		
unavailable10								1		
unavailable11								1		
unavailable25								1		
unavailable08								1		
66841-25-6								1		
2303-17-5								1		
82097-50-5								1		
615-54-3								1		
56-35-9								1		
76-13-1	1.37E+04		3.00E+04					2		
33663-50-2								1		
634-93-5								1		
120-82-1	9.14E-01		2.00E+00		3.00E+02	1.14E+02	5.82E-02	2		1.66E+03
71-55-6	2.29E+03		5.00E+03		1.33E+03	5.60E+00	7.05E-01	2		1.35E+02
79-00-5	9.14E-02	1.56E-01	2.00E-01	1.56E+00	4.42E+03	4.50E+00	3.74E-02	2		7.50E+01
79-01-6	9.14E-01	3.70E-01	2.00E+00	6.30E+00	1.10E+03	1.10E+01	4.22E-01	2		9.40E+01
75-69-4	3.20E+02		7.00E+02					2		
95-95-4					1.20E+03		1.78E-04	2		1.60E+03
88-06-2		8.06E-01		8.06E+00	8.00E+02	1.50E+02	3.19E-04	2		3.81E+02
93-76-5								1		
598-77-6								2		
96-18-4	1.37E-01		3.00E-01					2		
96-19-5	1.37E-01		3.00E-01					2		
58138-08-2								1		
121-44-8	3.20E+00		7.00E+00					2		
1582-09-8								1		
unavailable13								2		
512-56-1								2		
95-63-6	3.20E+00		7.00E+00					2		
108-67-8								2		
99-35-4								1		
479-45-8								2		
unavailable12	1.83E-02		4.00E-02				0.00E+00	1		
7440-62-2	4.57E-02		1.00E-01				0.00E+00	1	1.00E+03	
1314-62-1	3.20E-03	3.01E-04	7.00E-03	3.01E-03				1		
27774-13-6								1		
1929-77-7								2		
50471-44-8								1		
108-05-4	9.14E+01		2.00E+02		2.00E+04		2.10E-02	2		5.25E+00
75-01-4	4.57E+01	Guidance	1.00E+02	Guidance	2.76E+03	1.17E+00	1.11E+00	2		1.86E+01
81-81-2								2		
8012-95-1								1		
108-38-3	4.57E+01		1.00E+02		1.61E+02		3.01E-01	2		1.96E+02
95-47-6	4.57E+01		1.00E+02		1.78E+02		2.13E-01	2		2.41E+02
106-42-3	4.57E+01		1.00E+02		1.85E+02		3.14E-01	2		3.11E+02
1330-20-7	4.57E+01		1.00E+02		1.71E+02		2.79E-01	2		2.33E+02
7440-66-6						4.70E+01	0.00E+00	1	6.20E+01	
557-21-1								1		
1314-84-7								1		
12122-67-7								1		

APPENDIX I

Detailed Cost Analysis and Soil Excavation Alternatives



LEGEND

- MW-1 — MONITORING WELL/BORING EXISTING IN (2007)
- P01 — SOIL BORING (DIRECT PUSH, 2007)
- LEASEHOLD BOUNDARY
- PL — STATION FUEL/PRODUCT LINE

ALTERNATIVE 3 (preferred)

Remove contaminated soils associated with UST's and accessible contaminated soils.

- Approximate volume: 2,800 CY
- 2 weeks facility shutdown 2 weeks excavation and pumping groundwater
- Remove top 2 feet of soil and re-use on site
- Remove contaminated soils from depth of 2' to 12' depth
- Convenience store stays in place

