LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT
PROPOSED JADWIN
1866 JADWIN AVENUE
RICHLAND, WASHINGTON 99354

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2024-001866

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PREPARED FOR:
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1.0 EXECUTIVE SUMMARY

Dominion Due Diligence Group (D3G) conducted a Limited Phase II Environmental Site Assessment (ESA) of Proposed Jadwin located at 1866 Jadwin Avenue in Richland, Washington (subject property), in accordance with D3G's proposal to Eastern Mortgage Capital (Client) for the work, accepted by the Client on September 26, 2024. This report has been prepared for and can be relied upon by the Client and the United States Department of Housing and Urban Development (HUD). As such, Eastern Mortgage Capital, and HUD are authorized "Users" of this Phase II ESA. This report is not to be relied upon or reproduced, either in whole or in part, without written consent from D3G.

The subject property consists of approximately 3.95 acres of undeveloped cleared and partially wooded land and a 2,640-square foot storage building constructed circa 1976. The subject property is bounded by McMurray Street, Luther Place, O'Reilly Auto Parts, a commercial structure, and single-family residential to the north; Three Rivers Retirement Apartments and Richland Rehabilitation Center to the east; Columbia Park Apartments to the south; and Jadwin Avenue, Jadwin Stevens Apartments, El Dorado Apartments, and Chief Joseph Middle School to the west. Utilities were observed in the vicinity of the subject property. The Sponsor is submitting this project under the HUD MAP 221(d)(4) Program, consisting of new construction of a five (5) building, 114-unit multi-family apartment complex and one (1) accessory building. It should be noted that additional off-site areas associated with proposed water connections and sidewalks and roadway improvements are included in the associated HUD Environmental Review due to project aggregation.

The purpose of the Limited Phase II ESA was to evaluate the environmental integrity of the subject property based on the Draft D3G Phase I ESA findings, dated August 7, 2024, for Proposed Jadwin in Richland, Washington, which identified the following Recognized Environmental Conditions (RECs):

Recognized Environmental Conditions [RECs]	
Potential On-Site UST/VEC	During the site inspection, D3G observed suspect piping on the subject property storage building exterior. Additionally, a previous Phase I ESA report produced by Budinger & Associates, Inc. dated May 17, 2022, was provided to D3G for review. Budinger & Associates, Inc. concluded that a REC existed at the subject property regarding two vertical ½-inch diameter steel standpipes which were identified on the north side of the subject property building. It was undetermined if these pipes are associated with an existing or former heating oil tank. Further information is provided in Section 2.0.

Therefore, to determine if the potential on-site UST have negatively affected the environmental integrity of the subject property, and to assess whether there has been a release of hazardous substances at levels that would exceed the Statewide screening-level criteria (*de minimis* levels), D3G performed a Limited Phase II ESA on October 17, 2024, which included the advancement of two (2) soil borings with the collection of subsurface soil (SB-1 and SB-2) and groundwater (SB-1

GW and SB-2 GW) for laboratory analysis. In addition, two (2) soil gas borings were advanced for the collection of soil gas samples (SG-1 and SG-2). Subsurface soil samples were analyzed for Select Volatile Organic Compounds (VOCs) via EPA Method 8260, Polycyclic Aromatic Hydrocarbons (PAHs) via EPA Method 8270-SIM, Total Petroleum Hydrocarbons (TPHs) via EPA Method 8015, Polychlorinated Biphenyls (PCBs) via EPA Method 8082, and Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH) via PHWA/NWTPHGX/NWTPHDX-NO SGT. The groundwater samples were analyzed for Total Lead via EPA Method 6010, Select VOCs via EPA Method 8260/8011, PAHs via EPA Method 8270-SIM, TPHs via EPA Method 8015, PCBs via EPA Method 8082, and EPH/VPH via VPHWA/NWTPHGX/NWTPHDX-NO SGT. Soil gas samples were analyzed for Select VOCs via EPA Method TO-15.

Conclusions:

D3G reported to the Proposed Jadwin property in Richland, Washington (subject property) on October 17, 2024, to oversee Ground Penetrating Radar Systems, LLC (GPRS) perform a geophysical survey, utilizing Ground Penetrating Radar (GPR), Radiodetection (RD), and Ferromagnetic Survey within the immediate vicinity of the unidentified suspect pipes.

Based on the results of the Geophysical Investigation, GPRS did not identify subsurface anomalies indicative of intact ferrous/metallic intact Underground Storage Tanks (UST) within the immediate vicinity of the unidentified suspect pipes. The anomalies identified by GPRS outlined within the findings report were indicative of suspected utility conduit vaults as opposed to anomalies indicative of ferrous USTs. Therefore, the above grade identified ancillary piping system(s) observed as part of the initial Phase I ESA are suspected to be associated with utility conduit systems.

Based on the soil gas sampling analytical laboratory results obtained within the soil gas samples collected from SG-1 and SG-2 indicating an elevated level of Select VOC (Benzene) at concentrations of (89.8 ug/m^3 [SG-1]) and (47.0 ug/m^3 [SG-2]), and identified above the applicable Cleanup Levels and Risk Calculation (CLARC) Soil Gas Screening Levels, D3G concludes that a hazardous substance as defined by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that exceeded the Statewide, non-site specific criteria has been identified above a *de minimis* level within soil vapor and that a REC currently exists at the subject property.

Therefore, D3G input the elevated soil gas sampling analytical data above the CLARC Soil Gas Screening Levels (11 ug/m3) and the recommended default attenuation factor for exterior soil gas (0.03) for the United States Environmental Protection Agency (USEPA) Vapor Intrusion Screening Level (VISL) calculator to further evaluate calculated site-specific indoor air concentrations. After calculating estimated site-specific Target Indoor Air Concentrations from the soil gas analytical data, D3G compared these calculations against the CLARC Indoor Air Cleanup Level, to determine if the identified soil gas concentrations will be detrimental to the residential structure indoor air screening levels and thus pose a threat to the environment and to the health of existing or future tenants. Based on the results of the USEPA VISL calculator indicating calculated

estimated site-specific Indoor Air Concentrations of Select VOC (Benzene) above its applicable CLARC Indoor Air Cleanup Level, D3G concludes that the identified VOC within the soil gas samples collected from SG-1 and SG-2 currently represents a Vapor Encroachment Condition (VEC) and a potential Vapor Intrusion Condition (VIC) to existing/future tenants in the residential structures within the soil gas to indoor air pathway suspected to be attributed to an off-site source investigated as part of this Limited Phase II ESA investigation.

However, based on the absence of identified concentrations of Compound of Concern (COC)/Select VOC constituent (Benzene) within source media (soil and groundwater) within the area(s) of concern investigated, D3G suspects the identified potential vapor source regarding COC/Select VOC (Benzene) is migrating onto the subject property through preferential pathways (i.e. utility lines/corridors, etc.) and is most likely attributed to an off-site source.

Recommendations:

Based on the soil gas sampling analytical laboratory results obtained within the soil gas samples collected from SG-1 and SG-2 indicating an elevated level of Select VOC (Benzene) at concentrations of (89.8 ug/m^3 [SG-1]) and (47.0 ug/m^3 [SG-2]), and identified above the applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA investigation, the subject property has been adversely affected by an off-site source within the areas investigated during this Limited Phase II ESA. D3G concludes that the identified Select VOC (Benzene) within the soil gas samples collected from SG-1 and SG-2 potentially represents a VIC within the soil gas to indoor air pathway, representing a potential unacceptable risk (currently) under HUD's toxics policy at §50.3(i) in regard to unrestricted residential use criteria suspected to be attributed to an off-site source investigated as part of this Limited Phase II ESA investigation.

According to the following requirements set forth within the HUD MAP Guide:

- Anytime a site has been identified from a Phase I or Phase II ESA as having contamination (or contamination exposure pathways), be it vapor (gas), liquid, solid, dissolved, or non-aqueous phase liquid (NAPL), above *de minimis* levels, a complete site characterization sometimes known as special site assessment report, a detailed Phase II ESA, or a Phase III ESA) must be prepared as the initial step of any remediation plan.

- It must determine the total nature and distribution of such contamination, exposure pathways, and potential receptors (a.k.a., a conceptual site model). However, if the remediation plan preparer determines that the Phase II ESA preparer has already determined the total horizontal and vertical extent of such contamination, exposure pathways and potential receptors, then such determination shall be so indicated, and the Phase II ESA shall be made a part of the remediation plan.

In accordance with the U.S. Department of Housing and Urban Development (HUD) 2020 Multifamily Accelerated Processing (MAP) Guide – Chapter 9 – Environmental Review, the Local, State, Tribal and/or Federal (LSTF) authority (in this case the Washington State Department of Ecology (WSDE)) must issue a No Further Action (NFA) status, or similar approval (in regard to soil vapor exceedances in accordance with the Washington State Legislature WAC-Title 173, except that a conditional NFA may be allowed pursuant to Monitored Natural Attenuation (MNA) and/or Enhanced Passive Remediation (EPR) outlined within Section (9.4.5.D.c) of the MAP Guide, as amended. Additionally, When MNA/EPR is part of the RBCA, the remediation may continue beyond initial endorsement provided that the LSTF authority (in this case, the WSDE) has determined in writing that such undertakings would present no threat to health, safety or the environment.

If the LSTF authority (WSDE) determines that remediation to unrestricted criteria levels is infeasible and/or unwarranted based on the incomplete exposure pathways for Select VOC (Benzene) identified within soil gas beneath the subject property (considering the HUD Radon Mitigation requirements for passive/active systems further discussed herein), HUD may accept a Risk Based Corrective Action (RBCA) [including MNA/EPR] approved by the LSTF authority that allows for incomplete removal to LSTF restricted residential criteria levels. Justification for incomplete removal of contamination must be submitted along with the remediation plan and must include documentation that shows that the cost of the incomplete removal of contamination, including any life cycle costs for Operation and Maintenance and any applicable enforcement requirements of the WSDE authority, are sufficiently below the costs of complete contamination removal pursuant to Section 9.4.5 of the MAP Guide. If the extent and cost of removing the contamination can be definitively determined, and the cost of removing that contamination can be specified pursuant to a contract for remediation, HUD may allow a remediation plan that has been approved by the LSTF authority as long as: 1) It permits the remediation including site testing, any clearance and closure documents, and the approval by WSDE, prior to Initial Endorsement (as long as HEROS is complete), if the Lender can show why it would be impractical to complete remediation prior to Initial Endorsement, it permits the remediation including site testing, any clearance and closure documents, and the approval by the WSDE, prior to Final Endorsement and initial occupancy.

Therefore, D3G recommends the following:

- Submittal of the findings of the D3G Phase I and Phase II ESA to WSDE in accordance with the WAC 173-340-300(2)(b) guidance indicating:
    - An owner or operator should use the best professional judgment in deciding whether a release or threatened release of a hazardous substance to the environment may pose a threat to human health or the environment. The following, which is not an exhaustive list, are examples of situations that an owner or operator should generally report under this section:

- Contamination in a water supply well;
- Contaminated seeps, sediment or surface water;
- Vapors in a building, utility vault or other structure that appear to be entering the structure from nearby contaminated soil or groundwater (in this case, from a suspected off-site source).

Any person who conducts an independent investigation of a release required to be reported under WAC 173-340-300 must submit a written report to the department within 90 days of the completion of the investigation.

- An investigation is any remedial action conducted as part of a remedial investigation of the site under WAC 173-340-350; and

- An investigation is complete if no remedial action other than compliance monitoring has occurred at the site for 90 days. This means that an investigation may need to be reported separately from an interim action or cleanup action and that an individual investigation may need to be reported separately from other investigations of the site.

The WSDE will need to issue a "No Further Action" (NFA) letter for the release pursuant to Section 9.4.5.D.3 of the MAP Guide. The WSDE has established the Guidance for Evaluating Vapor Intrusion in Washington State Investigation and Remedial Action to assist environmental professionals and stakeholders with establishing a clear path forward for sites with the potential for Petroleum Vapor Intrusion (PVI) risk in Washington. As recommended by EPA in the Office of Solid Waste and Emergency Response (OSWER) Vapor Intrusion Guidance, Washington also adopts the preference for a long-term response to the potential intrusion of vapors into buildings by eliminating or substantially reducing the level of source contamination in the subsurface vapor forming chemicals to acceptable risk-levels, thereby achieving a permanent remedy. However, in certain instances, such reductions may not be possible prior to site development. Therefore, on sites with new construction where residual contaminants exceed CLARC Screening Levels for vapor inhalation risk, some form of PVI mitigation system will typically be required.

As per the OSWER Vapor Intrusion Guidance, passive PVI barriers (sometimes referred to simply as "vapor barriers") as stand-alone technologies may not adequately reduce vapor intrusion owing to difficulties in their installation, potential perforations of the barrier before or after installation, and material degradation. Therefore, within the jurisdiction of Washington, an active depressurization technology (ADT) in conjunction with a Vapor Intrusion (VI) barrier is the preferred technology for mitigating risk from residual contaminants that cannot be adequately remediated prior to construction. Washington currently recommends active sub-slab depressurization systems (SSDS) as a presumptive ADT remedy in cases where significant VI risk is deemed to exist. The design of each system will vary based on site specifics; however, all VI barriers utilized as part of the SSDS

should be a minimum of 30 mil in thickness (60 mil is preferred) and proven to be compatible with all known contaminants of concern as documented by manufacturer specifications.

Therefore, based on the guidelines set forth by HUD and outlined under the Guidance for Evaluating Vapor Intrusion in Washington State Investigation and Remedial Action, D3G recommends the following:

- The Sponsor is submitting this project under the HUD MAP 221(d)(4) Program, consisting of new construction of a five (5) building, 114-unit multi-family apartment complex and one (1) accessory building. At a minimum, mitigating potential radon contamination is required (HUD for all new construction) by constructing the proposed structure(s) to meet all of the requirements of ANSI-AARST CC-1000-2018 or ANSI/AARST CCAH-2020, as amended standards for the installation of passive/active systems. Post construction testing (radon) is required to be conducted in full accordance with the AARST testing standard. It should be noted that the onus for implementing the radon resistant construction requirements still falls on the architect at this time. Most architects do not have the experience with the design of vapor mitigation systems or have the appropriately liability coverage to cover this requirement. Therefore, it is recommended that the developer seek the guidance of a mitigation specialist (specifically for the COC/Select VOC (Benzene) identified within subsurface soil vapor) who is experienced with the mitigation design requirements for new construction to ensure it is done properly in accordance with WSDE/HUD requirements, both in the design and construction phases. There can be significant savings in the design and effectiveness of the design by having it designed and installed correctly, including pressure field extension testing. In addition, the contractor who is installing the Sub-Slab Depressurization System (SSD/ADT) soil gas control system is required by HUD to be certified (and state licensed, if applicable) as a mitigation contractor;

- D3G recommends a SSD/ADT/engineering barrier design to be implemented for mitigating potential radon contamination (currently for zone 2)/exposure for the upcoming construction for the subject property structure to be evaluated by the SSD/ADT/barrier designer to also include mitigation design for the potential entry of subsurface vapors into proposed first floor structures planned for construction, where elevated concentrations of Select VOC (Benzene) was identified within subsurface soil vapor collected during this Limited Phase II Investigation. The final design of the SSD/ADT/barrier system should include the elevated concentrations of VOC (Benzene) identified beneath the subject property. In addition, all penetrations and entryways through the slabs must be sealed against vapor intrusion for potential exposure to Radon and identified select VOC concentrations encountered during this Limited Phase II ESA;

- Since soil gas concentrations naturally attenuate to some degree in the migration from the subsurface into an overlying structure, detection of COCs from sub-slab soil gas sample supports, but does not necessarily confirm, that the chemical observed in indoor air is attributable to the subsurface source. Barometric pressure fluctuations can cause reversible vapor flow and can contribute vapors from interior sources to sub-slab samples. Thus, other lines of evidence may be important to evaluate to establish the presence of concentration gradients inside and outside the structures located on the subject property. Therefore, D3G recommends post construction indoor air testing (TO-15) for Select VOC (Benzene) following the installation of engineering controls (SSD/ADT) to ensure that the vapor intrusion pathway is effectively addressed for Radon and COCs identified within the subsurface soils (soil gas/vapor) during this Limited Phase II ESA subsurface investigation. It should be noted, sub-slab soil gas/vapor concentrations and distributions may change and/or migrate through other potential preferential migratory pathways during construction/renovation efforts along with the installation of operational fans and ventilation systems; therefore, D3G recommends the following post-mitigation conditions to be considered:

    - Collected while the system is operational but before potentially interfering factors are brought into the newly constructed building;
    - Analyzed for the target COC/Select VOC (Benzene);
    - Collected while the SSD/ADT is operational but after potentially interfering factors have had an opportunity to off-gas; and
    - Prior to Initial Occupancy.

  If post-mitigation sampling results do not indicate a significant decrease in the concentrations of volatile chemicals identified within exterior soil vapor modeled to be potentially present in the indoor air due to soil vapor intrusion, the reason (e.g., indoor or outdoor sources, improper operation of the mitigation system, etc.) should be identified and corrected as appropriate.

- D3G recommends a site-specific applicable operations, maintenance and monitoring (OM&M) plan for the SSD/ADT engineering control mitigation system (within applicable first floor areas as part of the forthcoming construction) to be implemented that will provide guidelines for routine inspections of controls and monitors providing a minimum obligation with a long-term risk management plan as a required component. The O&M plan (generated by the designer) shall stipulate recommendations and any requirements for the inspections of controls and/or monitors, as deemed appropriate. D3G further recommends the OM&M plan stipulate inspection frequency to be conducted of all fan monitors, controls, filters (for ASD/ADT systems) and/or vent openings. In addition, the OM&M plan shall also incorporate inspections of mechanical equipment in addition to controls and monitors subsequent to a motor replacement and/or any catastrophic event (power outage) that could damage SSD/ASD/ADT system components.

2.0 INTRODUCTION

On behalf of Eastern Mortgage Capital (Client), Dominion Due Diligence Group (D3G) conducted a Limited Phase II Environmental Site Assessment (ESA) of the Proposed Jadwin property located at 1866 Jadwin Avenue in Richland, Washington (subject property) on October 17, 2024. The purpose of the Limited Phase II ESA was to supplement the D3G Phase I ESA and to assess whether there has been a release of hazardous substances and/or petroleum products associated with the potential on-site UST at levels that would exceed the Statewide non-site-specific criteria (*de minimis* levels).

The purpose of the Phase I ESA was to provide an appropriate inquiry into the previous ownership and uses of the subject property and identify RECs, which are the likely presence of any hazardous substances or petroleum products at the subject property under conditions that indicate an existing release, a past release, or a material threat of a release into structures (vapors), the ground (soils), groundwater, or surface water at the subject property. Based on the findings of the Draft Phase I ESA, dated August 7, 2024, the following RECs were identified in connection with the subject property:

- Potential On-Site UST/VEC
  During the site inspection, D3G observed above grade suspect piping systems on the subject property storage building exterior. Additionally, a previous Phase I ESA report produced by Budinger & Associates, Inc. dated May 17, 2022, was provided to D3G for review. Budinger & Associates, Inc. concluded that a REC existed at the subject property regarding two vertical ½-inch diameter steel standpipes which were identified on the north side of the subject property building. It was undetermined if these pipes are associated with an existing or former heating oil tank. Based on the unknown nature of the suspect pipes and the possibility the pipes may be associated with an unregulated UST, the observed pipes are considered a REC, and a VEC exists on subject property. Further investigation (Tier II Invasive Screen) is warranted to further evaluate the identified VEC attributed/associated with the suspect pipes.

3.0 SITE BACKGROUND

3.1 Site Description and Features

The subject property consists of approximately 3.95 acres of undeveloped cleared and partially wooded land and a 2,640-square foot storage building constructed circa 1976. The subject property is bounded by McMurray Street, Luther Place, O'Reilly Auto Parts, a commercial structure, and single-family residential to the north; Three Rivers Retirement Apartments and Richland Rehabilitation Center to the east; Columbia Park Apartments to the south; and Jadwin Avenue, Jadwin Stevens Apartments, El Dorado Apartments, and Chief Joseph Middle School to the west. Utilities were observed in the vicinity of the subject property. The Sponsor is submitting this project under the HUD MAP 221(d)(4) Program, consisting of new construction of a five (5) building, 114-

unit multi-family apartment complex and one (1) accessory building. It should be noted that additional off-site areas associated with proposed water connections and sidewalks and roadway improvements are included in the associated HUD Environmental Review due to project aggregation.

3.2 Physical Setting

3.2.1 Topography and Regional Surface Water

Located in Attachment 1 is a topographic map depicting subject property elevations and drainage patterns. Depth to groundwater fluctuates depending on hydrological and weather conditions. Groundwater was encountered at approximate depths ranging from six (6) to seven (7) feet below ground surface within SB-1 and SB-2 during this Limited Phase II ESA.

Topography and Regional Surface Water	
ELEVATION (feet above mean sea level)	360
SLOPE	Southeast
APPROXIMATE GROUNDWATER FLOW	Southeast
REGIONAL SURFACE WATER	An unnamed creek is located 0.03 miles to the east of the subject property.
SOURCE - USGS Topographic Quadrangle – *Richland, Washington 2020*	

3.2.2 Soil Characteristics

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, accessed at http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx, the subject property consists of two (2) soil types: Finley fine sandy loam and Pasco fine sandy loam. These two (2) soil types do not meet hydric criteria.

The following is a generalized description, provided to highlight the major subsurface strata encountered in the borings on-site. Soil Boring Logs should be reviewed for specific information at individual boring locations and are included in Attachment 4. The soil stratification shown on the Soil Boring Logs represents conditions only at the actual boring locations. Variations may occur and should be expected between boring locations. The stratification represents the approximate boundary between subsurface materials and the transition may be gradual.

In general, the borings encountered two (2) types of soil. No pattern was observed in the occurrence of soil type; therefore, the following data should not be used for spatial extrapolation of soil type. Following an initial one (1) foot of grassy landscape, the following stratums were observed:

Depth Ranges (ft bgs)	USCS	USCS
1 – 6’	MLS	Sandy SILT; fine grain; brown; loose; moist.
6 – 15’	SP	SAND; coarse grain; gravelly; gray; loose; moist to wet.

Note: Depth ranges are an overall range of the stratums observed and do not reflect the depth intervals for each specific boring location.

The locations of the soil borings are described within Section 4.4 of this document. No pattern was observed in the occurrence of soil type; therefore, the lithologic information should not be used for spatial extrapolation of soil type. A copy of the soil boring logs is included in Attachment 4.

3.2.3 Site Geology

The subject property lies within the Younger glacial drift. The Younger glacial drift that underlies the subject property consists of advance and recessional outwash, stratified drift, and associated deposits. The Younger glacial drift is primarily silt, sand, and gravel with some clay. It also includes alluvium locally and scabland deposits of eastern Washington. The Younger glacial drift that underlies the subject property is suspected to be of Pleistocene geologic age.

3.3 Site History and Land Use

D3G reviewed aerial photographs from 1948, 1952, 1964, 1973, 1976, 1982, 1991, 1996, 2006, 2011, 2015, 2019, and 2024. According to the reviewed information, the subject property was originally depicted as undeveloped land and residential structures, prior to conversion to the existing land use as undeveloped land with one remaining storage structure. No environmental concerns were identified on the subject property based upon a review of the aerial photography.

Sanborn Maps generally cover areas of urban and industrial development from the 1800s to the 1990s. According to the Certified Sanborn Map Report prepared by EDR, the subject property and surrounding properties are not included in Sanborn Map coverage.

3.4 Adjacent Property Land Use

D3G reviewed aerial photographs from 1948, 1952, 1964, 1973, 1976, 1982, 1991, 1996, 2006, 2011, 2015, 2019, and 2023. According to the reviewed information, the adjacent properties have consisted of agricultural land, undeveloped and/or wooded land, residential properties, athletic fields and/or commercial properties. No environmental concerns were identified on the adjacent properties based upon a review of the aerial photography.

Sanborn Maps generally cover areas of urban and industrial development from the 1800s to the 1990s. According to the Certified Sanborn Map Report prepared by EDR, the subject property and

surrounding properties are not included in Sanborn Map coverage.

3.5 Summary of Previous Assessments

The findings of the D3G Phase I ESA for the Proposed Jadwin property are discussed previously in Section 2.0 of this report.

4.0 WORK PERFORMED AND RATIONALE

4.1 Objective(s)

D3G conducted a Limited Phase II ESA at the subject property in compliance with ASTM E 1903-19 – *"Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process"*. The objective of this Phase II ESA is to determine if the RECs or risks related to HUD's toxics policy identified in the Phase I ESA have resulted in the presence of hazardous substances, pollutants, contaminants, petroleum/petroleum products, controlled substances and/or constituents thereof including but not limited to those within the scope of the CERCLA indicating an unacceptable risk under HUD's toxics policy at §50.3(i) in regard to unrestricted residential use criteria.

4.2 Data Quality Objectives

The Data Quality Objectives (DQOs) for a Phase II ESA is, at a minimum, to achieve reproducible chemical testing results for target analytes in samples of environmental media collected from locations relevant to the objectives of the assessment likely to have the highest concentration of target analytes. To be consistent with scientific inquiry, D3G formulated site-specific DQOs such that another Phase II Assessor would be able to reproduce the assessment and obtain consistent results. DQOs are site-specific, Area of Concern (AOC)-specific, and/or release area-specific goals developed to ensure that a sufficient quality and quantity of data are collected to support the decisions made during site characterization and to develop and refine the Conceptual Site Model (CSM).

Based on the developed DQOs, the following summarizes the Chemicals of Potential Concern (COPCs) for each site media beneath the subject property. Additional inorganic compounds associated with background conditions will be considered in the risk analysis/exposure pathway(s) but are not considered COPCs:

Compounds of Potential Concern (COPC)
Subsurface Soils
COPCs: Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH
Groundwater
COPCs: Total Lead, Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH

Compounds of Potential Concern (COPC)
Soil Vapor
COPCs: Select VOCs
Outdoor (ambient) Air
COPCs: Select VOCs

Total Lead – EPA Method 6010 – water only
Select Volatile Organic Compounds (VOCs) – Benzene, Toluene, Ethylbenzene, Total Xylenes, MTBE, EDB, and EDC via EPA Method 8260/8011 and TO-15
Polycyclic Aromatic Hydrocarbons (PAHs) – including: 1-Methylnapthanlene, 2- Methylnaphthalene –- EPA 8270.
Total Petroleum Hydrocarbons (TPHs) – NWTPH-Gx & NWTPH-Dx
*Polychlorinated Biphenyls (PCBs) – EPA Method 8082 *SB-2 and SB-3 ONLY*
Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH)

Based on these suspected and/or perceived conditions, the preliminary CSM developed for the subject property as part of this Phase II ESA includes the following potential exposure pathways:

Preliminary CSM	
Potential Exposure Pathway(s)	Populations
Ingestion of Subsurface Soil Particulates	Residential
	Construction Workers
Inhalation of Fugitive Dust	Residential
	Construction Workers
Dermal Contact with Subsurface Soil	Residential
	Construction Workers
Dermal Contact with Groundwater	Residential
	Construction Workers
Inhalation of Subsurface Vapor	Residential
	Construction Workers

D3G suspects the Proposed Jadwin property will be serviced by a reticulated water supply, the exposure pathways between future on-site residents, construction/utility workers, and groundwater are not expected to be complete. The CSM validation is further discussed within Section 6.2 of this report.

4.3 Scope of Assessment

GROUND-PENETRATING RADAR (GPR) – FERROMAGNETIC/RADIODETECTION SURVEY

D3G oversaw GPRS conduct a Geophysical/Ferromagnetic Survey within the immediate vicinity of the unidentified suspect pipes on the northern portion of the subject property. The GPR Survey was utilized to determine the former/existing tank basin location/orientation. In addition, the GPR Survey was utilized to determine the appropriate placement of the soil borings in relation to the identified RECs. For health and safety purposes, the GPR survey was conducted in the vicinity of the soil boring locations for the primary purpose of identifying existing conduit/utilities.

The GPR profiles were conducted using a GSSI Utility Scan GPR system with 400 MHZ shielded antenna with an SIR 3000 Operating System, Radiodetection Pipe Locator, and TW-6 Magnetic Locator. GPR are impulse systems that transmit short duration EM pulses into the ground from an antenna near the surface. These EM pulses are reflected from interfaces with contrasting electrical properties back to the receiver section of the antenna connected to the control unit for processing and display. Contrasts in electrical properties of materials in the earth cause reflections of the radar signal. These reflections occur at different soil strata, soil/rock interfaces, rock/air interfaces (voids), fractures, manmade objects (rebar, conduit, metal casings), or any interface that can create a contrast in the dielectric properties. The technique operates on the principle of transmission, reflection, and detection of short-term duration electromagnetic pluses from a transducer (antenna with transmitting and receiving electronics) that is moved across the concrete/ground surface.

SUBSURFACE INVESTIGATION

Based on the location of the potential on-site UST, D3G advanced two (2) soil borings (SB-1 and SB-2) at the subject property to determine if site soils and groundwater (if encountered) have been adversely affected by the potential on-site UST.

Borings were advanced to an approximate depth of fifteen (15) feet below ground surface (bgs) to locate a water bearing zone with sufficient recharge for groundwater sample collection. Groundwater was encountered at approximate depths ranging from six(6) to seven (7) feet bgs within SB-1 and SB-2. Soil borings were advanced using a track-mounted Geoprobe® 7822DT direct-push technology. An *in-situ* groundwater sample (peristaltic pump) was collected from the SB-1 and SB-2 groundwater monitoring wells.

Soil was collected (US EPA grab and 5035 sampling methodologies) continuously with disposable clear acetate liners and the soil was screened in the field utilizing a photoionization detector (PID) to indicate the presence of total photoionizable vapors (TPVs)/VOCs.

VAPOR ENCROACHMENT CONDITON ASSESSMENT

To evaluate the VEC from the identified RECs at the subject property associated with the potential on-site UST, D3G conducted a Vapor Encroachment Screen (VES)/risk-based screening assessment (Tier II Invasive Screen) on the subject property including but not limited to soil gas sampling on the subject property. The vapor intrusion risk-based screening was utilized to support and evaluate human health risk using soil gas data, which would consider the magnitude of the concentration exceedance of the soil gas screening levels and site-specific risk management benchmarks.

The Toxics Cleanup Program of the Washington State Department of Ecology (WSDE) has published a vapor intrusion guidance manual entitled "Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action" dated March 2022. Therefore, a vapor intrusion assessment is recommended in accordance with the Environmental Protection Agency (EPA) Publication 9200.2-154 – OSWER Final Guidance for Assessing and Mitigating the

Vapor Intrusion Pathway from Subsurface Sources to Indoor Air, dated June, 2015; Standard Operating Procedure (SOP), Technical Bulletin No. 93-660 dated September 21, 1993; USEPA, Environmental Response Team and the WSDE Guidance for Evaluating Vapor Intrusion in Washington State Publication No. 09-09-047 dated March 2022.

The scope of the vapor intrusion condition assessment was comprised of:

- The collection of two (2) representative soil gas samples (SG-1 and SG-2) at the subject property using 1-Liter stainless steel Summa® canisters equipped with a five (5)-minute flow controller.
- The collection of one (1) representative outdoor (ambient) air sample (OA-1) at the subject property using 1-Liter stainless steel Summa® canisters equipped with a five (5)-minute flow controller.

SOIL GAS VAPOR POINTS

D3G advanced two (2) exterior soil gas borings at the subject property for the installation of deep subsurface soil gas samples (SG-1 and SG-2) in accordance with U.S. Environmental Protection Agency Operating Procedure – Soil Gas Sampling dated, May 14, 2014, ASTM D7663 – Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapor Intrusion Evaluations; and the WSDE Guidance for Evaluating Vapor Intrusion in Washington State Publication No. 09-09-047 dated March 2022.

Soil gas borings SG-1 and SG-2 were advanced and installed at a depth of five (5) feet below ground surface using track-mounted Geoprobe® 7822DT, direct-push technology. D3G collected one (1) soil gas sample representative of the subsurface vapor quality from each soil gas sampling point (SG-1 and SG-2) within the subsurface strata using a 1-Liter stainless steel Summa® canister via ¼" Teflon Tubing with soil gas drawn into the canister by pressure equilibration (approximate sampling time of five minutes).

Subsurface soils were collected (US EPA grab and 5035 sampling methodologies) continuously with disposable clear acetate liners and were screened in the field with a photoionization detector (PID) to indicate the presence of VOCs.

D3G oversaw the subcontractor install a sand pack to minimize disruption of airflow to the sampling tip. A PVC tremie-pipe was required for all soil gas wells to avoid bridging or segregation during placement of the sand pack and bentonite seal. The sand pack was approximately 1-foot thick. The probe tip was placed midway in the sand pack with 3-feet of dry granular bentonite on top of the sand pack. Following the dry bentonite, the subcontractor filled the borehole to the surface with hydrated bentonite. The bentonite was hydrated in a container at the surface and then slowly poured into the borehole. The purpose of the dry granular bentonite between the sand pack and the hydrated bentonite was to prevent hydrated bentonite from infiltrating the sand pack. A

down-hole rod was used to support the well tubing in the borehole. The support rod ensured that the probe tip was placed at the proper depth. The support rod was constructed to avoid possible cross contamination or ambient air intrusion. D3G installed the sampling point within the soil gas well constructed by the subcontractor.

The summa canister samples were submitted to a Washington accredited laboratory under appropriate chain-of-custody procedures and analyzed for Select VOCs via EPA Method TO-15.

OUTDOOR AIR VAPOR SAMPLING

Outdoor air concentration data is useful in correlating potential air contaminant contributions and/or baseline air concentrations from ambient air sources. Therefore, EPA generally recommends collecting ambient air sample(s) using similar sampling and analysis methods, whenever soil gas samples are collected. Normally, EPA recommends one or two outdoor air sample locations to characterize the conditions of the subject property. Additional outdoor air samples may be required if the investigation warrants additional environmental concerns. EPA also recommends that sample locations be designed to characterize representative conditions in the absence of site-related subsurface contamination (e.g., avoid collecting ambient air samples near locations of known or suspected chemical release(s), including any atmospheric releases from remediation equipment). Observable potential outdoor sources of pollutants (e.g., air emissions from nearby commercial or industrial facilities) were recorded.

D3G collected one (1) outdoor (ambient) air sample from upwind of the subject property and away from any potential VOC sources to account for potential background influences. The sample was submitted to a Washington accredited laboratory under appropriate chain-of-custody procedures and analyzed for Select VOCs via EPA Method TO-15.

PRELIMINARY SCREENING

Preliminary screening of the sampling area(s) (ambient air) was conducted through use of a PID. Screening equipment was checked and calibrated according to manufacturers' specifications. Additional factors documented during the preliminary screening included outdoor temperature, wind speed/direction, humidity, and barometric pressure.

SAMPLING PROCEDURES

Laboratory prepared sampling apparatus, sample collection, and documentation was performed as follows:

- Use of an evacuated Summa® passivated (or equivalent) stainless-steel canister to collect the sample. The canister was provided by the laboratory, along with a flow controller equipped with a gauge. The flow controller was pre-calibrated by the laboratory for the desired flow rate or duration of sample collection. The sampling flow rate was less than 0.2 liter per minute (lpm).

- The scheduled duration of sample collection took five (5) minutes for soil gas and outdoor (ambient) air with the canister and flow controller shipped to the laboratory from which the canister was rented under proper chain-of-custody protocol the same day.

The final canister vacuum was less than atmospheric pressure to ensure that a relatively constant flow rate was maintained for the entire sampling period. Prior to the commencement of sampling activities, a private utility mark-out was conducted at the subject property within the proposed boring locations.

Drilling and sampling operations were conducted in accordance with 29 CFR 1910.120. Prior to subsurface drilling activities, the drilling subcontractor notified the utility service alert (811 of Washington) in accordance with local practices. Equipment decontamination, sample collection, field documentation, sample custody and laboratory analyses were performed in general accordance with methods as prescribed within the applicable guidance documents presented in Section 10.0.

Subsurface soil, groundwater, soil gas, and outdoor (ambient) air samples collected during this Limited Phase II ESA investigation were analyzed by a Washington accredited laboratory for the following:

[1] Soil, Groundwater, and Soil Vapor Sampling Parameters												
Boring No.	Area(s) of Concern (AOC)	[2] Total Lead	[3] Select VOCs		[4] PAHs		[5] TPHs		[6] PCBs		[7] EPH/VPH		[3] Select VOCs
		Groundwater	Deep Soil	Groundwater	Deep Soil	Groundwater	Deep Soil	Groundwater	Deep Soil	Groundwater	Deep Soil	Groundwater	Soil Vapor
SB-1	Onsite Suspect Piping/Potential UST of Unknown Contents	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
SB-2		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
SG-1													✓
SG-2													✓
OA-1	Ambient Air												✓
Total		2	2	2	2	2	2	2	2	2	2	2	3

[1] *WSDE Guidance for Evaluating Vapor Intrusion in Washington State Publication No. 09-09-047 dated March 2022; and Site Assessment Guidance for Underground Storage Tank Systems – Appendix A: Required testing for petroleum releases, revised October 2022*

[2] [2] *Total Lead – EPA Method 6010 – water only*

(3) Select Volatile Organic Compounds (VOCs) – Benzene, Toluene, Ethylbenzene, Total Xylenes, MTBE, EDB, and EDC via EPA Method 8260/8011 and TO-15
(4) Polycyclic Aromatic Hydrocarbons (PAHs) – including: 1-Methylnapthanlene, 2- Methylnaphthalene –- EPA 8270.
(5) Total Petroleum Hydrocarbons (TPHs) – NWTPH-Gx & NWTPH-Dx
*(6) Polychlorinated Biphenyls (PCBs) – EPA Method 8082 *SB-2 and SB-3 ONLY*
(7) Extractable Petroleum Hydrocarbons (EPH) and Volatile Petroleum Hydrocarbons (VPH)

In addition, one (1) trip blank sample for EPA Method 8260 was submitted for laboratory analysis of Select VOCs for QA/QC purposes. Additionally, all manufacturer specifications were adhered to for operation and maintenance of field sampling monitoring equipment.

Changes to Scope of Work:
Changes to the scope of work were implemented based upon field observations and limitations that were observed and/or encountered during field activities and are discussed below:

- D3G originally proposed to install soil gas borings (SG-1 and SG-2) at a depth of ten (10) feet bgs. However, since groundwater was encountered between six (6) and seven (7) feet bgs at this sampling location, D3G decided to install the soil gas sampling points at five (5) feet bgs to avoid installing the samples into groundwater and not being able to obtain a representative sample.

- D3G originally proposed to conduct an invasive inspection of the on-site suspect piping on the northern portion of the subject property. D3G could not open the caps to the piping to conduct the inspection. In addition, the diameter of the piping (1/2 inch) was too small for the diameter of the camera and oil/water interface probe. D3G also did not want to get the oil/water interface probe stuck in the tight piping and wasn't sure if the piping came to a 90-degree angle at some point. In addition, the originally identified piping on the southern portion of the subject property was confirmed to be old fence posts.

4.4 Exploration, Sampling and Test Screening Methods

4.4.1 Soil Investigation

On October 17, 2024, D3G supervised the advancement of two (2) soil borings (SB-1 and SB-2) using hydraulically driven direct-push sampling equipment (track-mounted Geoprobe® 7822DT). The direct-push sampling equipment was used and operated in general accordance with EPA Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators (EPA Document #510-B-97-001), dated March 1997 and the EPA Office of Solid Waste and Emergency Response – Groundwater Sampling and Monitoring with Direct Push Technology (EPA Document #540-R-04-005), dated August 2005. The number and final placement of the boring locations were based on conditions observed in the field (i.e., underground utility locations, terrain, and drill rig access). Details pertaining to the final placement of each soil boring are listed in the following table:

Soil Boring ID	Location
SB-1	Advanced approximately 10 feet north of the 1866 Jadwin Avenue subject property to address the potential on-site UST.
SB-2	Advanced approximately 10 feet north of the 1866 Jadwin Avenue subject property to address the potential on-site UST

Soil borings were advanced by BB&A Environmental of Eugene, Oregon. Site photographs illustrating soil boring locations and advancement are included on Attachment 3.

Continuous soil samples were collected using 5-foot-long samplers fitted with new, clear acetate liners. Soil samples were screened in the field for organic vapors using a PID. PID readings and lithology descriptions for each subsurface soil sample were recorded within a field logbook. Upon retrieval, the soil was screened in the field, logged, and classified according to the Unified Soil Classification System (USCS). Soil boring logs were generated for each soil boring and are included in Attachment 4.

PID readings were collected from soil borings SB-1 and SB-2. PID readings were measured at 0.0 parts per million (ppm) within SB-1 and SB-2. No evidence of contamination (staining/odors) was observed during the advancement of soil borings SB-1 and SB-2 during this Limited Phase II ESA investigation.

Based on field observations indicating the absence of olfactory evidence of contamination and PID readings significantly below 50 ppm within soil boring samples, soil cuttings generated from each boring during borehole advancement were placed back within their appropriate borehole and capped to the surface with a layer of bentonite. Site photographs illustrating borehole abandonment are included in Attachment 3.

4.4.2 Groundwater Investigation

An *In situ* temporary groundwater sampling point was installed using one (1) ten (10) foot section of 1-inch, 0.010-inch slotted polyvinyl chloride (PVC) within soil borings SB-1 (SB-1 GW) and SB-2 (SB-2 GW). Since the groundwater sampling points were not constructed via methods associated with permanent groundwater monitoring well(s) (sand filter pack, etc.), development of the sampling points was not required, and sample collection occurred immediately following the completion of the temporary wells. Therefore, the collected groundwater samples from the temporary groundwater sampling points are representative of localized groundwater within the areas of SB-1 and SB-2.

Water level readings are normally obtained within the borings and are recorded on the Soil Boring Logs. In sandy soils, these readings indicate the approximate location of the hydrostatic water level at the time of our field exploration. In clayey soils, the rate of water seepage into the borehole

is low and is generally not possible to establish the location of the hydrostatic water level through short-term water level readings. Groundwater conditions will vary with environmental variations and seasonal conditions, such as the frequency and magnitude of rainfall patterns, as well as man-made influences, such as existing swales, drainage ponds, under drains and areas of covered soils (paved parking lots, sidewalks, etc.). For long-term monitoring of water levels, it is necessary to install piezometers.

The estimated water level reported on the Soil Boring Log was determined by a D3G Geologist immediately following the removal of the Geoprobe rods and compared to field observed soil samples collected from each soil boring and several minutes after the borings are completed, if possible. The time lag is intended to permit stabilization of the groundwater level that may have been disrupted by the drilling operation. Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the cave-in zone:

Prior to purging and sampling activities within SB-1 and SB-2, the temporary wells were gauged for Depth to Water (DTW).

Since impacted soil and/or groundwater was not observed during the boring advancement of soil borings SB-1 and SB-2, soil cuttings were placed back into its appropriate borehole and completely topped off with bentonite. Site photographs illustrating borehole abandonment are included in Attachment 3.

4.4.3 Vapor Encroachment Condition Assessment

Soil Gas Sampling:
On October 17, 2024, D3G supervised the installation of two (2) temporary soil gas sampling points (SG-1 and SG-2) at the subject property. The two (2) soil gas samples were collected at the locations presented in the following table. The soil gas vapor sample locations are depicted on the Site Plan included in Attachment 2.