Stantec
11130 NE 33RD PLACE, SUITE 200
BELLEVUE, WASHINGTON
PHONE: (425) 869-9448 FAX: (425) 869-1190

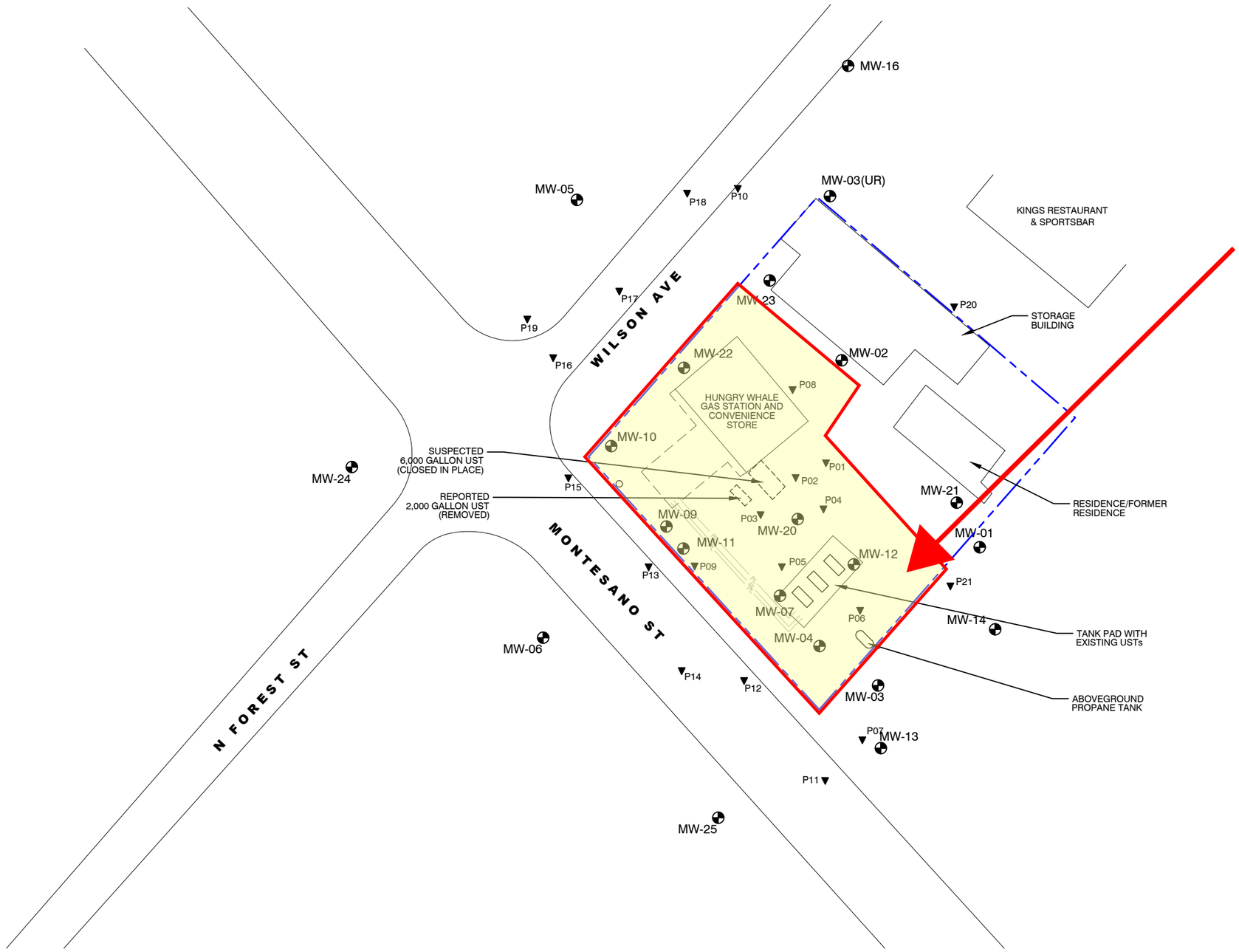
FOR: THE HUNGRY WHALE
1680 NORTH MONTESANO STREET
WESTPORT, WASHINGTON

SITE PLAN

FIGURE: **I1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185703328	SCL	CBS	MS	OCT 2018

FILEPATH:C:\AK_WORK DATA\01 Work data\2018\06 Hungary Whale\01 Input\Drawing to be used\CAD\HungryWhale-2017.dwg | Layout Tab: FIG-1 SITE PLAN | Drafter: akulkarni | Oct 25, 2018 at 15:52



LEGEND

- MW-1 — MONITORING WELL/BORING EXISTING IN (2007)
- P01 — SOIL BORING (DIRECT PUSH, 2007)
- LEASEHOLD BOUNDARY
- PL — STATION FUEL/PRODUCT LINE

ALTERNATIVE 4

Remove contaminated soils associated with UST's and all remaining contaminated soils on site.