Sample ID	Sample Location
SG-1	Advanced approximately 15 feet north of the 1866 Jadwin Avenue subject property to address the potential on-site UST.
SG-2	Advanced approximately 15 feet north of the 1866 Jadwin Avenue subject property to address the potential on-site UST.

The temporary soil gas points were installed utilizing Teflon™ tubing and a stainless-steel soil vapor implant at a depth of five (5) feet bgs for the collection of deep soil vapor. No evidence of contamination was observed during the advancement of soil gas points SG-1 and SG-2 during this Limited Phase II ESA investigation.

The stainless-steel soil vapor implant was installed and anchored at the bottom of each soil gas sampling point at a depth of five (5) feet bgs. Clean Teflon™ tubing was attached to the vapor implant to the surface. Approximately three (3) volumes, at minimum, of the Teflon™ tubing was purged from the sampling locations with a 60-cc syringe prior to attaching the tubing to a flow regulator (pre-set by the analytical laboratory for a five-minute sampling interval) and a certified pre-cleaned 1-Liter SUMMA® canister. Following sample collection, a PID was used to measure the total VOC concentrations within each soil gas sampling point and is described below.

Gas field screening was conducted following temporary gas point installation, using a calibrated photoionization detector (PID). PID measurements were recorded on the Soil Vapor Sampling Logs. Field screening readings were obtained by connecting the meter's tubing to the monitoring port being sampled and opening the monitoring port valve. Sampling was continued until sufficient stabilized concentrations were observed. PID readings taken from SG-1 and SG-2 were measured at 0.0 ppm after stabilization. No olfactory evidence of contamination was observed during the soil gas sampling point installation of SG-1 and SG-2.

In addition, prior to sample collection, D3G performed a leak test [shut-in test] to evaluate whether a good seal was established in the sampling train and the sampling port. A shut-in test involves assembling the sampling train and, leaving the canister valve in the closed position, applying a vacuum to the sampling line with a hand pump. A vacuum gauge, attached to the pump or connected to the line with a "T" fitting, is observed for at least one minute. If a loss of vacuum is observed, the fittings are adjusted until the vacuum does not noticeably dissipate. After approximately one (1) minute of the applied vacuum, a loss in pressure was not observed within soil gas points SG-1 and SG-2.

Outdoor (Ambient) Air:
Outdoor (ambient) air sampling was completed on October 17, 2024, and was collected concurrently with the soil gas samples. The location of the outdoor (ambient) air sample is presented in the following table. The outdoor (ambient) air sample location is depicted on the Site Plan included in Attachment 2.

Sample ID	Sample Location
OA-1	OA-1 was placed approximately 10 feet east of the 1866 Jadwin Avenue subject property.

The representative outdoor air sample was placed in an area that would minimize bias towards obvious sources of volatile chemicals and provide accurate results of background concentrations of chemicals of concern (COCs).

The sample was collected for a five (5) minute period with a five-minute flow regulator (pre-set by the analytical laboratory) using a certified pre-cleaned 1-Liter SUMMA canister. Temperature readings were recorded at the beginning and the completion of the five-minute sampling period. The provided canister label was completed to record the sample ID and location. PID readings taken from OA-1 were measured at 0.0 ppm after stabilization. Prior to the commencement of sampling, all canister and flow meter connections were verified for tightness. Site photographs illustrating sampling equipment setup are included in Attachment 3.

4.5 Chemical Analytical Methods

Subsurface soil, groundwater, soil gas, and outdoor (ambient) air samples were collected and analyzed in general accordance with requirements set forth within the WSDE Guidance for Evaluating Vapor Intrusion in Washington State Publication No. 09-09-047 dated March, 2022.

Subsurface Soil:
One (1) unsaturated (subsurface) soil sample was collected from just above the capillary fringe within soil borings SB-1 (5-7') and SB-2 (4-6'), and analyzed for Select VOCs via EPA Method 8260, PAHs via EPA Method 8270E-SIM, TPHs via Method EPH, PCBs via EPA Method 8082, and EPH/VPH via Method VPHWA/NWTPHGX/NWTPHDX-NO SGT.

Subsurface soil samples were collected just above the capillary fringe since contamination is typically found in soil moisture above the capillary fringe. Resistance to downward movement of contamination will be increased and some constituents will spread laterally and accumulate above the saturated media.

Soil samples were collected with nitrile gloves and placed in clean laboratory provided glassware. The soil samples were sealed, labeled, and placed in coolers with ice and delivered to Pace National – Mt. Juliet, Tennessee location, under proper chain-of-custody protocol. A copy of the soil laboratory analytical report is included in Attachment 7.

Groundwater:
One (1) groundwater sample was collected within temporary groundwater sampling points SB-1 GW and SB-2 GW at depths ranging from approximately six (6) and seven (7) feet bgs and analyzed for Total Lead via EPA Method 6010, Select VOCs via EPA Method 8260/8011, PAHs via EPA Method 8270E-SIM, TPHs via EPA Method EPH, PCBs via EPA Method 8082, and EPH/VPH via Method VPHWA/NWTPHGX/NWTPHDX-NO SGT.

The groundwater samples were collected with nitrile gloves and placed in clean laboratory provided glassware. The groundwater samples were sealed, labeled, and placed in coolers with ice and delivered to Pace National – Mt. Juliet, Tennessee location, under proper chain-of-custody protocol. A copy of the soil laboratory analytical report is included in Attachment 7.

Soil Gas and Outdoor (Ambient) Air:
One (1) soil gas sample was collected from temporary soil gas sampling points SG-1 and SG-2 as well as one outdoor (ambient) air sample (OA-1) and analyzed for Select VOCs via EPA Method TO-15.

Soil gas samples, representative of the air quality within the vadose zone located beneath the subject property, were collected into the 1-Liter stainless steel Summa® canisters via ¼" Teflon™ tubing with the soil gas drawn into the canister by pressure equilibration via a flow regulator calibrated for a sampling time of approximately five (5) minutes. Sample collection did not exceed 0.2 liters per minute. Soil gas samples were sealed, labeled, and placed in padded cardboard boxes and delivered to Pace National – Mt. Juliet, Tennessee location, under proper chain-of-custody protocol. A copy of the soil gas and outdoor (ambient) air sample laboratory analytical report is included in Attachment 7.

4.6 Evaluation Criteria

Subsurface Soil:
Surficial and subsurface soil samples analyzed for Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH were compared to the following:

- WSDE, CLARC, Master Table, Soil, updated July 2024; and
- Washington Administrative Code (WAC) 173-340-900 Tables, Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses, updated on February 20, 2023.

Groundwater:
Groundwater samples analyzed for Total Lead, Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH were compared to the following:

- WSDE, CLARC, Master Table, Groundwater, updated July 2024;
- WAC 173-340-900 Tables, Table 740-1 Method A Cleanup Levels for Groundwater, updated on February 20, 2023; and
- WAC 173-200-040 Criteria, Table 1 Groundwater Quality Criteria, updated on February 20, 2023.

Soil Gas and Outdoor (Ambient) Air:
Soil gas and outdoor (ambient) air samples analyzed for Select VOCs were compared to the following:

- WSDE, CLARC, Vapor Intrusion Method B Table, Indoor Air Cleanup Level, updated July 2024;
- WSDE, CLARC, Vapor Intrusion Method B Table, Soil Gas Screening Level, updated July 2024;
- USEPA VISLs for Target Sub-Slab and Near Source Soil Gas Concentrations (TR=1E-06, THQ=0.1), dated May 2024;
- USEPA VISLs – Target Indoor Air Concentration (TR=1E-06, THQ=0.1), dated May 2024; and
- USEPA RSLs set forth in the EPA RSL for Resident Ambient Air Table (TR=1E-06, THQ=0.1), dated May 2024.

Copies of the applicable WAC Method A Cleanup Levels, WSDE CLARC Screening Levels, USEPA VISLs, and USEPA RSLs specific to this Limited Phase II ESA investigation are included in Attachment 6.

5.0 PRESENTATION AND EVALUATION OF RESULTS

5.1 Geophysical & Electromagnetic Survey Investigation

D3G reported to the Proposed Jadwin property in Richland, Washington (subject property) on October 17, 2024, to oversee GPRS perform a geophysical and ferromagnetic survey within the immediate vicinity of the unidentified suspect pipes.

Based on the results of the Geophysical Investigation, GPRS did not identify subsurface anomalies indicative of intact ferrous/metallic intact Underground Storage Tanks (UST) within the immediate vicinity of the unidentified suspect pipes. The anomalies identified by GPRS outlined within the findings report were indicative of suspected utility conduit vaults as opposed to anomalies indicative of ferrous USTs. Therefore, the above grade identified ancillary piping system(s) observed as part of the initial Phase I ESA are suspected to be associated with utility conduit systems.

The location of the Geophysical Survey Investigation is depicted in the Boring and Sampling Location Plan included in Attachment 2 and a copy of the findings provided by GPRS are included in Attachment 10 of this document.

5.2 On-Site Suspect Piping Inspection

D3G originally proposed to conduct an invasive inspection of the on-site suspect piping on the northern portion of the subject property. D3G could not open the caps to the piping to conduct the inspection. In addition, the internal radius of the piping (1/2 inch) was too small for the diameter

of the camera and oil/water interface probe. In addition, the existing piping (suspected utility conduit) was not accessible to other invasive inspection equipment. Further, additional piping observed as part of the Phase I ESA inspection was subsequently identified as fencing support systems.

5.3 Subsurface Conditions

The table below summarizes the total boring depths, depths to groundwater, and depths at which soil samples were obtained for laboratory analysis. A Site Plan depicting soil boring locations is in Attachment 2.

Boring Depth Summary				
Boring ID	Total Depth (ft. bgs)	Approximate Distance from Closest Building (in ft.)	Depth to Groundwater (ft. bgs)	Soil Sampling Depths (ft. bgs)
SB-1	15’	10’	7’	(5-7’)
SB-2	15’	10’	6’	(4-6’)

Notes: Distances were measured from the residential building on site.

The table below summarizes the total boring depths, distance from building, screened intervals, and PID measurements for each soil vapor sample that was obtained for laboratory analysis. A Site Plan depicting soil gas boring locations is in Attachment 2.

Soil Gas Implant Summary				
Boring ID	Total Depth (ft bgs)	Approximate Distance from Closest Building (in ft.)	Screened Interval (ft bgs)	PID Measurements in parts per million (ppm)
SG-1	5’	15’	4’ to 5’	0.0
SG-2	5’	15’	4’ to 5’	0.0

5.4 Subsurface Soil Sampling Analytical Results

Field Observations:
No visual or olfactory evidence of soil contamination (free product, staining and/or odor) was observed during the advancement of soil borings SB-1 and SB-2. PID readings taken during the soil screening process were measured at 0.0 ppm during this Limited Phase II ESA investigation.

Select VOCs:
No concentrations of Select VOCs analyzed within subsurface soil samples collected from SB-1 and SB-2 were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Soil Screening Levels during this Limited Phase II ESA investigation.

PAHs:
No concentrations of PAHs analyzed within subsurface soil samples collected from SB-1 and SB-2 were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Soil Screening Levels during this Limited Phase II ESA investigation.

TPHs:
No concentrations of TPHs analyzed within subsurface soil samples collected from SB-1 and SB-2 were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Soil Screening Levels during this Limited Phase II ESA investigation.

PCBs:
No concentrations of PCBs analyzed within subsurface soil samples collected from SB-1 and SB-2 were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Soil Screening Levels during this Limited Phase II ESA investigation.

EPH/VPH:
No concentrations of EPH/VPH analyzed within subsurface soil samples collected from SB-1 and SB-2 were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Soil Screening Levels during this Limited Phase II ESA investigation.

The laboratory analytical report with subsurface soil sampling results is included in Attachment 7. The subsurface soil sampling analytical results table is presented below:

Subsurface Soil Sampling Analytical Results Table - Reported in milligrams per kilograms (mg/kg)								
Method	Analyte	Units	CLARC Soil Method A Unrestricted Land Use	Method A Soil Cleanup for Unrestricted Land Uses	SB-1 (5-7')		SB-2 (4-6')	
					Result	Qualifier	Result	Qualifier
EPH								
EPH	C21-C34 ALIPHATICS	mg/kg	NYE	2,000	3.55	J J4	<5.91	J4
EPH	C21-C34 AROMATICS	mg/kg	NYE	2,000	3.32	J	<5.91	
TPH								
NWTTPHD X-NO SGT	DIESEL RANGE ORGANICS	mg/kg	NYE	2,000	8.70		<4.73	
NWTTPHD X-NO SGT	RESIDUAL RANGE ORGANICS	mg/kg	NYE	2,000	33.6		<11.8	

Washington State Department of Ecology, Cleanup Levels and Risk Calculation (CLARC) – Master Table, Soil, updated July 2024
WAC 173-340-900 Tables, Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses, updated on February 20, 2023.
Bolded concentrations indicate de minimis concentrations
NYE = Not yet established
Qualifiers:
J: The identification of the analyte is acceptable; the reported value is an estimate.
J4: The associated batch QC was outside the established quality control range for accuracy.

5.5 Groundwater Sampling Analytical Results

Field Observations:
No evidence of contamination (free product, sheen and/or petroleum hydrocarbon odor) was observed within the groundwater samples collected from temporary groundwater sampling points SB-1 GW and SB-2 GW during this Limited Phase II investigation.

Total Lead:
No concentrations of Lead analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

Select VOCs:
No concentrations of Select VOCs analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

PAHs:
No concentrations of PAHs analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

TPHs:
No concentrations of TPHs analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits or above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

PCBs:
No concentrations of PCBs analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits, above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

EPH/VPH:
No concentrations of EPH/VPH analyzed within groundwater samples collected from SB-1 (GW) and SB-2 (GW) were identified above their respective laboratory reporting limits or above their applicable most stringent WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels during this Limited Phase II ESA investigation.

The laboratory analytical report with groundwater sampling results is included in Attachment 7. The groundwater sampling analytical results table is presented below:

Groundwater Sampling Analytical Results Table - Reported in micrograms per liter (ug/L)									
Method	Analyte	Units	CLARC Groundwater	Method A Cleanup Levels for Groundwater	Table 1 Groundwater Quality Criteria	SB-1 (GW)		SB-2 (GW)	
						Result	Qualifier	Result	Qualifier
Lead									
6010D	LEAD	ug/l	15	15	50	11.0		8.56	
Select VOCs									
8260D	BENZENE	ug/l	5.0	5	1	0.0270	J	0.0330	J
8260D	ETHYLBENZENE	ug/l	700	700	NYE	0.0520	J	<0.100	
8260D	TOLUENE	ug/l	1000	1000	NYE	0.119	J	0.104	J
PAHs									
8270E-SIM	FLUORENE	ug/l	320	NYE	NYE	0.0333	J	0.0313	J
EPH									
EPH	C21-C34 ALIPHATICS	ug/l	500	500	NYE	<50.0		19.1	B J
EPH	C16-C21 AROMATICS	ug/l	500	500	NYE	20.5	B J J4	25.7	B J J4
EPH	C21-C34 AROMATICS	ug/l	500	500	NYE	17.0	B J J4	20.7	B J J4
TPH									
NWTPH-GX	TPHG C6-C12	ug/l	500	500	NYE	56.1	B J	41.9	J

Washington State Department of Ecology, Cleanup Levels and Risk Calculation (CLARC) – Master Table, Ground Water, updated July 2024
WAC 173-340-900 Tables, Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses, updated on February 20, 2023.
WAC 173-200-040 Criteria, Table 1 Groundwater Quality Criteria, updated on February 20, 2023.
Bolded concentrations indicate de minimis concentrations
Qualifiers:
B: The same analyte is found in the associated blank.
J: The identification of the analyte is acceptable; the reported value is an estimate.
J4: The associated batch QC was outside the established quality control range for accuracy.

5.6 Soil Gas Vapor Sampling Analytical Results

Field Observations:
No evidence of contamination (petroleum/non-petroleum odors) was observed during the advancement of soil gas borings SG-1 and SG-2. PID readings taken during soil screening and temporary soil gas probe monitoring prior to sampling SG-1 and SG-2 were measured at 0.0 ppm during this Limited Phase II ESA Investigation.

Select VOCs:
Elevated concentrations of Select VOC (Benzene) analyzed within the soil gas samples collected from soil gas sampling point SG-1 and SG-2 were identified above their respective laboratory

reporting limits and above their applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA investigation.

All other concentrations of Select VOCs analyzed within soil gas samples collected from SG-1 and SG-2 were detected below their applicable laboratory reporting limits and/or below their applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA investigation.

Laboratory analytical reports with soil gas sampling results are included in Attachment 7. The soil gas sampling analytical results table is presented below:

Soil Gas Sampling Analytical Results Table - Reported in micrograms per cubic meter (ug/m3)					
Method	Analyte	Units	CLARC Soil Gas Screening Level	SG-1	SG-2
				Result	Result
TO-15	BENZENE	ug/m3	11	89.8	47.0
TO-15	TOLUENE	ug/m3	76,000	433	283
TO-15	ETHYLBENZENE	ug/m3	15,000	37.6	57.7
TO-15	M&P-XYLENE	ug/m3	1,500	129	247
TO-15	O-XYLENE	ug/m3	1,500	27.8	68.1

Washington State Department of Ecology, Cleanup Levels and Risk Calculation (CLARC) – Vapor Intrusion Method B Table, Soil Gas Screening Level, updated July 2024
Bolded concentrations indicate de minimis concentrations
Shaded concentrations indicate a concentration above screening criteria

5.7 Outdoor (Ambient) Air Sampling Analytical Results

Field Observations:
No olfactory or visual evidence of contamination (petroleum/non-petroleum odors) was observed during the placement of the outdoor (ambient) air sample (OA-1). PID readings of the outdoor (ambient) air, prior to soil gas sampling, was 0.0 ppm during this Limited Phase II ESA Investigation.

Select VOCs:
No concentrations of Select VOCs analyzed within outdoor (ambient) air sample OA-1 were identified above their respective laboratory reporting limits, above their applicable most stringent USEPA RSLs for Resident Ambient Air during this Limited Phase II ESA investigation.

Laboratory analytical reports with outdoor (ambient) air sampling results are included in Attachment 7. The outdoor (ambient) air sampling analytical results table is presented below:

Outdoor (Ambient) Air Results Table - Reported in micrograms per cubic meter (ug/m3)				
Method	Analyte	Units	USEPA RSLs for Resident Ambient Air	OA-1
				Result
TO-15	M&P-XYLENE	ug/m3	10.4	1.94

USEPA RSLs for Resident Ambient Air (TR=1E-06, THQ=0.1), dated May 2024
Bolded values indicate de minimis concentrations

Laboratory "Flagged" Concentrations:
Various Total Lead, Select VOC, PAH, TPH, PCB, and/or EPH/VPH constituents were "flagged" by the laboratory with one (1) or more of the following:

- A "B" value, indicating that the same analyte is found in the associated blank.
- A "J" value, indicating that the identification of the analyte is acceptable, and the reported value is an estimate.
- A "J4" value, indicating that the associated batch QC was outside the established quality control range for accuracy.

A Reporting Limit (RL or RDL) is the limit of detection for a specific target analyte for a specific sample after any adjustments have been made for dilutions or percent moisture. Some state regulatory programs require a laboratory to prove it can reliably "see" down to its RL by setting the RL at the lowest point on the calibration curve. In contrast, the Method Detection Limit or MDL is lower than the RL (often much lower) and is a *statistical calculation*. Since the MDL is below the point of calibration, results reported down to the MDL are not reliable and must be qualified as estimated values and, as such, carry a "J" qualifier designation. Since the "J" Flagged concentrations are estimated qualitative concentrations below the calibration point, and those values are not a quantified concentration.

5.8 Vapor Intrusion Screening Level [VISL] Calculator

The primary objective of risk-based screening is to identify sites or buildings unlikely to pose a health concern through the groundwater to indoor air vapor intrusion pathway. Generally, at properties where subsurface concentrations of vapor-forming chemicals, such as those in groundwater or "near source" soil gas, fall below the recommended screening levels (i.e., VISLs), no further action or study is warranted. This condition is generally true so long as the exposure assumptions match those accounted for in the calculations, and the site fulfills the conditions and assumptions of the generic conceptual model underlying the screening levels. Similarly, the results of risk-based screening can help the data review team identify areas, buildings and/or chemicals that can be eliminated from further assessment.

Subsurface vapor intrusion to indoor air from volatile compounds in sub-surface media is a potentially major exposure pathway. The USEPA VISLs for Near-source Soil Gas and USEPA VISLs for Target Indoor Air Concentrations address residential and commercial/industrial exposure scenarios and may be used for screening contaminants in indoor air. The air screening levels for volatile chemicals also have potential applications for screening soil gas data when used in concert with an appropriate attenuation factor and it is recommended that screening assessments evaluate the default attenuation factor of 0.03 for sub-slab soil gas and "near-source" exterior soil gas, released in 2015 by USEPA.

Based on the laboratory analytical results indicating elevated concentrations of Select VOC constituent (Benzene) identified within the soil gas sample collected from SG-1 and SG-2 above the applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA, D3G utilized the USEPA VISL Calculator to determine site-specific calculated Target Indoor Air Concentrations. The VISL calculator identifies chemicals that are sufficiently volatile and toxic to warrant an investigation of the soil gas intrusion pathway when they are present as subsurface contaminants.

D3G input the elevated soil gas sampling analytical data and the recommended default attenuation factor for soil gas (0.03) into the USEPA VISL calculator to further evaluate calculated site-specific indoor air concentrations. After calculating estimated site-specific Target Indoor Air Concentrations from the soil gas analytical data, the estimated Target Indoor Air Concentrations were compared against the CLARC Indoor Air Cleanup Level, to determine if the identified soil gas concentrations will be detrimental to the residential structure indoor air and thus, pose a threat to the environment and to the health of existing or future tenants.

The calculated estimated site-specific indoor air concentrations compared to the applicable CLARC Indoor Air Cleanup Level are illustrated in the table below:

EPA VISL Comparison to Calculated Site Indoor Air Concentrations Reported in micrograms per cubic meter [ug/m^3]			
Analyte	CLARC Indoor Air Cleanup Level	Calculated Estimated Indoor Air Concentrations	
		SG-1	SG-2
Benzene	0.321	2.69	1.41

Washington State Department of Ecology, Cleanup Levels and Risk Calculation (CLARC) – Vapor Intrusion Method B Table, Indoor Air Cleanup Level, updated July 2024
Bolded values indicate de minimis concentrations
Shaded concentrations indicate a concentration above screening criteria

The results of the EPA VISL calculator indicate calculated estimated site-specific Indoor Air Concentrations of Select VOC constituent (Benzene) above the applicable CLARC Indoor Air Cleanup Level. Therefore, D3G concludes that the identified Select VOC constituent (Benzene) identified within soil gas samples SG-1 and SG-2 currently represents a VEC within the area

investigated during this Limited Phase II ESA investigation with supplemental Tier II invasive investigation warranted (ASTM E 2600-22).

However, based on the subsurface soil and groundwater samples collected from the subject property, no concentrations of Select VOC constituent (Benzene) were identified within the source media (soil and/or groundwater) beneath the AOCs; therefore, D3G suspects a potential vapor source migrating onto the subject property through preferential pathways (i.e. utility lines, etc.) and are most likely attributed to an off-site source. In addition, it should be noted, the USEPA VISL model is a conservative screening tool and does not account for building foundation type, size, soil gas entry rates, building exchange rates, soil type, porosity, moisture, vertical and/or lateral inclusion zones from the source and/or chemical volatilization from groundwater.

Copies of the site-specific indoor air VISL calculations for soil gas are included in Attachment 9.

5.9 Quality Assurance/Quality Control Procedures

D3G adhered to industry standard procedures and processes for the collection and handling of environmental samples in accordance with those guidelines published by the WSDE, and the participating laboratory, Pace National – Mt. Juliet, Tennessee location. The QA/QC process is designed to ensure the analytical precision, accuracy, and representativeness of the analytical results. The QA/QC plan consists of field samples, including trip blanks, laboratory documentation and laboratory QC samples such as method blanks, matrix spikes, matrix spike duplicates, and laboratory control samples analyzed to ensure laboratory procedures and analyses were performed properly.

Trip blanks are used to identify possible sample contamination originating from sample transport, shipping, or site conditions. One (1) trip blank sample consisting of one (1) HCl preserved 40 mL glass vials, provided by the laboratory, was submitted along with the Limited Phase II ESA samples. The trip blank samples were shipped with the sample containers to the field, stored with the sample containers, and returned to the laboratory with the sample containers and analyzed for Select VOCs via EPA Method 8260 (soil/groundwater). The trip blank samples were shipped with the soil samples and transported the same day to the Pace National – Mt. Juliet, Tennessee location under proper chain-of-custody protocol.

No concentrations of Select VOCs were detected within the trip blank samples above their respective laboratory method detection limits during this Limited Phase II ESA investigation. Therefore, sample handling and transport procedures were appropriate to demonstrate cross-contamination has not occurred. A copy of the laboratory analytical reports is included in Attachment 7.

6.0 INTERPRETATION AND CONCLUSIONS

6.1 Recognized Environmental Condition/Potential Release Area(s)

Based on the findings of the D3G Draft Phase I ESA dated August 7, 2024, the Areas of Concern (AOCs) and probable location of potential on-site contamination, if present, is suspected to be located beneath the following portions of the subject property:

RECs		AOCs at the subject property
Potential On-Site UST/VEC	During the site inspection, D3G observed suspect piping on the subject property storage building exterior. Additionally, a previous Phase I ESA report produced by Budinger & Associates, Inc. dated May 17, 2022, was provided to D3G for review. Budinger & Associates, Inc. concluded that a REC existed at the subject property regarding two vertical ½-inch diameter steel standpipes which were identified on the north side of the subject property building. It was undetermined if these pipes are associated with an existing or former heating oil tank. Further information was provided in Section 2.0.	Northern portion of the subject property

6.2 Conceptual Site Model (CSM) Validation

For Limited Phase II Environmental Subsurface Investigations performed in accordance with ASTM Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (Designation E 1903-19), and the All-Appropriate Inquiries: Final Rule and HUD Multifamily Accelerated Processing Guide: Chapter 9 Environmental Review and Requirements, environmental sampling efforts must be validated. Validation is necessary to ensure reliable analytical results and an accurate Conceptual Site Model (CSM).

The CSM reviews the available site information (history, sources of hazardous substances and potentially exposed or exposed populations) to determine if any unacceptable or potentially unacceptable risks to site occupants are present. Exposure pathways are means by which hazardous substances move through the environment from a source to a point of contact with people. A complete exposure pathway must have four (4) parts:

- Source of contamination;
- A mechanism for transport of a substance from the source to the air, surface water, groundwater and/or soil;
- A point where people come in contact with contaminated air, surface water, groundwater or soil; and
- A route of entry into the body.

Routes of entry can be eating or drinking contaminated materials, breathing contaminated air, or absorbing contaminants through the skin. Risks can be assessed when an exposure pathway is complete. If any part of an exposure pathway is absent, the pathway is incomplete, and no exposure or risk is possible. In some cases, although a pathway is complete, the likelihood that significant exposure will occur is very small. Risk assessments include a "pathways analysis" to identify those pathways that are complete and most likely to produce significant exposure.

Subsurface Soil Exposure Pathways:

Based on the subsurface soil laboratory analytical results indicating concentrations of Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH identified within subsurface soil samples collected from soil borings SB-1 and SB-2 below their WAC Method A Cleanup Levels and CLARC Soil Screening Levels. D3G concludes that hazardous substances and petroleum constituents as defined by CERCLA have not been identified above Statewide, non-site-specific criteria, and that a REC and VEC does not exist on the subject property within subsurface soils beneath the subject property attributed for COPCs associated with potential petroleum sources (i.e. USTs) within areas investigated as part of this Limited Phase II ESA. the potential on-site UST within the areas investigated during this Limited Phase II ESA. Therefore, the exposure pathways for dermal contact, incidental ingestion, and inhalation for current/future residential receptors are considered incomplete. The preliminary CSM developed in Section 4.0 is considered validated.

Groundwater Exposure Pathways:

Based on the groundwater laboratory analytical results indicating concentrations of Total Lead, Select VOCs, PAHs, TPHs, PCBs, and EPH/VPH within groundwater samples collected from temporary groundwater sampling points SB-1 GW and SB-2 GW below the WAC Method A Cleanup Levels and CLARC Groundwater Screening Levels, D3G concludes that hazardous substances and petroleum constituents as defined by CERCLA have not been identified above Statewide, non-site specific criteria, and that a REC and VEC does not exist within groundwater beneath the subject property for COPCs associated with potential petroleum sources (i.e. USTs) during this Limited Phase II ESA. Therefore, the exposure pathways for dermal contact, incidental ingestion, and inhalation for current/future residential receptors and/or construction/utility workers are considered incomplete. The preliminary CSM developed in Section 4.0 is considered validated.

Soil Gas Exposure Pathways:

Based on the soil gas vapor laboratory analytical results indicating elevated concentrations of Select VOC (Benzene) identified within soil gas borings SG-1 and SG-2 above its applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA investigation, soil vapor beneath the subject property has been adversely affected by a suspected off-site source (based on the absence of soil and groundwater concentrations) within the areas investigated during this Limited Phase II ESA. In addition, based on the results of the EPA VISL calculator indicate calculated estimated site-specific Indoor Air Concentrations of Select VOC constituent (Benzene) above the applicable CLARC Indoor Air Cleanup Level. Therefore, the potential inhalation exposure pathway for residential and/or commercial receptors is considered complete (currently), and a VEC

currently exists at the subject property attributed to the potential on-site UST within the areas investigated during this Limited Phase II ESA.

In addition, based on the subsurface soil and groundwater samples collected from the subject property, no concentrations of Select VOC constituent (Benzene) were identified above the CLARC Soil Screening Levels and/or CLARC Ground Water Screening Levels, within the areas investigated indicating a lack of source media (soil and groundwater contamination) beneath the subject property, D3G suspects a potential vapor source migrating onto the subject property through preferential pathways (i.e. utility lines, etc.) and are most likely attributed to an off-site source.

In addition, based on the findings of this Phase II ESA, it is unlikely that any known or perceived on-site/offsite contamination will further migrate on to the subject property from any up-gradient, adjacent and/or vicinity properties with the exception of the elevated and/or *de minimis* concentrations identified within the subsurface soil and soil gas beneath the subject property as part of this Limited Phase II ESA subsurface investigation.

Outdoor (Ambient) Air Exposure Pathways:
Based on the outdoor (ambient) air sample (OA-1) laboratory analytical results indicating concentrations of Select VOCs below the laboratory method detection limits and below the USEPA RSLs for Resident Ambient Air, during this Limited Phase II ESA investigation, the exposure pathways for inhalation for future/current residential receptors and construction/utility workers are considered incomplete for outdoor (ambient) air vapor inhalation.

It is unlikely that any known or perceived on-site and/or off-site contamination will further migrate on to the subject property from any up-gradient, adjacent, and/or vicinity properties as investigated as part of the D3G Limited Phase II ESA conducted on October 17, 2024.

7.0 CONCLUSIONS

D3G reported to the Proposed Jadwin property in Richland, Washington (subject property) on October 17, 2024, to oversee GPRS perform a geophysical survey, utilizing GPR, RD, and Ferromagnetic Survey within the immediate vicinity of the unidentified suspect pipes.

Based on the results of the Geophysical Investigation, GPRS did not identify subsurface anomalies indicative of intact ferrous/metallic intact Underground Storage Tanks (UST) within the immediate vicinity of the unidentified suspect pipes. The anomalies identified by GPRS outlined within the findings report were indicative of suspected utility conduit vaults as opposed to anomalies indicative of ferrous USTs. Therefore, the above grade identified ancillary piping system(s) observed as part of the initial Phase I ESA are suspected to be associated with utility conduit systems.

Based on the soil gas sampling analytical laboratory results obtained within the soil gas samples collected from SG-1 and SG-2 indicating an elevated level of Select VOC (Benzene) at concentrations of (89.8 ug/m^3 [SG-1]) and (47.0 ug/m^3 [SG-2]), and identified above the applicable CLARC Soil Gas Screening Levels, D3G concludes that a hazardous substance as defined by the CERCLA that exceeded the Statewide, non-site specific criteria has been identified above a *de minimis* level within soil vapor and that a REC currently exists at the subject property.

Therefore, D3G input the elevated soil gas sampling analytical data above the CLARC Soil Gas Screening Levels (11 ug/m3) and the recommended default attenuation factor for exterior soil gas (0.03) for the USEPA VISL calculator to further evaluate calculated site-specific indoor air concentrations. After calculating estimated site-specific Target Indoor Air Concentrations from the soil gas analytical data, D3G compared these calculations against the CLARC Indoor Air Cleanup Level, to determine if the identified soil gas concentrations will be detrimental to the residential structure indoor air screening levels and thus pose a threat to the environment and to the health of existing or future tenants. Based on the results of the USEPA VISL calculator indicating calculated estimated site-specific Indoor Air Concentrations of Select VOC (Benzene) above its applicable CLARC Indoor Air Cleanup Level, D3G concludes that the identified VOC within the soil gas samples collected from SG-1 and SG-2 currently represents a VEC and a potential VIC to existing/future tenants in the residential structures within the soil gas to indoor air pathway suspected to be attributed to an off-site source investigated as part of this Limited Phase II ESA investigation.

However, based on the absence of identified concentrations of COC/Select VOC constituent (Benzene) within source media (soil and groundwater) within the area(s) of concern investigated, D3G suspects the identified potential vapor source regarding COC/Select VOC (Benzene) is migrating onto the subject property through preferential pathways (i.e. utility lines/corridors, etc.) and is most likely attributed to an off-site source.

8.0 RECOMMENDATIONS

Based on the soil gas sampling analytical laboratory results obtained within the soil gas samples collected from SG-1 and SG-2 indicating an elevated level of Select VOC (Benzene) at concentrations of (89.8 ug/m^3 [SG-1]) and (47.0 ug/m^3 [SG-2]), and identified above the applicable CLARC Soil Gas Screening Levels during this Limited Phase II ESA investigation, the subject property has been adversely affected by an off-site source within the areas investigated during this Limited Phase II ESA. D3G concludes that the identified Select VOC (Benzene) within the soil gas samples collected from SG-1 and SG-2 potentially represents a VIC within the soil gas to indoor air pathway, representing a potential unacceptable risk (currently) under HUD's toxics policy at §50.3(i) in regard to unrestricted residential use criteria suspected to be attributed to an off-site source investigated as part of this Limited Phase II ESA investigation.

According to the following requirements set forth within the HUD MAP Guide:

- Anytime a site has been identified from a Phase I or Phase II ESA as having contamination (or contamination exposure pathways), be it vapor (gas), liquid, solid, dissolved, or non-aqueous phase liquid (NAPL), above *de minimis* levels, a complete site characterization sometimes known as special site assessment report, a detailed Phase II ESA, or a Phase III ESA) must be prepared as the initial step of any remediation plan.

- It must determine the total nature and distribution of such contamination, exposure pathways, and potential receptors (a.k.a., a conceptual site model). However, if the remediation plan preparer determines that the Phase II ESA preparer has already determined the total horizontal and vertical extent of such contamination, exposure pathways and potential receptors, then such determination shall be so indicated, and the Phase II ESA shall be made a part of the remediation plan.

In accordance with the U.S. Department of Housing and Urban Development (HUD) 2020 Multifamily Accelerated Processing (MAP) Guide – Chapter 9 – Environmental Review, the Local, State, Tribal and/or Federal (LSTF) authority (in this case the Washington State Department of Ecology (WSDE)) must issue a No Further Action (NFA) status, or similar approval (in regard to soil vapor exceedances in accordance with the Washington State Legislature WAC-Title 173, except that a conditional NFA may be allowed pursuant to Monitored Natural Attenuation (MNA) and/or Enhanced Passive Remediation (EPR) outlined within Section 9.4.5.D.c of the MAP Guide, as amended. Additionally, When MNA/EPR is part of the RBCA, the remediation may continue beyond initial endorsement provided that the LSTF authority (in this case, the WSDE) has determined in writing that such undertakings would present no threat to health, safety or the environment.

If the LSTF authority (WSDE) determines that remediation to unrestricted criteria levels is infeasible and/or unwarranted based on the incomplete exposure pathways for Select VOC (Benzene) identified within soil gas beneath the subject property (considering the HUD Radon Mitigation requirements for passive/active systems further discussed herein), HUD may accept a Risk Based Corrective Action (RBCA) [including MNA/EPR] approved by the LSTF authority that allows for incomplete removal to LSTF restricted residential criteria levels. Justification for incomplete removal of contamination must be submitted along with the remediation plan and must include documentation that shows that the cost of the incomplete removal of contamination, including any life cycle costs for Operation and Maintenance and any applicable enforcement requirements of the WSDE authority, are sufficiently below the costs of complete contamination removal pursuant to Section 9.4.5 of the MAP Guide. If the extent and cost of removing the contamination can be definitively determined, and the cost of removing that contamination can be specified pursuant to a contract for remediation, HUD may allow a remediation plan that has been approved by the LSTF authority as long as: 1) It permits the remediation including site testing, any clearance and closure documents, and the approval by WSDE, prior to Initial Endorsement (as long as HEROS is complete), if the Lender can show why it would be impractical to complete remediation prior to Initial Endorsement, it permits the remediation including site testing, any

clearance and closure documents, and the approval by the WSDE, prior to Final Endorsement and initial occupancy.

Therefore, D3G recommends the following:

- Submittal of the findings of the D3G Phase I and Phase II ESA to WSDE in accordance with the WAC 173-340-300(2)(b) guidance indicating:

    - An owner or operator should use the best professional judgment in deciding whether a release or threatened release of a hazardous substance to the environment may pose a threat to human health or the environment. The following, which is not an exhaustive list, are examples of situations that an owner or operator should generally report under this section:

        - Contamination in a water supply well;
        - Contaminated seeps, sediment or surface water;
        - Vapors in a building, utility vault or other structure that appear to be entering the structure from nearby contaminated soil or groundwater (in this case, from an suspected off-site source).

Any person who conducts an independent investigation of a release required to be reported under WAC 173-340-300 must submit a written report to the department within 90 days of the completion of the investigation.

- An investigation is any remedial action conducted as part of a remedial investigation of the site under WAC 173-340-350; and

- An investigation is complete if no remedial action other than compliance monitoring has occurred at the site for 90 days. This means that an investigation may need to be reported separately from an interim action or cleanup action and that an individual investigation may need to be reported separately from other investigations of the site.

The WSDE will need to issue a "No Further Action" (NFA) letter for the release pursuant to Section 9.4.5.D.3 of the MAP Guide. The WSDE has established the Guidance for Evaluating Vapor Intrusion in Washington State Investigation and Remedial Action to assist environmental professionals and stakeholders with establishing a clear path forward for sites with the potential for Petroleum Vapor Intrusion (PVI) risk in Washington. As recommended by EPA in the Office of Solid Waste and Emergency Response (OSWER) Vapor Intrusion Guidance, Washington also adopts the preference for a long-term response to the potential intrusion of vapors into buildings by eliminating or substantially reducing the level of source contamination in the subsurface vapor forming

chemicals to acceptable risk-levels, thereby achieving a permanent remedy. However, in certain instances, such reductions may not be possible prior to site development. Therefore, on sites with new construction where residual contaminants exceed CLARC Screening Levels for vapor inhalation risk, some form of PVI mitigation system will typically be required.

As per the OSWER Vapor Intrusion Guidance, passive PVI barriers (sometimes referred to simply as "vapor barriers") as stand-alone technologies may not adequately reduce vapor intrusion owing to difficulties in their installation, potential perforations of the barrier before or after installation, and material degradation. Therefore, within the jurisdiction of Washington, an active depressurization technology (ADT) in conjunction with a Vapor Intrusion (VI) barrier is the preferred technology for mitigating risk from residual contaminants that cannot be adequately remediated prior to construction. Washington currently recommends active sub-slab depressurization systems (SSDS) as a presumptive ADT remedy in cases where significant VI risk is deemed to exist. The design of each system will vary based on site specifics; however, all VI barriers utilized as part of the SSDS should be a minimum of 30 mil in thickness (60 mil is preferred) and proven to be compatible with all known contaminants of concern as documented by manufacturer specifications.

Therefore, based on the guidelines set forth by HUD and outlined under the Guidance for Evaluating Vapor Intrusion in Washington State Investigation and Remedial Action, D3G recommends the following:

- The Sponsor is submitting this project under the HUD MAP 221(d)(4) Program, consisting of new construction of a five (5) building, 114-unit multi-family apartment complex and one (1) accessory building. At a minimum, mitigating potential radon contamination is required (HUD for all new construction) by constructing the proposed structure(s) to meet all of the requirements of ANSI-AARST CC-1000-2018 or ANSI/AARST CCAH-2020, as amended standards for the installation of passive/active systems. Post construction testing (radon) is required to be conducted in full accordance with the AARST testing standard. It should be noted that the onus for implementing the radon resistant construction requirements still falls on the architect at this time. Most architects do not have the experience with the design of vapor mitigation systems or have the appropriately liability coverage to cover this requirement. Therefore, it is recommended that the developer seek the guidance of a mitigation specialist (specifically for the COC/Select VOC (Benzene) identified within subsurface soil vapor) who is experienced with the mitigation design requirements for new construction to ensure it is done properly in accordance with WSDE/HUD requirements, both in the design and construction phases. There can be significant savings in the design and effectiveness of the design by having it designed and installed correctly, including pressure field extension testing. In addition, the contractor who is installing the Sub-Slab Depressurization System (SSD/ADT) soil gas control system is required by HUD to be certified (and state licensed, if applicable) as a mitigation contractor;

- D3G recommends a SSD/ADT/engineering barrier design to be implemented for mitigating potential radon contamination (currently for zone 2)/exposure for the upcoming construction for the subject property structure to be evaluated by the SSD/ADT/barrier designer to also include mitigation design for the potential entry of subsurface vapors into proposed first floor structures planned for construction, where elevated concentrations of Select VOC (Benzene) was identified within subsurface soil vapor collected during this Limited Phase II Investigation. The final design of the SSD/ADT/barrier system should include the elevated concentrations of VOC (Benzene) identified beneath the subject property. In addition, all penetrations and entryways through the slabs must be sealed against vapor intrusion for potential exposure to Radon and identified select VOC concentrations encountered during this Limited Phase II ESA;

- Since soil gas concentrations naturally attenuate to some degree in the migration from the subsurface into an overlying structure, detection of COCs from sub-slab soil gas sample supports, but does not necessarily confirm, that the chemical observed in indoor air is attributable to the subsurface source. Barometric pressure fluctuations can cause reversible vapor flow and can contribute vapors from interior sources to sub-slab samples. Thus, other lines of evidence may be important to evaluate to establish the presence of concentration gradients inside and outside the structures located on the subject property. Therefore, D3G recommends post construction indoor air testing (TO-15) for Select VOC (Benzene) following the installation of engineering controls (SSD/ADT) to ensure that the vapor intrusion pathway is effectively addressed for Radon and COCs identified within the subsurface soils (soil gas/vapor) during this Limited Phase II ESA subsurface investigation. It should be noted, sub-slab soil gas/vapor concentrations and distributions may change and/or migrate through other potential preferential migratory pathways during construction/renovation efforts along with the installation of operational fans and ventilation systems; therefore, D3G recommends the following post-mitigation conditions to be considered:

    - Collected while the system is operational but before potentially interfering factors are brought into the newly constructed building;
    - Analyzed for the target COC/Select VOC (Benzene);
    - Collected while the SSD/ADT is operational but after potentially interfering factors have had an opportunity to off-gas; and
    - Prior to Initial Occupancy.