- Approximate volume: 5,200 CY
- Assumes removal of convenience store
- Approximately 4 weeks to demo building and complete soil excavation
- Pump and remove contaminated groundwater for 4 weeks

Stantec
11130 NE 33RD PLACE, SUITE 200
BELLEVUE, WASHINGTON
PHONE: (425) 869-9448 FAX: (425) 869-1190

FOR:		SITE PLAN	FIGURE:
THE HUNGRY WHALE 1680 NORTH MONTESANO STREET WESTPORT, WASHINGTON			I2
JOB NUMBER: 185703328	DRAWN BY: SCL	CHECKED BY: CBS	APPROVED BY: MS	DATE: OCT 2018

Table I1					
Alternative 1- In-Situ Treatment with BOS 200					
ITEM	QUANTITY	UNIT	UNIT COST	COST	NOTES
CAPITAL DIRECT COSTS					
Clean-up Action Plan and Pre-Con	1	LS	$35,000	$35,000	1
UST Removal	1	LS	$52,000	$52,000	2
BOS 200 Injection					
Contractor Mobilization/Demobilization	1	LS	$2,500	$2,500	3
Carbon Injection (2 injection events; initial and polisher)	1	LS	$1,400,000	$1,800,000	8
Annual Groundwater Monitoring	15	years	$7,500	$112,500	11
TOTAL CAPITAL DIRECT COSTS				**$2,002,000**	
CAPITAL INDIRECT COSTS					
Remedial Design	3	%		**$60,060**	14
Construction Management	2	%		**$40,040**	15
Remedial Action Report	1	LS	$12,000	**$12,000**	16
Permitting and Regulatory Compliance	1	%		**$20,020**	17
Ecology Oversight	2	%		**$40,040**	18
Combined Sales Tax for Grays Harbor Co	8.8	%		**$176,176**	19
TOTAL CAPITAL INDIRECT COSTS				**$348,336**	
Estimated Total Cost				**$2,178,176**	

1 Prepare Cleanup Action Plan and Pre-construction Planning (RFP and contractor selection)

2 Remove/dispose 3, 20,000 gallon gasoline USTs, remove/dispose overburded soils and concrete, backfill with clean. No contaminated soils excavation/removal

3 Includes notification of public utilities and private utilities; temporary facilities, work plans/submittals

4 Temporary fencing to surround the entire property

8 December 3, 2018 e-mail form Randy Boes: 143,000 lbs of BOS 200, 77,650 lbs of gypsum (supplemental sulfate), 290 gallons of bacteria concentrate. 941 injection points with injections between 4 and 14 feet in depth for a total of 5,176 injections - Added $400 K for polisher event 12 months after initial event

11 Annual groundwater monitorng over a period of 15 years (the restoration timeframe) 10 wells for TPH-G/BTEX

12 40 floor samples, 20 sidewall samples; Analysis based on antcipated CAP requirements (NWTPHGx and NWTPHDx): 12 soil borings, 5 samples per location

13 N/A

14 Prepare remedaition plan

15 Oversight and soil sampling during carbon injection

16 Remedial action report per MTCA requirements

17 Pre-injection permitting. Regulatory interaction following remedial action. VCP preparation and submission

18 Ecology oversight charges - estimated

Table I2					
Alternative 2- Groundwater Extraction and Treatment					
ITEM	QUANTITY	UNIT	UNIT COST	COST	NOTES
CAPITAL DIRECT COSTS					
Clean-up Action Plan and Pre-Con	1	LS	$35,000	$35,000	1
UST Removal	1	LS	$52,000	$52,000	2
Remedial Excavation and Site Restoration					
Contractor Mobilization/Demobilization	1	LS	$5,000	$5,000	3
Install Remediaition System	1	LS	$490,000	$490,000	9
Operate and Maintain System	5	years	$30,000	$150,000	10
Monthly system sampling (analytical)	5	years	$6,000	$30,000	11
Annual Groundwater monitoring	15	years	$7,500	$112,500	12
TOTAL CAPITAL DIRECT COSTS				**$874,500**	
CAPITAL INDIRECT COSTS					
Remedial Design	8	%		**$69,960**	14
Construction Management	5	%		**$43,725**	15
Remedial Action Report	1	LS	$12,000	**$12,000**	16
Permitting and Regulatory Compliance	3	%		**$26,235**	17
Ecology Oversight	3	%		**$26,235**	18
Combined Sales Tax for Grays Harbor Co	8.8	%		**$76,956**	19
TOTAL CAPITAL INDIRECT COSTS				**$255,111**	
Total Estimated Costs				**$1,129,611**	