  If post-mitigation sampling results do not indicate a significant decrease in the concentrations of volatile chemicals identified within exterior soil vapor modeled to be potentially present in the indoor air due to soil vapor intrusion, the reason (e.g., indoor or outdoor sources, improper operation of the mitigation system, etc.) should be identified and corrected as appropriate.

- D3G recommends a site-specific applicable operations, maintenance and monitoring (OM&M) plan for the SSD/ADT engineering control mitigation system (within applicable first floor areas as part of the forthcoming construction) to be implemented that will provide guidelines for routine inspections of controls and monitors providing a minimum obligation with a long-term risk management plan as a required component. The O&M plan (generated by the designer) shall stipulate recommendations and any requirements for the inspections of controls and/or monitors, as deemed appropriate. D3G further recommends the OM&M plan stipulate inspection frequency to be conducted of all fan monitors, controls, filters (for ASD/ADT systems) and/or vent openings. In addition, the OM&M plan shall also incorporate inspections of mechanical equipment in addition to controls and monitors subsequent to a motor replacement and/or any catastrophic event (power outage) that could damage SSD/ASD/ADT system components.

9.0 CERTIFICATIONS

Data presented in this report is factual to the best of D3G's knowledge. Available sources of data were comprehensively researched to provide a complete Limited Phase II ESA of the subject property. The Limited Phase II ESA consisted of subsurface soil, groundwater, soil gas, and outdoor (ambient) air sample collection and analysis. The subsurface soil, groundwater, soil gas, and outdoor (ambient) air sampling was conducted in general accordance with the EPA Office of Solid Waste and Emergency Response – Expedited Site Assessment Tools for Underground Storage Tank Sites: A guide for Regulators (EPA Document #510-B-91-001), (March 1997); the EPA Office of Solid Waste and Emergency Response – Groundwater Sampling and Monitoring with Direct Push Technology (EPA Document #540-R-04-005), (August 2005); ASTM E 1903 (currently 1903-19), "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process," as amended; ASTM E 2600-15, "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions"; ASTM D 6235-04, "Practice for Expedited Site Characterization of Vadose Zone and Ground Water Contamination at Hazardous Waste Contaminated Sites"; ASTM E 1689-95 "Standard Guide for Developing Conceptual Site Models for Contaminated Sites"; ASTM E 1912-98, "Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases"; and ASTM D 6725-04, 2010 "Standard Practice for Direct Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers"; and the WSDE Guidance for Evaluating Soil Vapor Intrusion in Washington State Investigation and Remedial Action - Publication no. 09-09-047, dated March 2022.

D3G understands that this Phase II ESA will be relied upon by the User to document to the U.S. Department of HUD that the MAP Lender's future application for FHA multifamily mortgage insurance with conversion through the HUD MAP 221d4 NC was prepared in accordance with HUD MAP requirements. D3G has no financial interest or family relationship with the officers, directors, stockholders or partners of the Borrower, the general contractor, any subcontractors, the buyer, or seller of the proposed property or engage in any business that might present a conflict of interest.

D3G is employed under contract for this specific assignment and has no other side deals, agreements, or financial considerations with the Lender of others in connection with this transaction.

Respectfully Submitted,

Michael Antal
Site Assessor/Staff Geologist — Signature

Ron James, P.G., C.E.M.
Technical Director of Environmental Services — Signature

10.0 LIMITATIONS OF ASSESSMENT

The professional services were performed in accordance with practices generally accepted by other appropriate environmental professionals, geologists, hydrologists, hydrogeologists, geophysicists, engineers, or environmental scientists practicing in this field and directed by the client. No other warranty, either expressed or implied, is made. D3G is not an insurer and makes no guarantee or warranty that the services supplied will avert or mitigate occurrences, or the consequences of occurrences, that the services are intended to prevent or ameliorate. As with all environmental assessments, there is no guarantee that the work conducted identified any and all sources or locations of petroleum and/or non-petroleum constituents in the soil, groundwater, soil vapor, and indoor air.

This project included a Geophysical Ground Penetrating Radar (GPR) survey. The absence of detected signatures does not preclude the possibility that targets may exist. To the extent the client desires more definitive conclusions than are warranted by the currently available facts; it is specifically D3G's intent that the conclusions stated herein will be intended as guidance. GPR may not always be able to detect the thickness of a base layer if there is insufficient contrast between the layer in question and the base below. In actual practice soil attenuation may restrict the use of GPR to shallow depths.

The Client shall cause all tests and inspections of the site, materials and work performed by D3G or others to be timely and properly performed in accordance with the plans, specifications and contract documents and D3G's recommendations. No claims for loss, damage, or injury shall be brought against D3G by Client or any third party unless all tests and inspections have been so performed and unless D3G's recommendations have been followed. Client's reliance on or use of the professional services provided by D3G constitutes an agreement to indemnify, defend, and hold D3G, its officers, employees and agents harmless from any and all claims, suits, losses, costs and expenses, including but not limited to, court costs and reasonable attorney's fees in the event that all such tests and inspections are not so performed or D3G's recommendations are not so followed except to the extent that such failure is the result of the negligence, willful or wanton act or omission of D3G, its officers, agents or employees, subject to the limitation contained in paragraph 9.

Seasonally variable conditions (e.g., moisture levels, depth to groundwater) can lead to seasonally variable concentrations and distributions of vapors in the vadose zone. Likewise, weather conditions and building operations can lead to time-variable contributions from vapor intrusion (e.g., driving forces for vapor intrusion) and ambient air infiltration. Collectively, these processes cause soil gas concentrations of vapor-forming chemicals to vary over time. An individual sample (or single round of sampling) would be insufficient to characterize seasonal variability, or variability at any other time scale. Because of variability, a single soil vapor sampling event, collected at a randomly chosen time, is insufficient information to estimate an average exposure. Multiple sampling events generally are considered necessary to account for seasonal variations within soil

gas concentration within the vadose zone and ensure that related risk management decisions are based upon a consideration of a reasonable maximum vapor intrusion conditions.

Vapor intrusion occurs when vapors from volatile contaminants in soil or groundwater diffuse through the soil, through building foundations and into overlying homes or other buildings. Soil gas can flow or be drawn into a building due to several factors, including barometric pressure changes, wind load, thermal currents, or depressurization from building exhaust fans. The rate of movement of the vapors into the building is a difficult value to quantify and depends on soil type, chemical properties, building design and condition, and the pressure differential. Once inside the building, vapors mix with and contaminate the indoor air and may pose a chronic or acute health risk to inhabitants. Vapor intrusion may be a completed exposure pathway even in cases where ingestion or dermal contact are not completed pathways. Both diffusion and advection are mechanisms of transport of subsurface soil gas into the indoor air environment. Diffusion is the mechanism by which soil gas moves from high concentration to low concentration due to a concentration gradient. Advection is the transport mechanism by which soil-gas moves due to differences in pressure. These pressure differences can be generated by atmospheric pressure changes, temperature changes creating natural convection in the soil, or forced pressure changes due to building ventilation systems. Advective transport is likely to be the most significant in the region very close to a basement or a foundation, and soil gas velocities decrease rapidly with increasing distance from the structure. Once soil gases enter the "building zone of influence," they are generally swept into the building through foundation cracks by advection due to the indoor-outdoor building pressure differential. The reach of the "building zone of influence" on soil gas flow is usually less than a few feet, vertically and horizontally.

11.0 REFERENCES AND SOURCES OF INFORMATION

- Web Soil Survey accessed at http://websoilsurvey.nrcs.usda.gov/app/
- USGS Topographic Quadrangle – *Richland, Washington 2020*
- Delorme Street Atlas USA® 2015
- Google Earth
- All Appropriate Inquiries: Final Rule
- U.S. Housing and Urban Development (HUD) Multifamily Accelerated Processing Guide: (2020): Chapter 9 Environmental Review and Requirements, as amended
- U.S. Environmental Protection Agency (EPA);
- ASTM E 2600-22, "Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions";
- ASTM E 1903 (currently 1903-19), "Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process," as amended;
- ASTM D 6235-04, "Practice for Expedited Site Characterization of Vadose Zone and Ground Water Contamination at Hazardous Waste Contaminated Sites";
- ASTM E 1689-95 "Standard Guide for developing Conceptual Site Models for Contaminated Sites";
- ASTM E 1912-98, "Guide for Accelerated Site Characterization for Confirmed or Suspected Petroleum Releases";
- ASTM D 6725-04, 2010 "Standard Practice for Direct Push Installation of Prepacked Screen Monitoring Wells in Unconsolidated Aquifers";
- Interstate Technology Regulatory Council, The Use of Direct Push Well Technology for Long-Term Environmental Monitoring in Groundwater Investigations, March 2006
- (OSWER) Final Guidance for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air, dated June 2015;
- Standard Operating Procedure (SOP), Technical Bulletin No. 93-660 dated September 21, 1993;
- Interstate Technology Regulatory Council (ITRC) Vapor Intrusion Pathway: A Practical Guideline dated January 2007;
- WSDE Guidance for Evaluating Vapor Intrusion in Washington State Publication No. 09-09-047 dated March 2022.
- Younger glacial drift. Retrieved from https://mrdata.usgs.gov/geology/state/sgmc-unit.php?unit=WAQg1o%3B0
- WSDE Underground storage tank closures accessed at https://ecology.wa.gov/DOE/files/c8/c86161c4-8529-4f77-b1e0-2249ca68b246.pdf?bcs-agent-scanner=b66d4067-71dd-be49-830b-109a9799fab8

12.0 ATTACHMENTS

Attachment 1: Site (Vicinity) Maps

Attachment 2: Boring and Sampling Location Plan

Attachment 3: Site Photographs

Attachment 4: Soil Boring Logs, Soil Map, and USCS Classification System

Attachment 5: Qualifications for Environmental Professionals

Attachment 6: WAC Method A Cleanup Levels, WSDE CLARC Screening Levels, USEPA VISLs, and USEPA RSLs

Attachment 7: Laboratory Analytical Reports

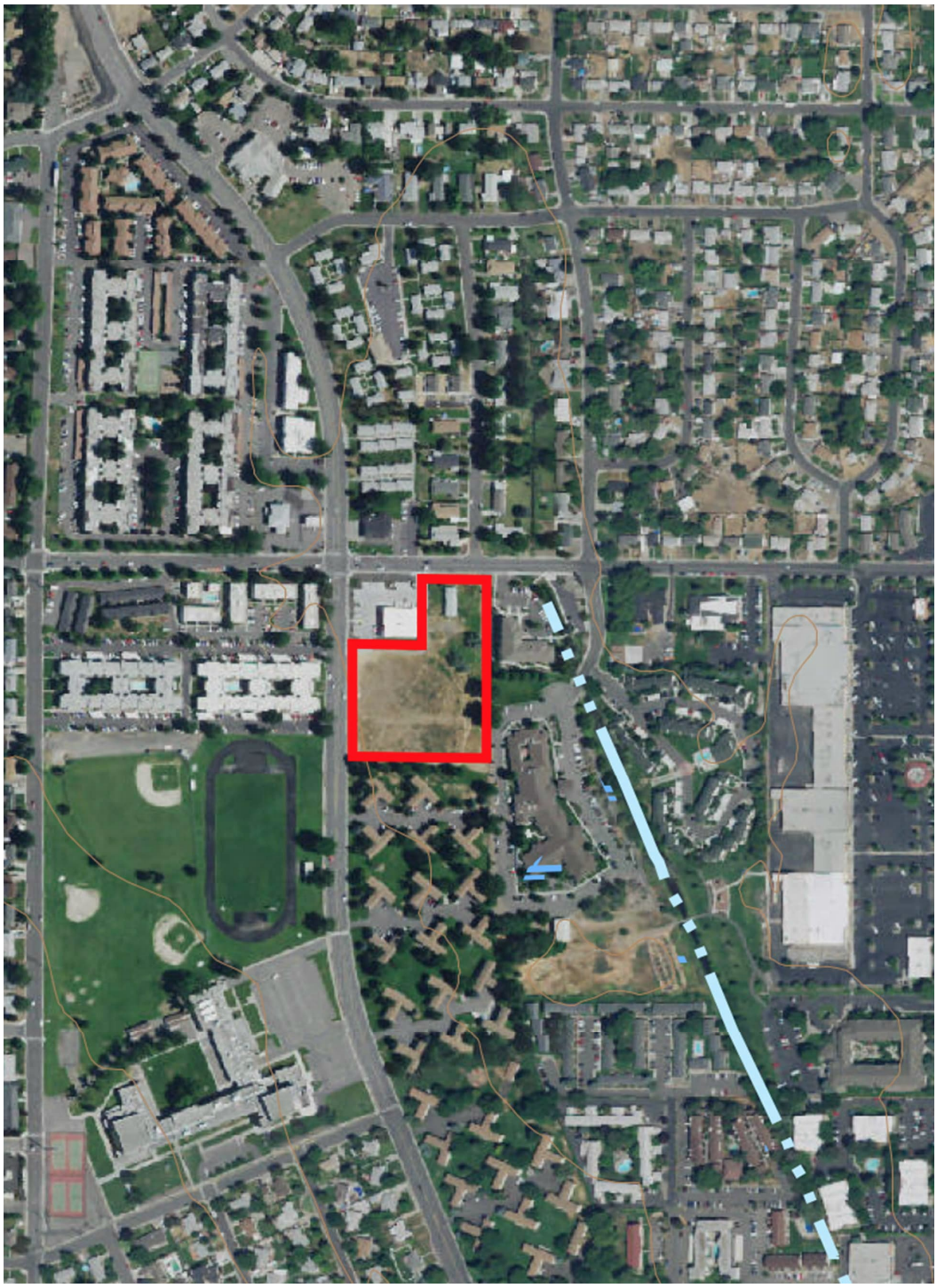
Attachment 8: Groundwater and Soil Vapor Sampling Logs

Attachment 9: USEPA VISL Calculator Results (SG-1 and SG-2)

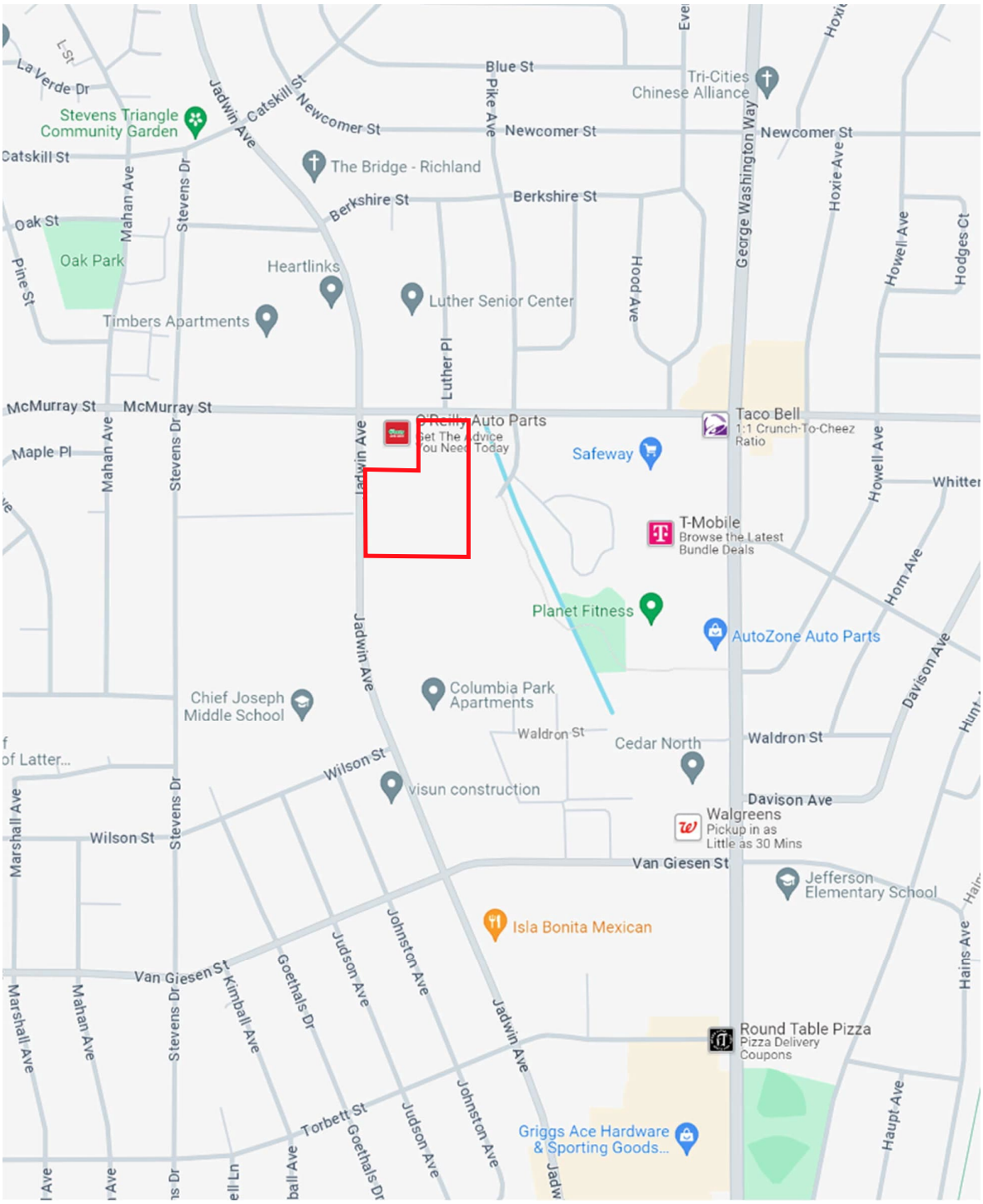
Attachment 10: Geophysical/Ferromagnetic Survey Investigation Report

Attachment 1

Site (Vicinity) Maps



Appendix A Site Topographic Map	↑ N	Proposed Jadwin 1866 Jadwin Avenue Richland, Washington *Topographic Quadrangle: Richland, Washington 2020*	**DOMINION DUE DILIGENCE GROUP**



Appendix A Site Locator Map	↑ N	Proposed Jadwin 1866 Jadwin Avenue Richland, Washington	**DOMINION DUE DILIGENCE GROUP**

Attachment 2

Boring and Sampling Location Plan

BORING LOCATION PLAN – PROPOSED JADWIN – RICHLAND, WASHINGTON

DG DOMINION Due Diligence Group

Proposed Jadwin – Richland, Washington
Limited Phase II ESA Investigation
Soil, Groundwater, and Soil Gas Boring Location and Sampling Plan

Attachment 3

Site Photographs

PHOTO #1

Photograph of GPRS locate in the vicinity of the unidentified suspect piping.

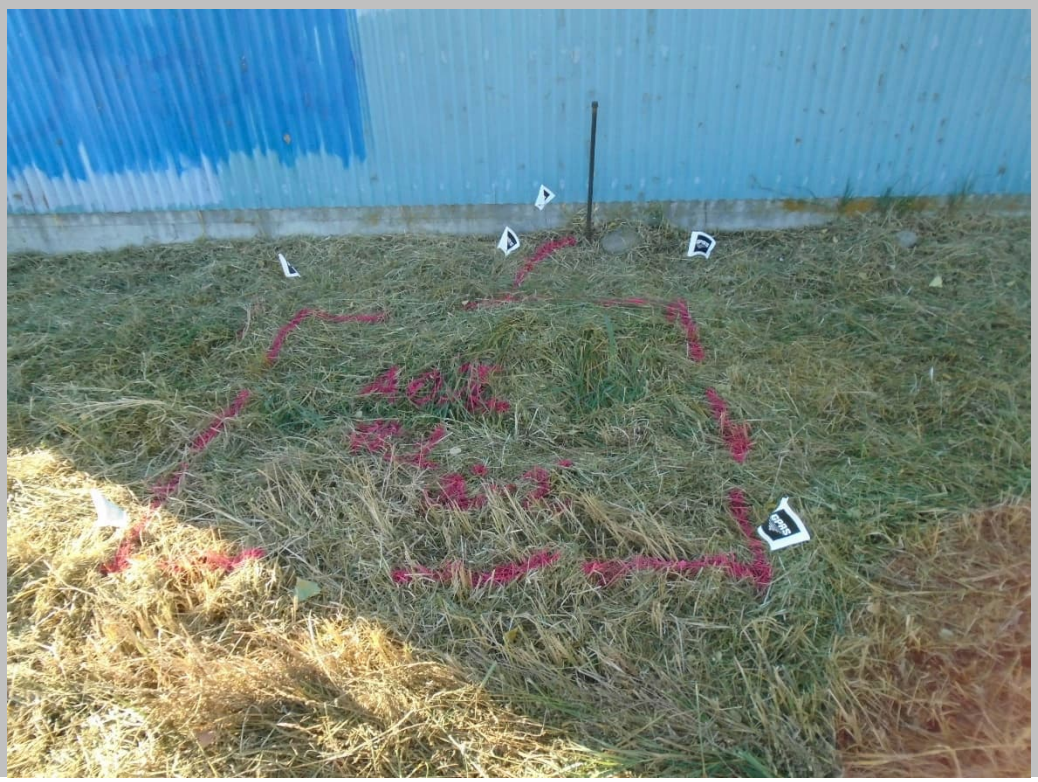
PHOTO #2

Photograph of unidentified suspect piping located on the northern portion of the subject property.

PHOTO #3

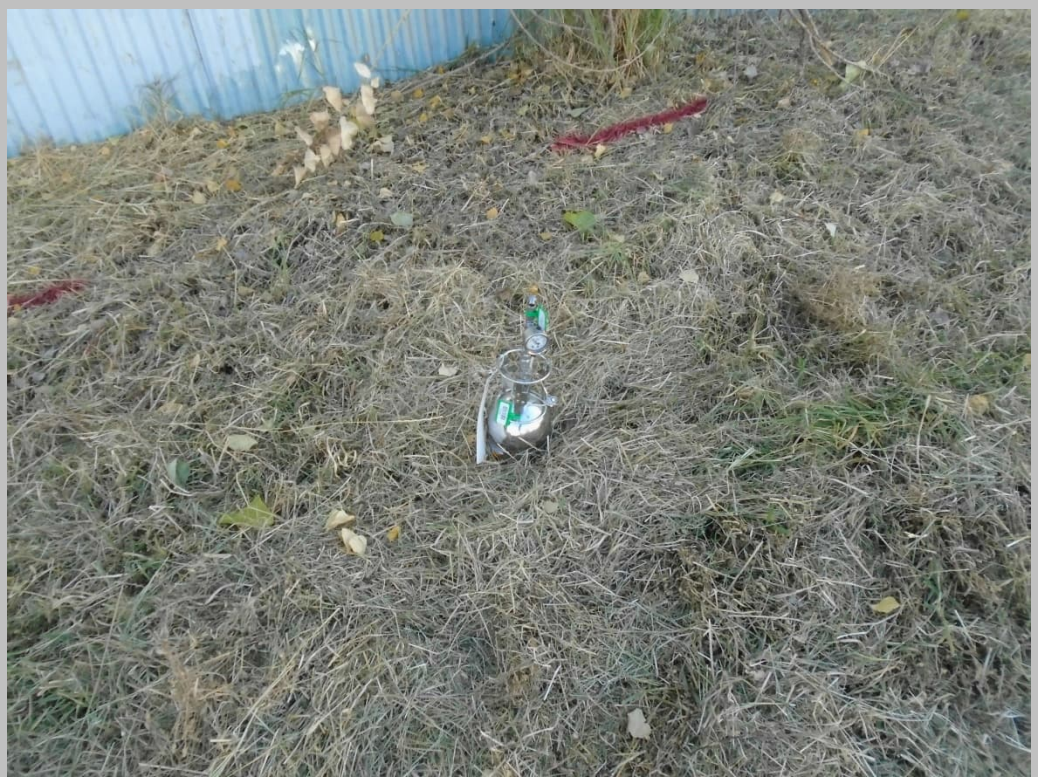
Photograph of GPRS mark out of potential subsurface utility vault.

PHOTO #4



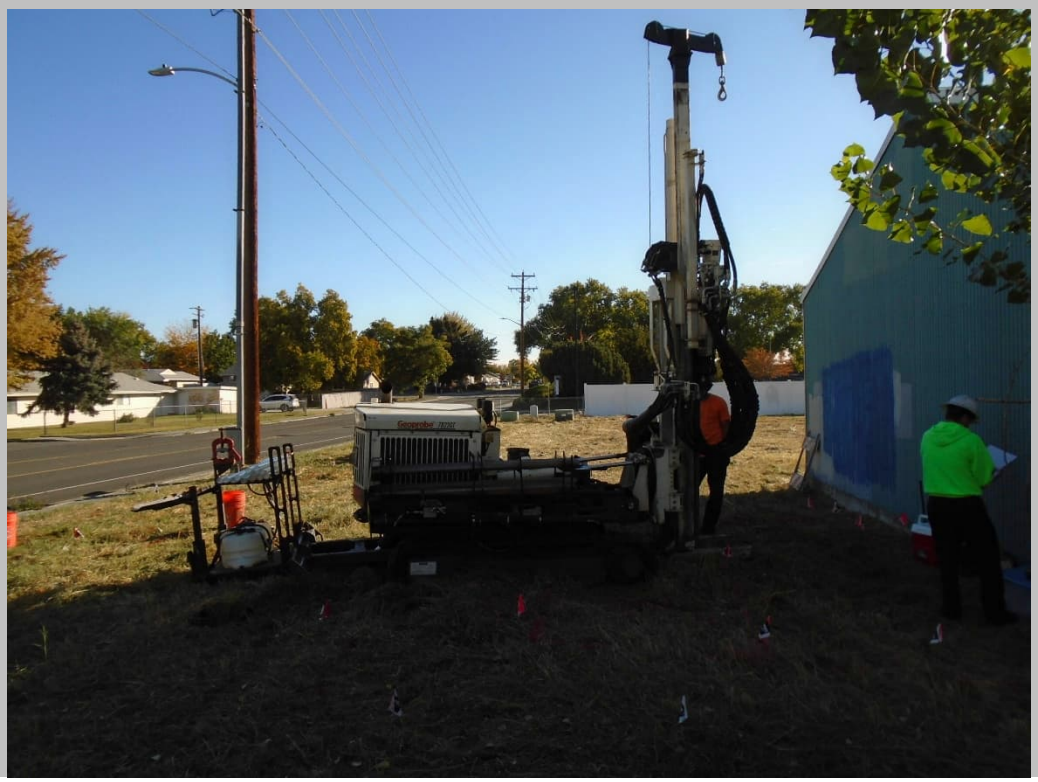
Photograph of GPRS mark out of potential subsurface utility vault.

PHOTO #5



Photograph of outdoor (ambient) air sampling point OA-1.

PHOTO #6



Photograph of drilling operations at SG-1 location.

PHOTO #7

Photograph of drilling operations at SG-2 location.

PHOTO #8

Photograph of drilling operations at SB-2 location.

PHOTO #9

Photograph of soil gas sampling point SG-1.

PHOTO #10

Photograph of soil gas sampling point SG-2.

PHOTO #11

Photograph of groundwater sampling at SB-2 location.

PHOTO #12

Photograph of drilling operations at SB-1 location.

PHOTO #13

Photograph of backfilled SG-1.

PHOTO #14

Photograph of backfilled SB-1.

PHOTO #15

Photograph of backfilled SG-2.

PHOTO #16

Photograph of backfilled SB-2.

ATTACHMENT 4

Soil Boring Logs, Soil Map, and USCS Classification System

Soil Boring SB-1

D3G PROJECT NUMBER 2024-001866
PROJECT NAME Proposed Jadwin
CLIENT Eastern Mortgage Capital
ADDRESS 1866 Jadwin Avenue Richland, WA 99354

DRILLING COMPANY BB&A Environmental
DRILLER
DRILL RIG Geoprobe 7822DT
DRILLING METHOD Direct Push
TOTAL DEPTH 15 feet bgs
DIAMETER 1.5 inches

LOGGED BY Michael Antal
CHECKED BY Ron James
DRILLING DATE 10/17/2024

COMMENTS SB-1 is located approximately 10 feet north of the 1866 Jadwin Avenue subject property.

Depth (ft)	PID	% Recovery	Samples	Well Installation	Graphic Log	Material Description	Additional Observations
0	0.0	40				Grassy Landscape	No Visual or olfactory evidence of contamination was observed during borehole advancement. Borehole was backfilled with soil borings and capped at the surface with bentonite.
1						(MLS) Sandy SILT; fine grain; brown; loose; moist.	
2	0.0						
3							
4							
5	0.0	60	Sampled SB-1 at 1205				
6						(SP) SAND; coarse grain; gravelly; gray; loose; moist to wet.	
7	0.0		Sampled SB-1 GW at 1215	▽			
8							
9							
10	0.0	70					
11							
12	0.0						
13							
14							
15						Borehole terminated at fifteen (15) feet below ground surface per encountered groundwater.	

Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 22 Oct 2024

Soil Boring SB-2

D3G PROJECT NUMBER 2024-001866
PROJECT NAME Proposed Jadwin
CLIENT Eastern Mortgage Capital
ADDRESS 1866 Jadwin Avenue Richland, WA 99354

DRILLING COMPANY BB&A Environmental
DRILLER
DRILL RIG Geoprobe 7822DT
DRILLING METHOD Direct Push
TOTAL DEPTH 15 feet bgs
DIAMETER 1.5 inches

LOGGED BY Michael Antal
CHECKED BY Ron James
DRILLING DATE 10/17/2024

COMMENTS SB-2 is located approximately 10 feet north of the 1866 Jadwin Avenue subject property.

Depth (ft)	PID	% Recovery	Samples	Well Installation	Graphic Log	Material Description	Additional Observations
0	0.0	60				Grassy Landscape	No Visual or olfactory evidence of contamination was observed during borehole advancement. Borehole was backfilled with soil borings and capped at the surface with bentonite.
1						(MLS) Sandy SILT; fine grain; brown; loose; moist.	
2	0.0						
3							
4			Sampled SB-2 at 1055				
5	0.0	30					
6			Sampled SB-2 GW at 1115	▽		(SP) SAND; coarse grain; gravelly; gray; loose; wet.	
7	0.0						
8							
9							
10	0.0	50					
11							
12	0.0						
13							
14							
15						Borehole terminated at fifteen (15) feet below ground surface per encountered groundwater.	

Disclaimer This bore log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 22 Oct 2024

Appendix A Site Soils Map	↑ N	Proposed Jadwin 1866 Jadwin Avenue Richland, Washington *http://websoilsurvey.nrcs.usda.gov/app/*	**DOMINION DUE DILIGENCE GROUP**

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, provide information on the composition of map units and properties of their components.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Benton County Area, Washington

Map Unit: FeA—Finley fine sandy loam, 0 to 2 percent slopes

Component: Finley (90%)

The Finley component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on terraces, flood plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R007XY143WA Sandy Loam ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 15 percent. There are no saline horizons within 30 inches of the soil surface.

Map Unit: PaA—Pasco fine sandy loam, 0 to 2 percent slopes

Component: Pasco (90%)

The Pasco component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on flood plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during May, June, July, August, September. Organic matter content in the surface horizon is about 2 percent. This component is in the R007XY930WA Loamy Bottom ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 3w. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. The soil has a slightly saline horizon within 30 inches of the soil surface. The soil has a maximum sodium adsorption ratio of 8 within 30 inches of the soil surface.

Data Source Information

Soil Survey Area: Benton County Area, Washington
Survey Area Data: Version 19, Aug 29, 2023

UNIFIED SOIL CLASSIFICATION
INCLUDING IDENTIFICATION AND DESCRIPTION

	FIELD IDENTIFICATION PROCEDURES (excluding particles larger than 3 inches and basing fractions on stimated weights)			GROUP SYMBOLS	TYPICAL NAMES	INFORMATION REQUIRED FOR DESCRIBING SOILS
COARSE GRAINED SOILS More than half materials is larger than No. 200 sieve size	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size (For visual classification, the 1/4" size may be used as equivalent for the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes	GW	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentage of sand and gravel, max. size; angularity, surface condition, and hardness of the coarse grains; local or geological name and other pertinent descriptive information, and symbol in parentheses For undisturbed soils add information on stratification, degree of compactness, cementation, moisture conditions and drainage characteristics EXAMPLE Silty sand gravelly; about 20% hard, angular gravel particle 1/2 - in maximum size; rounded and subangular sand grains coarse to fine; about 15% non-plastic fines with low dry strength; well compacted and moist in place; alluvial sand; (SM)
			Predominantly one size or a range of sizes with same intermediate sizes missing	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	
		GRAVELS WITH FINES (Appreciables amount of fines)	Non-plastic fines (for identification procedures see ML below)	GM	Silty gravel, poorly graded gravel-sand silt mixtures	
			Plastic fines (for identification procedures see CL below)	GC	Clayey gravels, poorly graded gravel-sand clay mixtures	
	SANDS More than half of coarse fraction is smaller than No. 4 sieve size (For visual classification, the 1/4" size may be used as equivalent for the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amount of all intermediate particle sizes	SW	Well graded sands, gravelly sands, little or no fines	
			Predominantly one size or a range of sizes with some intermediate sizes missing	SP	Poorly graded sand, gravelly sands, little or no fines	
		SANDS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see CL below)	SM	Silty sand, poorly graded sand-silt mixtures	
			Plastic fines (for identification procedures see CL below)	SC	Clayey sand, poorly graded sand-clay mixtures	
FINE GRAINED SOILS More than half materials is smaller than No. 200 sieve size (The No. 200 sieve size es about the smallest particle visible to the naked eye)	IDENTIFICATION PROCEDURES ON FRACTION SMALLER THAN No 40 SIEVE SIZE	DRY STRENGTH (CRUSHING CHARACTERISTICS)	DILATANCY (REACTION TO SHAKING)	TOUGHNESS (CONSISTENCY NEAR PLASTIC LIMIT)		
	SILTS AND CLAYS Liquid limit less than 50	None to slight	Quick to slow	None	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sand with slight plasticity
		Medium to high	None to very slow	Medium	OL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		Slight to medium	Slow	Slight	MN	Organic silts and organic silt-clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50	Slight to medium	Slow to none	Slight to medium	OL	Inorganic silt, micaceous or diatomaceus fine sandy or silty soils, elastic silts
		High to very high	None	High	CH	Inorganic clays of high organic plasticity
		Medium to high	None to very slow	Slight to medium	OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS	Readily identified by color, odor, spongy feel and frequently by fibrous texture			Pt	Peat and other organic soils	

Use grain size curve in indentifying the fractions as given under field identification

LABORATORY CLASSIFICATION CRITERIA

Determine percentages of gravel and sand from grain size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follow :

Less than 5% GW, GP, SW, SP.
More than 12% GM, GC, SM, SC.
5% to 12% Borderline cases requiring use of dual symbols

$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4

$C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between one and 3

Not meeting all gradation requirements for GW

Atterberg limits above "A" line with PI greater than 7	Above "A" line with PI between 4 and 7 are borderline cases requiring use of dual symbols
Atterberg limits below "A" line or PI greater than 7	

$C_u = \frac{D_{60}}{D_{10}}$ Greater than 6

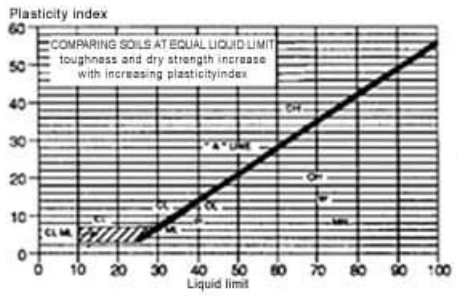
$C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between one and 3

Not meeting all gradation requirements for SW

Atterberg limits below "A" line or PI less than 4	Above "A" line with PI between 4 and 7 are borderline cases requiring use of dual symbols
Atterberg limits above "A" line with PI greater than 7	

PLASTICITY CHART

FOR LABORATORY CLASSIFICATION OF FINE GRAINED SOILS



DOMINION
Due Diligence Group

UNIFIED SOIL CLASSIFICATION SYSTEM

Attachment 5

Qualifications for Environmental Professionals

Environmental Phase II Team

DOMINION Due Diligence Group

PRINCIPAL GEOLOGIST – DIRECTOR OF TECHNICAL ENVIRONMENTAL SERVICES

Ron A. James, P.G., C.E.M. | r.james@d3g.com | 804-665-2911

Ron is your Technical Director for Environmental Services, holding numerous Professional Geologist and Certified Environmental Manager (CEM) licenses in good standing with multiple state jurisdictions and has been with D3G since 2013. In leading the technical staff and the Phase II Department, he is responsible for guiding you through your technical questions and nuances related to overall processes, timing, and protocols through multiple financing platforms (HUD/FHA, Freddie Mac, Fannie Mae, ASTM).

SENIOR GEOLOGIST

Brett Diehl | b.diehl@d3g.com | 570-772-5264

Brett is your Senior Geologist with over 9 years of experience in developing, coordinating, and technical oversight of advanced environmental and geological services, including subsurface explorations, groundwater permeability testing, and multimedia sampling for site investigations. He has supervised teams conducting multimedia investigations and remedial actions and performed groundwater and vapor intrusion investigations and compliance monitoring, in addition to laboratory data evaluation and validation for compliance report submission.

STAFF GEOLOGIST

Michael Antal | m.antal@d3g.com | 570-504-4671

Michael is your Staff Geologist with over 6 years of experience in environmental and geological services. He is responsible for identifying environmental concerns, interpreting historical documentation, report writing, and assisting in overseeing Phase II projects. Michael's experience in project management related to environmental investigations and remediation ensure projects meet federal, state, and local regulations needed for on-time project delivery.

ENVIRONMENTAL SCIENTIST

Ian Court | i.court@d3g.com | 703-340-5773

Ian is your Environmental Scientist with over 2 years of experience in conducting field investigations, multi-media sampling, and monitoring. He is responsible for subcontractor retention, multimedia sampling, reviewing/analyzing data to develop site-specific conceptual models for technical report generation and on-time project delivery.

MICHAEL ANTAL

Staff Geologist

m.antal@d3g.com / 570-504-4671

EDUCATION

Bloomsburg University of Pennsylvania – B.S. Environmental, Geographical, and Geological Science – Environmental Geoscience

CERTIFICATIONS/REGISTRATIONS/TRAINING

- OSHA 40-Hour HAZWOPER Training
- OSHA 10-Hour General Construction Training
- MSHA General Mineral Mining Training
- First Aid/CPR Certified
- GSSI StructureScan ProSIR
- Resource Conservation Recovery Act (RCRA)
- DOT Hazardous Materials Ground Shipping

SUMMARY OF EXPERIENCE

Mr. Antal is an experienced Staff Geologist with 5 years of experience in the field conducting site investigations, multi- media sampling and monitoring, and remediation operations and maintenance. Mr. Antal has been involved in the planning, sampling, and field investigations for Phase II ESAs conducted in general accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (Designation E 1903-19) and the Standards and Practices for all Appropriate Inquiries: Final Rule. Mr. Antal also has extensive experience with developing and executing groundwater investigations and conducting operations and maintenance of Remediation systems per Corrective Action programs.

SAMPLE PROJECTS

ASTM General

- Iluka Resources *(Stoney Creek, VA)*
- Bondale Apartments *(Norfolk, VA)*
- Proposed Creek Bend *(San Antonio, TX)*

HUD General

- Proposed Bay City Lofts *(Green Bay, WI)*

HUD MAP 223(f)

- The Hill at Eastbury *(Homewood, AL)*
- Bassett Creek Commons *(Plymouth, MN)*
- Marian Plaza *(Denver, CO)*
- Tent City *(Boston, MA)*
- St. Philips on the Park *(New York, New York)*

HUD MAP 221 (d)(4) SR

- Palestine Gardens & Palestine Gardens North *(Kansas City, MO)*
- The Carlton *(Tyler, TX)*
- Meeting Street Manor *(SCSHFDA – Charleston, SC)*

HUD MAP 221 (d)(4) NC

- Proposed Cycle House *(Washington, DC)*
- Proposed Lotus Alchemy *(Salt Lake City, Utah)*
- Proposed Sherman Park Workforce Housing *(Victor, ID)*

HUD RENTAL ASSISTANCE DEMONSTRATION

- Spratley House Apartments *(Newport News, VA)*

MICHAEL ANTAL

Staff Geologist

m.antal@d3g.com / 570-504-4671

SUMMARY OF EXPERIENCE *(cont'd)*

As a Staff Geologist, Mr. Antal is responsible for development, coordination, and technical oversight of advanced environmental and geological services, including subsurface explorations, groundwater permeability testing and multi-mediasampling for site investigations for real-estate transactions, site development, characterization and hydrogeological modeling. Projects include the coordination of field crews for installation and development of monitoring wells, sampling and laboratory analysis of soil, groundwater and air samples, interpretation of data, technical report preparation with the development of site-specific conceptual models to assess cleanup methods and cost analysis.

Mr. Antal's duties as Staff Geologist for Dominion Due Diligence Group (D3G) include assisting the Phase II Department in coordinating, conducting and generating reports for Phase II Environmental Site Assessments (HUD, Freddie Mac, Fannie Mae, CHFA, and ASTM E 1903-19) throughout the United States, and client contact relations.

SAMPLE PROJECTS

HUD RENTAL ASSISTANCE DEMONSTRATION 1

- Churchill Park (fka Rolling Heights) *(KHC – Owensboro, KY)*
- Felix Fuld Phase I *(NJHMFA – Newark, NJ)*
- Parkway Homes, Parkway Homes Extended, & Smyser Street Cottages *(PHFA – York, Pennsylvania)*
- Renaissance Preserve I, II, III, & IV – *(Fort Myers, Florida)*

HUD RENTAL ASSISTANCE DEMONSTRATION 2

- Greater Allen Cathedral Senior Residence – *(Jamaica, NY)*

LIHTC

- Paige Estates *(TDHCA – Waco, TX)*

HUD PRAC

- Grand Street Senior Housing *(New York, NY)*

HUD MAP 220 NC

- Proposed 51st & Prairie *(Chicago, IL)*

HUD LEAN 232/223f

- Arcadia Medical Resort of Parkside *(Union Gap, WA)*

HUD CAPITAL FUND PROGRAM

- East Lake Courts *(Chattanooga, TN)*
- Emma Wheeler Homes *(Chattanooga, TN)*

CDBG

- Proposed Tallgrass Family and Senior Housing *(Papillion, NE)*

RON A. JAMES, PG, CEM, EP

Technical Director of Environmental Services
r.james@d3g.com / 804-665-2911

EDUCATION

Radford University — B.S. in Engineering Geology

CERTIFICATIONS/REGISTRATIONS/TRAINING

- Certified Professional Geologist – Commonwealth of Virginia
- Certified Professional Geologist – State of Florida
- Professional Geologist – State of Georgia
- Certified Professional Geologist – State of Louisiana
- Professional Geologist – State of Alabama
- Professional Geologist – Commonwealth of Kentucky
- Certified Environmental Manager – State of Nevada
- American Concrete Institute (ACI) Certification Level II
- OSHA 40 Hour Hazardous Waste Certification
- Nuclear Density Gauge Office/Instructor
- Virginia Department of Transportation Soils Compaction Certification Asbestos Designers Licensee, Virginia
- VDOT Asphalt; VDOT Flagger; and VDOT GRIT (Guardrail)
- DCR Soil and Erosion Sediment Control - Inspector
- GSSI Structural Optical Scan – Geophysical, GSSI Advanced Geophysical GPR Certified

SUMMARY OF EXPERIENCE

Ron James is a highly experienced environmental and technical professional with more than 25 years of experience as a Professional Geologist qualifying as an Environmental Professional as defined under ASTM E 1527 Section 4.3 - Appendix X2 and 40 CFR Part 312.10(b). He has been involved in the planning, sampling and field investigations of numerous Phase II ESAs conducted in general accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (Designation E 1903-19), the Standards and Practices for all Appropriate Inquiries: Final Rule and the U.S. Department of HUD Multifamily Accelerated Processing Map Guide in the following States: North Carolina, South Carolina, Georgia, Alabama, Florida, Louisiana, Virginia, Texas, Missouri, Mississippi, Pennsylvania, New Jersey, Michigan, Maryland, Massachusetts, New Hampshire, Connecticut, New York, Maine, Colorado New Hampshire, Utah, Nevada and North Dakota. HUD Programs consisted of: MAP 221d4 New Construction, 223f refinance, 221d4 Substantial Rehabilitation, 202/223f Refinance, HUD Rental Assistance Demonstration (RAD), and 232 Refinance.

SAMPLE PROJECTS

HUD MAP 223(f)

- Colonial Arms Apartments *(Virginia Beach, VA)*
- Bella Vista I, II & III *(New Haven, CT)*
- Villa Paree Apartments *(Indianapolis, IN)*
- Aspen Apartments Phase II *(Shreveport, LA)*
- Eberhart Place *(Austin, TX)*
- Balcones Haus *(New Braunfels, TX)*
- Montgomery Landing *(Savannah, GA)*

HUD MAP 221 (d)(4) NC

- Fontaine Towers *(Rochester, MN)*
- Beasley Mill Apartments *(Athens, OH)*
- Proposed Azalia Gardens *(Philadelphia, PA)*
- Proposed Westridge Apartments *(Jacksonville, FL)*
- Savo Island Cooperative *(Berkely, CA)*
- Domsey Residential *(Brooklyn, NY)*
- Proposed Point Ruston Apartments *(Denver, CO)*
- Proposed Point Ruston Apartments *(Tacoma, WA)*

HUD SPECIAL APP. CENTER

- Collegeville Center – Phase I & II *(Birmingham, AL)*
- Carver Park *(Cleveland, OH)*
- Stokes Mall *(Cleveland, OH)*

RON A. JAMES, PG, CEM, EP

Technical Director of Environmental Services
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SUMMARY OF EXPERIENCE *(cont'd)*

As a Principal Geologist and Technical Director of Environmental Services, Ron is responsible for development, coordination, and technical oversight of advanced environmental and geological services, including subsurface explorations, field permeability testing, evaluation of potential borrow and cover materials, and geophysical investigations including Ground Penetrating Radar (GPR), Electrical Resistivity (ER), Electro Magnetic (EM) and Ferromagnetic non-invasive investigations for real-estate transactions, site development, characterization and hydrogeological modeling of select sites in suburban metropolitan areas throughout the United States. The projects included the coordination of field crews for installation and development of monitoring wells, sampling and laboratory analysis of soil and groundwater samples, interpretation of data, technical report preparation with the development of site-specific conceptual models to assess cleanup methods and cost analysis. Ron is proficient in developing statistical sample plans to adequately characterize subsurface conditions with contaminant plumes with proficiency in several technical fields including environmental site assessments (ESAs) and underground storage tanks (USTs) having assessed and managed remedial design for numerous release incidents with demonstrated success. He has supervised technical team(s) performing hazardous waste assessments and remediation under criteria established by CERCLA, RCRA, CWA, TSCA, SDWA, OSHA and other recognized standards. He has performed Tier I and Tier II fate and transport analysis by determining the horizontal and vertical extent of Chemicals of Concern (COCs), established exposure points, transport evaluation media and potential receptors with site specific target levels in accordance with ASTM Risk-Based Corrective Action Guidance within selected jurisdictions throughout the United States.

Ron is a licensed Professional Geologist in Virginia, Kentucky, Alabama, Florida, Georgia and Louisiana. He is certified as a State of Nevada Certified Environmental Manager (CEM) through the Nevada Division of Environmental Protection. His duties as Principal Geologist and Technical Director for Environmental Services for Dominion Due Diligence Group (D3G) include coordinating, conducting and reviewing Phase II Environmental Site Assessments (HUD, Freddie Mac, Fannie Mae, CHFA, and ASTM E 1903-19) throughout the United States, managing the D3G Phase II ESA Department and client contact.

SAMPLE PROJECTS

HUD MAP 223 (f) & 202/223(f)

- Enon Plaza *(Dayton, OH)*
- Bixby Brockton Apartments *(Brockton, MA)*
- Golden Rule Plaza *(Washington, D.C.)*
- Revitz House *(Rockville, MD)*

HUD RENTAL ASSISTANCE DEMONSTRATION

- Belmont Heights Estates *(Tampa, FL)*
- Sparta Housing *Authority (Sparta, TN)*
- Housing Authority of the City of Georgiana *(Georgiana, AL)*
- Proposed Taft Homes *(Peoria, IL)*

ASTM/AAI Environmental Projects

- Virginia State University Steam Plant (Petersburg, VA)
- Spotsylvania Town Center (Fredericksburg, VA)
- Mall Properties (Hampton, VA)
- Paracelsus Medical Center (Arlington, VA)

GEOPHYSICAL INVESTIGATIONS

- Proposed New Middle School – Hull Street *(Richmond, VA)*
- Creighton Road & Sandy Lane *(Richmond, VA)*
- The Estates at Horsepen *(Richmond, VA)*

Attachment 6

WAC Method A Cleanup Levels, WSDE CLARC Screening Levels, USEPA VISLs, and USEPA RSLs

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
83-32-9	PAHs	Non-Halogenated	acenaphthene								6.00E-02	I				4.80E+03		
30560-19-1	Pesticides	Non-Halogenated	acephate								3.00E-04	O				2.40E+01		
75-07-0	VOCs	Non-Halogenated	acetaldehyde		9.00E-03	I	2.57E-03	2.20E-06	I	7.70E-03								
34256-82-1	Pesticides	Halogenated	acetochlor								2.00E-02	I				1.60E+03		
67-64-1	VOCs	Non-Halogenated (Solvent)	acetone								9.00E-01	I				7.20E+04		
75-86-5	SVOCs	Non-Halogenated	acetone cyanohydrin		2.00E-03	X	5.71E-04											
75-05-8	VOCs	Non-Halogenated (Solvent)	acetonitrile		6.00E-02	I	1.71E-02											
98-86-2	SVOCs	Non-Halogenated	acetophenone								1.00E-01	I				8.00E+03		
62476-59-9	Herbicides	Halogenated	acifluorfen, sodium								1.30E-02	I				1.00E+03		
107-02-8	VOCs	Non-Halogenated (Solvent)	acrolein		2.00E-05	I	5.71E-06				5.00E-04	I				4.00E+01		
79-06-1	VOCs	Non-Halogenated	acrylamide		6.00E-03	I	1.71E-03	1.00E-04	I-M	3.50E-01	2.00E-03	I	5.00E-01	I-M		1.60E+02	3.80E-01	
79-10-7	VOCs	Reactive Wastes; Corrosive	acrylic acid		1.00E-03	I	2.86E-04				5.00E-01	I				4.00E+04		
107-13-1	VOCs	Non-Halogenated	acrylonitrile		2.00E-03	I	5.71E-04	6.80E-05	I	2.38E-01	1.00E-03	H	5.40E-01	I		8.00E+01	1.90E+00	
15972-60-8	Pesticides	Halogenated	alachlor								1.00E-02	I	5.60E-02	C		8.00E+02	1.80E+01	
1596-84-5	Pesticides	Non-Halogenated	alar					5.10E-06	C	1.79E-02	1.50E-01	I	1.80E-02	C		1.20E+04	5.60E+01	
116-06-3	Pesticides (Carbamate)	Non-Halogenated	aldicarb								1.00E-03	I				8.00E+01		
1646-88-4	Pesticides (Carbamate)	Non-Halogenated	aldicarb sulfone								1.00E-03	I				8.00E+01		
309-00-2	Pesticides	Halogenated	aldrin					4.90E-03	I	1.72E+01	3.00E-05	I	1.70E+01	I		2.40E+00	5.90E-02	
74223-64-6	Pesticides	Non-Halogenated	ally								2.50E-01	I				2.00E+04		
107-18-6	VOCs	Non-Halogenated (Solvent)	allyl alcohol		1.00E-04	X	2.86E-05				5.00E-03	I				4.00E+02		
107-05-1	VOCs	Halogenated	allyl chloride		1.00E-03	I	2.86E-04	6.00E-06	C	2.10E-02			2.10E-02	C			4.80E+01	
7429-90-5	Metals	Aluminum compounds	aluminum		5.00E-03	P	1.43E-03				1.00E+00	P				8.00E+04		
20859-73-8	Metal compounds	Aluminum compounds	aluminum phosphide								4.00E-04	I				3.20E+01		
67485-29-4	Pesticides	Halogenated	amdro								1.70E-02	O				1.40E+03		
834-12-8	Pesticides	Non-Halogenated	ametryn								9.00E-03	I				7.20E+02		
92-67-1	SVOCs	Non-Halogenated	aminobiphenyl;4-					6.00E-03	C	2.10E+01			2.10E+01	C			4.80E-02	
591-27-5	Phenols	Non-Halogenated	aminophenol;m-								8.00E-02	P				6.40E+03		
33089-61-1	Pesticides	Non-Halogenated	amitraz								2.50E-03	I				2.00E+02		
7664-41-7	Nonmetal inorganics	Corrosive	AMMONIA	AMMONIA NOTES	5.00E-01	I	1.43E-01											
7790-98-9	Perchlorates	Halogenated	ammonium perchlorate								7.00E-04	I				5.60E+01		
7773-06-0	Nonmetal inorganics		ammonium sulfamate								2.00E-01	I				1.60E+04		
62-53-3	SVOCs	Non-Halogenated	aniline		1.00E-03	I	2.86E-04	1.60E-06	C	5.60E-03	7.00E-03	P	5.70E-03	I		5.60E+02	1.80E+02	
120-12-7	PAHs	Non-Halogenated	anthracene								3.00E-01	I				2.40E+04		
7440-36-0	Metals	Antimony compounds	antimony		3.00E-04	A	8.57E-05				4.00E-04	I				3.20E+01		
1314-60-9	Metal compounds	Antimony compounds	antimony pentoxide								5.00E-04	H				4.00E+01		
28300-74-5	Metal compounds	Antimony compounds	antimony potassium tartrate								9.00E-04	H				7.20E+01		
1332-81-6	Metal compounds	Antimony compounds	antimony tetroxide								4.00E-04	H				3.20E+01		
1309-64-4	Metal compounds	Antimony compounds	antimony trioxide		2.00E-04	I	5.71E-05											
74115-24-5	Pesticides	Halogenated	apollo								1.30E-02	I				1.00E+03		
140-57-8	SVOCs	Halogenated	aramite					7.10E-06	I	2.49E-02	5.00E-02	H	2.50E-02	I		4.00E+03	4.00E+01	
12674-11-2	PCBs	Halogenated	aroclor 1016					2.00E-05	G	7.00E-02	7.00E-05	I	7.00E-02	G		5.60E+00	1.40E+01	
11097-69-1	PCBs	Halogenated	aroclor 1254					5.70E-04	G	2.00E+00	2.00E-05	I	2.00E+00	G		1.60E+00	5.00E-01	
11096-82-5	PCBs	Halogenated	aroclor 1260					5.70E-04	G	2.00E+00			2.00E+00	G			5.00E-01	
7440-38-2	Metals	Arsenic compound	arsenic, inorganic		1.50E-05	C	4.29E-06	4.30E-03	I	1.51E+01	3.00E-04	I	1.50E+00	I	2.00E+01	2.40E+01	6.70E-01	2.00E+01
7784-42-1	Metal compounds	Arsenic compound	arsine		5.00E-05	I	1.43E-05				3.50E-06	C				2.80E-01		
1332-21-4	Fibers		ASBESTOS	ASBESTOS NOTE				2.30E-01	I									
76578-14-8	Pesticides	Halogenated	assure								9.00E-03	I				7.20E+02		
3337-71-1	Pesticides	Non-Halogenated	asulam								3.60E-01	O				2.90E+04		
1912-24-9	Pesticides	Halogenated	atrazine								3.50E-02	I	2.30E-01	C		2.80E+03	4.30E+00	
65195-55-3	Pesticides	Non-Halogenated	avermectin B1								4.00E-04	I				3.20E+01		
103-33-3	Pesticides	Non-Halogenated	azobenzene					3.10E-05	I	1.09E-01			1.10E-01	I			9.10E+00	
7440-39-3	Metals		barium and compounds		5.00E-04	H	1.43E-04				2.00E-01	I				1.60E+04		
114-26-1	Pesticides	Non-Halogenated	baygon								4.00E-03	I				3.20E+02		
43121-43-3	Pesticides	Halogenated	bayleton								3.40E-02	O				2.70E+03		
68359-37-5	Pesticides	Halogenated	baythroid								2.50E-02	I				2.00E+03		
1861-40-1	Pesticides	Halogenated	benefin								5.00E-03	O				4.00E+02		

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
17804-35-2	Pesticides	Non-Halogenated	benomyl								5.00E-02	I				4.00E+03		
25057-89-0	Herbicides	Non-Halogenated	bentazon								3.00E-02	I				2.40E+03		
100-52-7	SVOCs	Non-Halogenated	benzaldehyde								1.00E-01	I	4.00E-03	P		8.00E+03	2.30E+02	
71-43-2	VOCs (BTEX)	Non-Halogenated (Solvent)	BENZENE		3.00E-02	I	8.57E-03	7.80E-06	I	2.73E-02	4.00E-03	I	5.50E-02	I	3.00E-02	3.20E+02	1.80E+01	3.00E-02
108-98-5	SVOCs	Non-Halogenated	benzenethiol								1.00E-03	P				8.00E+01		
92-87-5	SVOCs	Non-Halogenated	benzidine					6.70E-02	I-M	2.35E+02	3.00E-03	I	2.30E+02	I-M		2.40E+02	8.20E-04	
192-97-2	PAHs	Non-Halogenated	benzo[e]pyrene		2.00E-06	X	5.71E-07				9.00E-05	X				7.20E+00		
56-55-3	cPAHs	Non-Halogenated	BENZO[a]ANTHRACENE	PAH NOTES														
50-32-8	cPAHs	Non-Halogenated	BENZO[a]PYRENE	PAH NOTES	2.00E-06	I	5.71E-07	6.00E-04	I-M	2.10E+00	3.00E-04	I	1.00E+00	I-M	1.00E-01	2.40E+01	1.90E-01	2.00E+00
205-99-2	cPAHs	Non-Halogenated	BENZO[b]FLUORANTHENE	PAH NOTES														
207-08-9	cPAHs	Non-Halogenated	BENZO[k]FLUORANTHENE	PAH NOTES														
65-85-0	SVOCs	Non-Halogenated	BENZOIC ACID	pH-DEPENDENT							4.00E+00	I				3.20E+05		
98-07-7	VOCs	Halogenated	benzotrichloride										1.30E+01	I			7.70E-02	
100-51-6	SVOCs	Non-Halogenated (Solvent)	benzyl alcohol								1.00E-01	P				8.00E+03		
100-44-7	VOCs	Halogenated	benzyl chloride		1.00E-03	P	2.86E-04	4.90E-05	C	1.72E-01	2.00E-03	P	1.70E-01	I		1.60E+02	5.90E+00	
7440-41-7	Metals		beryllium		2.00E-05	I	5.71E-06	2.40E-03	I	8.40E+00	2.00E-03	I				1.60E+02		
91-58-7	PAHs	Halogenated	beta-chloronaphthalene								8.00E-02	I				6.40E+03		
141-66-2	Pesticides	Non-Halogenated	bidrin								3.00E-05	O				2.40E+00		
82657-04-3	Pesticides	Halogenated	biphenthrin								1.50E-02	I				1.20E+03		
92-52-4	SVOCs	Non-Halogenated	biphenyl;1,1-		4.00E-04	X	1.14E-04				5.00E-01	I	8.00E-03	I		4.00E+04	1.30E+02	
108-60-1	VOCs	Halogenated	bis(2-chloro-1-methyl-ethyl)ether					1.00E-05	H	3.50E-02	4.00E-02	I	7.00E-02	H		3.20E+03	1.40E+01	
111-91-1	SVOCs	Halogenated	bis(2-chloroethoxy)methane								3.00E-03	P				2.40E+02		
111-44-4	SVOCs	Halogenated	bis(2-chloroethyl)ether					3.30E-04	I	1.16E+00			1.10E+00	I			9.10E-01	
117-81-7	Phthalates (ortho)	Non-Halogenated	bis(2-ethylhexyl) phthalate (DEHP)					2.40E-06	C	8.40E-03	2.00E-02	I	1.40E-02	I		1.60E+03	7.10E+01	
542-88-1	VOCs	Halogenated	bis(chloromethyl)ether					6.20E-02	I	2.17E+02			2.20E+02	I			4.50E-03	
80-05-7	Phenols	Non-Halogenated	bisphenol a								5.00E-02	I				4.00E+03		
7440-42-8	Metals		boron		2.00E-02	H	5.71E-03				2.00E-01	I				1.60E+04		
15541-45-4	Nonmetal inorganics		bromate					1.40E-04	C	4.90E-01	4.00E-03	I	7.00E-01	I		3.20E+02	1.40E+00	
79-08-3	Haloacetic acids	Halogenated	bromoacetic acid								1.70E-03	C				1.40E+02		
108-86-1	VOCs	Halogenated (Solvent)	bromobenzene		6.00E-02	I	1.71E-02				8.00E-03	I				6.40E+02		
74-97-5	VOCs	Halogenated	bromochloromethane		4.00E-02	X	1.14E-02											
75-27-4	VOCs (trihalomethanes)	Halogenated	BROMODICHLOROMETHANE	TTHM NOTES				3.70E-05	C	1.30E-01	2.00E-02	I	6.20E-02	I		1.60E+03	1.60E+01	
593-60-2	VOCs	Halogenated	bromoethene		3.00E-03	I	8.57E-04	1.50E-05	P	5.25E-02								
75-25-2	VOCs (trihalomethanes)	Halogenated (Solvent)	BROMOFORM	TTHM NOTES				1.10E-06	I	3.85E-03	2.00E-02	I	7.90E-03	I		1.60E+03	1.30E+02	
74-83-9	VOCs	Halogenated (Pesticide)	bromomethane		5.00E-03	I	1.43E-03				1.40E-03	I				1.10E+02		
2104-96-3	Pesticides	Halogenated	bromophos								5.00E-03	H				4.00E+02		
1689-84-5	Pesticides	Halogenated	bromoxynil								1.50E-02	O	1.00E-01	O		1.20E+03	1.00E+01	
1689-99-2	Pesticides	Halogenated	bromoxynil octanoate								1.50E-02	O	1.00E-01	O		1.20E+03	1.00E+01	
106-99-0	VOCs	Non-Halogenated	butadiene;1,3-		2.00E-03	I	5.71E-04	3.00E-05	I	1.05E-01			6.00E-01	C			1.70E+00	
71-36-3	VOCs	Non-Halogenated (Solvent)	butanol;n-								1.00E-01	I				8.00E+03		
75-65-0	VOCs	Non-Halogenated (Solvent)	butyl alcohol;tert-		5.00E+00	I	1.43E+00				4.00E-01	I	5.00E-04	I		3.20E+04	2.00E+03	
85-68-7	Phthalates (ortho)	Non-Halogenated	butyl benzyl phthalate (BBP)								2.00E-01	I	1.90E-03	P		1.60E+04	5.30E+02	
2008-41-5	Pesticides	Non-Halogenated	butylate								5.00E-02	I				4.00E+03		
85-70-1	Phthalates (ortho)	Non-Halogenated	butylphthalyl butylglycolate (BPBG)								1.00E+00	I				8.00E+04		
94-81-5	Pesticides	Halogenated	butyric acid;4-(2-methyl-4-chlorophenoxy)-								4.40E-02	O				3.50E+03		
75-60-5	Pesticides	Non-Halogenated	cacodylic acid								2.00E-02	A				1.60E+03		
7440-43-9	Metals		CADMIUM (POTABLE GROUNDWATER & SURFACE WATER)	CADMIUM NOTES	1.00E-05	A	2.86E-06	1.80E-03	I	6.30E+00	5.00E-04	I						
7440-43-9	Metals		CADMIUM (SOIL & NONPOTABLE SURFACE WATER)	CADMIUM NOTES	1.00E-05	A	2.86E-06	1.80E-03	I	6.30E+00	1.00E-03	I			2.00E+00	8.00E+01		2.00E+00
592-01-8	Cyanides	Non-Halogenated	calcium cyanide		[REMOVED]						1.00E-03	I				8.00E+01		
105-60-2	SVOCs	Non-Halogenated	caprolactam		2.20E-03	C	6.29E-04				5.00E-01	I				4.00E+04		
2425-06-1	Pesticides	Halogenated	captafol					4.30E-05	C	1.51E-01	2.00E-03	I	1.50E-01	C		1.60E+02	6.70E+00	
133-06-2	Pesticides	Halogenated	captan					6.60E-07	C	2.31E-03	1.30E-01	I	2.30E-03	C		1.00E+04	4.30E+02	
63-25-2	Pesticides (Carbamate)	Non-Halogenated	carbaryl								1.00E-01	I				8.00E+03		
1563-66-2	Pesticides (Carbamate)	Non-Halogenated	carbofuran								5.00E-03	I				4.00E+02		
75-15-0	VOCs	Non-Halogenated (Solvent)	carbon disulfide		7.00E-01	I	2.00E-01				1.00E-01	I				8.00E+03		
56-23-5	VOCs	Halogenated (Solvent)	carbon tetrachloride		1.00E-01	I	2.86E-02	6.00E-06	I	2.10E-02	4.00E-03	I	7.00E-02	I		3.20E+02	1.40E+01	

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
55285-14-8	Pesticides	Non-Halogenated	carbosulfan								1.00E-02	I				8.00E+02		
5234-68-4	Pesticides	Non-Halogenated	carboxin								1.00E-01	I				8.00E+03		
1306-38-3	Metals		cerium oxide and cerium compounds		9.00E-04	I	2.57E-04											
302-17-0	VOCs	Halogenated	chloral hydrate								1.00E-01	I				8.00E+03		
133-90-4	Herbicides	Halogenated	chloramben								1.50E-02	I				1.20E+03		
118-75-2	Pesticides	Halogenated	chloranil										4.00E-01	H			2.50E+00	
12789-03-6	Pesticides	Halogenated	chlordane		7.00E-04	I	2.00E-04	1.00E-04	I	3.50E-01	5.00E-04	I	3.50E-01	I		4.00E+01	2.90E+00	
5103-71-9	Pesticides	Halogenated	chlordane (alpha)								5.00E-04	G				4.00E+01		
5103-74-2	Pesticides	Halogenated	chlordane (gamma)								5.00E-04	G				4.00E+01		
143-50-0	Pesticides	Halogenated	chlordecone (kepone)					4.60E-03	C	1.61E+01	3.00E-04	I	1.00E+01	I		2.40E+01	1.00E-01	
16887-00-6	Nonmetal inorganics		chloride															
90982-32-4	Pesticides	Halogenated	chlorimuron-ethyl								9.00E-02	O				7.20E+03		
7782-50-5	Nonmetal inorganics		CHLORINE	MCL FOR DISINFECTANTS	1.45E-04	A	4.14E-05				1.00E-01	I				8.00E+03		
506-77-4	Cyanides	Halogenated	chlorine cyanide								5.00E-02	I				4.00E+03		
10049-04-4	VOCs	Halogenated	CHLORINE DIOXIDE	MCL FOR DISINFECTANTS	2.00E-04	I	5.71E-05				3.00E-02	I				2.40E+03		
7758-19-2	Nonmetal inorganics		chlorite								3.00E-02	I				2.40E+03		
75-68-3	VOCs	Halogenated	chloro-1,1-difluoroethane;1-		5.00E+01	I	1.43E+01											
126-99-8	VOCs	Halogenated	chloro-1,3-butadiene;2-		2.00E-02	I	5.71E-03	3.00E-04	I	1.05E+00	2.00E-02	H				1.60E+03		
3165-93-3	SVOCs	Halogenated	chloro-2-methylaniline hydrochloride;4-										4.60E-01	H			2.20E+00	
95-69-2	SVOCs	Halogenated	chloro-2-methylaniline;4-					7.70E-05	C	2.70E-01	3.00E-03	X	1.00E-01	P		2.40E+02	1.00E+01	
79-11-8	Haloacetic acids	Halogenated	chloroacetic acid								2.00E-03	H				1.60E+02		
532-27-4	SVOCs	Halogenated	chloroacetophenone;2-		3.00E-05	I	8.57E-06											
106-47-8	SVOCs	Halogenated	chloroaniline;p-								4.00E-03	I	2.00E-01	P		3.20E+02	5.00E+00	
108-90-7	VOCs	Halogenated (Solvent)	chlorobenzene		5.00E-02	P	1.43E-02				2.00E-02	I				1.60E+03		
510-15-6	Pesticides	Halogenated	chlorobenzilate					3.10E-05	C	1.09E-01	2.00E-02	I	1.10E-01	C		1.60E+03	9.10E+00	
74-11-3	Pesticides	Halogenated	chlorobenzoic acid;p-								3.00E-02	X				2.40E+03		
98-56-6	VOCs	Halogenated (Solvent)	chlorobenzotrifluoride;4-		3.00E-01	P	8.57E-02	8.60E-06	C	3.01E-02	3.00E-03	P				2.40E+02		
109-69-3	VOCs	Halogenated	chlorobutane;1-								4.00E-02	P				3.20E+03		
59-50-7	Phenols	Halogenated	chlorocresol								1.00E-01	A				8.00E+03		
75-45-6	VOCs	Halogenated	chlorodifluoromethane		5.00E+01	I	1.43E+01											
67-66-3	VOCs (trihalomethanes)	Halogenated (Solvent)	CHLOROFORM	TTHM NOTES	9.80E-02	A	2.80E-02	2.30E-05	I	8.05E-02	1.00E-02	I	3.10E-02	C		8.00E+02	3.20E+01	
74-87-3	VOCs	Halogenated	chloromethane		9.00E-02	I	2.57E-02											
107-30-2	VOCs	Halogenated	chloromethyl methyl ether					6.90E-04	C	2.42E+00			2.40E+00	C			4.20E-01	
88-73-3	Pesticides	Halogenated	chloronitrobenzene;o-		1.00E-05	X	2.86E-06				3.00E-03	P	3.00E-01	P		2.40E+02	3.30E+00	
100-00-5	Pesticides	Halogenated	chloronitrobenzene;p-		2.00E-03	P	5.71E-04				7.00E-04	P	6.00E-02	P		5.60E+01	1.70E+01	
95-57-8	Phenols	Halogenated	CHLOROPHENOL;2-	pH-DEPENDENT							5.00E-03	I				4.00E+02		
1897-45-6	Pesticides	Halogenated	chlorothalonil								1.50E-02	I	1.70E-02	C		1.20E+03	5.90E+01	
95-49-8	VOCs	Halogenated (Solvent)	chlorotoluene;o-								2.00E-02	I				1.60E+03		
106-43-4	VOCs	Halogenated (Solvent)	chlorotoluene;p-								2.00E-02	X				1.60E+03		
101-21-3	Pesticides	Halogenated	chlorpropham								5.00E-03	O				4.00E+02		
2921-88-2	Pesticides	Halogenated	chlorpyrifos								1.00E-03	A				8.00E+01		
5598-13-0	Pesticides	Halogenated	chlorpyrifos-methyl								1.00E-02	H				8.00E+02		
64902-72-3	Pesticides	Halogenated	chlorsulfuron								5.00E-02	O				4.00E+03		
60238-56-4	Pesticides	Halogenated	chlorthiophos								8.00E-04	H				6.40E+01		
7440-47-3	Metals	Chromium compounds	CHROMIUM (TOTAL)	CHROMIUM NOTES														
16065-83-1	Metals	Chromium compounds	CHROMIUM (III)	CHROMIUM NOTES							1.50E+00	I			2.00E+03	1.20E+05		2.00E+03
18540-29-9	Metals	Chromium compounds	CHROMIUM (VI)	CHROMIUM NOTES	1.00E-04	I	2.86E-05	8.40E-02	G-M	2.94E+02	3.00E-03	I	5.00E-01	C-M	1.90E+01	2.40E+02	3.80E-01	1.90E+01
218-01-9	cPAHs	Non-Halogenated	CHRYSENE	PAH NOTES														
7440-48-4	Metals		Cobalt		6.00E-06	P	1.71E-06	9.00E-03	P	3.15E+01	3.00E-04	P				2.40E+01		
E649830	VOCs		coke oven emissions					6.20E-04	I-M	2.17E+00								
7440-50-8	Metals	Copper compounds	COPPER	HARDNESS - DEPENDENT							4.00E-02	H				3.20E+03		
544-92-3	Cyanides	Copper compounds	copper cyanide								5.00E-03	I				4.00E+02		
108-39-4	Phenols	Non-Halogenated	cresol;m-		6.00E-01	C	1.71E-01				5.00E-02	I				4.00E+03		
95-48-7	Phenols	Non-Halogenated (Solvent)	cresol;o-		6.00E-01	C	1.71E-01				5.00E-02	I				4.00E+03		
106-44-5	Phenols	Non-Halogenated (Solvent)	cresol;p-		6.00E-01	C	1.71E-01				1.00E-01	A				8.00E+03		
1319-77-3	Phenols	Non-Halogenated (Solvent)	cresols		6.00E-01	C	1.71E-01				1.00E-01	A				8.00E+03		

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
123-73-9	VOCs	Non-Halogenated	crotonaldehyde								1.00E-03	P	1.90E+00	H		8.00E+01	5.30E-01	
98-82-8	VOCs	Non-Halogenated (Solvent)	cumene		4.00E-01	I	1.14E-01				1.00E-01	I				8.00E+03		
21725-46-2	Pesticides	Halogenated	cyanazine								2.00E-03	H	8.40E-01	H		1.60E+02	1.20E+00	
57-12-5	Cyanides	Non-Halogenated	CYANIDE	CYANIDE NOTES	8.00E-04	G	2.29E-04				6.30E-04	I				5.00E+01		
460-19-5	Cyanides	Non-Halogenated	cyanogen								1.00E-03	I				8.00E+01		
506-68-3	Cyanides	Halogenated	cyanogen bromide								9.00E-02	I				7.20E+03		
110-82-7	VOCs	Non-Halogenated (Solvent)	cyclohexane		6.00E+00	I	1.71E+00											
108-94-1	VOCs	Non-Halogenated (Solvent)	cyclohexanone		7.00E-01	P	2.00E-01				5.00E+00	I				4.00E+05		
110-83-8	VOCs	Non-Halogenated	cyclohexene		1.00E+00	X	2.86E-01				5.00E-03	P				4.00E+02		
108-91-8	VOCs	Non-Halogenated	cyclohexylamine								2.00E-01	I				1.60E+04		
66215-27-8	Pesticides	Non-Halogenated	cyromazine								5.00E-01	O				4.00E+04		
1861-32-1	Herbicides	Halogenated	dacthal								1.00E-02	I				8.00E+02		
75-99-0	Herbicides	Halogenated	dalapon, sodium salt								3.00E-02	I				2.40E+03		
39515-41-8	Pesticides	Non-Halogenated	danitol								2.50E-02	I				2.00E+03		
72-54-8	Pesticides	Halogenated	DDD					6.90E-05	C	2.42E-01	5.00E-04	A	2.40E-01	I		4.00E+01	4.20E+00	
72-55-9	Pesticides	Halogenated	DDE					9.70E-05	C	3.40E-01	5.00E-04	A	3.40E-01	I		4.00E+01	2.90E+00	
50-29-3	Pesticides	Halogenated	DDT					9.70E-05	I	3.40E-01	5.00E-04	I	3.40E-01	I	3.00E+00	4.00E+01	2.90E+00	4.00E+00
1163-19-5	PBDEs	Halogenated	decabromodiphenyl ether (PBDE-209)								7.00E-03	I	7.00E-04	I		5.60E+02	1.40E+03	
8065-48-3	Pesticides	Non-Halogenated	demeton								4.00E-05	I				3.20E+00		
103-23-1	SVOCs	Non-Halogenated (Solvent)	di(2-ethylhexyl)adipate								6.00E-01	I	1.20E-03	I		4.80E+04	8.30E+02	
2303-16-4	Pesticides	Halogenated	diallate										6.10E-02	H			1.60E+01	
333-41-5	Pesticides	Non-Halogenated	diazinon								7.00E-04	A				5.60E+01		
53-70-3	cPAHs	Non-Halogenated	DIBENZ[a,h]ANTHRACENE	PAH NOTES														
132-64-9	Furans	Non-Halogenated	dibenzofuran								1.00E-03	X				8.00E+01		
96-12-8	Pesticides	Halogenated	dibromo-3-chloropropane;1,2-		2.00E-04	I	5.71E-05	6.00E-03	P-M	2.10E+01	2.00E-04	P	8.00E-01	P-M		1.60E+01	2.30E-01	
631-64-1	Haloacetic acids	Halogenated	dibromoacetic acid								3.00E-04	C	2.50E-01	C		2.40E+01	4.00E+00	
106-37-6	Pesticides	Halogenated	dibromobenzene;1,4-								1.00E-02	I				8.00E+02		
124-48-1	VOCs (trihalomethanes)	Halogenated	DIBROMOCHLOROMETHANE	TTHM NOTES							2.00E-02	I	8.40E-02	I		1.60E+03	1.20E+01	
84-74-2	Phthalates (ortho)	Non-Halogenated	di-butyl phthalate (DBP)								1.00E-01	I				8.00E+03		
1918-00-9	Herbicides	Halogenated	dicamba								3.00E-02	I				2.40E+03		
3400-09-7	Inorganic chloramines	Halogenated	DICHLORAMINE	MCL FOR DISINFECTANTS														
764-41-0	VOCs	Halogenated	dichloro-2-butene;1,4-					4.20E-03	P	1.47E+01								
110-57-6	VOCs	Halogenated	dichloro-2-butene;trans-1,4-					4.20E-03	P	1.47E+01								
79-43-6	Haloacetic acids	Halogenated	dichloroacetic acid								4.00E-03	I	5.00E-02	I		3.20E+02	2.00E+01	
95-50-1	VOCs	Halogenated (Solvent)	dichlorobenzene;1,2-		2.00E-01	H	5.71E-02				9.00E-02	I				7.20E+03		
541-73-1	VOCs	Halogenated	dichlorobenzene;1,3-															
106-46-7	VOCs	Halogenated	dichlorobenzene;1,4-		8.00E-01	I	2.29E-01	1.10E-05	C	3.85E-02	7.00E-02	A	5.40E-03	C		5.60E+03	1.90E+02	
91-94-1	SVOCs	Halogenated	dichlorobenzidine;3,3'-					3.40E-04	C	1.19E+00			4.50E-01	I			2.20E+00	
75-71-8	VOCs	Halogenated	dichlorodifluoromethane		1.00E-01	X	2.86E-02				2.00E-01	I				1.60E+04		
75-34-3	VOCs	Halogenated (Solvent)	dichloroethane;1,1-					1.60E-06	C	5.60E-03	2.00E-01	P	5.70E-03	C		1.60E+04	1.80E+02	
107-06-2	VOCs	Halogenated (Solvent)	dichloroethane;1,2- (EDC)		7.00E-03	P	2.00E-03	2.60E-05	I	9.10E-02	6.00E-03	X	9.10E-02	I		4.80E+02	1.10E+01	
75-35-4	VOCs	Halogenated (Solvent)	dichloroethylene;1,1-		2.00E-01	I	5.71E-02				5.00E-02	I				4.00E+03		
156-59-2	VOCs	Halogenated (Solvent)	dichloroethylene;cis-1,2-		4.00E-02	X	1.14E-02				2.00E-03	I				1.60E+02		
156-60-5	VOCs	Halogenated (Solvent)	dichloroethylene;trans-1,2-		4.00E-02	X	1.14E-02				2.00E-02	I				1.60E+03		
120-83-2	Phenols	Halogenated	DICHLOROPHENOL;2,4-	pH-DEPENDENT							3.00E-03	I				2.40E+02		
94-75-7	Herbicides	Halogenated	dichlorophenoxyacetic acid;2,4-								1.00E-02	I				8.00E+02		
78-87-5	VOCs	Halogenated (Solvent)	dichloropropane;1,2-		4.00E-03	I	1.14E-03	3.70E-06	P	1.30E-02	4.00E-02	P	3.70E-02	P		3.20E+03	2.70E+01	
142-28-9	VOCs	Halogenated	dichloropropane;1,3-								2.00E-02	P				1.60E+03		
616-23-9	SVOCs	Halogenated	dichloropropanol;2,3-								3.00E-03	I				2.40E+02		
542-75-6	VOCs	Halogenated	dichloropropene;1,3-		2.00E-02	I	5.71E-03	4.00E-06	I	1.40E-02	3.00E-02	I	1.00E-01	I		2.40E+03	1.00E+01	
62-73-7	Pesticides	Halogenated	dichlorvos		5.00E-04	I	1.43E-04	8.30E-05	C	2.91E-01	5.00E-04	I	2.90E-01	I		4.00E+01	3.40E+00	
77-73-6	VOCs	Non-Halogenated	dicyclopentadiene		3.00E-04	X	8.57E-05				8.00E-02	P				6.40E+03		
60-57-1	Pesticides	Halogenated	dieldrin					4.60E-03	I	1.61E+01	5.00E-05	I	1.60E+01	I		4.00E+00	6.30E-02	
84-66-2	Phthalates (ortho)	Non-Halogenated	diethyl phthalate								8.00E-01	I				6.40E+04		
112-34-5	Glycols	Non-Halogenated	diethylene glycol monobutyl ether		1.00E-04	P	2.86E-05				3.00E-02	P				2.40E+03		
111-90-0	Glycols	Non-Halogenated	diethylene glycol monoethyl ether		3.00E-04	P	8.57E-05				6.00E-02	P				4.80E+03		

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617-84-5	SVOCs	Non-Halogenated	diethylformamide								1.00E-03	P				8.00E+01		
56-53-1	SVOCs	Non-Halogenated	diethylstilbesterol					1.00E-01	C	3.50E+02			3.50E+02	C			2.90E-03	
43222-48-6	Pesticides	Non-Halogenated	difenzoquat								8.30E-02	O				6.60E+03		
35367-38-5	Pesticides	Halogenated	diflubenzuron								2.00E-02	I				1.60E+03		
75-37-6	VOCs	Halogenated	difluoroethane;1,1-		4.00E+01	I	1.14E+01											
108-20-3	VOCs	Non-Halogenated (Solvent)	diisopropyl ether		7.00E-01	P	2.00E-01											
1445-75-6	VOCs	Non-Halogenated	diisopropyl methylphosphonate								8.00E-02	I				6.40E+03		
55290-64-7	Pesticides	Non-Halogenated	dimethipin								2.20E-02	O				1.80E+03		
60-51-5	Pesticides	Non-Halogenated	dimethoate								2.20E-03	O				1.80E+02		
119-90-4	SVOCs	Non-Halogenated	dimethoxybenzidine;3,3'-					[REMOVED]					1.60E+00	P			6.30E-01	
131-11-3	Phthalates (ortho)	Non-Halogenated	dimethyl phthalate															
120-61-6	Phthalates	Non-Halogenated	dimethyl terephthalate								1.00E-01	I				8.00E+03		
21436-96-4	SVOCs	Halogenated	dimethylaniline hydrochloride;2,4-										5.80E-01	H			1.70E+00	
95-68-1	SVOCs	Non-Halogenated	dimethylaniline;2,4-								2.00E-03	X	2.00E-01	P		1.60E+02	5.00E+00	
121-69-7	VOCs	Non-Halogenated	dimethylaniline;N,N-								2.00E-03	I	2.70E-02	P		1.60E+02	3.70E+01	
119-93-7	SVOCs	Non-Halogenated	dimethylbenzidine;3,3'-										1.10E+01	P			9.10E-02	
68-12-2	VOCs	Non-Halogenated (Solvent)	dimethylformamide;N,N-		3.00E-02	I	8.57E-03				1.00E-01	P				8.00E+03		
57-14-7	VOCs	Non-Halogenated	dimethylhydrazine;1,1-		2.00E-06	X	5.71E-07				1.00E-04	X				8.00E+00		
540-73-8	VOCs	Non-Halogenated	dimethylhydrazine;1,2-					1.60E-01	C	5.60E+02			5.50E+02	C			1.80E-03	
105-67-9	Phenols	Non-Halogenated	dimethylphenol;2,4-								2.00E-02	I				1.60E+03		
576-26-1	Phenols	Non-Halogenated	dimethylphenol;2,6-								6.00E-04	I				4.80E+01		
95-65-8	Phenols	Non-Halogenated	dimethylphenol;3,4-								1.00E-03	I				8.00E+01		
99-65-0	Explosives	Non-Halogenated	dinitrobenzene;m-								1.00E-04	I				8.00E+00		
528-29-0	SVOCs	Non-Halogenated	dinitrobenzene;o-								1.00E-04	P				8.00E+00		
100-25-4	SVOCs	Non-Halogenated	dinitrobenzene;p-								1.00E-04	P				8.00E+00		
131-89-5	Phenols	Non-Halogenated	dinitro-o-cyclohexyl phenol;4,6-								2.00E-03	I				1.60E+02		
51-28-5	Phenols	Non-Halogenated	DINITROPHENOL;2,4-	pH-DEPENDENT							2.00E-03	I				1.60E+02		
25550-58-7	Phenols	Non-Halogenated	dinitrophenols															
E1615210	Explosives	Non-Halogenated	dinitrotoluene mixture; 2,4-/2,6-								9.00E-04	X	6.80E-01	I		7.20E+01	1.50E+00	
121-14-2	Explosives	Non-Halogenated	dinitrotoluene;2,4-					8.90E-05	C	3.12E-01	2.00E-03	I	3.10E-01	C		1.60E+02	3.20E+00	
606-20-2	Explosives	Non-Halogenated	dinitrotoluene;2,6-								3.00E-04	X	1.50E+00	P		2.40E+01	6.70E-01	
35572-78-2	Explosives	Non-Halogenated	dinitrotoluene, 2-Amino-4,6-								1.00E-04	X				8.00E+00		
19406-51-0	Explosives	Non-Halogenated	dinitrotoluene, 4-Amino-2,6-								1.00E-04	X				8.00E+00		
117-84-0	Phthalates (ortho)	Non-Halogenated	di-n-octyl phthalate (DNoP)								1.00E-02	P				8.00E+02		
88-85-7	Herbicides	Non-Halogenated	dinoseb								1.00E-03	I				8.00E+01		
123-91-1	VOCs	Non-Halogenated (Solvent)	dioxane;1,4-		3.00E-02	I	8.57E-03	5.00E-06	I	1.75E-02	3.00E-02	I	1.00E-01	I		2.40E+03	1.00E+01	
957-51-7	Pesticides	Non-Halogenated	diphenamid								3.00E-02	I				2.40E+03		
122-39-4	Pesticides	Non-Halogenated	diphenylamine								1.00E-01	O				8.00E+03		
122-66-7	SVOCs	Non-Halogenated	diphenylhydrazine;1,2-					2.20E-04	I	7.70E-01			8.00E-01	I			1.30E+00	
2764-72-9	Pesticides	Non-Halogenated	diquat								2.20E-03	I				1.80E+02		
1937-37-7	Dyes		direct black 38					2.10E-03	C	7.35E+00			7.40E+00	C			1.40E-01	
2602-46-2	Dyes		direct blue 6					2.10E-03	C	7.35E+00			7.40E+00	C			1.40E-01	
16071-86-6	Dyes		direct brown 95					1.90E-03	C	6.65E+00			6.70E+00	C			1.50E-01	
298-04-4	Pesticides	Non-Halogenated	disulfoton								4.00E-05	I				3.20E+00		
505-29-3	SVOCs	Non-Halogenated	dithiane;1,4-								1.00E-02	I				8.00E+02		
330-54-1	Pesticides (Carbamate)	Halogenated	diuron								2.00E-03	I				1.60E+02		
534-52-1	Phenols	Non-Halogenated	DNOC								8.00E-05	X				6.40E+00		
2439-10-3	Pesticides	Non-Halogenated	dodine								2.00E-02	O				1.60E+03		
115-29-7	Pesticides	Halogenated	endosulfan								6.00E-03	I				4.80E+02		
1031-07-8	Pesticides	Halogenated	endosulfan sulfate								6.00E-03	P				4.80E+02		
959-98-8	Pesticides	Halogenated	endosulfan;alpha															
33213-65-9	Pesticides	Halogenated	endosulfan;beta															
145-73-3	Herbicides	Non-Halogenated	endothall								2.00E-02	I				1.60E+03		
72-20-8	Pesticides	Halogenated	endrin								3.00E-04	I				2.40E+01		
7421-93-4	Pesticides	Halogenated	endrin aldehyde															
106-89-8	VOCs	Halogenated	epichlorohydrin		1.00E-03	I	2.86E-04	1.20E-06	I	4.20E-03	6.00E-03	P	9.90E-03	I		4.80E+02	1.00E+02	