1 Prepare Cleanup Action Plan and Pre-construction Planning (RFP and contractor selection)

2 Remove/dispose 3, 20,000 gallon gasoline USTs, remove/dispose overburded soils and concrete, backfill with clean. No contaminated soils excavation/removal

3 Includes notification of public utilities and private utilities; temporary facilities, work plans/submittals

9 Based on cost to install similar GWET at a Seattle site in 2012 : Install turnkey system ordered from Newterra 800.420.4056

10 Based on experience with yearly O&M costs at Seattle GWET

11 Monthly influent and effluent sampling (TPH-G/BTEX)

12 Annual Groundwater Monitoring. Ten monitorng wells. TPH-G/BTEX at each location

13 Install groundwater pump, extract and treatment system. Turnkey system ordered from Newterra 800.420.4056

14 Based on 10 years of system operation - bi-monthly system visits, Based on experience

15 Monthly influent and effluent sampling (TPH-G/BTEX)

16 Annual Groundwater Monitoring. Ten monitorng wells. TPH-G/BTEX at each location

17 Pre-construction permitting. Regulatory interaction following remedial action. VCP preparation and submission

18 Ecology oversight charges - estimated

Table I3					
Alternative 3 - Source Removal of 2,800 CY Soils and Groundwater Monitoring					
ITEM	QUANTITY	UNIT	UNIT COST	COST	NOTES
CAPITAL DIRECT COSTS					
Clean-up Action Plan and Pre-Con	1	LS	$35,000	$35,000	1
UST Removal	1	LS	$52,000	$52,000	2
Remedial Excavation and Site Restoration					
Contractor Mobilization/Demobilization	1	LS	$15,000	$15,000	3
Temporary Fencing	1	LS	$5,000	$5,000	4
Street Sweeping and Sediment Control	1	LS	$4,500	$4,500	5
Remove Asphalt Paving	8,000	SF	$2	$16,000	6
Hauling/Disposal of Pavement Demolition	180	ton	$50	$9,000	7
Excavation/Loading Contaminated Soils	2,800	CY	$15	$42,000	8
Dewatering	1	LS	$40,000	$40,000	9
Hauling/Disposal of Contaminated Soils	4,200	ton	$75	$315,000	10
Import/Place/Grade/Compact Backfill	4,200	ton	$27	$113,400	11
Confirmation Sampling	60	EA	$120	$7,200	12
Site Restoration - Asphalt Paving	8,000	SF	$4	$32,000	13
Annual Groundwater Monitoring	10	years	$7,500	$75,000	14
TOTAL CAPITAL DIRECT COSTS				**$761,100**	
CAPITAL INDIRECT COSTS					
Remedial Design	5	%		**$38,055**	15
Construction Management	3	%		**$22,833**	16
Remedial Action Report	1	LS	$12,000	**$12,000**	17
Permitting and Regulatory Compliance	2	%		**$15,222**	18
Ecology Oversight	2	%		**$15,222**	19
Combined Sales Tax for Grays Harbor Co	8.8	%		**$66,977**	20
TOTAL CAPITAL INDIRECT COSTS				**$170,309**	
Total Estimated Costs				**$931,409**	

1	Prepare Cleanup Action Plan and Pre-construction Planning (RFP and contractor selection)
2	Remove/dispose 3, 20,000 gallon gasoline USTs, remove/dispose overburded soils and concrete, backfill with clean. No contaminated soils excavation/removal
2 continued	Non-binding quote provided in 11/30/2018 e-mail quote from ERRG
3	Includes notification of public utilities and private utilities; temporary facilities, work plans/submittals
4	Temporary fencing to surround the entire property
5	Street sweeping, erosion control measures
6	Asphalt paving removal only - concrete covering USTs included in the UST removal costs
7	Assumes 4" thickness and 150lbs/cubic foot and disposal and subtitle D landfill (non-haz)
8	Assumes $2000/day for excavator and operator and 200 CY per day due to dewatering
9	Assumes 2 weeks operation. Pumping into 2 Baker tanks with oil/water separator then discharge to City of Westport POTW
10	Assume 1.5 ton/CY hauling/disposal - per 12/11/2018 e-mail exchange with Jim Boone at Wastex
11	Assume imported structural fill from clean burrow - could provide the estimated area
12	40 floor samples, 20 sidewall samples; Analysis based on antcipated CAP requirements (NWTPHGx and NWTPHDx)
13	Restore excavated area with asphalt pavement. Re-striping where required.
14	Annual groundwater monitorng 10 wells for TPH-G/BTEX
15	Oversight and soil sampling during remedial excavation
16	Close-out remedial action report
17	Pre-construction permitting. Regulatory interaction following remedial action. VCP preparation and submission
18	Permit preparation, VCP application and submittal
19	Ecology oversight charges - estimated