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
106-88-7	VOCs	Non-Halogenated	epoxybutane		2.00E-02	I	5.71E-03											
16672-87-0	Pesticides	Halogenated	ethephon								5.00E-03	I				4.00E+02		
563-12-2	Pesticides	Non-Halogenated	ethion								5.00E-04	I				4.00E+01		
111-15-9	VOCs	Non-Halogenated (Solvent)	ethoxyethanol acetate;2-		6.00E-02	P	1.71E-02				1.00E-01	P				8.00E+03		
110-80-5	VOCs	Non-Halogenated (Solvent)	ethoxyethanol;2-		2.00E-01	I	5.71E-02				9.00E-02	P				7.20E+03		
141-78-6	VOCs	Non-Halogenated (Solvent)	ethyl acetate		7.00E-02	P	2.00E-02				9.00E-01	I				7.20E+04		
140-88-5	VOCs	Non-Halogenated	ethyl acrylate		8.00E-03	P	2.29E-03				5.00E-03	P	4.80E-02	H		4.00E+02	2.10E+01	
75-00-3	VOCs	Halogenated	ethyl chloride		1.00E+01	I	2.86E+00											
759-94-4	Pesticides	Non-Halogenated	ethyl dipropylthiocarbamate;S-								5.00E-02	O				4.00E+03		
60-29-7	VOCs	Non-Halogenated (Solvent)	ethyl ether								2.00E-01	I				1.60E+04		
97-63-2	VOCs	Non-Halogenated	ethyl methacrylate		3.00E-01	P	8.57E-02				9.00E-02	H				7.20E+03		
2104-64-5	Pesticides	Non-Halogenated	ethyl p-nitrophenyl phenylphosphorothioate								1.00E-05	I				8.00E-01		
637-92-3	VOCs	Non-Halogenated	ethyl tertiary butyl ether (ETBE)		4.00E+01	I	1.14E+01	8.00E-08	I	2.80E-04	1.00E+00	I				8.00E+04		
100-41-4	VOCs (BTEX)	Non-Halogenated (Solvent)	ethylbenzene		1.00E+00	I	2.86E-01				1.00E-01	I			6.00E+00	8.00E+03		6.00E+00
109-78-4	SVOCs	Non-Halogenated	ethylene cyanohydrin								7.00E-02	P				5.60E+03		
107-15-3	VOCs	Non-Halogenated	ethylene diamine								9.00E-02	P				7.20E+03		
106-93-4	VOCs	Halogenated Pesticides	ethylene dibromide (EDB)		9.00E-03	I	2.57E-03	6.00E-04	I	2.10E+00	9.00E-03	I	2.00E+00	I	5.00E-03	7.20E+02	5.00E-01	5.00E-03
107-21-1	Glycols	Non-Halogenated (Solvent)	ethylene glycol		4.00E-01	C	1.14E-01				2.00E+00	I				1.60E+05		
111-76-2	Glycols	Non-Halogenated (Solvent)	ethylene glycol monobutyl ether (EGBE)		1.60E+00	I	4.57E-01				1.00E-01	I				8.00E+03		
75-21-8	VOCs	Non-Halogenated	ethylene oxide		3.00E-02	C	8.57E-03	3.00E-03	I-M	1.05E+01			3.10E-01	C-M			6.00E-01	
96-45-7	SVOCs	Non-Halogenated	ethylene thiourea					1.30E-05	C	4.55E-02	8.00E-05	I	4.50E-02	C		6.40E+00	2.20E+01	
84-72-0	Phthalates (ortho)	Non-Halogenated	ethylphthalyl ethyl glycolate								3.00E+00	I				2.40E+05		
101200-48-0	Pesticides	Non-Halogenated	express								8.00E-03	I				6.40E+02		
22224-92-6	Pesticides	Non-Halogenated	fenamiphos								2.50E-04	I				2.00E+01		
2164-17-2	Pesticides	Halogenated	fluometuron								1.30E-02	I				1.00E+03		
206-44-0	PAHs	Non-Halogenated	fluoranthene								4.00E-02	I				3.20E+03		
86-73-7	PAHs	Non-Halogenated	fluorene								4.00E-02	I				3.20E+03		
16984-48-8	Nonmetal inorganics		FLUORIDE	FLUORIDE NOTES	1.30E-02	C	3.71E-03				6.00E-02	I				4.80E+03		
59756-60-4	Pesticides	Halogenated	fluridone								8.00E-02	I				6.40E+03		
56425-91-3	Pesticides	Halogenated	flurprimidol								4.00E-02	O				3.20E+03		
66332-96-5	Pesticides	Halogenated	flutolanil								5.00E-01	O				4.00E+04		
69409-94-5	Pesticides	Halogenated	fluvalinate								1.00E-02	I				8.00E+02		
133-07-3	Pesticides	Halogenated	folpet								9.00E-02	O				7.20E+03		
72178-02-0	Pesticides	Halogenated	fomesafen								1.00E-02	O				8.00E+02		
944-22-9	Pesticides	Non-Halogenated	fonofos								2.00E-03	I				1.60E+02		
50-00-0	VOCs	Non-Halogenated	formaldehyde		9.80E-03	A	2.80E-03	1.30E-05	I	4.55E-02	2.00E-01	I	2.10E-02	C		1.60E+04	4.80E+01	
64-18-6	VOCs	Non-Halogenated (Solvent)	formic acid		3.00E-04	X	8.57E-05				9.00E-01	P				7.20E+04		
39148-24-8	Pesticides	Non-Halogenated	fosetyl-al								2.50E+00	O				2.00E+05		
110-00-9	Furans	Non-Halogenated	furan								1.00E-03	I				8.00E+01		
67-45-8	SVOCs	Non-Halogenated	furazolidone										3.80E+00	H			2.60E-01	
98-01-1	VOCs	Non-Halogenated	furfural		5.00E-02	H	1.43E-02				3.00E-03	I				2.40E+02		
531-82-8	SVOCs	Non-Halogenated	furium					4.30E-04	C	1.51E+00			1.50E+00	C			6.70E-01	
60568-05-0	Pesticides	Non-Halogenated	furmecyclox					8.60E-06	C	3.01E-02			3.00E-02	I			3.30E+01	
77182-82-2	Pesticides	Non-Halogenated	glufosinate-ammonium								6.00E-03	O				4.80E+02		
765-34-4	VOCs	Non-Halogenated	glycidaldehyde		1.00E-03	X	2.86E-04				4.00E-04	I				3.20E+01		
1071-83-6	Herbicides	Non-Halogenated	glyphosate								1.00E-01	I				8.00E+03		
unavailable20	Radionuclides		GROSS ALPHA PARTICLE ACTIVITY	ALPHA PARTICLE NOTE														
unavailable21	Radionuclides		GROSS BETA PARTICLE ACTIVITY	BETA PARTICLE NOTE														
86-50-0	Pesticides	Non-Halogenated	guthion		1.00E-02	A	2.86E-03				3.00E-03	A				2.40E+02		
69806-40-2	Pesticides	Halogenated	haloxyfop-methyl								5.00E-05	I				4.00E+00		
79277-27-3	Pesticides	Non-Halogenated	harmony								4.30E-02	O				3.40E+03		
76-44-8	Pesticides	Halogenated	heptachlor					1.30E-03	I	4.55E+00	5.00E-04	I	4.50E+00	I		4.00E+01	2.20E-01	
1024-57-3	Pesticides	Halogenated	heptachlor epoxide					2.60E-03	I	9.10E+00	1.30E-05	I	9.10E+00	I		1.00E+00	1.10E-01	
142-82-5	VOCs	Non-Halogenated (Solvent)	heptane;n-		4.00E-01	P	1.14E-01				3.00E-04	X				2.40E+01		
87-82-1	SVOCs	Halogenated	hexabromobenzene								2.00E-03	I				1.60E+02		
68631-49-2	PBDEs	Halogenated	hexabromodiphenyl ether; 2,2',4,4',5,5'- (PBDE-153)								2.00E-04	I				1.60E+01		

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
118-74-1	Pesticides	Halogenated	hexachlorobenzene					4.60E-04	I	1.61E+00	8.00E-04	I	1.60E+00	I		6.40E+01	6.30E-01	
87-68-3	VOCs	Halogenated	hexachlorobutadiene					2.20E-05	I	7.70E-02	1.00E-03	P	7.80E-02	I		8.00E+01	1.30E+01	
319-84-6	Pesticides	Halogenated	hexachlorocyclohexane;alpha					1.80E-03	I	6.30E+00	9.00E-04	A	6.30E+00	I		7.20E+01	1.60E-01	
319-85-7	Pesticides	Halogenated	hexachlorocyclohexane;beta-					5.30E-04	I	1.86E+00			1.80E+00	I			5.60E-01	
608-73-1	Pesticides	Halogenated	hexachlorocyclohexane;technical					5.10E-04	I	1.79E+00			1.80E+00	I			5.60E-01	
77-47-4	Pesticides	Halogenated	hexachlorocyclopentadiene		2.00E-04	I	5.71E-05				6.00E-03	I				4.80E+02		
34465-46-8	Dioxins	Halogenated	hexachlorodibenzo-p-dioxin, mixture					1.30E+00	I	4.55E+03			6.20E+03	I			1.60E-04	
67-72-1	VOCs	Halogenated	hexachloroethane		3.00E-02	I	8.57E-03	1.10E-05	C	3.85E-02	7.00E-04	I	4.00E-02	I		5.60E+01	2.50E+01	
70-30-4	SVOCs	Halogenated	hexachlorophene								3.00E-04	I				2.40E+01		
13252-13-6	PFAS	Halogenated	HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA; GenX)	PFAS NOTES							3.00E-06	D				2.40E-01		
822-06-0	VOCs	Non-Halogenated	hexamethylene diisocyanate;1,6-		1.00E-05	I	2.86E-06											
110-54-3	VOCs	Non-Halogenated (Solvent)	hexane;n-		7.00E-01	I	2.00E-01				6.00E-02	H				4.80E+03		
591-78-6	VOCs	Non-Halogenated (Solvent)	hexanone;2-		3.00E-02	I	8.57E-03				5.00E-03	I				4.00E+02		
51235-04-2	Pesticides	Non-Halogenated	hexazinone								3.30E-02	I				2.60E+03		
302-01-2	VOCs	Non-Halogenated	hydrazine		3.00E-05	P	8.57E-06	4.90E-03	I	1.72E+01			3.00E+00	I			3.30E-01	
10034-93-2	Nonmetal inorganics		hydrazine sulfate					4.90E-03	I	1.72E+01			3.00E+00	I			3.30E-01	
7647-01-0	Nonmetal inorganics	Reactive Wastes; Corrosive	hydrogen chloride		2.00E-02	I	5.71E-03											
74-90-8	Cyanides	Non-Halogenated	hydrogen cyanide		8.00E-04	I	2.29E-04				6.00E-04	I				4.80E+01		
7783-06-4	Nonmetal inorganics		hydrogen sulfide		2.00E-03	I	5.71E-04											
123-31-9	SVOCs	Non-Halogenated	hydroquinone								4.00E-02	P	6.00E-02	P		3.20E+03	1.70E+01	
35554-44-0	Pesticides	Halogenated	imazalil								1.10E-01	O	6.10E-02	O		8.80E+03	1.60E+01	
81335-37-7	Pesticides	Non-Halogenated	imazaquin								2.50E-01	I				2.00E+04		
193-39-5	cPAHs	Non-Halogenated	INDENO[1,2,3-cd]PYRENE	PAH NOTES														
36734-19-7	Pesticides	Halogenated	iprodione								4.00E-02	I				3.20E+03		
7439-89-6	Metals		iron								7.00E-01	P				5.60E+04		
78-83-1	VOCs	Non-Halogenated (Solvent)	isobutyl alcohol		4.00E-01	X	1.14E-01				3.00E-01	I				2.40E+04		
78-59-1	SVOCs	Non-Halogenated (Solvent)	isophorone		2.00E+00	C	5.71E-01				2.00E-01	I	9.50E-04	I		1.60E+04	1.10E+03	
33820-53-0	Pesticides	Non-Halogenated	isopropalin								1.50E-02	I				1.20E+03		
67-63-0	VOCs	Non-Halogenated (Solvent)	isopropanol		2.00E-01	P	5.71E-02				2.00E+00	P				1.60E+05		
1832-54-8	SVOCs	Non-Halogenated	isopropyl methyl phosphonic acid								1.00E-01	I				8.00E+03		
82558-50-7	Pesticides	Non-Halogenated	isoxaben								5.00E-02	I				4.00E+03		
77501-63-4	Pesticides	Halogenated	lactofen								8.00E-03	O				6.40E+02		
7439-92-1	Metals	Lead compounds	LEAD	LEAD NOTES											2.50E+02			1.00E+03
58-89-9	Pesticides	Halogenated	lindane					3.10E-04	C	1.09E+00	3.00E-04	I	1.10E+00	C	1.00E-02	2.40E+01	9.10E-01	1.00E-02
330-55-2	Pesticides (Carbamate)	Halogenated	linuron								7.70E-03	O				6.20E+02		
7439-93-2	Metals		lithium								2.00E-03	P				1.60E+02		
7791-03-9	Perchlorates	Halogenated	lithium perchlorate								7.00E-04	I				5.60E+01		
83055-99-6	Pesticides	Non-Halogenated	londax								2.00E-01	I				1.60E+04		
121-75-5	Pesticides	Non-Halogenated	malathion								2.00E-02	I				1.60E+03		
108-31-6	SVOCs	Non-Halogenated	maleic anhydride		7.00E-04	C	2.00E-04				1.00E-01	I				8.00E+03		
123-33-1	SVOCs	Non-Halogenated	maleic hydrazide								5.00E-01	I				4.00E+04		
109-77-3	VOCs	Non-Halogenated	malononitrile								1.00E-04	P				8.00E+00		
8018-01-7	Pesticides	Non-Halogenated	mancozeb								3.00E-02	H				2.40E+03		
12427-38-2	Pesticides	Non-Halogenated	maneb								5.00E-03	I				4.00E+02		
7439-96-5	Metals		MANGANESE (Diet - e.g., fish consumption)	MANGANESE NOTES	5.00E-05	I	1.43E-05				1.40E-01	I						
7439-96-5	Metals		MANGANESE (Non-Diet - e.g., drinking water or soil)	MANGANESE NOTES	5.00E-05	I	1.43E-05				4.67E-02	I				3.70E+03		
950-10-7	Pesticides	Non-Halogenated	mephosfolan								9.00E-05	H				7.20E+00		
24307-26-4	Pesticides	Halogenated	mepiquat chloride								3.00E-02	I				2.40E+03		
7487-94-7	Metal compounds	Mercury compounds	mercuric chloride		3.00E-04	G	8.57E-05				3.00E-04	I				2.40E+01		
7439-97-6	Metals	Mercury compounds	mercury		3.00E-04	I	8.57E-05								2.00E+00			2.00E+00
150-50-5	Pesticides	Non-Halogenated	merphos								3.00E-05	I				2.40E+00		
57837-19-1	Pesticides	Non-Halogenated	metalaxyl								6.00E-02	I				4.80E+03		
126-98-7	VOCs	Non-Halogenated	methacrylonitrile		3.00E-02	P	8.57E-03				1.00E-04	I				8.00E+00		
10265-92-6	Pesticides	Non-Halogenated	methamidosphos								5.00E-05	I				4.00E+00		
67-56-1	VOCs	Non-Halogenated (Solvent)	methanol		2.00E+01	I	5.71E+00				2.00E+00	I				1.60E+05		
950-37-8	Pesticides	Non-Halogenated	methidathion								1.50E-03	O				1.20E+02		

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
16752-77-5	Pesticides (Carbamate)	Non-Halogenated	methomyl								2.50E-02	I				2.00E+03		
99-59-2	SVOCs	Non-Halogenated	methoxy-5-nitroaniline;2-										4.90E-02	C			2.00E+01	
72-43-5	Pesticides	Halogenated	methoxychlor								5.00E-03	I				4.00E+02		
110-49-6	VOCs	Non-Halogenated (Solvent)	methoxyethanol acetate;2-		1.00E-03	P	2.86E-04				8.00E-03	P				6.40E+02		
109-86-4	VOCs	Non-Halogenated (Solvent)	methoxyethanol;2-		2.00E-02	I	5.71E-03				5.00E-03	P				4.00E+02		
79-20-9	VOCs	Non-Halogenated (Solvent)	methyl acetate								1.00E+00	X				8.00E+04		
96-33-3	VOCs	Non-Halogenated	methyl acrylate		2.00E-02	P	5.71E-03				3.00E-02	H				2.40E+03		
78-93-3	VOCs	Non-Halogenated (Solvent)	methyl ethyl ketone		5.00E+00	I	1.43E+00				6.00E-01	I				4.80E+04		
108-10-1	VOCs	Non-Halogenated (Solvent)	methyl isobutyl ketone		3.00E+00	I	8.57E-01				8.00E-02	H				6.40E+03		
22967-92-6	Organometallics	Mercury compounds	METHYL MERCURY	METHYL MERCURY NOTES							1.00E-04	I				8.00E+00		
80-62-6	VOCs	Non-Halogenated (Solvent)	methyl methacrylate		7.00E-01	I	2.00E-01				1.40E+00	I				1.10E+05		
90-12-0	PAHs	Non-Halogenated	methyl naphthalene;1-		3.00E-06	P	8.57E-07				7.00E-02	A	5.10E-02	X		5.60E+03	2.00E+01	
91-57-6	PAHs	Non-Halogenated	methyl naphthalene;2-								4.00E-03	I				3.20E+02		
298-00-0	Pesticides	Non-Halogenated	methyl parathion								2.50E-04	I				2.00E+01		
25013-15-4	VOCs	Non-Halogenated	methyl styrene		4.00E-02	H	1.14E-02				6.00E-03	H				4.80E+02		
98-83-9	VOCs	Non-Halogenated	methyl styrene, alpha								7.00E-02	H				5.60E+03		
1634-04-4	VOCs	Non-Halogenated (Solvent)	methyl tert-butyl ether (MTBE)		3.00E+00	I	8.57E-01	2.60E-07	C	9.10E-04			1.80E-03	C	1.00E-01		5.60E+02	1.00E-01
94-74-6	Herbicides	Halogenated	methyl-4-chlorophenoxy-acetic acid;2-								5.00E-04	I				4.00E+01		
99-55-8	SVOCs	Non-Halogenated	methyl-5-nitroaniline;2-								2.00E-02	X	9.00E-03	P		1.60E+03	1.10E+02	
636-21-5	SVOCs	Halogenated	methylaniline hydrochloride;2-					3.70E-05	C	1.30E-01			1.30E-01	C			7.70E+00	
95-53-4	VOCs	Non-Halogenated	methylaniline;2-					5.10E-05	C	1.79E-01			1.60E-02	P			6.30E+01	
101-14-4	SVOCs	Halogenated	methylene bis(2-chloroaniline);4,4'-					4.30E-04	C-M	1.51E+00	2.00E-03	P	1.00E-01	P-M		1.60E+02	1.90E+00	
101-61-1	SVOCs	Non-Halogenated	methylene bis(n,n'-dimethyl)aniline;4,4'-					1.30E-05	C	4.55E-02			4.60E-02	I			2.20E+01	
74-95-3	VOCs	Halogenated	methylene bromide		4.00E-03	X	1.14E-03				1.00E-02	H				8.00E+02		
75-09-2	VOCs	Halogenated (Solvent)	methylene chloride		6.00E-01	I	1.71E-01	1.00E-08	I-M	3.50E-05	6.00E-03	I	2.00E-03	I-M	2.00E-02	4.80E+02	9.40E+01	2.00E-02
101-68-8	SVOCs	Non-Halogenated	methylene diphenyl diisocyanate (MDI)		6.00E-04	I	1.71E-04											
9016-87-9	SVOCs	Non-Halogenated	methylene diphenyl diisocyanate (polymeric) (PMDI)		6.00E-04	I	1.71E-04											
101-77-9	SVOCs	Non-Halogenated	methylenebisbenzenamine;4,4-		2.00E-02	C	5.71E-03	4.60E-04	C	1.61E+00			1.60E+00	C			6.30E-01	
60-34-4	VOCs	Non-Halogenated	methylhydrazine		2.00E-05	X	5.71E-06	1.00E-03	X	3.50E+00	1.00E-03	P				8.00E+01		
51218-45-2	Pesticides	Halogenated	metolachlor								1.50E-01	I				1.20E+04		
21087-64-9	Pesticides	Non-Halogenated	metribuzin								2.50E-02	I				2.00E+03		
2385-85-5	Pesticides	Halogenated	mirex					5.10E-03	C	1.79E+01	2.00E-04	I	1.80E+01	C		1.60E+01	5.60E-02	
2212-67-1	Pesticides	Non-Halogenated	molinate								2.00E-03	I				1.60E+02		
7439-98-7	Metals		molybdenum		2.00E-03	A	5.71E-04				5.00E-03	I				4.00E+02		
10599-90-3	Inorganic chloramines	Halogenated	MONOCHLORAMINE	MCL FOR DISINFECTANTS							1.00E-01	I				8.00E+03		
300-76-5	Pesticides	Halogenated	naled								2.00E-03	I				1.60E+02		
91-20-3	PAHs	Non-Halogenated	naphthalene		3.00E-03	I	8.57E-04	3.40E-05	C	1.19E-01	2.00E-02	I			5.00E+00	1.60E+03		5.00E+00
15299-99-7	Pesticides	Non-Halogenated	napropamide								1.20E-01	O				9.60E+03		
104-51-8	VOCs	Non-Halogenated	n-butylbenzene								5.00E-02	P				4.00E+03		
E715532	Metals	Nickel compounds	nickel refinery dust		1.40E-05	C	4.00E-06	2.40E-04	I	8.40E-01	1.10E-02	C				8.80E+02		
7440-02-0	Metals	Nickel compounds	NICKEL SOLUBLE SALTS	HARDNESS - DEPENDENT	1.40E-05	C	4.00E-06	2.60E-04	C	9.10E-01	2.00E-02	I				1.60E+03		
12035-72-2	Metal compounds	Nickel compounds	nickel subsulfide		1.40E-05	C	4.00E-06	4.80E-04	I	1.68E+00	1.10E-02	C	1.70E+00	C		8.80E+02	5.90E-01	
14797-55-8	Nonmetal inorganics		nitrate (measured as nitrogen)								1.60E+00	I				1.30E+05		
14797-65-0	Nonmetal inorganics		nitrite (measured as nitrogen)								1.00E-01	I				8.00E+03		
88-74-4	SVOCs	Non-Halogenated	nitroaniline, 2-		5.00E-05	X	1.43E-05				1.00E-02	X				8.00E+02		
100-01-6	SVOCs	Non-Halogenated	nitroaniline, 4-		6.00E-03	P	1.71E-03				4.00E-03	P	2.00E-02	P		3.20E+02	5.00E+01	
98-95-3	Explosives	Non-Halogenated	nitrobenzene		9.00E-03	I	2.57E-03	4.00E-05	I	1.40E-01	2.00E-03	I				1.60E+02		
67-20-9	SVOCs	Non-Halogenated	nitrofurantoin								7.00E-02	H				5.60E+03		
59-87-0	SVOCs	Non-Halogenated	nitrofurazone					3.70E-04	C	1.30E+00			1.30E+00	C			7.70E-01	
55-63-0	Explosives	Non-Halogenated	nitroglycerin								1.00E-04	P	1.70E-02	P		8.00E+00	5.90E+01	
556-88-7	SVOCs	Non-Halogenated	nitroguanidine								1.00E-01	I				8.00E+03		
79-46-9	VOCs	Non-Halogenated (Solvent)	nitropropane;2-		2.00E-02	I	5.71E-03	5.80E-04	X	2.03E+00								
1116-54-7	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiethanolamine;N-					8.00E-04	C	2.80E+00			2.80E+00	I			3.60E-01	
55-18-5	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiethylamine;N-					4.30E-02	I-M	1.51E+02			1.50E+02	I-M			1.30E-03	
62-75-9	SVOCs; Nitrosamines	Non-Halogenated	nitrosodimethylamine;N-		4.00E-05	X	1.14E-05	1.40E-02	I-M	4.90E+01	8.00E-06	P	5.10E+01	I-M		6.40E-01	3.70E-03	
924-16-3	SVOCs; Nitrosamines	Non-Halogenated	nitroso-di-n-butylamine;N-					1.60E-03	I	5.60E+00			5.40E+00	I			1.90E-01	

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621-64-7	SVOCs; Nitrosamines	Non-Halogenated	nitroso-di-n-propylamine;N-					2.00E-03	C	7.00E+00			7.00E+00	I			1.40E-01	
86-30-6	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiphenylamine;N-					2.60E-06	C	9.10E-03			4.90E-03	I			2.00E+02	
759-73-9	SVOCs	Non-Halogenated	nitroso-n-ethylurea;n-					7.70E-03	C-M	2.70E+01			2.70E+01	C-M			6.90E-03	
10595-95-6	SVOCs; Nitrosamines	Non-Halogenated	nitroso-N-methylethylamine;N-					6.30E-03	C	2.21E+01			2.20E+01	I			4.50E-02	
684-93-5	SVOCs	Non-Halogenated	nitroso-n-methylurea,n-					3.40E-02	C-M	1.19E+02			1.20E+02	C-M			1.60E-03	
930-55-2	SVOCs	Non-Halogenated	nitrosopyrrolidine;N-					6.10E-04	I	2.14E+00			2.10E+00	I			4.80E-01	
99-08-1	Explosives	Non-Halogenated	nitrotoluene, m-								1.00E-04	X				8.00E+00		
88-72-2	Explosives	Non-Halogenated	nitrotoluene, o-								9.00E-04	P	2.20E-01	P		7.20E+01	4.50E+00	
99-99-0	Explosives	Non-Halogenated	nitrotoluene, p-								4.00E-03	P	1.60E-02	P		3.20E+02	6.30E+01	
84852-15-3	Phenols	Non-Halogenated	nonylphenol															
27314-13-2	Pesticides	Halogenated	norflurazon								1.50E-03	O				1.20E+02		
85509-19-9	Pesticides	Halogenated	nustar								2.00E-03	O				1.60E+02		
32536-52-0	PBDEs	Halogenated	octabromodiphenyl ether (OctaBDE)								3.00E-03	I				2.40E+02		
2691-41-0	Explosives	Non-Halogenated	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine								5.00E-02	I				4.00E+03		
152-16-9	SVOCs	Non-Halogenated	octamethylpyrophosphoramide								2.00E-03	H				1.60E+02		
19044-88-3	Pesticides	Non-Halogenated	oryzalin								1.90E-01	O	7.80E-03	O		1.50E+04	1.30E+02	
19666-30-9	Pesticides	Halogenated	oxadiazon								5.00E-03	I				4.00E+02		
23135-22-0	Pesticides (Carbamate)	Non-Halogenated	oxamyl								2.50E-02	I				2.00E+03		
42874-03-3	Pesticides	Halogenated	oxyfluorfen								4.00E-02	O	7.30E-02	O		3.20E+03	1.40E+01	
76738-62-0	Herbicides	Halogenated	paclobutrazol								1.30E-02	I				1.00E+03		
1910-42-5	Pesticides	Halogenated	Paraquat Dichloride								4.50E-03	I				3.60E+02		
56-38-2	Pesticides	Non-Halogenated	parathion								6.00E-03	H				4.80E+02		
1114-71-2	Pesticides	Non-Halogenated	pebulate								5.00E-02	H				4.00E+03		
40487-42-1	Pesticides	Non-Halogenated	pendimethalin								3.00E-01	O				2.40E+04		
87-84-3	SVOCs	Halogenated	pentabromo-6-chloro-cyclohexane;1,2,3,4,5-								2.00E-02	X	2.00E-02	X		1.60E+03	5.00E+01	
60348-60-9	PBDEs	Halogenated	pentabromodiphenyl ether; 2,2',4,4',5- (PBDE-99)								1.00E-04	I				8.00E+00		
32534-81-9	PBDEs	Halogenated	pentabromodiphenyl ethers (PentaBDE)								2.00E-03	I				1.60E+02		
608-93-5	SVOCs	Halogenated	pentachlorobenzene								8.00E-04	I				6.40E+01		
76-01-7	VOCs	Halogenated (Solvent)	pentachloroethane										9.00E-02	P			1.10E+01	
82-68-8	Pesticides	Halogenated	pentachloronitrobenzene								3.00E-03	I	2.60E-01	H		2.40E+02	3.80E+00	
87-86-5	Herbicides	Halogenated	PENTACHLOROPHENOL	pH-DEPENDENT				5.10E-06	C	1.79E-02	5.00E-03	I	4.00E-01	I		4.00E+02	2.50E+00	
78-11-5	Explosives	Non-Halogenated	pentaerythritol tetranitrate (PETN)								9.00E-03	P	4.30E-03	X		7.20E+02	2.30E+02	
109-66-0	VOCs	Non-Halogenated (Solvent)	pentane;n-		1.00E+00	P	2.86E-01											
14797-73-0	Perchlorates	Halogenated	perchlorate and perchlorate salts								7.00E-04	I				5.60E+01		
375-73-5	PFAS	Halogenated	PERFLUOROBUTANESULFONIC ACID (PFBS)	PFAS NOTES							3.00E-04	P				2.40E+01		
375-22-4	PFAS	Halogenated	PERFLUOROBUTANOIC ACID (PFBA)	PFAS NOTES							1.00E-03	I				8.00E+01		
355-46-4	PFAS	Halogenated	PERFLUOROHEXANESULFONIC ACID (PFHxS)	PFAS NOTES							9.70E-06	S				7.80E-01		
307-24-4	PFAS	Halogenated	PERFLUOROHEXANOIC ACID (PFHxA)	PFAS NOTES							5.00E-04	I				4.00E+01		
375-95-1	PFAS	Halogenated	PERFLUORONONANOIC ACID (PFNA)	PFAS NOTES							2.50E-06	A				2.00E-01		
1763-23-1	PFAS	Halogenated	PERFLUOROOCTANESULFONIC ACID (PFOS)	PFAS NOTES							1.00E-07	D	3.95E+01	D		8.00E-03	2.50E-02	
335-67-1	PFAS	Halogenated	PERFLUOROOCTANOIC ACID (PFOA)	PFAS NOTES							3.00E-08	D	2.93E+04	D		2.40E-03	3.40E-05	
52645-53-1	Pesticides	Halogenated	permethrin								5.00E-02	I				4.00E+03		
unavailable19	General Chemistry		pH	pH NOTES														
13684-63-4	Pesticides	Non-Halogenated	phenmedipham								2.40E-01	O				1.90E+04		
108-95-2	Phenols	Non-Halogenated	phenol		2.00E-01	C	5.71E-02				3.00E-01	I				2.40E+04		
106-50-3	SVOCs	Non-Halogenated	phenylenediamine, p-								1.00E-03	X				8.00E+01		
108-45-2	SVOCs	Non-Halogenated	phenylenediamine;m-								6.00E-03	I				4.80E+02		
95-54-5	SVOCs	Non-Halogenated	phenylenediamine;o-								4.00E-03	P	1.20E-01	P		3.20E+02	8.30E+00	
62-38-4	Organometallics	Mercury compounds	phenylmercuric acetate								8.00E-05	I				6.40E+00		
90-43-7	Phenols	Non-Halogenated	phenylphenol;2-										1.90E-03	H			5.30E+02	
298-02-2	Pesticides	Non-Halogenated	phorate								2.00E-04	H				1.60E+01		
75-44-5	VOCs	Halogenated	phosgene		3.00E-04	I	8.57E-05											
732-11-6	Pesticides	Non-Halogenated	phosmet								2.00E-02	I				1.60E+03		
7803-51-2	Nonmetal inorganics		phosphine		3.00E-04	I	8.57E-05				3.00E-04	I				2.40E+01		
7664-38-2	Nonmetal inorganics	Reactive Wastes; Corrosive	phosphoric acid		1.00E-02	I	2.86E-03				1.00E+00	P				8.00E+04		
7723-14-0	Nonmetal inorganics	Reactive Wastes	phosphorus								2.00E-05	I				1.60E+00		

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100-21-0	Phthalates	Non-Halogenated	phthalic acid;p-								5.00E-01	X				4.00E+04		
85-44-9	Phthalates	Non-Halogenated	phthalic anhydride		2.00E-02	C	5.71E-03				2.00E+00	I				1.60E+05		
1918-02-1	Herbicides	Halogenated	picloram								7.00E-02	I				5.60E+03		
29232-93-7	Pesticides	Non-Halogenated	pirimiphos-methyl								7.30E-04	O				5.80E+01		
36355-01-8	PBBs	Halogenated	polybrominated biphenyls					8.60E-03	C	3.01E+01	7.00E-06	H	3.00E+01	C		5.60E-01	3.30E-02	
1336-36-3	PCBs	Halogenated	polychlorinated biphenyls (PCBs)					5.70E-04	I	2.00E+00			2.00E+00	I	1.00E+00		5.00E-01	1.00E+01
151-50-8	Cyanides	Non-Halogenated	potassium cyanide		9.00E-03	C	2.57E-03				2.00E-03	I				1.60E+02		
7778-74-7	Perchlorates	Halogenated	potassium perchlorate								7.00E-04	I				5.60E+01		
506-61-6	Cyanides	Non-Halogenated	potassium silver cyanide								5.00E-03	I				4.00E+02		
67747-09-5	Pesticides	Halogenated	prochloraz								9.00E-03	I	1.50E-01	I		7.20E+02	6.70E+00	
26399-36-0	Pesticides	Halogenated	profluralin								6.00E-03	H				4.80E+02		
1610-18-0	Pesticides	Non-Halogenated	prometon								1.50E-02	I				1.20E+03		
7287-19-6	Pesticides	Non-Halogenated	prometryn								4.00E-02	O				3.20E+03		
23950-58-5	Pesticides	Halogenated	pronamide								7.50E-02	I				6.00E+03		
1918-16-7	Pesticides	Halogenated	propachlor								1.30E-02	I				1.00E+03		
709-98-8	Pesticides	Halogenated	propanil								5.00E-03	I				4.00E+02		
2312-35-8	Pesticides	Non-Halogenated	propargite								4.00E-02	O	1.90E-01	O		3.20E+03	5.30E+00	
107-19-7	VOCs	Non-Halogenated	propargyl alcohol								2.00E-03	I				1.60E+02		
139-40-2	Pesticides	Halogenated	propazine								2.00E-02	I				1.60E+03		
122-42-9	Pesticides	Non-Halogenated	propham								2.00E-02	I				1.60E+03		
60207-90-1	Pesticides	Halogenated	propiconazole								1.00E-01	O				8.00E+03		
123-38-6	VOCs	Non-Halogenated	propionaldehyde		8.00E-03	I	2.29E-03											
93-65-2	Herbicides	Halogenated	propionic acid;(2-methyl-4-chlorophenoxy)2-								1.00E-03	I				8.00E+01		
103-65-1	VOCs	Non-Halogenated	propylbenzene;n-		1.00E+00	X	2.86E-01				1.00E-01	X				8.00E+03		
57-55-6	Glycols	Non-Halogenated (Solvent)	propylene glycol								2.00E+01	P				1.60E+06		
6423-43-4	Glycols	Non-Halogenated	propylene glycol dinitrate;1,2-		2.70E-04	A	7.71E-05											
52125-53-8	Glycols	Non-Halogenated	propylene glycol monoethyl ether								7.00E-01	H				5.60E+04		
107-98-2	Glycols	Non-Halogenated (Solvent)	propylene glycol monomethyl ether (PGME)		2.00E+00	I	5.71E-01				7.00E-01	H				5.60E+04		
75-56-9	VOCs	Non-Halogenated	propylene oxide		3.00E-02	I	8.57E-03	3.70E-06	I	1.30E-02			2.40E-01	I			4.20E+00	
81335-77-5	Pesticides	Non-Halogenated	pursuit								2.50E+00	O				2.00E+05		
51630-58-1	Pesticides	Halogenated	pydrin								2.50E-02	I				2.00E+03		
129-00-0	PAHs	Non-Halogenated	pyrene								3.00E-02	I				2.40E+03		
110-86-1	VOCs	Non-Halogenated (Solvent)	pyridine								1.00E-03	I				8.00E+01		
13593-03-8	Pesticides	Non-Halogenated	quinalphos								5.00E-04	I				4.00E+01		
91-22-5	SVOCs	Non-Halogenated	quinoline										3.00E+00	I			3.30E-01	
13982-63-3	Radionuclides		RADIUM 226	RADIUM 226 NOTE														
unavailable23	Radionuclides		RADIUM 226 AND 228	RADIUM 226 & 228 NOTES														
121-82-4	Explosives	Non-Halogenated	rdx								4.00E-03	I	8.00E-02	I		3.20E+02	1.30E+01	
E715557	Fibers		REFRACTORY CERAMIC FIBERS	REFRACTORY FIBER NOTE	3.00E+04	A												
10453-86-8	Pesticides	Non-Halogenated	resmethrin								3.00E-02	I				2.40E+03		
299-84-3	Pesticides	Halogenated	ronnel								5.00E-02	H				4.00E+03		
83-79-4	Pesticides	Non-Halogenated	rotenone								4.00E-03	I				3.20E+02		
78-48-8	Pesticides	Non-Halogenated	s,s,s-tributylphosphorotrithioate								2.00E-04	O				1.60E+01		
78587-05-0	Pesticides	Halogenated	savey								2.50E-02	I				2.00E+03		
135-98-8	VOCs	Non-Halogenated (Solvent)	sec-butylbenzene								1.00E-01	X				8.00E+03		
7783-00-8	Metal compounds	Selenium compounds	selenious acid								5.00E-03	I				4.00E+02		
7782-49-2	Metals	Selenium compounds	selenium and compounds		2.00E-02	C	5.71E-03				5.00E-03	I				4.00E+02		
74051-80-2	Pesticides	Non-Halogenated	sethoxydim								1.40E-01	O				1.10E+04		
7440-22-4	Metals	Silver compounds	SILVER	HARDNESS - DEPENDENT							5.00E-03	I				4.00E+02		
506-64-9	Cyanides	Silver compounds	silver cyanide								1.00E-01	I				8.00E+03		
122-34-9	Pesticides	Halogenated	simazine								5.00E-03	I	1.20E-01	H		4.00E+02	8.30E+00	
26628-22-8	Metal compounds		sodium azide								4.00E-03	I				3.20E+02		
143-33-9	Cyanides	Non-Halogenated	sodium cyanide		9.00E-03	C	2.57E-03				1.00E-03	I				8.00E+01		
148-18-5	Organic metal salts		sodium diethyldithiocarbamate								3.00E-02	I	2.70E-01	H		2.40E+03	3.70E+00	
62-74-8	Organofluorides	Halogenated	sodium fluoroacetate								2.00E-05	I				1.60E+00		
13718-26-8	Metal compounds		sodium metavanadate								1.00E-03	H				8.00E+01		

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
7601-89-0	Perchlorates	Halogenated	sodium perchlorate								7.00E-04	I				5.60E+01		
7440-24-6	Metals		strontium								6.00E-01	I				4.80E+04		
57-24-9	SVOCs	Non-Halogenated	strychnine								3.00E-04	I				2.40E+01		
100-42-5	VOCs	Non-Halogenated (Solvent)	styrene		1.00E+00	I	2.86E-01				2.00E-01	I				1.60E+04		
88671-89-0	Pesticides	Halogenated	systhane								2.50E-02	I				2.00E+03		
1746-01-6	Dioxins	Halogenated	TCDD;2,3,7,8 (DIOXIN)	TEF NOTES	4.00E-08	C	1.14E-08	3.80E+01	C	1.33E+05	7.00E-10	I	1.30E+05	C		9.30E-05	1.30E-05	
34014-18-1	Pesticides	Non-Halogenated	tebuthiuron								7.00E-02	I				5.60E+03		
3383-96-8	Pesticides	Non-Halogenated	temephos								2.00E-02	H				1.60E+03		
5902-51-2	Pesticides	Halogenated	terbacil								1.30E-02	I				1.00E+03		
13071-79-9	SVOCs	Non-Halogenated	terbufos								2.50E-05	H				2.00E+00		
886-50-0	Pesticides	Non-Halogenated	terbutryn								1.00E-03	I				8.00E+01		
98-06-6	VOCs	Non-Halogenated	tert-butylbenzene								1.00E-01	X				8.00E+03		
5436-43-1	PBDEs	Halogenated	tetrabromodiphenyl ether 2,2',4,4' (PBDE-47)								1.00E-04	I				8.00E+00		
95-94-3	SVOCs	Halogenated	tetrachlorobenzene;1,2,4,5-								3.00E-04	I				2.40E+01		
630-20-6	VOCs	Halogenated (Solvent)	tetrachloroethane;1,1,1,2-					7.40E-06	I	2.59E-02	3.00E-02	I	2.60E-02	I		2.40E+03	3.80E+01	
79-34-5	VOCs	Halogenated (Solvent)	tetrachloroethane;1,1,2,2-					5.80E-05	C	2.03E-01	2.00E-02	I	2.00E-01	I		1.60E+03	5.00E+00	
127-18-4	VOCs	Halogenated (Solvent)	TETRACHLOROETHYLENE (PCE)	PCE NOTES	4.00E-02	I	1.14E-02	2.60E-07	I	9.10E-04	6.00E-03	I	2.10E-03	I	5.00E-02	4.80E+02	4.80E+02	5.00E-02
58-90-2	Phenols	Halogenated	TETRACHLOROPHENOL;2,3,4,6-	pH-DEPENDENT							3.00E-02	I				2.40E+03		
5216-25-1	VOCs	Halogenated	tetrachlorotoluene;p,a,a,a,-								6.00E-05	X	1.60E+01	X		4.80E+00	6.30E-02	
961-11-5	Pesticides	Halogenated	tetrachlorvinphos								3.00E-02	I	2.40E-02	H		2.40E+03	4.20E+01	
3689-24-5	Pesticides	Non-Halogenated	tetraethyl dithiopyrophosphate								5.00E-04	I				4.00E+01		
78-00-2	Organometallics	Lead compounds	tetraethyl lead								1.00E-07	I				8.00E-03		
811-97-2	VOCs	Halogenated	tetrafluoroethane;1,1,1,2-		8.00E+01	I	2.29E+01											
109-99-9	Furans	Non-Halogenated (Solvent)	tetrahydrofuran		2.00E+00	I	5.71E-01				9.00E-01	I				7.20E+04		
1314-32-5	Metal compounds	Thallium compounds	thallic oxide								2.00E-05	G				1.60E+00		
563-68-8	Metal compounds	Thallium compounds	thallium acetate								1.00E-05	X				8.00E-01		
6533-73-9	Metal compounds	Thallium compounds	thallium carbonate								2.00E-05	X				1.60E+00		
7791-12-0	Metal compounds	Thallium compounds	thallium chloride								1.00E-05	X				8.00E-01		
10102-45-1	Metal compounds	Thallium compounds	thallium nitrate								1.00E-05	X				8.00E-01		
12039-52-0	Metal compounds	Thallium compounds	thallium selenite								1.00E-05	G				8.00E-01		
7446-18-6	Metal compounds	Thallium compounds	thallium(I) sulfate								2.00E-05	X				1.60E+00		
7440-28-0	Metals	Thallium compounds	thallium, soluble salts								1.00E-05	X				8.00E-01		
28249-77-6	Pesticides	Halogenated	thiobencarb								1.00E-02	I				8.00E+02		
21564-17-0	SVOCs	Non-Halogenated	thiocyanomethylthiobenzothiazole;2-								3.00E-02	H				2.40E+03		
39196-18-4	Pesticides	Non-Halogenated	thiofanox								3.00E-04	H				2.40E+01		
23564-05-8	Pesticides	Non-Halogenated	thiophanate-methyl								1.60E-01	O	1.20E-02	O		1.30E+04	8.30E+01	
137-26-8	Pesticides	Non-Halogenated	thiram								1.50E-02	O				1.20E+03		
7440-31-5	Metals		tin								6.00E-01	H				4.80E+04		
118-96-7	Explosives	Non-Halogenated	tnt								5.00E-04	I	3.00E-02	I		4.00E+01	3.30E+01	
108-88-3	VOCs (BTEX)	Non-Halogenated (Solvent)	toluene		5.00E+00	I	1.43E+00				8.00E-02	I			7.00E+00	6.40E+03		7.00E+00
584-84-9	VOCs	Non-Halogenated	toluene-2,4-diisocyanate		8.00E-06	C	2.29E-06	1.10E-05	C	3.85E-02			3.90E-02	C			2.60E+01	
91-08-7	VOCs	Non-Halogenated	toluene-2,6-diisocyanate		8.00E-06	C	2.29E-06	1.10E-05	C	3.85E-02			3.90E-02	C			2.60E+01	
95-70-5	SVOCs	Non-Halogenated	toluenediamine;2,5-								2.00E-04	X	1.80E-01	X		1.60E+01	5.60E+00	
106-49-0	SVOCs	Non-Halogenated	toluidine;p-								4.00E-03	X	3.00E-02	P		3.20E+02	3.30E+01	
8001-35-2	Pesticides	Halogenated	toxaphene					3.20E-04	I	1.12E+00	9.00E-05	P	1.10E+00	I		7.20E+00	9.10E-01	
93-72-1	Herbicides	Halogenated	tp;2,4,5-								8.00E-03	I				6.40E+02		
unavailable09	Petroleum	Non-Halogenated	tph, diesel range organics												2.00E+03			2.00E+03
unavailable10	Petroleum	Non-Halogenated	tph, heavy oils												2.00E+03			2.00E+03
unavailable11	Petroleum	Non-Halogenated	tph, mineral oils												4.00E+03			4.00E+03
unavailable25	Petroleum	Non-Halogenated	tph: gasoline range organics, benzene present												3.00E+01			3.00E+01
unavailable08	Petroleum	Non-Halogenated	tph: gasoline range organics, no detectable benzene												1.00E+02			1.00E+02
66841-25-6	Pesticides	Halogenated	tralomethrin								7.50E-03	I				6.00E+02		
2303-17-5	Pesticides	Halogenated	trialiate								2.50E-02	O	7.20E-02	O		2.00E+03	1.40E+01	
82097-50-5	Pesticides	Halogenated	triasulfuron								1.00E-02	I				8.00E+02		
615-54-3	VOCs	Halogenated	tribromobenzene;1,2,4-								5.00E-03	I				4.00E+02		
688-73-3	Organotins	Non-Halogenated	tributyltin															

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	RfC Inhalation Reference Concentration (mg/m^3)	Source	RfDi Inhalation Reference Dose (mg/kg-day)	IUR Inhalation Unit Risk $(\mu g/m^3)^{-1}$	Source	CPFi Inhalation Cancer Potency Factor (kg-day/mg)	RfDo Oral Reference Dose (mg/kg-day)	Source	CPFo Oral Cancer Potency Factor (kg-day/mg)	Source	Soil Method A Unrestricted Land Use (Table 740-1) (mg/kg)	Soil Method B Direct Contact Noncancer (Eq. 740-1) (mg/kg)	Soil Method B Direct Contact Cancer (Eq. 740-2) (mg/kg)	Soil Method A Industrial Properties (Table 745-1) (mg/kg)
56-35-9	Organotins	Non-Halogenated	tributyltin oxide								3.00E-04	I				2.40E+01		
10025-85-1	Inorganic chloramines	Halogenated	TRICHLORAMINE	MCL FOR DISINFECTANTS														
76-13-1	VOCs	Halogenated (Solvent)	trichloro-1,2,2-trifluoroethane;1,1,2-		5.00E+00	P	1.43E+00				3.00E+01	I				2.40E+06		
76-03-9	Haloacetic acids	Halogenated	trichloroacetic acid								2.00E-02	I	7.00E-02	I		1.60E+03	1.40E+01	
33663-50-2	SVOCs	Halogenated	trichloroaniline hydrochloride;2,4,6-										2.90E-02	H			3.40E+01	
634-93-5	SVOCs	Halogenated	trichloroaniline;2,4,6-								3.00E-05	X	7.00E-03	X		2.40E+00	1.40E+02	
87-61-6	VOCs	Halogenated (Solvent)	trichlorobenzene;1,2,3-								8.00E-04	X				6.40E+01		
120-82-1	VOCs	Halogenated (Solvent)	trichlorobenzene;1,2,4-		2.00E-03	P	5.71E-04				1.00E-02	I	2.90E-02	P		8.00E+02	3.40E+01	
71-55-6	VOCs	Halogenated (Solvent)	trichloroethane;1,1,1-		5.00E+00	I	1.43E+00				2.00E+00	I			2.00E+00	1.60E+05		2.00E+00
79-00-5	VOCs	Halogenated (Solvent)	trichloroethane;1,1,2-		2.00E-04	X	5.71E-05	1.60E-05	I	5.60E-02	4.00E-03	I	5.70E-02	I		3.20E+02	1.80E+01	
79-01-6	VOCs	Halogenated (Solvent)	TRICHLOROETHYLENE (TCE)	TCE NOTES	2.00E-03	I	5.71E-04	4.10E-06	I-M	1.44E-02	5.00E-04	I	4.60E-02	I-M	3.00E-02	4.00E+01	1.20E+01	3.00E-02
75-69-4	VOCs	Halogenated	trichlorofluoromethane		7.00E-01	H	2.00E-01				3.00E-01	I				2.40E+04		
95-95-4	Phenols	Halogenated	TRICHLOROPHENOL;2,4,5-	pH-DEPENDENT							1.00E-01	I				8.00E+03		
88-06-2	Phenols	Halogenated	TRICHLOROPHENOL;2,4,6-	pH-DEPENDENT				3.10E-06	I	1.09E-02	1.00E-03	P	1.10E-02	I		8.00E+01	9.10E+01	
93-76-5	Herbicides	Halogenated	trichlorophenoxyacetic acid;2,4,5-								1.00E-02	I				8.00E+02		
598-77-6	VOCs	Halogenated	trichloropropane;1,1,2-								5.00E-03	I				4.00E+02		
96-18-4	VOCs	Halogenated (Solvent)	trichloropropane;1,2,3-		3.00E-04	I	8.57E-05				4.00E-03	I	3.00E+01	I-M		3.20E+02	6.30E-03	
96-19-5	VOCs	Halogenated	trichloropropene;1,2,3-		3.00E-04	P	8.57E-05				3.00E-03	X				2.40E+02		
58138-08-2	Pesticides	Halogenated	tridiphane								3.00E-03	I				2.40E+02		
121-44-8	VOCs	Non-Halogenated (Solvent)	triethylamine		7.00E-03	I	2.00E-03											
1582-09-8	Pesticides	Halogenated	trifluralin								7.50E-03	I	7.70E-03	I		6.00E+02	1.30E+02	
unavailable13	VOCs (trihalomethanes)	Halogenated	TRIHALOMETHANES, (TOTAL) (TTHMs)	TTHM NOTES														
512-56-1	SVOCs	Non-Halogenated (Solvent)	trimethyl phosphate								1.00E-02	P	2.00E-02	P		8.00E+02	5.00E+01	
526-73-8	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,2,3-		6.00E-02	I	1.71E-02				1.00E-02	I				8.00E+02		
95-63-6	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,2,4-		6.00E-02	I	1.71E-02				1.00E-02	I				8.00E+02		
108-67-8	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,3,5-		6.00E-02	I	1.71E-02				1.00E-02	I				8.00E+02		
99-35-4	Explosives	Non-Halogenated	trinitrobenzene;1,3,5-								3.00E-02	I				2.40E+03		
479-45-8	Explosives	Non-Halogenated	trinitrophenylmethylnitramine								2.00E-03	P				1.60E+02		
7440-61-1	Radionuclides	Radioactive Wastes	URANIUM, SOLUBLE SALTS	URANIUM, SOLUBLE SALTS	4.00E-05	A	1.14E-05				2.00E-04	A				1.60E+01		
7440-62-2	Metals	Vanadium compounds	vanadium		1.00E-04	A	2.86E-05				5.00E-03	G				4.00E+02		
1314-62-1	Metal compounds	Vanadium compounds	vanadium pentoxide		7.00E-06	P	2.00E-06	8.30E-03	P	2.91E+01	9.00E-03	I				7.20E+02		
1929-77-7	Pesticides	Non-Halogenated	vernam								1.00E-03	I				8.00E+01		
50471-44-8	Pesticides	Halogenated	vinclozolin								1.20E-03	O				9.60E+01		
108-05-4	VOCs	Non-Halogenated (Solvent)	vinyl acetate		2.00E-01	I	5.71E-02				1.00E+00	H				8.00E+04		
75-01-4	VOCs	Halogenated (Solvent)	VINYL CHLORIDE	VINYL CHLORIDE NOTES	1.00E-01	I	2.86E-02	8.80E-06	I-M	3.08E-02	3.00E-03	I	1.50E+00	I-M		2.40E+02	6.70E-01	
81-81-2	Pesticides	Non-Halogenated	warfarin								3.00E-04	I				2.40E+01		
8012-95-1	Petroleum	Non-Halogenated	WHITE MINERAL OIL	WHITE MINERAL OIL NOTES							3.00E+00	P				SEE NOTE		
108-38-3	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;m-		1.00E-01	G	2.86E-02				2.00E-01	G				1.60E+04		
95-47-6	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;o-		1.00E-01	G	2.86E-02				2.00E-01	G				1.60E+04		
106-42-3	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;p-		1.00E-01	G	2.86E-02				2.00E-01	G				1.60E+04		
1330-20-7	VOCs (BTEX)	Non-Halogenated (Solvent)	xylenes		1.00E-01	I	2.86E-02				2.00E-01	I			9.00E+00	1.60E+04		9.00E+00
7440-66-6	Metals	Zinc compounds	ZINC	HARDNESS - DEPENDENT							3.00E-01	I				2.40E+04		
557-21-1	Cyanides	Zinc compounds	zinc cyanide								5.00E-02	I				4.00E+03		
1314-84-7	Metal compounds	Zinc compounds	zinc phosphide								3.00E-04	I				2.40E+01		
12122-67-7	Pesticides	Zinc compounds	zineb								5.00E-02	I				4.00E+03		

j **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.

k **Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

l **Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

m **Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).

n **Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

o **Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

p **Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

q **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).

r **Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

s **PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.

t **Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

u **Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).

v **Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

w **Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

x **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

- **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of groundwater for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the groundwater sample. If any detectable amount of benzene is present in the groundwater sample, then the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.
- **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.
- **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The groundwater cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.
- **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. Sites using this cleanup level must analyze groundwater samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

y **1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

z **Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

aa **Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1×10^{-5} risk.

bb **Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level in this table for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.

Table 740-1
Method A Soil Cleanup Levels for Unrestricted Land Uses.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20 mg/kg[b]
Benzene	71-43-2	0.03 mg/kg[c]
Benzo(a)pyrene	50-32-8	0.1 mg/kg[d]
Cadmium	7440-43-9	2 mg/kg[e]
Chromium		
Chromium VI	18540-29-9	19 mg/kg[f1]
Chromium III	16065-83-1	2,000 mg/kg[f2]
DDT	50-29-3	3 mg/kg[g]
Ethylbenzene	100-41-4	6 mg/kg[h]
Ethylene dibromide (EDB)	106-93-4	0.005 mg/kg[i]
Lead	7439-92-1	250 mg/kg[j]
Lindane	58-89-9	0.01 mg/kg[k]
Methylene chloride	75-09-2	0.02 mg/kg[l]
Mercury (inorganic)	7439-97-6	2 mg/kg[m]
MTBE	1634-04-4	0.1 mg/kg[n]

Hazardous Substance	CAS Number	Cleanup Level
Naphthalenes	91-20-3	5 mg/kg[o]
PAHs (carcinogenic)		See benzo(a)pyrene[d]
PCB Mixtures		1 mg/kg[p]
Tetrachloroethylene	127-18-4	0.05 mg/kg[q]
Toluene	108-88-3	7 mg/kg[r]
Total Petroleum Hydrocarbons[s]		
[Note: Must also test for and meet cleanup levels for other petroleum components—see footnotes!]		
Gasoline Range Organics		
Gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture		100 mg/kg
All other gasoline mixtures		30 mg/kg
Diesel Range Organics		2,000 mg/kg
Heavy Oils		2,000 mg/kg
Mineral Oil		4,000 mg/kg
1,1,1 Trichloroethane	71-55-6	2 mg/kg[t]
Trichloroethylene	79-01-6	0.03 mg/kg[u]
Xylenes	1330-20-7	9 mg/kg[v]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for sites undergoing routine cleanup actions or for sites with relatively few hazardous substances, and the site qualifies under WAC 173-340-7491 for an exclusion from conducting a simplified or site-specific terrestrial ecological evaluation, or it can be demonstrated using a terrestrial ecological evaluation under WAC 173-340-7492 or 173-340-7493 that the values in this table are ecologically protective for the site. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the soil must be restored to these levels at a site. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on direct contact using Equation 740-2 and protection of groundwater for drinking water use using the procedures in WAC 173-340-747(4), adjusted for natural background for soil.

c **Benzene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures in WAC 173-340-747 (4) and (6).

d **Benzo(a)pyrene.** Cleanup level based on direct contact using Equation 740-2. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit for soil.

f1 **Chromium VI.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

f2 **Chromium III.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4). Chromium VI must also be tested for and the cleanup level met when present at a site.

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup level based on direct contact using Equation 740-2.

h **Ethylbenzene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

i **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit for soil.

j **Lead.** Cleanup level based on preventing unacceptable blood lead levels.

k **Lindane.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit.

l **Methylene chloride (dichloromethane).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

m **Mercury.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

n **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

o **Naphthalenes.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4). This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

p **PCB Mixtures.** Cleanup level based on applicable federal law (40 C.F.R. 761.61). This is a total value for all PCBs.

q **Tetrachloroethylene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

r **Toluene.** Cleanup level based on protection of groundwater for drinking water use, using the procedures described in WAC 173-340-747(4).

s **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
83-32-9	PAHs	Non-Halogenated	acenaphthene			4.80E+02		1.10E+03							4.80E+02	N
30560-19-1	Pesticides	Non-Halogenated	acephate			4.80E+00		1.10E+01							4.80E+00	N
75-07-0	VOCs	Non-Halogenated	acetaldehyde													
34256-82-1	Pesticides	Halogenated	acetochlor			3.20E+02		7.00E+02							3.20E+02	N
67-64-1	VOCs	Non-Halogenated (Solvent)	acetone			7.20E+03		1.60E+04							7.20E+03	N
75-86-5	SVOCs	Non-Halogenated	acetone cyanohydrin													
75-05-8	VOCs	Non-Halogenated (Solvent)	acetonitrile													
98-86-2	SVOCs	Non-Halogenated	acetophenone			8.00E+02		1.80E+03							8.00E+02	N
62476-59-9	Herbicides	Halogenated	acifluorfen, sodium			2.10E+02		4.60E+02							2.08E+02	N
107-02-8	VOCs	Non-Halogenated (Solvent)	acrolein			4.00E+00		8.80E+00							4.00E+00	N
79-06-1	VOCs	Non-Halogenated	acrylamide			3.20E+01	4.60E-02	7.00E+01	1.80E+00	0.00E+00					4.61E-02	C
79-10-7	VOCs	Reactive Wastes; Corrosive	acrylic acid			4.00E+03		8.80E+03							4.00E+03	N
107-13-1	VOCs	Non-Halogenated	acrylonitrile			8.00E+00	8.10E-02	1.80E+01	8.10E-01						8.10E-02	C
15972-60-8	Pesticides	Halogenated	alachlor			1.60E+02	1.60E+00	3.50E+02	1.60E+01	0.00E+00	2.00E+00	2.00E+00			2.00E+00	MCL
1596-84-5	Pesticides	Non-Halogenated	alar			2.40E+03	4.90E+00	5.30E+03	4.90E+01						4.86E+00	C
116-06-3	Pesticides (Carbamate)	Non-Halogenated	aldicarb			1.60E+01		3.50E+01							1.60E+01	N
1646-88-4	Pesticides (Carbamate)	Non-Halogenated	aldicarb sulfone			1.60E+01		3.50E+01							1.60E+01	N
309-00-2	Pesticides	Halogenated	aldrin			2.40E-01	2.60E-03	5.30E-01	2.60E-02						2.57E-03	C
74223-64-6	Pesticides	Non-Halogenated	ally			4.00E+03		8.80E+03							4.00E+03	N
107-18-6	VOCs	Non-Halogenated (Solvent)	allyl alcohol			4.00E+01		8.80E+01							4.00E+01	N
107-05-1	VOCs	Halogenated	allyl chloride				2.10E+00		2.10E+01						2.08E+00	C
7429-90-5	Metals	Aluminum compounds	aluminum			1.60E+04		3.50E+04							1.60E+04	N
20859-73-8	Metal compounds	Aluminum compounds	aluminum phosphide			6.40E+00		1.40E+01								
67485-29-4	Pesticides	Halogenated	amdro			2.70E+02		6.00E+02							2.72E+02	N
834-12-8	Pesticides	Non-Halogenated	ametryn			1.40E+02		3.20E+02							1.44E+02	N
92-67-1	SVOCs	Non-Halogenated	aminobiphenyl;4-				4.20E-03		4.20E-02						4.17E-03	C
591-27-5	Phenols	Non-Halogenated	aminophenol;m-			1.30E+03		2.80E+03							1.28E+03	N
33089-61-1	Pesticides	Non-Halogenated	amitraz			4.00E+01		8.80E+01							4.00E+01	N
7664-41-7	Nonmetal inorganics	Corrosive	AMMONIA	AMMONIA NOTES												
7790-98-9	Perchlorates	Halogenated	ammonium perchlorate			1.10E+01		2.50E+01								
7773-06-0	Nonmetal inorganics		ammonium sulfamate			3.20E+03		7.00E+03								
62-53-3	SVOCs	Non-Halogenated	aniline			1.10E+02	1.50E+01	2.50E+02	1.50E+02						1.54E+01	C
120-12-7	PAHs	Non-Halogenated	anthracene			2.40E+03		5.30E+03							2.40E+03	N
7440-36-0	Metals	Antimony compounds	antimony			6.40E+00		1.40E+01		6.00E+00	6.00E+00	6.00E+00			6.00E+00	MCL
1314-60-9	Metal compounds	Antimony compounds	antimony pentoxide			8.00E+00		1.80E+01								
28300-74-5	Metal compounds	Antimony compounds	antimony potassium tartrate			1.40E+01		3.20E+01							1.44E+01	N
1332-81-6	Metal compounds	Antimony compounds	antimony tetroxide			6.40E+00		1.40E+01								
1309-64-4	Metal compounds	Antimony compounds	antimony trioxide													
74115-24-5	Pesticides	Halogenated	apollo			2.10E+02		4.60E+02							2.08E+02	N
140-57-8	SVOCs	Halogenated	aramite			8.00E+02	3.50E+00	1.80E+03	3.50E+01						3.50E+00	C
12674-11-2	PCBs	Halogenated	aroclor 1016			5.60E-01	6.30E-01	1.20E+00	6.30E+00						5.60E-01	N
11097-69-1	PCBs	Halogenated	aroclor 1254			1.60E-01	2.20E-02	3.50E-01	2.20E-01						2.19E-02	C
11096-82-5	PCBs	Halogenated	aroclor 1260				2.20E-02		2.20E-01						2.19E-02	C
7440-38-2	Metals	Arsenic compound	arsenic, inorganic		5.00E+00	4.80E+00	5.80E-02	1.10E+01	5.80E-01	0.00E+00	1.00E+01	1.00E+01			5.00E+00	Background
7784-42-1	Metal compounds	Arsenic compound	arsine			2.80E-02		6.10E-02								
1332-21-4	Fibers		ASBESTOS	ASBESTOS NOTE						7.00E+06	7.00E+06	7.00E+06				
76578-14-8	Pesticides	Halogenated	assure			1.40E+02		3.20E+02							1.44E+02	N
3337-71-1	Pesticides	Non-Halogenated	asulam			5.80E+03		1.30E+04							5.76E+03	N
1912-24-9	Pesticides	Halogenated	atrazine			5.60E+02	3.80E-01	1.20E+03	3.80E+00	3.00E+00	3.00E+00	3.00E+00			3.00E+00	MCL
65195-55-3	Pesticides	Non-Halogenated	avermectin B1			6.40E+00		1.40E+01							6.40E+00	N
103-33-3	Pesticides	Non-Halogenated	azobenzene				4.00E-01		4.00E+00						3.98E-01	C
7440-39-3	Metals		barium and compounds			3.20E+03		7.00E+03		2.00E+03	2.00E+03	2.00E+03			2.00E+03	MCL
114-26-1	Pesticides	Non-Halogenated	baygon			6.40E+01		1.40E+02							6.40E+01	N
43121-43-3	Pesticides	Halogenated	bayleton			5.40E+02		1.20E+03							5.44E+02	N
68359-37-5	Pesticides	Halogenated	baythroid			4.00E+02		8.80E+02							4.00E+02	N
1861-40-1	Pesticides	Halogenated	benefin			4.00E+01		8.80E+01							4.00E+01	N

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
17804-35-2	Pesticides	Non-Halogenated	benomyl			8.00E+02		1.80E+03							8.00E+02	N
25057-89-0	Herbicides	Non-Halogenated	bentazon			4.80E+02		1.10E+03							4.80E+02	N
100-52-7	SVOCs	Non-Halogenated	benzaldehyde			8.00E+02	1.10E+01	1.80E+03	1.10E+02						1.09E+01	C
71-43-2	VOCs (BTEX)	Non-Halogenated (Solvent)	BENZENE		5.00E+00	3.20E+01	8.00E-01	7.00E+01	8.00E+00	0.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL
108-98-5	SVOCs	Non-Halogenated	benzenethiol			8.00E+00		1.80E+01							8.00E+00	N
92-87-5	SVOCs	Non-Halogenated	benzidine			4.80E+01	1.00E-04	1.10E+02	3.80E-03						1.00E-04	C
192-97-2	PAHs	Non-Halogenated	benzo[e]pyrene			1.40E+00		3.20E+00							1.44E+00	N
56-55-3	cPAHs	Non-Halogenated	BENZO[a]ANTHRACENE	PAH NOTES												
50-32-8	cPAHs	Non-Halogenated	BENZO[a]PYRENE	PAH NOTES	1.00E-01	4.80E+00	2.30E-02	1.10E+01	8.80E-01	0.00E+00	2.00E-01	2.00E-01			2.00E-01	MCL
205-99-2	cPAHs	Non-Halogenated	BENZO[b]FLUORANTHENE	PAH NOTES												
207-08-9	cPAHs	Non-Halogenated	BENZO[k]FLUORANTHENE	PAH NOTES												
65-85-0	SVOCs	Non-Halogenated	BENZOIC ACID	pH-DEPENDENT		6.40E+04		1.40E+05							6.40E+04	N
98-07-7	VOCs	Halogenated	benzotrichloride				3.40E-03		3.40E-02						3.37E-03	C
100-51-6	SVOCs	Non-Halogenated (Solvent)	benzyl alcohol			1.60E+03		3.50E+03							1.60E+03	N
100-44-7	VOCs	Halogenated	benzyl chloride			1.60E+01	2.60E-01	3.50E+01	2.60E+00						2.57E-01	C
7440-41-7	Metals		beryllium			3.20E+01		7.00E+01		4.00E+00	4.00E+00	4.00E+00			4.00E+00	MCL
91-58-7	PAHs	Halogenated	beta-chloronaphthalene			6.40E+02		1.40E+03							6.40E+02	N
141-66-2	Pesticides	Non-Halogenated	bidrin			4.80E-01		1.10E+00							4.80E-01	N
82657-04-3	Pesticides	Halogenated	biphenthrin			2.40E+02		5.30E+02							2.40E+02	N
92-52-4	SVOCs	Non-Halogenated	biphenyl;1,1-			4.00E+03	5.50E+00	8.80E+03	5.50E+01						5.47E+00	C
108-60-1	VOCs	Halogenated	bis(2-chloro-1-methyl-ethyl)ether			3.20E+02	6.30E-01	7.00E+02	6.30E+00						6.25E-01	C
111-91-1	SVOCs	Halogenated	bis(2-chloroethoxy)methane			4.80E+01		1.10E+02							4.80E+01	N
111-44-4	SVOCs	Halogenated	bis(2-chloroethyl)ether				4.00E-02		4.00E-01						3.98E-02	C
117-81-7	Phthalates (ortho)	Non-Halogenated	bis(2-ethylhexyl) phthalate (DEHP)			3.20E+02	6.30E+00	7.00E+02	6.30E+01	0.00E+00	6.00E+00	6.00E+00			6.00E+00	MCL
542-88-1	VOCs	Halogenated	bis(chloromethyl)ether				2.00E-04		2.00E-03						1.99E-04	C
80-05-7	Phenols	Non-Halogenated	bisphenol a			8.00E+02		1.80E+03							8.00E+02	N
7440-42-8	Metals		boron			3.20E+03		7.00E+03							3.20E+03	N
15541-45-4	Nonmetal inorganics		bromate			6.40E+01	1.30E-01	1.40E+02	1.30E+00	0.00E+00	1.00E+01	1.00E+01			1.25E+00	MCL C ADJ
79-08-3	Haloacetic acids	Halogenated	bromoacetic acid			2.70E+01		6.00E+01			6.00E+01	6.00E+01			2.72E+01	MCL N ADJ
108-86-1	VOCs	Halogenated (Solvent)	bromobenzene			6.40E+01		1.40E+02							6.40E+01	N
74-97-5	VOCs	Halogenated	bromochloromethane													
75-27-4	VOCs (trihalomethanes)	Halogenated	BROMODICHLOROMETHANE	TTHM NOTES		1.60E+02	7.10E-01	3.50E+02	7.10E+00	0.00E+00	8.00E+01	8.00E+01			7.06E+00	MCL C ADJ
593-60-2	VOCs	Halogenated	bromoethene													
75-25-2	VOCs (trihalomethanes)	Halogenated (Solvent)	BROMOFORM	TTHM NOTES		1.60E+02	5.50E+00	3.50E+02	5.50E+01	0.00E+00	8.00E+01	8.00E+01			5.54E+01	MCL C ADJ
74-83-9	VOCs	Halogenated (Pesticide)	bromomethane			1.10E+01		2.50E+01							1.12E+01	N
2104-96-3	Pesticides	Halogenated	bromophos			4.00E+01		8.80E+01							4.00E+01	N
1689-84-5	Pesticides	Halogenated	bromoxynil			2.40E+02	8.80E-01	5.30E+02	8.80E+00						8.75E-01	C
1689-99-2	Pesticides	Halogenated	bromoxynil octanoate			1.20E+02	4.40E-01	2.60E+02	4.40E+00						4.38E-01	C
106-99-0	VOCs	Non-Halogenated	butadiene;1,3-				7.30E-02		7.30E-01						7.29E-02	C
71-36-3	VOCs	Non-Halogenated (Solvent)	butanol;n-			8.00E+02		1.80E+03							8.00E+02	N
75-65-0	VOCs	Non-Halogenated (Solvent)	butyl alcohol;tert-			3.20E+03	8.80E+01	7.00E+03	8.80E+02						8.75E+01	C
85-68-7	Phthalates (ortho)	Non-Halogenated	butyl benzyl phthalate (BBP)			3.20E+03	4.60E+01	7.00E+03	4.60E+02						4.61E+01	C
2008-41-5	Pesticides	Non-Halogenated	butylate			4.00E+02		8.80E+02							4.00E+02	N
85-70-1	Phthalates (ortho)	Non-Halogenated	butylphthalyl butylglycolate (BPBG)			1.60E+04		3.50E+04							1.60E+04	N
94-81-5	Pesticides	Halogenated	butyric acid;4-(2-methyl-4-chlorophenoxy)-			7.00E+02		1.50E+03							7.04E+02	N
75-60-5	Pesticides	Non-Halogenated	cacodylic acid			3.20E+02		7.00E+02							3.20E+02	N
7440-43-9	Metals		CADMIUM (POTABLE GROUNDWATER & SURFACE WATER)	CADMIUM NOTES	5.00E+00	8.00E+00		1.80E+01		5.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL
7440-43-9	Metals		CADMIUM (SOIL & NONPOTABLE SURFACE WATER)	CADMIUM NOTES												
592-01-8	Cyanides	Non-Halogenated	calcium cyanide			1.60E+01		3.50E+01								
105-60-2	SVOCs	Non-Halogenated	caprolactam			8.00E+03		1.80E+04							8.00E+03	N
2425-06-1	Pesticides	Halogenated	captafol			3.20E+01	5.80E-01	7.00E+01	5.80E+00						5.83E-01	C
133-06-2	Pesticides	Halogenated	captan			2.10E+03	3.80E+01	4.60E+03	3.80E+02						3.80E+01	C
63-25-2	Pesticides (Carbamate)	Non-Halogenated	carbaryl			1.60E+03		3.50E+03							1.60E+03	N
1563-66-2	Pesticides (Carbamate)	Non-Halogenated	carbofuran			8.00E+01		1.80E+02		4.00E+01	4.00E+01	4.00E+01			4.00E+01	MCL
75-15-0	VOCs	Non-Halogenated (Solvent)	carbon disulfide			8.00E+02		1.80E+03							8.00E+02	N
56-23-5	VOCs	Halogenated (Solvent)	carbon tetrachloride			3.20E+01	6.30E-01	7.00E+01	6.30E+00	0.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
55285-14-8	Pesticides	Non-Halogenated	carbosulfan			1.60E+02		3.50E+02							1.60E+02	N
5234-68-4	Pesticides	Non-Halogenated	carboxin			1.60E+03		3.50E+03							1.60E+03	N
1306-38-3	Metals		cerium oxide and cerium compounds													
302-17-0	VOCs	Halogenated	chloral hydrate			8.00E+02		1.80E+03							8.00E+02	N
133-90-4	Herbicides	Halogenated	chloramben			2.40E+02		5.30E+02							2.40E+02	N
118-75-2	Pesticides	Halogenated	chloranil				2.20E-01		2.20E+00						2.19E-01	C
12789-03-6	Pesticides	Halogenated	chlordane			4.00E+00	1.30E-01	8.80E+00	1.30E+00	0.00E+00	2.00E+00	2.00E+00			1.25E+00	MCL C ADJ
5103-71-9	Pesticides	Halogenated	chlordane (alpha)			4.00E+00		8.80E+00							4.00E+00	N
5103-74-2	Pesticides	Halogenated	chlordane (gamma)			4.00E+00		8.80E+00							4.00E+00	N
143-50-0	Pesticides	Halogenated	chlordecone (kepone)			4.80E+00	8.80E-03	1.10E+01	8.80E-02						8.75E-03	C
16887-00-6	Nonmetal inorganics		chloride										2.50E+05	SMCL		
90982-32-4	Pesticides	Halogenated	chlorimuron-ethyl			1.40E+03		3.20E+03							1.44E+03	N
7782-50-5	Nonmetal inorganics		CHLORINE	MCL FOR DISINFECTANTS		8.00E+02		1.80E+03		4.00E+03	4.00E+03	4.00E+03			8.00E+02	MCL N ADJ
506-77-4	Cyanides	Halogenated	chlorine cyanide			4.00E+02		8.80E+02								
10049-04-4	VOCs	Halogenated	CHLORINE DIOXIDE	MCL FOR DISINFECTANTS		2.40E+02		5.30E+02		8.00E+02	8.00E+02	8.00E+02				
7758-19-2	Nonmetal inorganics		chlorite			4.80E+02		1.10E+03		8.00E+02	1.00E+03	1.00E+03				
75-68-3	VOCs	Halogenated	chloro-1,1-difluoroethane;1-													
126-99-8	VOCs	Halogenated	chloro-1,3-butadiene;2-			1.60E+02		3.50E+02							1.60E+02	N
3165-93-3	SVOCs	Halogenated	chloro-2-methylaniline hydrochloride;4-				1.90E-01		1.90E+00						1.90E-01	C
95-69-2	SVOCs	Halogenated	chloro-2-methylaniline;4-			4.80E+01	8.80E-01	1.10E+02	8.80E+00						8.75E-01	C
79-11-8	Haloacetic acids	Halogenated	chloroacetic acid			3.20E+01		7.00E+01		7.00E+01	6.00E+01	6.00E+01			3.20E+01	MCL N ADJ
532-27-4	SVOCs	Halogenated	chloroacetophenone;2-													
106-47-8	SVOCs	Halogenated	chloroaniline;p-			6.40E+01	4.40E-01	1.40E+02	4.40E+00						4.38E-01	C
108-90-7	VOCs	Halogenated (Solvent)	chlorobenzene			1.60E+02		3.50E+02		1.00E+02	1.00E+02	1.00E+02			1.00E+02	MCL
510-15-6	Pesticides	Halogenated	chlorobenzilate			3.20E+02	8.00E-01	7.00E+02	8.00E+00						7.95E-01	C
74-11-3	Pesticides	Halogenated	chlorobenzoic acid;p-			4.80E+02		1.10E+03							4.80E+02	N
98-56-6	VOCs	Halogenated (Solvent)	chlorobenzotrifluoride;4-			2.40E+01		5.30E+01							2.40E+01	N
109-69-3	VOCs	Halogenated	chlorobutane;1-			3.20E+02		7.00E+02							3.20E+02	N
59-50-7	Phenols	Halogenated	chlorocresol			1.60E+03		3.50E+03							1.60E+03	N
75-45-6	VOCs	Halogenated	chlorodifluoromethane													
67-66-3	VOCs (trihalomethanes)	Halogenated (Solvent)	CHLOROFORM	TTHM NOTES		8.00E+01	1.40E+00	1.80E+02	1.40E+01	7.00E+01	8.00E+01	8.00E+01			1.41E+01	MCL C ADJ
74-87-3	VOCs	Halogenated	chloromethane													
107-30-2	VOCs	Halogenated	chloromethyl methyl ether				1.80E-02		1.80E-01						1.82E-02	C
88-73-3	Pesticides	Halogenated	chloronitrobenzene;o-			4.80E+01	2.90E-01	1.10E+02	2.90E+00						2.92E-01	C
100-00-5	Pesticides	Halogenated	chloronitrobenzene;p-			1.10E+01	1.50E+00	2.50E+01	1.50E+01						1.46E+00	C
95-57-8	Phenols	Halogenated	CHLOROPHENOL;2-	pH-DEPENDENT		4.00E+01		8.80E+01							4.00E+01	N
1897-45-6	Pesticides	Halogenated	chlorothalonil			2.40E+02	5.10E+00	5.30E+02	5.10E+01						5.15E+00	C
95-49-8	VOCs	Halogenated (Solvent)	chlorotoluene;o-			1.60E+02		3.50E+02							1.60E+02	N
106-43-4	VOCs	Halogenated (Solvent)	chlorotoluene;p-			1.60E+02		3.50E+02							1.60E+02	N
101-21-3	Pesticides	Halogenated	chlorpropham			8.00E+01		1.80E+02							8.00E+01	N
2921-88-2	Pesticides	Halogenated	chlorpyrifos			1.60E+01		3.50E+01							1.60E+01	N
5598-13-0	Pesticides	Halogenated	chlorpyrifos-methyl			1.60E+02		3.50E+02							1.60E+02	N
64902-72-3	Pesticides	Halogenated	chlorsulfuron			8.00E+02		1.80E+03							8.00E+02	N
60238-56-4	Pesticides	Halogenated	chlorthiophos			1.30E+01		2.80E+01							1.28E+01	N
7440-47-3	Metals	Chromium compounds	CHROMIUM (TOTAL)	CHROMIUM NOTES	5.00E+01					1.00E+02	1.00E+02	1.00E+02			1.00E+02	MCL
16065-83-1	Metals	Chromium compounds	CHROMIUM (III)	CHROMIUM NOTES		2.40E+04		5.30E+04							2.40E+04	N
18540-29-9	Metals	Chromium compounds	CHROMIUM (VI)	CHROMIUM NOTES		4.80E+01	4.60E-02	1.10E+02	1.80E+00						4.60E-01	MCL C ADJ
218-01-9	cPAHs	Non-Halogenated	CHRYSENE	PAH NOTES												
7440-48-4	Metals		Cobalt			4.80E+00		1.10E+01							4.80E+00	N
E649830	VOCs		coke oven emissions													
7440-50-8	Metals	Copper compounds	COPPER	HARDNESS - DEPENDENT		6.40E+02		1.40E+03		1.30E+03	1.30E+03	1.30E+03			6.40E+02	MCL N ADJ
544-92-3	Cyanides	Copper compounds	copper cyanide			8.00E+01		1.80E+02								
108-39-4	Phenols	Non-Halogenated	cresol;m-			8.00E+02		1.80E+03							8.00E+02	N
95-48-7	Phenols	Non-Halogenated (Solvent)	cresol;o-			8.00E+02		1.80E+03							8.00E+02	N
106-44-5	Phenols	Non-Halogenated (Solvent)	cresol;p-			1.60E+03		3.50E+03							1.60E+03	N
1319-77-3	Phenols	Non-Halogenated (Solvent)	cresols			1.60E+03		3.50E+03							1.60E+03	N