Table I4					
Alternative 4 - Source Removal of 5,200 CY and Groundwater Monitoring					
ITEM	QUANTITY	UNIT	UNIT COST	COST	NOTES
CAPITAL DIRECT COSTS					
Clean-up Action Plan and Pre-Con	1	LS	$35,000	$35,000	1
UST Removal	1	LS	$100,000	$52,000	2
Remedial Excavation and Site Restoration					
Contractor Mobilization/Demobilization	1	LS	$15,000	$15,000	3
Temporary Fencing	1	LS	$5,000	$5,000	4
Street Sweeping and Sediment Control	1	LS	$4,500	$4,500	5
Remove Asphalt Paving	14,000	SF	$2	$28,000	6
Hauling/Disposal of Pavement Demolition	315	ton	$50	$15,750	7
Demo and Remove Convenience Store	1	LS	$80,000	$80,000	
Excavation/Loading Contaminated Soils	5,200	CY	$15	$78,000	8
Dewatering	1	LS	$50,000	$50,000	9
Hauling/Disposal of Contaminated Soils	7,800	ton	$75	$585,000	10
Import/Place/Grade/Compact Backfill	7,800	ton	$27	$210,600	11
Confirmation Sampling	90	EA	$120	$10,800	12
Site Restoration - Asphalt Paving	14,000	SF	$4	$56,000	13
Annual Groundwater Monitoring	5	year	$7,500	$37,500	
TOTAL CAPITAL DIRECT COSTS				**$1,263,150**	
CAPITAL INDIRECT COSTS					
Remedial Design	4	%		**$50,526**	14
Construction Management	3	%		**$37,895**	15
Remedial Action Report	1	LS	$12,000	**$12,000**	16
Permitting and Regulatory Compliance	3	%		**$37,895**	17
Ecology Oversight	2	%		**$25,263**	18
Combined Sales Tax for Grays Harbor Co	8.8	%		**$111,157**	19
TOTAL CAPITAL INDIRECT COSTS				**$274,735**	
Total Estimated Costs				**$1,537,885**	

1 Prepare Cleanup Action Plan and Pre-construction Planning (RFP and contractor selection)

2 Remove/dispose 3, 20,000 gallon gasoline USTs, remove/dispose overburded soils and concrete, backfill with clean. No contaminated soils excavation/removal

3 Includes notification of public utilities and private utilities; temporary facilities, work plans/submittals

4 Temporary fencing to surround the entire property

5 Street sweeping, erosion control measures

6 Asphalt paving removal only - concrete covering USTs included in the UST removal costs

7 Assumes 4" thickness and 150lbs/cubic foot and disposal and subtitle D landfill (non-haz)

8 Assumes $2000/day for excavator and operator and 200 CY per day due to dewatering

9 Assumes 3 weeks operation. Pumping into 2 Baker tanks with oil/water separator then discharge to City of Westport POTW

10 Assume 1.5 ton/CY hauling and disposal costs to Hillsboro Landfill (Oregon) - per 12/11/2018 e-mail exchange with Jim Boone (Wastex)

11 Assume imported structural fill from clean burrow - could provide the estimated area

12 60 floor samples, 30 sidewall samples; Analysis based on antcipated CAP requirements (NWTPHGx and NWTPHDx)

13 Restore excavated area with asphalt pavement. Re-striping where required.

14 Prepare remedaition plan, sampling and analysis plan, soil stability anaysis (geotech)

15 Oversight and soil sampling during remedial excavation

16 Close-out remedial action report

17 Pre-construction permitting. Regulatory interaction following remedial action. VCP preparation and submission

18 Ecology oversight charges - estimated

18 Sales Tax