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123-73-9	VOCs	Non-Halogenated	crotonaldehyde			8.00E+00	2.30E-02	1.80E+01	2.30E-01						2.30E-02	C
98-82-8	VOCs	Non-Halogenated (Solvent)	cumene			8.00E+02		1.80E+03							8.00E+02	N
21725-46-2	Pesticides	Halogenated	cyanazine			3.20E+01	1.00E-01	7.00E+01	1.00E+00						1.04E-01	C
57-12-5	Cyanides	Non-Halogenated	CYANIDE	CYANIDE NOTES		5.00E+00		1.10E+01		2.00E+02	2.00E+02	2.00E+02			5.04E+00	MCL N ADJ
460-19-5	Cyanides	Non-Halogenated	cyanogen			8.00E+00		1.80E+01								
506-68-3	Cyanides	Halogenated	cyanogen bromide			7.20E+02		1.60E+03								
110-82-7	VOCs	Non-Halogenated (Solvent)	cyclohexane													
108-94-1	VOCs	Non-Halogenated (Solvent)	cyclohexanone			4.00E+04		8.80E+04							4.00E+04	N
110-83-8	VOCs	Non-Halogenated	cyclohexene			4.00E+01		8.80E+01							4.00E+01	N
108-91-8	VOCs	Non-Halogenated	cyclohexylamine			1.60E+03		3.50E+03							1.60E+03	N
66215-27-8	Pesticides	Non-Halogenated	cyromazine			8.00E+03		1.80E+04							8.00E+03	N
1861-32-1	Herbicides	Halogenated	dacthal			1.60E+02		3.50E+02							1.60E+02	N
75-99-0	Herbicides	Halogenated	dalapon, sodium salt			4.80E+02		1.10E+03		2.00E+02	2.00E+02	2.00E+02			2.00E+02	MCL
39515-41-8	Pesticides	Non-Halogenated	danitol			4.00E+02		8.80E+02							4.00E+02	N
72-54-8	Pesticides	Halogenated	DDD			8.00E+00	3.60E-01	1.80E+01	3.60E+00						3.65E-01	C
72-55-9	Pesticides	Halogenated	DDE			4.00E+00	1.30E-01	8.80E+00	1.30E+00						1.29E-01	C
50-29-3	Pesticides	Halogenated	DDT		3.00E-01	8.00E+00	2.60E-01	1.80E+01	2.60E+00						2.57E-01	C
1163-19-5	PBDEs	Halogenated	decabromodiphenyl ether (PBDE-209)			1.10E+02	1.30E+02	2.50E+02	1.30E+03						1.12E+02	N
8065-48-3	Pesticides	Non-Halogenated	demeton			6.40E-01		1.40E+00								
103-23-1	SVOCs	Non-Halogenated (Solvent)	di(2-ethylhexyl)adipate			9.60E+03	7.30E+01	2.10E+04	7.30E+02	4.00E+02	4.00E+02	4.00E+02			4.00E+02	MCL
2303-16-4	Pesticides	Halogenated	diallate				1.40E+00		1.40E+01						1.43E+00	C
333-41-5	Pesticides	Non-Halogenated	diazinon			1.10E+01		2.50E+01							1.12E+01	N
53-70-3	cPAHs	Non-Halogenated	DIBENZ[a,h]ANTHRACENE	PAH NOTES												
132-64-9	Furans	Non-Halogenated	dibenzofuran			8.00E+00		1.80E+01							8.00E+00	N
96-12-8	Pesticides	Halogenated	dibromo-3-chloropropane;1,2-			1.60E+00	1.40E-02	3.50E+00	5.50E-01	0.00E+00	2.00E-01	2.00E-01			1.44E-01	MCL C ADJ
631-64-1	Haloacetic acids	Halogenated	dibromoacetic acid			4.80E+00	3.50E-01	1.10E+01	3.50E+00		6.00E+01	6.00E+01			3.50E+00	MCL C ADJ
106-37-6	Pesticides	Halogenated	dibromobenzene;1,4-			8.00E+01		1.80E+02							8.00E+01	N
124-48-1	VOCs (trihalomethanes)	Halogenated	DIBROMOCHLOROMETHANE	TTHM NOTES		1.60E+02	5.20E-01	3.50E+02	5.20E+00	6.00E+01	8.00E+01	8.00E+01			5.21E+00	MCL C ADJ
84-74-2	Phthalates (ortho)	Non-Halogenated	di-butyl phthalate (DBP)			1.60E+03		3.50E+03							1.60E+03	N
1918-00-9	Herbicides	Halogenated	dicamba			4.80E+02		1.10E+03							4.80E+02	N
3400-09-7	Inorganic chloramines	Halogenated	DICHLORAMINE	MCL FOR DISINFECTANTS						4.00E+03	4.00E+03	4.00E+03				
764-41-0	VOCs	Halogenated	dichloro-2-butene;1,4-													
110-57-6	VOCs	Halogenated	dichloro-2-butene;trans-1,4-													
79-43-6	Haloacetic acids	Halogenated	dichloroacetic acid			6.40E+01	1.80E+00	1.40E+02	1.80E+01	0.00E+00	6.00E+01	6.00E+01			1.75E+01	MCL C ADJ
95-50-1	VOCs	Halogenated (Solvent)	dichlorobenzene;1,2-			7.20E+02		1.60E+03		6.00E+02	6.00E+02	6.00E+02			6.00E+02	MCL
541-73-1	VOCs	Halogenated	dichlorobenzene;1,3-													
106-46-7	VOCs	Halogenated	dichlorobenzene;1,4-			5.60E+02	8.10E+00	1.20E+03	8.10E+01	7.50E+01	7.50E+01	7.50E+01			7.50E+01	MCL
91-94-1	SVOCs	Halogenated	dichlorobenzidine;3,3'-				1.90E-01		1.90E+00						1.94E-01	C
75-71-8	VOCs	Halogenated	dichlorodifluoromethane			1.60E+03		3.50E+03							1.60E+03	N
75-34-3	VOCs	Halogenated (Solvent)	dichloroethane;1,1-			1.60E+03	7.70E+00	3.50E+03	7.70E+01						7.68E+00	C
107-06-2	VOCs	Halogenated (Solvent)	dichloroethane;1,2- (EDC)		5.00E+00	4.80E+01	4.80E-01	1.10E+02	4.80E+00	0.00E+00	5.00E+00	5.00E+00			4.81E+00	MCL C ADJ
75-35-4	VOCs	Halogenated (Solvent)	dichloroethylene;1,1-			4.00E+02		8.80E+02		7.00E+00	7.00E+00	7.00E+00			7.00E+00	MCL
156-59-2	VOCs	Halogenated (Solvent)	dichloroethylene;cis-1,2-			1.60E+01		3.50E+01		7.00E+01	7.00E+01	7.00E+01			1.60E+01	MCL N ADJ
156-60-5	VOCs	Halogenated (Solvent)	dichloroethylene;trans-1,2-			1.60E+02		3.50E+02		1.00E+02	1.00E+02	1.00E+02			1.00E+02	MCL
120-83-2	Phenols	Halogenated	DICHLOROPHENOL;2,4-	pH-DEPENDENT		4.80E+01		1.10E+02							4.80E+01	N
94-75-7	Herbicides	Halogenated	dichlorophenoxyacetic acid;2,4-			1.60E+02		3.50E+02		7.00E+01	7.00E+01	7.00E+01			7.00E+01	MCL
78-87-5	VOCs	Halogenated (Solvent)	dichloropropane;1,2-			3.20E+02	1.20E+00	7.00E+02	1.20E+01	0.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL
142-28-9	VOCs	Halogenated	dichloropropane;1,3-			1.60E+02		3.50E+02							1.60E+02	N
616-23-9	SVOCs	Halogenated	dichloropropanol;2,3-			4.80E+01		1.10E+02							4.80E+01	N
542-75-6	VOCs	Halogenated	dichloropropene;1,3-			2.40E+02	4.40E-01	5.30E+02	4.40E+00						4.38E-01	C
62-73-7	Pesticides	Halogenated	dichlorvos			8.00E+00	3.00E-01	1.80E+01	3.00E+00						3.02E-01	C
77-73-6	VOCs	Non-Halogenated	dicyclopentadiene			6.40E+02		1.40E+03							6.40E+02	N
60-57-1	Pesticides	Halogenated	dieldrin			8.00E-01	5.50E-03	1.80E+00	5.50E-02						5.47E-03	C
84-66-2	Phthalates (ortho)	Non-Halogenated	diethyl phthalate			1.30E+04		2.80E+04							1.28E+04	N
112-34-5	Glycols	Non-Halogenated	diethylene glycol monobutyl ether			4.80E+02		1.10E+03							4.80E+02	N
111-90-0	Glycols	Non-Halogenated	diethylene glycol monoethyl ether			9.60E+02		2.10E+03							9.60E+02	N

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
617-84-5	SVOCs	Non-Halogenated	diethylformamide			8.00E+00		1.80E+01							8.00E+00	N
56-53-1	SVOCs	Non-Halogenated	diethylstilbesterol				2.50E-04		2.50E-03						2.50E-04	C
43222-48-6	Pesticides	Non-Halogenated	difenzoquat			1.30E+03		2.90E+03							1.33E+03	N
35367-38-5	Pesticides	Halogenated	diflubenzuron			3.20E+02		7.00E+02							3.20E+02	N
75-37-6	VOCs	Halogenated	difluoroethane;1,1-													
108-20-3	VOCs	Non-Halogenated (Solvent)	diisopropyl ether													
1445-75-6	VOCs	Non-Halogenated	diisopropyl methylphosphonate			6.40E+02		1.40E+03							6.40E+02	N
55290-64-7	Pesticides	Non-Halogenated	dimethipin			3.50E+02		7.70E+02							3.52E+02	N
60-51-5	Pesticides	Non-Halogenated	dimethoate			3.50E+01		7.70E+01							3.52E+01	N
119-90-4	SVOCs	Non-Halogenated	dimethoxybenzidine;3,3'-				5.50E-02		5.50E-01						5.47E-02	C
131-11-3	Phthalates (ortho)	Non-Halogenated	dimethyl phthalate													
120-61-6	Phthalates	Non-Halogenated	dimethyl terephthalate			8.00E+02		1.80E+03							8.00E+02	N
21436-96-4	SVOCs	Halogenated	dimethylaniline hydrochloride;2,4-				1.50E-01		1.50E+00						1.51E-01	C
95-68-1	SVOCs	Non-Halogenated	dimethylaniline;2,4-			3.20E+01	4.40E-01	7.00E+01	4.40E+00						4.38E-01	C
121-69-7	VOCs	Non-Halogenated	dimethylaniline;N,N-			1.60E+01	1.60E+00	3.50E+01	1.60E+01						1.62E+00	C
119-93-7	SVOCs	Non-Halogenated	dimethylbenzidine;3,3'-				8.00E-03		8.00E-02						7.95E-03	C
68-12-2	VOCs	Non-Halogenated (Solvent)	dimethylformamide;N,N-			8.00E+02		1.80E+03							8.00E+02	N
57-14-7	VOCs	Non-Halogenated	dimethylhydrazine;1,1-			8.00E-01		1.80E+00							8.00E-01	N
540-73-8	VOCs	Non-Halogenated	dimethylhydrazine;1,2-				8.00E-05		8.00E-04						7.95E-05	C
105-67-9	Phenols	Non-Halogenated	dimethylphenol;2,4-			3.20E+02		7.00E+02							3.20E+02	N
576-26-1	Phenols	Non-Halogenated	dimethylphenol;2,6-			9.60E+00		2.10E+01							9.60E+00	N
95-65-8	Phenols	Non-Halogenated	dimethylphenol;3,4-			1.60E+01		3.50E+01							1.60E+01	N
99-65-0	Explosives	Non-Halogenated	dinitrobenzene;m-			1.60E+00		3.50E+00							1.60E+00	N
528-29-0	SVOCs	Non-Halogenated	dinitrobenzene;o-			1.60E+00		3.50E+00							1.60E+00	N
100-25-4	SVOCs	Non-Halogenated	dinitrobenzene;p-			1.60E+00		3.50E+00							1.60E+00	N
131-89-5	Phenols	Non-Halogenated	dinitro-o-cyclohexyl phenol;4,6-			3.20E+01		7.00E+01							3.20E+01	N
51-28-5	Phenols	Non-Halogenated	DINITROPHENOL;2,4-	pH-DEPENDENT		3.20E+01		7.00E+01							3.20E+01	N
25550-58-7	Phenols	Non-Halogenated	dinitrophenols													
E1615210	Explosives	Non-Halogenated	dinitrotoluene mixture; 2,4-/2,6-			1.40E+01	1.30E-01	3.20E+01	1.30E+00						1.29E-01	C
121-14-2	Explosives	Non-Halogenated	dinitrotoluene;2,4-			3.20E+01	2.80E-01	7.00E+01	2.80E+00						2.82E-01	C
606-20-2	Explosives	Non-Halogenated	dinitrotoluene;2,6-			4.80E+00	5.80E-02	1.10E+01	5.80E-01						5.83E-02	C
35572-78-2	Explosives	Non-Halogenated	dinitrotoluene, 2-Amino-4,6-			1.60E+00		3.50E+00							1.60E+00	N
19406-51-0	Explosives	Non-Halogenated	dinitrotoluene, 4-Amino-2,6-			1.60E+00		3.50E+00							1.60E+00	N
117-84-0	Phthalates (ortho)	Non-Halogenated	di-n-octyl phthalate (DNoP)			1.60E+02		3.50E+02							1.60E+02	N
88-85-7	Herbicides	Non-Halogenated	dinoseb			1.60E+01		3.50E+01		7.00E+00	7.00E+00	7.00E+00			7.00E+00	MCL
123-91-1	VOCs	Non-Halogenated (Solvent)	dioxane;1,4-			2.40E+02	4.40E-01	5.30E+02	4.40E+00						4.38E-01	C
957-51-7	Pesticides	Non-Halogenated	diphenamid			4.80E+02		1.10E+03							4.80E+02	N
122-39-4	Pesticides	Non-Halogenated	diphenylamine			1.60E+03		3.50E+03							1.60E+03	N
122-66-7	SVOCs	Non-Halogenated	diphenylhydrazine;1,2-				1.10E-01		1.10E+00						1.09E-01	C
2764-72-9	Pesticides	Non-Halogenated	diquat			3.50E+01		7.70E+01		2.00E+01	2.00E+01	2.00E+01			2.00E+01	MCL
1937-37-7	Dyes		direct black 38				1.20E-02		1.20E-01						1.18E-02	C
2602-46-2	Dyes		direct blue 6				1.20E-02		1.20E-01						1.18E-02	C
16071-86-6	Dyes		direct brown 95				1.30E-02		1.30E-01						1.31E-02	C
298-04-4	Pesticides	Non-Halogenated	disulfoton			6.40E-01		1.40E+00							6.40E-01	N
505-29-3	SVOCs	Non-Halogenated	dithiane;1,4-			8.00E+01		1.80E+02							8.00E+01	N
330-54-1	Pesticides (Carbamate)	Halogenated	diuron			3.20E+01		7.00E+01							3.20E+01	N
534-52-1	Phenols	Non-Halogenated	DNOC			1.30E+00		2.80E+00							1.28E+00	N
2439-10-3	Pesticides	Non-Halogenated	dodine			3.20E+02		7.00E+02							3.20E+02	N
115-29-7	Pesticides	Halogenated	endosulfan			4.80E+01		1.10E+02							4.80E+01	N
1031-07-8	Pesticides	Halogenated	endosulfan sulfate			9.60E+01		2.10E+02							9.60E+01	N
959-98-8	Pesticides	Halogenated	endosulfan;alpha													
33213-65-9	Pesticides	Halogenated	endosulfan;beta													
145-73-3	Herbicides	Non-Halogenated	endothall			3.20E+02		7.00E+02		1.00E+02	1.00E+02	1.00E+02			1.00E+02	MCL
72-20-8	Pesticides	Halogenated	endrin			4.80E+00		1.10E+01		2.00E+00	2.00E+00	2.00E+00			2.00E+00	MCL
7421-93-4	Pesticides	Halogenated	endrin aldehyde													
106-89-8	VOCs	Halogenated	epichlorohydrin			4.80E+01	4.40E+00	1.10E+02	4.40E+01	0.00E+00					4.42E+00	C

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106-88-7	VOCs	Non-Halogenated	epoxybutane													
16672-87-0	Pesticides	Halogenated	ethephon			8.00E+01		1.80E+02							8.00E+01	N
563-12-2	Pesticides	Non-Halogenated	ethion			8.00E+00		1.80E+01							8.00E+00	N
111-15-9	VOCs	Non-Halogenated (Solvent)	ethoxyethanol acetate;2-			8.00E+02		1.80E+03							8.00E+02	N
110-80-5	VOCs	Non-Halogenated (Solvent)	ethoxyethanol;2-			7.20E+02		1.60E+03							7.20E+02	N
141-78-6	VOCs	Non-Halogenated (Solvent)	ethyl acetate			7.20E+03		1.60E+04							7.20E+03	N
140-88-5	VOCs	Non-Halogenated	ethyl acrylate			4.00E+01	9.10E-01	8.80E+01	9.10E+00						9.11E-01	C
75-00-3	VOCs	Halogenated	ethyl chloride													
759-94-4	Pesticides	Non-Halogenated	ethyl dipropylthiocarbamate;S-			4.00E+02		8.80E+02							4.00E+02	N
60-29-7	VOCs	Non-Halogenated (Solvent)	ethyl ether			1.60E+03		3.50E+03							1.60E+03	N
97-63-2	VOCs	Non-Halogenated	ethyl methacrylate			7.20E+02		1.60E+03							7.20E+02	N
2104-64-5	Pesticides	Non-Halogenated	ethyl p-nitrophenyl phenylphosphorothioate			1.60E-01		3.50E-01							1.60E-01	N
637-92-3	VOCs	Non-Halogenated	ethyl tertiary butyl ether (ETBE)			8.00E+03		1.80E+04							8.00E+03	N
100-41-4	VOCs (BTEX)	Non-Halogenated (Solvent)	ethylbenzene		7.00E+02	8.00E+02		1.80E+03		7.00E+02	7.00E+02	7.00E+02			7.00E+02	MCL
109-78-4	SVOCs	Non-Halogenated	ethylene cyanohydrin			1.10E+03		2.50E+03							1.12E+03	N
107-15-3	VOCs	Non-Halogenated	ethylene diamine			7.20E+02		1.60E+03							7.20E+02	N
106-93-4	VOCs	Halogenated Pesticides	ethylene dibromide (EDB)		1.00E-02	7.20E+01	2.20E-02	1.60E+02	2.20E-01	0.00E+00	5.00E-02	5.00E-02			5.00E-02	MCL
107-21-1	Glycols	Non-Halogenated (Solvent)	ethylene glycol			3.20E+04		7.00E+04							3.20E+04	N
111-76-2	Glycols	Non-Halogenated (Solvent)	ethylene glycol monobutyl ether (EGBE)			1.60E+03		3.50E+03							1.60E+03	N
75-21-8	VOCs	Non-Halogenated	ethylene oxide				3.70E-02		1.40E+00						3.71E-02	C
96-45-7	SVOCs	Non-Halogenated	ethylene thiourea			1.30E+00	1.90E+00	2.80E+00	1.90E+01						1.28E+00	N
84-72-0	Phthalates (ortho)	Non-Halogenated	ethylphthalyl ethyl glycolate			4.80E+04		1.10E+05							4.80E+04	N
101200-48-0	Pesticides	Non-Halogenated	express			1.30E+02		2.80E+02							1.28E+02	N
22224-92-6	Pesticides	Non-Halogenated	fenamiphos			4.00E+00		8.80E+00							4.00E+00	N
2164-17-2	Pesticides	Halogenated	fluometuron			2.10E+02		4.60E+02							2.08E+02	N
206-44-0	PAHs	Non-Halogenated	fluoranthene			6.40E+02		1.40E+03							6.40E+02	N
86-73-7	PAHs	Non-Halogenated	fluorene			3.20E+02		7.00E+02							3.20E+02	N
16984-48-8	Nonmetal inorganics		FLUORIDE	FLUORIDE NOTES		9.60E+02		2.10E+03		4.00E+03	4.00E+03	4.00E+03	2.00E+03	SMCL	9.60E+02	MCL N ADJ
59756-60-4	Pesticides	Halogenated	fluridone			1.30E+03		2.80E+03							1.28E+03	N
56425-91-3	Pesticides	Halogenated	flurprimidol			6.40E+02		1.40E+03							6.40E+02	N
66332-96-5	Pesticides	Halogenated	flutolanil			8.00E+03		1.80E+04							8.00E+03	N
69409-94-5	Pesticides	Halogenated	fluvalinate			1.60E+02		3.50E+02							1.60E+02	N
133-07-3	Pesticides	Halogenated	folpet			1.40E+03		3.20E+03							1.44E+03	N
72178-02-0	Pesticides	Halogenated	fomesafen			1.60E+02		3.50E+02							1.60E+02	N
944-22-9	Pesticides	Non-Halogenated	fonofos			3.20E+01		7.00E+01							3.20E+01	N
50-00-0	VOCs	Non-Halogenated	formaldehyde			1.60E+03	2.10E+00	3.50E+03	2.10E+01						2.08E+00	C
64-18-6	VOCs	Non-Halogenated (Solvent)	formic acid			7.20E+03		1.60E+04							7.20E+03	N
39148-24-8	Pesticides	Non-Halogenated	fosetyl-al			4.00E+04		8.80E+04							4.00E+04	N
110-00-9	Furans	Non-Halogenated	furan			8.00E+00		1.80E+01							8.00E+00	N
67-45-8	SVOCs	Non-Halogenated	furazolidone				2.30E-02		2.30E-01						2.30E-02	C
98-01-1	VOCs	Non-Halogenated	furfural			2.40E+01		5.30E+01							2.40E+01	N
531-82-8	SVOCs	Non-Halogenated	furium				5.80E-02		5.80E-01						5.83E-02	C
60568-05-0	Pesticides	Non-Halogenated	furmecyclox				2.90E+00		2.90E+01						2.92E+00	C
77182-82-2	Pesticides	Non-Halogenated	glufosinate-ammonium			9.60E+01		2.10E+02							9.60E+01	N
765-34-4	VOCs	Non-Halogenated	glycidaldehyde			3.20E+00		7.00E+00							3.20E+00	N
1071-83-6	Herbicides	Non-Halogenated	glyphosate			1.60E+03		3.50E+03		7.00E+02	7.00E+02	7.00E+02			7.00E+02	MCL
unavailable20	Radionuclides		GROSS ALPHA PARTICLE ACTIVITY	ALPHA PARTICLE NOTE	1.50E+01					0.00E+00	1.50E+01	1.50E+01				
unavailable21	Radionuclides		GROSS BETA PARTICLE ACTIVITY	BETA PARTICLE NOTE	4.00E+00					0.00E+00	4.00E+00	4.00E+00				
86-50-0	Pesticides	Non-Halogenated	guthion			4.80E+01		1.10E+02							4.80E+01	N
69806-40-2	Pesticides	Halogenated	haloxyfop-methyl			8.00E-01		1.80E+00							8.00E-01	N
79277-27-3	Pesticides	Non-Halogenated	harmony			6.90E+02		1.50E+03							6.88E+02	N
76-44-8	Pesticides	Halogenated	heptachlor			4.00E+00	9.70E-03	8.80E+00	9.70E-02	0.00E+00	4.00E-01	4.00E-01			9.72E-02	MCL C ADJ
1024-57-3	Pesticides	Halogenated	heptachlor epoxide			1.00E-01	4.80E-03	2.30E-01	4.80E-02	0.00E+00	2.00E-01	2.00E-01			4.81E-02	MCL C ADJ
142-82-5	VOCs	Non-Halogenated (Solvent)	heptane;n-			2.40E+00		5.30E+00							2.40E+00	N
87-82-1	SVOCs	Halogenated	hexabromobenzene			1.60E+01		3.50E+01							1.60E+01	N
68631-49-2	PBDEs	Halogenated	hexabromodiphenyl ether; 2,2',4,4',5,5'- (PBDE-153)			3.20E+00		7.00E+00								

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118-74-1	Pesticides	Halogenated	hexachlorobenzene			6.40E+00	2.70E-02	1.40E+01	2.70E-01	0.00E+00	1.00E+00	1.00E+00			2.73E-01	MCL C ADJ
87-68-3	VOCs	Halogenated	hexachlorobutadiene			8.00E+00	5.60E-01	1.80E+01	5.60E+00						5.61E-01	C
319-84-6	Pesticides	Halogenated	hexachlorocyclohexane;alpha			1.40E+01	1.40E-02	3.20E+01	1.40E-01						1.39E-02	C
319-85-7	Pesticides	Halogenated	hexachlorocyclohexane;beta-				4.90E-02		4.90E-01						4.86E-02	C
608-73-1	Pesticides	Halogenated	hexachlorocyclohexane;technical				4.90E-02		4.90E-01						4.86E-02	C
77-47-4	Pesticides	Halogenated	hexachlorocyclopentadiene			4.80E+01		1.10E+02		5.00E+01	5.00E+01	5.00E+01			4.80E+01	MCL N ADJ
34465-46-8	Dioxins	Halogenated	hexachlorodibenzo-p-dioxin, mixture				1.40E-05		1.40E-04						1.41E-05	C
67-72-1	VOCs	Halogenated	hexachloroethane			5.60E+00	1.10E+00	1.20E+01	1.10E+01						1.09E+00	C
70-30-4	SVOCs	Halogenated	hexachlorophene			4.80E+00		1.10E+01							4.80E+00	N
13252-13-6	PFAS	Halogenated	HEXAFLUOROPROPYLENE OXIDE DIMER ACID (HFPO-DA; GenX)	PFAS NOTES		2.40E-02		5.30E-02		1.00E-02	1.00E-02				1.00E-02	MCL; see MCL Note
822-06-0	VOCs	Non-Halogenated	hexamethylene diisocyanate;1,6-													
110-54-3	VOCs	Non-Halogenated (Solvent)	hexane;n-			4.80E+02		1.10E+03							4.80E+02	N
591-78-6	VOCs	Non-Halogenated (Solvent)	hexanone;2-			4.00E+01		8.80E+01							4.00E+01	N
51235-04-2	Pesticides	Non-Halogenated	hexazinone			5.30E+02		1.20E+03							5.28E+02	N
302-01-2	VOCs	Non-Halogenated	hydrazine				1.50E-02		1.50E-01						1.46E-02	C
10034-93-2	Nonmetal inorganics		hydrazine sulfate				2.90E-02		2.90E-01							
7647-01-0	Nonmetal inorganics	Reactive Wastes; Corrosive	hydrogen chloride													
74-90-8	Cyanides	Non-Halogenated	hydrogen cyanide			4.80E+00		1.10E+01							4.80E+00	N
7783-06-4	Nonmetal inorganics		hydrogen sulfide													
123-31-9	SVOCs	Non-Halogenated	hydroquinone			6.40E+02	1.50E+00	1.40E+03	1.50E+01						1.46E+00	C
35554-44-0	Pesticides	Halogenated	imazalil			1.80E+03	1.40E+00	3.90E+03	1.40E+01						1.43E+00	C
81335-37-7	Pesticides	Non-Halogenated	imazaquin			4.00E+03		8.80E+03							4.00E+03	N
193-39-5	cPAHs	Non-Halogenated	INDENO[1,2,3-cd]PYRENE	PAH NOTES												
36734-19-7	Pesticides	Halogenated	iprodione			6.40E+02		1.40E+03							6.40E+02	N
7439-89-6	Metals		iron			1.10E+04		2.50E+04					3.00E+02	SMCL	3.00E+02	SMCL
78-83-1	VOCs	Non-Halogenated (Solvent)	isobutyl alcohol			2.40E+03		5.30E+03							2.40E+03	N
78-59-1	SVOCs	Non-Halogenated (Solvent)	isophorone			3.20E+03	9.20E+01	7.00E+03	9.20E+02						9.21E+01	C
33820-53-0	Pesticides	Non-Halogenated	isopropalin			1.20E+02		2.60E+02							1.20E+02	N
67-63-0	VOCs	Non-Halogenated (Solvent)	isopropanol			1.60E+04		3.50E+04							1.60E+04	N
1832-54-8	SVOCs	Non-Halogenated	isopropyl methyl phosphonic acid			1.60E+03		3.50E+03							1.60E+03	N
82558-50-7	Pesticides	Non-Halogenated	isoxaben			8.00E+02		1.80E+03							8.00E+02	N
77501-63-4	Pesticides	Halogenated	lactofen			1.30E+02		2.80E+02							1.28E+02	N
7439-92-1	Metals	Lead compounds	LEAD	LEAD NOTES	1.50E+01					0.00E+00	1.50E+01	1.50E+01			1.50E+01	MCL
58-89-9	Pesticides	Halogenated	lindane		2.00E-01	4.80E+00	8.00E-02	1.10E+01	8.00E-01	2.00E-01	2.00E-01	2.00E-01			2.00E-01	MCL
330-55-2	Pesticides (Carbamate)	Halogenated	linuron			1.20E+02		2.70E+02							1.23E+02	N
7439-93-2	Metals		lithium			3.20E+01		7.00E+01							3.20E+01	N
7791-03-9	Perchlorates	Halogenated	lithium perchlorate			1.10E+01		2.50E+01								
83055-99-6	Pesticides	Non-Halogenated	londax			3.20E+03		7.00E+03							3.20E+03	N
121-75-5	Pesticides	Non-Halogenated	malathion			3.20E+02		7.00E+02							3.20E+02	N
108-31-6	SVOCs	Non-Halogenated	maleic anhydride			1.60E+03		3.50E+03							1.60E+03	N
123-33-1	SVOCs	Non-Halogenated	maleic hydrazide			8.00E+03		1.80E+04							8.00E+03	N
109-77-3	VOCs	Non-Halogenated	malononitrile			1.60E+00		3.50E+00							1.60E+00	N
8018-01-7	Pesticides	Non-Halogenated	mancozeb			4.80E+02		1.10E+03							4.80E+02	N
12427-38-2	Pesticides	Non-Halogenated	maneb			8.00E+01		1.80E+02							8.00E+01	N
7439-96-5	Metals		MANGANESE (Diet - e.g., fish consumption)	MANGANESE NOTES												
7439-96-5	Metals		MANGANESE (Non-Diet - e.g., drinking water or soil)	MANGANESE NOTES		7.50E+02		1.60E+03					5.00E+01	SMCL	5.00E+01	SMCL
950-10-7	Pesticides	Non-Halogenated	mephosfolan			1.40E+00		3.20E+00							1.44E+00	N
24307-26-4	Pesticides	Halogenated	mepiquat chloride			4.80E+02		1.10E+03							4.80E+02	N
7487-94-7	Metal compounds	Mercury compounds	mercuric chloride			4.80E+00		1.10E+01		2.00E+00	2.00E+00	2.00E+00				
7439-97-6	Metals	Mercury compounds	mercury		2.00E+00					2.00E+00	2.00E+00	2.00E+00			2.00E+00	MCL
150-50-5	Pesticides	Non-Halogenated	merphos			2.40E-01		5.30E-01							2.40E-01	N
57837-19-1	Pesticides	Non-Halogenated	metalaxyl			9.60E+02		2.10E+03							9.60E+02	N
126-98-7	VOCs	Non-Halogenated	methacrylonitrile			8.00E-01		1.80E+00							8.00E-01	N
10265-92-6	Pesticides	Non-Halogenated	methamidosphos			8.00E-01		1.80E+00							8.00E-01	N
67-56-1	VOCs	Non-Halogenated (Solvent)	methanol			1.60E+04		3.50E+04							1.60E+04	N
950-37-8	Pesticides	Non-Halogenated	methidathion			2.40E+01		5.30E+01							2.40E+01	N

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
16752-77-5	Pesticides (Carbamate)	Non-Halogenated	methomyl			4.00E+02		8.80E+02							4.00E+02	N
99-59-2	SVOCs	Non-Halogenated	methoxy-5-nitroaniline;2-				1.80E+00		1.80E+01						1.79E+00	C
72-43-5	Pesticides	Halogenated	methoxychlor			8.00E+01		1.80E+02		4.00E+01	4.00E+01	4.00E+01			4.00E+01	MCL
110-49-6	VOCs	Non-Halogenated (Solvent)	methoxyethanol acetate;2-			6.40E+01		1.40E+02							6.40E+01	N
109-86-4	VOCs	Non-Halogenated (Solvent)	methoxyethanol;2-			4.00E+01		8.80E+01							4.00E+01	N
79-20-9	VOCs	Non-Halogenated (Solvent)	methyl acetate			8.00E+03		1.80E+04							8.00E+03	N
96-33-3	VOCs	Non-Halogenated	methyl acrylate			2.40E+02		5.30E+02							2.40E+02	N
78-93-3	VOCs	Non-Halogenated (Solvent)	methyl ethyl ketone			4.80E+03		1.10E+04							4.80E+03	N
108-10-1	VOCs	Non-Halogenated (Solvent)	methyl isobutyl ketone			6.40E+02		1.40E+03							6.40E+02	N
22967-92-6	Organometallics	Mercury compounds	METHYL MERCURY	METHYL MERCURY NOTES		1.60E+00		3.50E+00							1.60E+00	N
80-62-6	VOCs	Non-Halogenated (Solvent)	methyl methacrylate			1.10E+04		2.50E+04							1.12E+04	N
90-12-0	PAHs	Non-Halogenated	methyl naphthalene;1-			5.60E+02	8.60E-01	1.20E+03	8.60E+00						8.58E-01	C
91-57-6	PAHs	Non-Halogenated	methyl naphthalene;2-			3.20E+01		7.00E+01							3.20E+01	N
298-00-0	Pesticides	Non-Halogenated	methyl parathion			4.00E+00		8.80E+00							4.00E+00	N
25013-15-4	VOCs	Non-Halogenated	methyl styrene			4.80E+01		1.10E+02							4.80E+01	N
98-83-9	VOCs	Non-Halogenated	methyl styrene, alpha			5.60E+02		1.20E+03							5.60E+02	N
1634-04-4	VOCs	Non-Halogenated (Solvent)	methyl tert-butyl ether (MTBE)		2.00E+01		2.40E+01		2.40E+02						2.43E+01	C
94-74-6	Herbicides	Halogenated	methyl-4-chlorophenoxy-acetic acid;2-			8.00E+00		1.80E+01							8.00E+00	N
99-55-8	SVOCs	Non-Halogenated	methyl-5-nitroaniline;2-			3.20E+02	9.70E+00	7.00E+02	9.70E+01						9.72E+00	C
636-21-5	SVOCs	Halogenated	methylaniline hydrochloride;2-				6.70E-01		6.70E+00						6.73E-01	C
95-53-4	VOCs	Non-Halogenated	methylaniline;2-				5.50E+00		5.50E+01						5.47E+00	C
101-14-4	SVOCs	Halogenated	methylene bis(2-chloroaniline);4,4'-			3.20E+01	2.30E-01	7.00E+01	8.80E+00						2.30E-01	C
101-61-1	SVOCs	Non-Halogenated	methylene bis(n,n'-dimethyl)aniline;4,4'-				1.90E+00		1.90E+01						1.90E+00	C
74-95-3	VOCs	Halogenated	methylene bromide			8.00E+01		1.80E+02							8.00E+01	N
75-09-2	VOCs	Halogenated (Solvent)	methylene chloride		5.00E+00	4.80E+01	5.80E+00	1.10E+02	2.20E+02	0.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL
101-68-8	SVOCs	Non-Halogenated	methylene diphenyl diisocyanate (MDI)													
9016-87-9	SVOCs	Non-Halogenated	methylene diphenyl diisocyanate (polymeric) (PMDI)													
101-77-9	SVOCs	Non-Halogenated	methylenebisbenzenamine;4,4-				5.50E-02		5.50E-01						5.47E-02	C
60-34-4	VOCs	Non-Halogenated	methylhydrazine			8.00E+00		1.80E+01							8.00E+00	N
51218-45-2	Pesticides	Halogenated	metolachlor			2.40E+03		5.30E+03							2.40E+03	N
21087-64-9	Pesticides	Non-Halogenated	metribuzin			4.00E+02		8.80E+02							4.00E+02	N
2385-85-5	Pesticides	Halogenated	mirex			1.60E+00	2.40E-03	3.50E+00	2.40E-02						2.43E-03	C
2212-67-1	Pesticides	Non-Halogenated	molinate			3.20E+01		7.00E+01							3.20E+01	N
7439-98-7	Metals		molybdenum			8.00E+01		1.80E+02							8.00E+01	N
10599-90-3	Inorganic chloramines	Halogenated	MONOCHLORAMINE	MCL FOR DISINFECTANTS		1.60E+03		3.50E+03		4.00E+03	4.00E+03	4.00E+03				
300-76-5	Pesticides	Halogenated	naled			1.60E+01		3.50E+01							1.60E+01	N
91-20-3	PAHs	Non-Halogenated	naphthalene		1.60E+02	1.60E+02		3.50E+02							1.60E+02	N
15299-99-7	Pesticides	Non-Halogenated	napropamide			1.90E+03		4.20E+03							1.92E+03	N
104-51-8	VOCs	Non-Halogenated	n-butylbenzene			4.00E+02		8.80E+02							4.00E+02	N
E715532	Metals	Nickel compounds	nickel refinery dust			1.80E+02		3.90E+02							1.76E+02	N
7440-02-0	Metals	Nickel compounds	NICKEL SOLUBLE SALTS	HARDNESS - DEPENDENT		3.20E+02		7.00E+02							3.20E+02	N
12035-72-2	Metal compounds	Nickel compounds	nickel subsulfide			1.80E+02	5.10E-02	3.90E+02	5.10E-01							
14797-55-8	Nonmetal inorganics		nitrate (measured as nitrogen)			2.60E+04		5.60E+04		1.00E+04	1.00E+04	1.00E+04				
14797-65-0	Nonmetal inorganics		nitrite (measured as nitrogen)			1.60E+03		3.50E+03		1.00E+03	1.00E+03	1.00E+03				
88-74-4	SVOCs	Non-Halogenated	nitroaniline, 2-			1.60E+02		3.50E+02							1.60E+02	N
100-01-6	SVOCs	Non-Halogenated	nitroaniline, 4-			6.40E+01	4.40E+00	1.40E+02	4.40E+01						4.38E+00	C
98-95-3	Explosives	Non-Halogenated	nitrobenzene			1.60E+01		3.50E+01							1.60E+01	N
67-20-9	SVOCs	Non-Halogenated	nitrofurantoin			1.10E+03		2.50E+03							1.12E+03	N
59-87-0	SVOCs	Non-Halogenated	nitrofurazone				6.70E-02		6.70E-01						6.73E-02	C
55-63-0	Explosives	Non-Halogenated	nitroglycerin			1.60E+00	5.10E+00	3.50E+00	5.10E+01						1.60E+00	N
556-88-7	SVOCs	Non-Halogenated	nitroguanidine			1.60E+03		3.50E+03							1.60E+03	N
79-46-9	VOCs	Non-Halogenated (Solvent)	nitropropane;2-													
1116-54-7	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiethanolamine;N-				3.10E-02		3.10E-01						3.13E-02	C
55-18-5	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiethylamine;N-				1.50E-04		5.80E-03						1.54E-04	C
62-75-9	SVOCs; Nitrosamines	Non-Halogenated	nitrosodimethylamine;N-			6.40E-02	2.30E-04	1.40E-01	8.60E-03						2.26E-04	C
924-16-3	SVOCs; Nitrosamines	Non-Halogenated	nitroso-di-n-butylamine;N-				8.10E-03		8.10E-02						8.10E-03	C

CAS No.	Chemical Data Group	Chemical Data Subgroup	Chemical Name	Links to Important Notes	Ground Water Method A (Table 720-1) (µg/L)	Ground Water Method B Noncancer (Eq. 720-1) (µg/L)	Ground Water Method B Cancer (Eq. 720-2) (µg/L)	Ground Water Method C Noncancer (Eq. 720-1 adjusted) (µg/L)	Ground Water Method C Cancer (Eq. 720-2 adjusted) (µg/L)	Ground Water Maximum Contaminant Level Goal 40 CFR 141 (µg/L)	Ground Water Federal Maximum Contaminant Level 40 CFR 141 (µg/L)	Ground Water WA State Maximum Contaminant Level 246-290 WAC (µg/L)	Ground Water Other Regulatory Criteria (see CLARC - July 2022 Main update) (µg/L)	Basis	Ground Water Method B Potable Groundwater Cleanup Level (Target for Soil to Groundwater Pathway) see guidance (µg/L)	Ground Water Target Criterion see guidance
621-64-7	SVOCs; Nitrosamines	Non-Halogenated	nitroso-di-n-propylamine;N-				1.30E-02		1.30E-01						1.25E-02	C
86-30-6	SVOCs; Nitrosamines	Non-Halogenated	nitrosodiphenylamine;N-				1.80E+01		1.80E+02						1.79E+01	C
759-73-9	SVOCs	Non-Halogenated	nitroso-n-ethylurea;n-				8.50E-04		3.20E-02						8.53E-04	C
10595-95-6	SVOCs; Nitrosamines	Non-Halogenated	nitroso-N-methylethylamine;N-				2.00E-03		2.00E-02						1.99E-03	C
684-93-5	SVOCs	Non-Halogenated	nitroso-n-methylurea,n-				1.90E-04		7.30E-03						1.92E-04	C
930-55-2	SVOCs	Non-Halogenated	nitrosopyrrolidine;N-				4.20E-02		4.20E-01						4.17E-02	C
99-08-1	Explosives	Non-Halogenated	nitrotoluene, m-			1.60E+00		3.50E+00							1.60E+00	N
88-72-2	Explosives	Non-Halogenated	nitrotoluene, o-			7.20E+00	2.00E-01	1.60E+01	2.00E+00						1.99E-01	C
99-99-0	Explosives	Non-Halogenated	nitrotoluene, p-			6.40E+01	5.50E+00	1.40E+02	5.50E+01						5.47E+00	C
84852-15-3	Phenols	Non-Halogenated	nonylphenol													
27314-13-2	Pesticides	Halogenated	norflurazon			2.40E+01		5.30E+01							2.40E+01	N
85509-19-9	Pesticides	Halogenated	nustar			3.20E+01		7.00E+01							3.20E+01	N
32536-52-0	PBDEs	Halogenated	octabromodiphenyl ether (OctaBDE)			4.80E+01		1.10E+02							4.80E+01	N
2691-41-0	Explosives	Non-Halogenated	octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine			8.00E+02		1.80E+03							8.00E+02	N
152-16-9	SVOCs	Non-Halogenated	octamethylpyrophosphoramide			3.20E+01		7.00E+01							3.20E+01	N
19044-88-3	Pesticides	Non-Halogenated	oryzalin			3.00E+03	1.10E+01	6.70E+03	1.10E+02						1.12E+01	C
19666-30-9	Pesticides	Halogenated	oxadiazon			8.00E+01		1.80E+02							8.00E+01	N
23135-22-0	Pesticides (Carbamate)	Non-Halogenated	oxamyl			4.00E+02		8.80E+02		2.00E+02	2.00E+02	2.00E+02			2.00E+02	MCL
42874-03-3	Pesticides	Halogenated	oxyfluorfen			6.40E+02	1.20E+00	1.40E+03	1.20E+01						1.20E+00	C
76738-62-0	Herbicides	Halogenated	paclobutrazol			2.10E+02		4.60E+02							2.08E+02	N
1910-42-5	Pesticides	Halogenated	Paraquat Dichloride			7.20E+01		1.60E+02							7.20E+01	N
56-38-2	Pesticides	Non-Halogenated	parathion			9.60E+01		2.10E+02							9.60E+01	N
1114-71-2	Pesticides	Non-Halogenated	pebulate			4.00E+02		8.80E+02							4.00E+02	N
40487-42-1	Pesticides	Non-Halogenated	pendimethalin			4.80E+03		1.10E+04							4.80E+03	N
87-84-3	SVOCs	Halogenated	pentabromo-6-chloro-cyclohexane;1,2,3,4,5-			3.20E+02	4.40E+00	7.00E+02	4.40E+01						4.38E+00	C
60348-60-9	PBDEs	Halogenated	pentabromodiphenyl ether; 2,2',4,4',5- (PBDE-99)			1.60E+00		3.50E+00							1.60E+00	N
32534-81-9	PBDEs	Halogenated	pentabromodiphenyl ethers (PentaBDE)			1.60E+01		3.50E+01							1.60E+01	N
608-93-5	SVOCs	Halogenated	pentachlorobenzene			6.40E+00		1.40E+01							6.40E+00	N
76-01-7	VOCs	Halogenated (Solvent)	pentachloroethane				4.90E-01		4.90E+00						4.86E-01	C
82-68-8	Pesticides	Halogenated	pentachloronitrobenzene			2.40E+01	1.70E-01	5.30E+01	1.70E+00						1.68E-01	C
87-86-5	Herbicides	Halogenated	PENTACHLOROPHENOL	pH-DEPENDENT		8.00E+01	2.20E-01	1.80E+02	2.20E+00	0.00E+00	1.00E+00	1.00E+00			1.00E+00	MCL
78-11-5	Explosives	Non-Halogenated	pentaerythritol tetranitrate (PETN)			1.40E+02	2.00E+01	3.20E+02	2.00E+02						2.03E+01	C
109-66-0	VOCs	Non-Halogenated (Solvent)	pentane;n-													
14797-73-0	Perchlorates	Halogenated	perchlorate and perchlorate salts			1.10E+01		2.50E+01								
375-73-5	PFAS	Halogenated	PERFLUOROBUTANESULFONIC ACID (PFBS)	PFAS NOTES		4.80E+00		1.10E+01					[Removed SAL]		4.80E+00	N; see MCL Note
375-22-4	PFAS	Halogenated	PERFLUOROBUTANOIC ACID (PFBA)	PFAS NOTES		8.00E+00		1.80E+01							8.00E+00	N
355-46-4	PFAS	Halogenated	PERFLUOROHEXANESULFONIC ACID (PFHxS)	PFAS NOTES		1.60E-01		3.40E-01		1.00E-02	1.00E-02		[Removed SAL]		1.00E-02	MCL; see MCL Note
307-24-4	PFAS	Halogenated	PERFLUOROHEXANOIC ACID (PFHxA)	PFAS NOTES		8.00E+00		1.80E+01							8.00E+00	N
375-95-1	PFAS	Halogenated	PERFLUORONONANOIC ACID (PFNA)	PFAS NOTES		4.00E-02		8.80E-02		1.00E-02	1.00E-02		[Removed SAL]		1.00E-02	MCL; see MCL Note
1763-23-1	PFAS	Halogenated	PERFLUOROOCTANESULFONIC ACID (PFOS)	PFAS NOTES		1.60E-03	2.20E-03	3.50E-03	2.20E-02	0.00E+00	4.00E-03		[Removed SAL]		4.00E-03	MCL; see MCL Note
335-67-1	PFAS	Halogenated	PERFLUOROOCTANOIC ACID (PFOA)	PFAS NOTES		4.80E-04	3.00E-06	1.10E-03	3.00E-05	0.00E+00	4.00E-03		[Removed SAL]		4.00E-03	MCL; see MCL Note
52645-53-1	Pesticides	Halogenated	permethrin			8.00E+02		1.80E+03							8.00E+02	N
unavailable19	General Chemistry		pH	pH NOTES												
13684-63-4	Pesticides	Non-Halogenated	phenmedipham			3.80E+03		8.40E+03							3.84E+03	N
108-95-2	Phenols	Non-Halogenated	phenol			4.80E+03		1.10E+04							4.80E+03	N
106-50-3	SVOCs	Non-Halogenated	phenylenediamine, p-			1.60E+01		3.50E+01							1.60E+01	N
108-45-2	SVOCs	Non-Halogenated	phenylenediamine;m-			9.60E+01		2.10E+02							9.60E+01	N
95-54-5	SVOCs	Non-Halogenated	phenylenediamine;o-			6.40E+01	7.30E-01	1.40E+02	7.30E+00						7.29E-01	C
62-38-4	Organometallics	Mercury compounds	phenylmercuric acetate			1.30E+00		2.80E+00							1.28E+00	N
90-43-7	Phenols	Non-Halogenated	phenylphenol;2-				4.60E+01		4.60E+02						4.61E+01	C
298-02-2	Pesticides	Non-Halogenated	phorate			3.20E+00		7.00E+00							3.20E+00	N
75-44-5	VOCs	Halogenated	phosgene													
732-11-6	Pesticides	Non-Halogenated	phosmet			3.20E+02		7.00E+02							3.20E+02	N
7803-51-2	Nonmetal inorganics		phosphine			2.40E+00		5.30E+00								
7664-38-2	Nonmetal inorganics	Reactive Wastes; Corrosive	phosphoric acid			1.60E+04		3.50E+04								
7723-14-0	Nonmetal inorganics	Reactive Wastes	phosphorus			1.60E-01		3.50E-01							1.60E-01	N

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100-21-0	Phthalates	Non-Halogenated	phthalic acid;p-			8.00E+03		1.80E+04							8.00E+03	N
85-44-9	Phthalates	Non-Halogenated	phthalic anhydride			3.20E+04		7.00E+04							3.20E+04	N
1918-02-1	Herbicides	Halogenated	picloram			1.10E+03		2.50E+03		5.00E+02	5.00E+02	5.00E+02			5.00E+02	MCL
29232-93-7	Pesticides	Non-Halogenated	pirimiphos-methyl			1.20E+01		2.60E+01							1.17E+01	N
36355-01-8	PBBs	Halogenated	polybrominated biphenyls			1.10E-01	2.90E-03	2.50E-01	2.90E-02							
1336-36-3	PCBs	Halogenated	polychlorinated biphenyls (PCBs)		1.00E-01		2.20E-02		2.20E-01	0.00E+00	5.00E-01	5.00E-01			2.19E-01	MCL C ADJ
151-50-8	Cyanides	Non-Halogenated	potassium cyanide			3.20E+01		7.00E+01								
7778-74-7	Perchlorates	Halogenated	potassium perchlorate			1.10E+01		2.50E+01								
506-61-6	Cyanides	Non-Halogenated	potassium silver cyanide			8.00E+01		1.80E+02								
67747-09-5	Pesticides	Halogenated	prochloraz			1.40E+02	5.80E-01	3.20E+02	5.80E+00						5.83E-01	C
26399-36-0	Pesticides	Halogenated	profluralin			4.80E+01		1.10E+02							4.80E+01	N
1610-18-0	Pesticides	Non-Halogenated	prometon			2.40E+02		5.30E+02							2.40E+02	N
7287-19-6	Pesticides	Non-Halogenated	prometryn			6.40E+02		1.40E+03							6.40E+02	N
23950-58-5	Pesticides	Halogenated	pronamide			1.20E+03		2.60E+03							1.20E+03	N
1918-16-7	Pesticides	Halogenated	propachlor			2.10E+02		4.60E+02							2.08E+02	N
709-98-8	Pesticides	Halogenated	propanil			8.00E+01		1.80E+02							8.00E+01	N
2312-35-8	Pesticides	Non-Halogenated	propargite			6.40E+02	4.60E-01	1.40E+03	4.60E+00						4.61E-01	C
107-19-7	VOCs	Non-Halogenated	propargyl alcohol			1.60E+01		3.50E+01							1.60E+01	N
139-40-2	Pesticides	Halogenated	propazine			3.20E+02		7.00E+02							3.20E+02	N
122-42-9	Pesticides	Non-Halogenated	propham			3.20E+02		7.00E+02							3.20E+02	N
60207-90-1	Pesticides	Halogenated	propiconazole			1.60E+03		3.50E+03							1.60E+03	N
123-38-6	VOCs	Non-Halogenated	propionaldehyde													
93-65-2	Herbicides	Halogenated	propionic acid;(2-methyl-4-chlorophenoxy)2-			1.60E+01		3.50E+01							1.60E+01	N
103-65-1	VOCs	Non-Halogenated	propylbenzene;n-			8.00E+02		1.80E+03							8.00E+02	N
57-55-6	Glycols	Non-Halogenated (Solvent)	propylene glycol			3.20E+05		7.00E+05							3.20E+05	N
6423-43-4	Glycols	Non-Halogenated	propylene glycol dinitrate;1,2-													
52125-53-8	Glycols	Non-Halogenated	propylene glycol monoethyl ether			5.60E+03		1.20E+04							5.60E+03	N
107-98-2	Glycols	Non-Halogenated (Solvent)	propylene glycol monomethyl ether (PGME)			5.60E+03		1.20E+04							5.60E+03	N
75-56-9	VOCs	Non-Halogenated	propylene oxide				1.80E-01		1.80E+00						1.82E-01	C
81335-77-5	Pesticides	Non-Halogenated	pursuit			4.00E+04		8.80E+04							4.00E+04	N
51630-58-1	Pesticides	Halogenated	pydrin			4.00E+02		8.80E+02							4.00E+02	N
129-00-0	PAHs	Non-Halogenated	pyrene			2.40E+02		5.30E+02							2.40E+02	N
110-86-1	VOCs	Non-Halogenated (Solvent)	pyridine			8.00E+00		1.80E+01							8.00E+00	N
13593-03-8	Pesticides	Non-Halogenated	quinalphos			8.00E+00		1.80E+01							8.00E+00	N
91-22-5	SVOCs	Non-Halogenated	quinoline				2.90E-02		2.90E-01						2.92E-02	C
13982-63-3	Radionuclides		RADIUM 226	RADIUM 226 NOTE	3.00E+00											
unavailable23	Radionuclides		RADIUM 226 AND 228	RADIUM 226 & 228 NOTES	5.00E+00					0.00E+00	5.00E+00	5.00E+00				
121-82-4	Explosives	Non-Halogenated	rdx			6.40E+01	1.10E+00	1.40E+02	1.10E+01						1.09E+00	C
E715557	Fibers		REFRACTORY CERAMIC FIBERS	REFRACTORY FIBER NOTE												
10453-86-8	Pesticides	Non-Halogenated	resmethrin			4.80E+02		1.10E+03							4.80E+02	N
299-84-3	Pesticides	Halogenated	ronnel			4.00E+02		8.80E+02							4.00E+02	N
83-79-4	Pesticides	Non-Halogenated	rotenone			6.40E+01		1.40E+02							6.40E+01	N
78-48-8	Pesticides	Non-Halogenated	s,s,s-tributylphosphorotrithioate			3.20E+00		7.00E+00							3.20E+00	N
78587-05-0	Pesticides	Halogenated	savey			4.00E+02		8.80E+02							4.00E+02	N
135-98-8	VOCs	Non-Halogenated (Solvent)	sec-butylbenzene			8.00E+02		1.80E+03							8.00E+02	N
7783-00-8	Metal compounds	Selenium compounds	selenious acid			8.00E+01		1.80E+02								
7782-49-2	Metals	Selenium compounds	selenium and compounds			8.00E+01		1.80E+02		5.00E+01	5.00E+01	5.00E+01			5.00E+01	MCL
74051-80-2	Pesticides	Non-Halogenated	sethoxydim			2.20E+03		4.90E+03							2.24E+03	N
7440-22-4	Metals	Silver compounds	SILVER	HARDNESS - DEPENDENT		8.00E+01		1.80E+02					1.00E+02	SMCL	8.00E+01	MCL N ADJ
506-64-9	Cyanides	Silver compounds	silver cyanide			1.60E+03		3.50E+03								
122-34-9	Pesticides	Halogenated	simazine			8.00E+01	7.30E-01	1.80E+02	7.30E+00	4.00E+00	4.00E+00	4.00E+00			4.00E+00	MCL
26628-22-8	Metal compounds		sodium azide			6.40E+01		1.40E+02								
143-33-9	Cyanides	Non-Halogenated	sodium cyanide			1.60E+01		3.50E+01								
148-18-5	Organic metal salts		sodium diethyldithiocarbamate			4.80E+02	3.20E-01	1.10E+03	3.20E+00						3.24E-01	C
62-74-8	Organofluorides	Halogenated	sodium fluoroacetate			3.20E-01		7.00E-01							3.20E-01	N
13718-26-8	Metal compounds		sodium metavanadate			1.60E+01		3.50E+01								

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7601-89-0	Perchlorates	Halogenated	sodium perchlorate			1.10E+01		2.50E+01								
7440-24-6	Metals		strontium			9.60E+03		2.10E+04							9.60E+03	N
57-24-9	SVOCs	Non-Halogenated	strychnine			4.80E+00		1.10E+01							4.80E+00	N
100-42-5	VOCs	Non-Halogenated (Solvent)	styrene			1.60E+03		3.50E+03		1.00E+02	1.00E+02	1.00E+02			1.00E+02	MCL
88671-89-0	Pesticides	Halogenated	systhane			4.00E+02		8.80E+02							4.00E+02	N
1746-01-6	Dioxins	Halogenated	TCDD;2,3,7,8 (DIOXIN)	TEF NOTES		5.60E-06	3.40E-07	1.20E-05	3.40E-06	0.00E+00	3.00E-05	3.00E-05			3.37E-06	MCL C ADJ
34014-18-1	Pesticides	Non-Halogenated	tebuthiuron			1.10E+03		2.50E+03							1.12E+03	N
3383-96-8	Pesticides	Non-Halogenated	temephos			3.20E+02		7.00E+02							3.20E+02	N
5902-51-2	Pesticides	Halogenated	terbacil			2.10E+02		4.60E+02							2.08E+02	N
13071-79-9	SVOCs	Non-Halogenated	terbufos			2.00E-01		4.40E-01							2.00E-01	N
886-50-0	Pesticides	Non-Halogenated	terbutryn			1.60E+01		3.50E+01							1.60E+01	N
98-06-6	VOCs	Non-Halogenated	tert-butylbenzene			8.00E+02		1.80E+03							8.00E+02	N
5436-43-1	PBDEs	Halogenated	tetrabromodiphenyl ether 2,2',4,4' (PBDE-47)			1.60E+00		3.50E+00							1.60E+00	N
95-94-3	SVOCs	Halogenated	tetrachlorobenzene;1,2,4,5-			2.40E+00		5.30E+00							2.40E+00	N
630-20-6	VOCs	Halogenated (Solvent)	tetrachloroethane;1,1,1,2-			2.40E+02	1.70E+00	5.30E+02	1.70E+01						1.68E+00	C
79-34-5	VOCs	Halogenated (Solvent)	tetrachloroethane;1,1,2,2-			1.60E+02	2.20E-01	3.50E+02	2.20E+00						2.19E-01	C
127-18-4	VOCs	Halogenated (Solvent)	TETRACHLOROETHYLENE (PCE)	PCE NOTES	5.00E+00	4.80E+01	2.10E+01	1.10E+02	2.10E+02	0.00E+00	5.00E+00	5.00E+00			5.00E+00	MCL
58-90-2	Phenols	Halogenated	TETRACHLOROPHENOL;2,3,4,6-	pH-DEPENDENT		4.80E+02		1.10E+03							4.80E+02	N
5216-25-1	VOCs	Halogenated	tetrachlorotoluene;p,a,a,a,-			4.80E-01	2.70E-03	1.10E+00	2.70E-02						2.73E-03	C
961-11-5	Pesticides	Halogenated	tetrachlorvinphos			4.80E+02	3.60E+00	1.10E+03	3.60E+01						3.65E+00	C
3689-24-5	Pesticides	Non-Halogenated	tetraethyl dithiopyrophosphate			8.00E+00		1.80E+01							8.00E+00	N
78-00-2	Organometallics	Lead compounds	tetraethyl lead			8.00E-04		1.80E-03							8.00E-04	N
811-97-2	VOCs	Halogenated	tetrafluoroethane;1,1,1,2-													
109-99-9	Furans	Non-Halogenated (Solvent)	tetrahydrofuran			7.20E+03		1.60E+04							7.20E+03	N
1314-32-5	Metal compounds	Thallium compounds	thallic oxide			3.20E-01		7.00E-01								
563-68-8	Metal compounds	Thallium compounds	thallium acetate			8.00E-02		1.80E-01							8.00E-02	N
6533-73-9	Metal compounds	Thallium compounds	thallium carbonate			3.20E-01		7.00E-01							3.20E-01	N
7791-12-0	Metal compounds	Thallium compounds	thallium chloride			1.60E-01		3.50E-01								
10102-45-1	Metal compounds	Thallium compounds	thallium nitrate			1.60E-01		3.50E-01								
12039-52-0	Metal compounds	Thallium compounds	thallium selenite			1.60E-01		3.50E-01								
7446-18-6	Metal compounds	Thallium compounds	thallium(I) sulfate			3.20E-01		7.00E-01								
7440-28-0	Metals	Thallium compounds	thallium, soluble salts			1.60E-01		3.50E-01		5.00E-01	2.00E+00	2.00E+00			1.60E-01	MCL N ADJ
28249-77-6	Pesticides	Halogenated	thiobencarb			1.60E+02		3.50E+02							1.60E+02	N
21564-17-0	SVOCs	Non-Halogenated	thiocyanomethylthiobenzothiazole;2-			4.80E+02		1.10E+03							4.80E+02	N
39196-18-4	Pesticides	Non-Halogenated	thiofanox			4.80E+00		1.10E+01							4.80E+00	N
23564-05-8	Pesticides	Non-Halogenated	thiophanate-methyl			2.60E+03	7.30E+00	5.60E+03	7.30E+01						7.29E+00	C
137-26-8	Pesticides	Non-Halogenated	thiram			2.40E+02		5.30E+02							2.40E+02	N
7440-31-5	Metals		tin			9.60E+03		2.10E+04							9.60E+03	N
118-96-7	Explosives	Non-Halogenated	tnt			8.00E+00	2.90E+00	1.80E+01	2.90E+01						2.92E+00	C
108-88-3	VOCs (BTEX)	Non-Halogenated (Solvent)	toluene		1.00E+03	6.40E+02		1.40E+03		1.00E+03	1.00E+03	1.00E+03			6.40E+02	MCL N ADJ
584-84-9	VOCs	Non-Halogenated	toluene-2,4-diisocyanate				1.10E+00		1.10E+01						1.12E+00	C
91-08-7	VOCs	Non-Halogenated	toluene-2,6-diisocyanate				1.10E+00		1.10E+01						1.12E+00	C
95-70-5	SVOCs	Non-Halogenated	toluenediamine;2,5-			3.20E+00	4.90E-01	7.00E+00	4.90E+00						4.86E-01	C
106-49-0	SVOCs	Non-Halogenated	toluidine;p-			6.40E+01	2.90E+00	1.40E+02	2.90E+01						2.92E+00	C
8001-35-2	Pesticides	Halogenated	toxaphene			1.40E+00	8.00E-02	3.20E+00	8.00E-01	0.00E+00	3.00E+00	3.00E+00			7.95E-01	MCL C ADJ
93-72-1	Herbicides	Halogenated	tp;2,4,5-			1.30E+02		2.80E+02		5.00E+01	5.00E+01	5.00E+01			5.00E+01	MCL
unavailable09	Petroleum	Non-Halogenated	tph, diesel range organics		5.00E+02											
unavailable10	Petroleum	Non-Halogenated	tph, heavy oils		5.00E+02											
unavailable11	Petroleum	Non-Halogenated	tph, mineral oils		5.00E+02											
unavailable25	Petroleum	Non-Halogenated	tph: gasoline range organics, benzene present		8.00E+02											
unavailable08	Petroleum	Non-Halogenated	tph: gasoline range organics, no detectable benzene		1.00E+03											
66841-25-6	Pesticides	Halogenated	tralomethrin			1.20E+02		2.60E+02							1.20E+02	N
2303-17-5	Pesticides	Halogenated	triallate			2.00E+02	6.10E-01	4.40E+02	6.10E+00						6.08E-01	C
82097-50-5	Pesticides	Halogenated	triasulfuron			1.60E+02		3.50E+02							1.60E+02	N
615-54-3	VOCs	Halogenated	tribromobenzene;1,2,4-			4.00E+01		8.80E+01							4.00E+01	N
688-73-3	Organotins	Non-Halogenated	tributyltin													

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56-35-9	Organotins	Non-Halogenated	tributyltin oxide			4.80E+00		1.10E+01							4.80E+00	N
10025-85-1	Inorganic chloramines	Halogenated	TRICHLORAMINE	MCL FOR DISINFECTANTS						4.00E+03	4.00E+03	4.00E+03				
76-13-1	VOCs	Halogenated (Solvent)	trichloro-1,2,2-trifluoroethane;1,1,2-			2.40E+05		5.30E+05							2.40E+05	N
76-03-9	Haloacetic acids	Halogenated	trichloroacetic acid			3.20E+02	1.30E+00	7.00E+02	1.30E+01	2.00E+01	6.00E+01	6.00E+01			1.25E+01	MCL C ADJ
33663-50-2	SVOCs	Halogenated	trichloroaniline hydrochloride;2,4,6-				3.00E+00		3.00E+01						3.02E+00	C
634-93-5	SVOCs	Halogenated	trichloroaniline;2,4,6-			4.80E-01	1.30E+01	1.10E+00	1.30E+02						4.80E-01	N
87-61-6	VOCs	Halogenated (Solvent)	trichlorobenzene;1,2,3-			6.40E+00		1.40E+01							6.40E+00	N
120-82-1	VOCs	Halogenated (Solvent)	trichlorobenzene;1,2,4-			8.00E+01	1.50E+00	1.80E+02	1.50E+01	7.00E+01	7.00E+01	7.00E+01			1.51E+01	MCL C ADJ
71-55-6	VOCs	Halogenated (Solvent)	trichloroethane;1,1,1-		2.00E+02	1.60E+04		3.50E+04		2.00E+02	2.00E+02	2.00E+02			2.00E+02	MCL
79-00-5	VOCs	Halogenated (Solvent)	trichloroethane;1,1,2-			3.20E+01	7.70E-01	7.00E+01	7.70E+00	3.00E+00	5.00E+00	5.00E+00			3.00E+00	MCLG
79-01-6	VOCs	Halogenated (Solvent)	TRICHLOROETHYLENE (TCE)	TCE NOTES	5.00E+00	4.00E+00	5.40E-01	8.80E+00	9.50E+00	0.00E+00	5.00E+00	5.00E+00			4.00E+00	MCL N ADJ
75-69-4	VOCs	Halogenated	trichlorofluoromethane			2.40E+03		5.30E+03							2.40E+03	N
95-95-4	Phenols	Halogenated	TRICHLOROPHENOL;2,4,5-	pH-DEPENDENT		1.60E+03		3.50E+03							1.60E+03	N
88-06-2	Phenols	Halogenated	TRICHLOROPHENOL;2,4,6-	pH-DEPENDENT		1.60E+01	8.00E+00	3.50E+01	8.00E+01						7.95E+00	C
93-76-5	Herbicides	Halogenated	trichlorophenoxyacetic acid;2,4,5-			1.60E+02		3.50E+02							1.60E+02	N
598-77-6	VOCs	Halogenated	trichloropropane;1,1,2-			4.00E+01		8.80E+01							4.00E+01	N
96-18-4	VOCs	Halogenated (Solvent)	trichloropropane;1,2,3-			3.20E+01	3.80E-04	7.00E+01	1.50E-02						3.84E-04	C
96-19-5	VOCs	Halogenated	trichloropropene;1,2,3-			2.40E+01		5.30E+01							2.40E+01	N
58138-08-2	Pesticides	Halogenated	tridiphane			4.80E+01		1.10E+02							4.80E+01	N
121-44-8	VOCs	Non-Halogenated (Solvent)	triethylamine													
1582-09-8	Pesticides	Halogenated	trifluralin			6.00E+01	5.70E+00	1.30E+02	5.70E+01						5.68E+00	C
unavailable13	VOCs (trihalomethanes)	Halogenated	TRIHALOMETHANES, (TOTAL) (TTHMs)	TTHM NOTES							8.00E+01	8.00E+01				
512-56-1	SVOCs	Non-Halogenated (Solvent)	trimethyl phosphate			1.60E+02	4.40E+00	3.50E+02	4.40E+01						4.38E+00	C
526-73-8	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,2,3-			8.00E+01		1.80E+02							8.00E+01	N
95-63-6	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,2,4-			8.00E+01		1.80E+02							8.00E+01	N
108-67-8	VOCs	Non-Halogenated (Solvent)	trimethylbenzene;1,3,5-			8.00E+01		1.80E+02							8.00E+01	N
99-35-4	Explosives	Non-Halogenated	trinitrobenzene;1,3,5-			4.80E+02		1.10E+03							4.80E+02	N
479-45-8	Explosives	Non-Halogenated	trinitrophenylmethylnitramine			3.20E+01		7.00E+01							3.20E+01	N
7440-61-1	Radionuclides	Radioactive Wastes	URANIUM, SOLUBLE SALTS	URANIUM, SOLUBLE SALTS		3.20E+00		7.00E+00		0.00E+00	3.00E+01	3.00E+01			3.20E+00	MCL N ADJ
7440-62-2	Metals	Vanadium compounds	vanadium			8.00E+01		1.80E+02							8.00E+01	N
1314-62-1	Metal compounds	Vanadium compounds	vanadium pentoxide			1.40E+02		3.20E+02								
1929-77-7	Pesticides	Non-Halogenated	vernam			8.00E+00		1.80E+01							8.00E+00	N
50471-44-8	Pesticides	Halogenated	vinclozolin			1.90E+01		4.20E+01							1.92E+01	N
108-05-4	VOCs	Non-Halogenated (Solvent)	vinyl acetate			8.00E+03		1.80E+04							8.00E+03	N
75-01-4	VOCs	Halogenated (Solvent)	VINYL CHLORIDE	VINYL CHLORIDE NOTES	2.00E-01	2.40E+01	2.90E-02	5.30E+01	2.90E-01	0.00E+00	2.00E+00	2.00E+00			2.92E-01	MCL C ADJ
81-81-2	Pesticides	Non-Halogenated	warfarin			4.80E+00		1.10E+01							4.80E+00	N
8012-95-1	Petroleum	Non-Halogenated	WHITE MINERAL OIL	WHITE MINERAL OIL NOTES		SEE NOTE		SEE NOTE							SEE NOTE	
108-38-3	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;m-			1.60E+03		3.50E+03							1.60E+03	N
95-47-6	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;o-			1.60E+03		3.50E+03							1.60E+03	N
106-42-3	VOCs (BTEX)	Non-Halogenated (Solvent)	xylene;p-			1.60E+03		3.50E+03							1.60E+03	N
1330-20-7	VOCs (BTEX)	Non-Halogenated (Solvent)	xylenes		1.00E+03	1.60E+03		3.50E+03		1.00E+04	1.00E+04	1.00E+04			1.60E+03	MCL N ADJ
7440-66-6	Metals	Zinc compounds	ZINC	HARDNESS - DEPENDENT		4.80E+03		1.10E+04					5.00E+03	SMCL	4.80E+03	MCL N ADJ
557-21-1	Cyanides	Zinc compounds	zinc cyanide			8.00E+02		1.80E+03								
1314-84-7	Metal compounds	Zinc compounds	zinc phosphide			4.80E+00		1.10E+01								
12122-67-7	Pesticides	Zinc compounds	zineb			8.00E+02		1.80E+03							8.00E+02	N

CAS Number	Hazardous Substance	TEF (unitless)[1]
224-42-0	dibenz[a, j]acridine	0.1
226-36-8	dibenz[a, h]acridine	0.1
194-59-2	7H-dibenzo[c, g]carbazole	1
192-65-4	dibenzo[a, e]pyrene	1
189-64-0	dibenzo[a, h]pyrene	10
189-55-9	dibenzo[a, i]pyrene	10
191-30-0	dibenzo[a, l]pyrene	10
3351-31-3	5-methylchrysene	1
5522-43-0	1-nitropyrene	0.1
57835-92-4	4-nitropyrene	0.1
42397-64-8	1,6-dinitropyrene	10
42397-65-9	1,8-dinitropyrene	1
7496-02-8	6-nitrochrysene	10
607-57-8	2-nitrofluorene	0.01
57-97-6	7,12-dimethylbenzanthracene	10
56-49-5	3-methylcholanthrene	1
602-87-9	5-nitroacenaphthene	0.01

(1) Source: Cal-EPA, 2005. Air Toxics Hot Spots Program Risk Assessment Guidelines, Part II Technical Support Document for Describing Available Cancer Potency Factors. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. May 2005.

Table 708-4: Toxicity Equivalency Factors for Dioxin-Like Polychlorinated Biphenyls (PCBs)

CAS Number	Hazardous Substance	TEF (unitless)[1]
	Dioxin-Like PCBs	
32598-13-3	3,3',4,4'-Tetrachlorobiphenyl (PCB 77)	0.0001
70362-50-4	3,4,4',5- Tetrachlorobiphenyl (PCB 81)	0.0003
32598-14-4	2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)	0.00003
74472-37-0	2,3,4,4',5-Pentachlorobiphenyl (PCB 114)	0.00003
31508-00-6	2,3',4,4',5-Pentachlorobiphenyl (PCB 118)	0.00003
65510-44-3	2',3,4,4',5-Pentachlorobiphenyl (PCB 123)	0.00003
57465-28-8	3,3',4,4',5-Pentachlorobiphenyl (PCB 126)	0.1
38380-08-4	2,3,3',4,4',5-Hexachlorobiphenyl (PCB 156)	0.00003
69782-90-7	2,3,3',4,4',5'-Hexachlorobiphenyl (PCB 157)	0.00003
52663-72-6	2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	0.00003
32774-16-6	3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	0.03
39635-31-9	2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB 189)	0.00003

(1) Source: Van den Berg et al. 2006. The 2005 World Health Organization Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds. Toxicological Sciences 2006 93(2):223-241; doi:10.1093/toxsci/kfl055.

Table 720-1
Method A Cleanup Levels for Groundwater.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5 ug/liter[b]
Benzene	71-43-2	5 ug/liter[c]
Benzo(a)pyrene	50-32-8	0.1 ug/liter[d]
Cadmium	7440-43-9	5 ug/liter[e]
Chromium (Total)	7440-47-3	50 ug/liter[f]
DDT	50-29-3	0.3 ug/liter[g]
1,2 Dichloroethane (EDC)	107-06-2	5 ug/liter[h]
Ethylbenzene	100-41-4	700 ug/liter[i]
Ethylene dibromide (EDB)	106-93-4	0.01 ug/liter[j]
Gross Alpha Particle Activity		15 pCi/liter[k]
Gross Beta Particle Activity		4 mrem/yr[l]
Lead	7439-92-1	15 ug/liter[m]
Lindane	58-89-9	0.2 ug/liter[n]
Methylene chloride	75-09-2	5 ug/liter[o]
Mercury	7439-97-6	2 ug/liter[p]
MTBE	1634-04-4	20 ug/liter[q]
Naphthalenes	91-20-3	160 ug/liter[r]
PAHs (carcinogenic)		See benzo(a)pyrene[d]
PCB mixtures		0.1 ug/liter[s]
Radium 226 and 228		5 pCi/liter[t]
Radium 226		3 pCi/liter[u]
Tetrachloroethylene	127-18-4	5 ug/liter[v]
Toluene	108-88-3	1,000 ug/liter[w]
Total Petroleum Hydrocarbons[x]		
[Note: Must also test for and meet cleanup levels for other petroleum components—see footnotes!]		
Gasoline Range Organics		
Benzene present in groundwater		800 ug/liter
No detectable benzene in groundwater		1,000 ug/liter
Diesel Range Organics		500 ug/liter
Heavy Oils		500 ug/liter
Mineral Oil		500 ug/liter
1,1,1 Trichloroethane	71-55-6	200 ug/liter[y]
Trichloroethylene	79-01-6	5 ug/liter[z]
Vinyl chloride	75-01-4	0.2 ug/liter[aa]
Xylenes	1330-20-7	1,000 ug/liter[bb]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for drinking water beneficial uses at sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the groundwater must be restored to those levels at all sites. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on background concentrations for state of Washington.

c **Benzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

d **Benzo(a)pyrene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1×10^{-5} risk. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

f **Chromium (Total).** Cleanup level based on concentration derived using Equation 720-1 for hexavalent chromium. This is a total value for chromium III and chromium VI. If just chromium III is present at the site, a cleanup level of 100 ug/l may be used (based on WAC 246-290-310 and 40 C.F.R. 141.62).

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup levels based on concentration derived using Equation 720-2.

h **1,2 Dichloroethane (ethylene dichloride or EDC).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

i **Ethylbenzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

WAC 173-200-040 Criteria. (1) Groundwaters in the state of Washington support many different beneficial uses. The purpose of these criteria is to establish maximum contaminant concentrations for the protection of a variety of beneficial uses of Washington's groundwater.

(a) Drinking water is the beneficial use generally requiring the highest quality of groundwater.

(b) Providing protection to the level of drinking water standards will protect a great variety of existing and future beneficial uses.

(c) Some groundwaters of the state support environmental systems with existing and future beneficial uses requiring more stringent protection than that provided by human health based criteria. These groundwaters and dependent uses will be protected by either or both of the following:

(i) Designation of an area and its associated groundwater as a special protection area in accordance with WAC 173-200-090.

(ii) Establishment of enforcement limits as close to the natural groundwater quality as possible for activities that may adversely affect those groundwaters in accordance with WAC 173-200-050.

(d) The use of criteria based on drinking water quality shall in no way be interpreted to mean that all groundwaters are used for drinking water or that all groundwaters are presently suitable for drinking water.

(2) The following criteria shall apply to all groundwaters in the state of Washington:

(a) Groundwater concentrations shall not exceed the criteria listed in Table 1, except as described in WAC 173-200-050 (3)(b).

(b) For the primary and secondary contaminants and radionuclides listed in Table 1, the criteria shall be the most stringent concentration of the following and those listed in Table 1:

(i) Maximum contaminant level goals;

(ii) Maximum contaminant levels; and

(iii) State maximum contaminant levels published in chapter 248-54 WAC as presently promulgated or subsequently amended or repromulgated.

The criteria for primary and secondary contaminants and radionuclide contaminants in Table 1 shall be amended as the federal and state rules are amended and without amendment of this chapter.

(c) For carcinogens listed in Table 1, the criteria are the concentrations that are anticipated to result in a total incremental human cancer risk of less than 1 in 1,000,000, and were estimated using the following equation and standard exposure assumptions:

$$\text{Groundwater Criteria (ug/l)} = \frac{\text{RISK} \times \text{BW} \times \text{LIFE} \times \text{UCF}}{\text{CPF} \times \text{DWIR} \times \text{DUR}}$$

Where:

RISK	=	Human cancer risk level (1 in 1,000,000)
BW	=	Body Weight (70 kg)
LIFE	=	Lifetime (70 years)
UCF	=	Unit conversion factor (1,000 ug/mg)
CPF	=	Cancer potency factor as published in the IRIS database (1/mg/kg/day)
DWIR	=	Drinking water ingestion rate (2.0 liters/day)
DUR	=	Duration of exposure (30 years)

For volatile carcinogens, inhalation exposure from showering was incorporated into the criteria by doubling the drinking water ingestion rate.

(3) For contaminants for which no numeric criteria have been established, enforcement limits shall be established in accordance with WAC 173-200-050.

TABLE 1
GROUNDWATER QUALITY CRITERIA

CONTAMINANT	CRITERION	
I. PRIMARY AND SECONDARY CONTAMINANTS AND RADIONUCLIDES		
A. PRIMARY CONTAMINANTS		
Barium*	1.0	milligrams/liter (mg/1)
Cadmium*	0.01	mg/1
Chromium*	0.05	mg/1
Lead*	0.05	mg/1
Mercury*	0.002	mg/1
Selenium*	0.01	mg/1
Silver*	0.05	mg/1
Fluoride	4	mg/1
Nitrate (as N)	10	mg/1
Endrin	0.0002	mg/1
Methoxychlor	0.1	mg/1
1,1,1-Trichloroethane	0.20	mg/1
2-4 D	0.10	mg/1
2,4,5-TP Silvex	0.01	mg/1
Total Coliform Bacteria	1/100	ml
B. SECONDARY CONTAMINANTS		
Copper*	1.0	mg/1
Iron*	0.30	mg/1
Manganese*	0.05	mg/1
Zinc*	5.0	mg/1
Chloride	250	mg/1
Sulfate	250	mg/1
Total Dissolved Solids	500	mg/1
Foaming Agents	0.5	mg/1
pH	6.5-8.5	
Corrosivity	noncorrosive	
Color	15 color units	
Odor	3 threshold odor units	
C. RADIONUCLIDES		
Gross Alpha Particle Activity	15	pico Curie/liter (pCi/1)
Gross Beta Particle Radioactivity		pCi/l
Gross Beta Activity	50	pCi/l
Tritium	20,000	pCi/l
Strontium-90	8	
Radium 226 & 228	5	pCi/1
Radium -226	3	pCi/1
II. CARCINOGENS		
Acrylamide	0.02	micrograms/liter ug/1

CONTAMINANT	CRITERION	
Acrylonitrile	0.07	ug/1
Aldrin	0.005	ug/1
Aniline	14	ug/1
Aramite	3	ug/1
Arsenic*	0.05	(ug/1)
Azobenzene	0.7	ug/1
Benzene	1.0	ug/1
Benzidine	0.0004	ug/1
Benzo(a)pyrene	0.008	ug/1
Benzotrichloride	0.007	ug/1
Benzyl chloride	0.5	ug/1
Bis(chloroethyl)ether	0.07	ug/1
Bis(chloromethyl)ether	0.0004	ug/1
Bis(2-ethylhexyl) phthalate	6.0	ug/1
Bromodichloromethane	0.3	ug/1
Bromoform	5	ug/1
Carbazole	5	ug/1
Carbon tetrachloride	0.3	ug/1
Chlordane	0.06	ug/1
Chlorodibromomethane	0.5	ug/1
Chloroform	7.0	ug/1
4 Chloro-2-methyl aniline	0.1	ug/1
4 Chloro-2-methyl analine hydrochloride	0.2	ug/1
o-Chloronitrobenzene	3	ug/1
p-Chloronitrobenzene	5	ug/1
Chlorthalonil	30	ug/1
Diallate	1	ug/1
DDT (includes DDE and DDD)	0.3	ug/1
1,2 Dibromoethane	0.001	ug/1
1,4 Dichlorobenzene	4	ug/1
3,3' Dichlorobenzidine	0.2	ug/1
1,1 Dichloroethane	1.0	ug/1
1,2 Dichloroethane (ethylene chloride)	0.5	ug/1
1,2 Dichloropropane	0.6	ug/1
1,3 Dichloropropene	0.2	ug/1
Dichlorvos	0.3	ug/1
Dieldrin	0.005	ug/1
3,3' Dimethoxybenzidine	6	ug/1
3,3 Dimethylbenzidine	0.007	
1,2 Dimethylhydrazine	60	ug/1
2,4 Dinitrotoluene	0.1	ug/1
2,6 Dinitrotoluene	0.1	ug/1
1,4 Dioxane	7.0	ug/1
1,2 Diphenylhydrazine	0.09	ug/1
Direct Black 38	0.009	ug/1
Direct Blue 6	0.009	ug/1
Direct Brown 95	0.009	ug/1
Epichlorohydrin	8	ug/1
Ethyl acrylate	2	ug/1
Ethylene dibromide	0.001	ug/1
Ethylene thiourea	2	ug/1
Folpet	20	ug/1
Furazolidone	0.02	ug/1

CONTAMINANT	CRITERION	
Furium	0.002	ug/1
Furmecyclox	3	ug/1
Heptachlor	0.02	ug/1
Heptachlor Epoxide	0.009	ug/1
Hexachlorobenzene	0.05	ug/1
Hexachlorocyclohexane (alpha)	0.001	ug/1
Hexachlorocyclohexane (technical)	0.05	ug/1
Hexachlorodibenzo-p-dioxin, mix	0.00001	ug/1
Hydrazine/Hydrazine sulfate	0.03	ug/1
Lindane	0.06	ug/1
2 Methoxy-5-nitroaniline	2	ug/1
2 Methylaniline	0.2	ug/1
2 Methylaniline hydrochloride	0.5	ug/1
4,4' Methylene bis(N,N'-dimethyl) aniline	2	ug/1
Methylene chloride (dichloromethane)	5	ug/1
Mirex	0.05	ug/1
Nitrofurazone	0.06	ug/1
N-Nitrosodiethanolamine	0.03	ug/1
N-Nitrosodiethylamine	0.0005	ug/1
N-Nitrosodimethylamine	0.002	ug/1
N-Nitrosodiphenylamine	17	ug/1
N-Nitroso-di-n-propylamine	0.01	ug/1
N-Nitrosopyrrolidine	0.04	ug/1
N-Nitroso-di-n-butylamine	0.02	ug/1
N-Nitroso-N-methylethylamine	0.004	ug/1
PAH	0.01	ug/1
PBBs	0.01	ug/1
PCBs	0.01	ug/1
o-Phenylenediamine	0.005	ug/1
Propylene oxide	0.01	ug/1
2,3,7,8-Tetrachlorodibenzo-p-dioxin	0.0000006	ug/1
Tetrachloroethylene (perchloroethylene)	0.8	ug/1
p,α,α,α-Tetrachlorotoluene	0.004	ug/1
2,4 Toluenediamine	0.002	ug/1
o-Toluidine	0.2	ug/1
Toxaphene	0.08	ug/1
Trichloroethylene	3	ug/1
2,4,6-Trichlorophenol	4	ug/1
Trimethyl phosphate	2	ug/1
Vinyl chloride	0.02	ug/1

*metals are measured as total metals

[Statutory Authority: RCW 90.48.035. WSR 90-22-023, § 173-200-040, filed 10/31/90, effective 12/1/90.]

Washington State Department of Ecology - Cleanup Levels and Risk Calculation (CLARC) Vapor Intrusion Method B Table - July 2024

CAS #	Chemical Name[1]	Links to Important Notes click here for general VI Guidance (website)	Risk Driver for Individual Chemicals	Indoor Air Cleanup Level Method B Noncancer (µg/m³)	Indoor Air Cleanup Level Method B Cancer (µg/m³)	Groundwater Screening Level Method B Noncancer (µg/L)	Groundwater Screening Level Method B Cancer (µg/L)	Soil Gas Screening Level Method B Noncancer (µg/m³)	Soil Gas Screening Level Method B Cancer (µg/m³)
75-07-0	acetaldehyde		Cancer	4.11E+00	1.14E+00	2.30E+03	6.20E+02	1.40E+02	3.80E+01
75-05-8	acetonitrile		Noncancer	2.74E+01		3.30E+04		9.10E+02	
107-02-8	acrolein		Noncancer	9.14E-03		2.90E+00		3.00E-01	
107-13-1	acrylonitrile		Cancer	9.14E-01	3.68E-02	2.90E+02	1.20E+01	3.00E+01	1.20E+00
107-05-1	allyl chloride		Cancer	4.57E-01	4.17E-01	1.60E+00	1.50E+00	1.50E+01	1.40E+01
71-43-2	benzene	Ecology VI Guidance (2022) (Sect. E-5.2)	Cancer	1.37E+01	3.21E-01	1.00E+02	2.40E+00	4.60E+02	1.10E+01
100-44-7	benzyl chloride		Cancer	4.57E-01	5.10E-02	5.60E+01	6.20E+00	1.50E+01	1.70E+00
108-86-1	bromobenzene		Noncancer	2.74E+01		6.30E+02		9.10E+02	
75-27-4	bromodichloromethane		Cancer		6.76E-02		1.40E+00		2.30E+00
593-60-2	bromoethene		Cancer	1.37E+00	1.67E-01	3.90E+00	4.70E-01	4.60E+01	5.60E+00
75-25-2	bromoform		Cancer		2.27E+00		2.20E+02		7.60E+01
74-83-9	bromomethane		Noncancer	2.29E+00		1.10E+01		7.60E+01	
106-99-0	butadiene;1,3-		Cancer	9.14E-01	8.33E-02	4.20E-01	3.80E-02	3.00E+01	2.80E+00
75-15-0	carbon disulfide		Noncancer	3.20E+02		8.40E+02		1.10E+04	
56-23-5	carbon tetrachloride		Cancer	4.57E+01	4.17E-01	6.80E+01	6.20E-01	1.50E+03	1.40E+01
126-99-8	chloro-1,3-butadiene;2-		Cancer	9.14E+00	8.33E-03	7.10E+00	6.50E-03	3.00E+02	2.80E-01
108-90-7	chlorobenzene		Noncancer	2.29E+01		3.40E+02		7.60E+02	
75-45-6	chlorodifluoromethane		Noncancer	2.29E+04		1.80E+04		7.60E+05	
67-66-3	chloroform		Cancer	4.48E+01	1.09E-01	4.90E+02	1.20E+00	1.50E+03	3.60E+00
74-87-3	chloromethane		Noncancer	4.11E+01		1.50E+02		1.40E+03	
98-82-8	cumene		Noncancer	1.83E+02		9.10E+02		6.10E+03	
110-82-7	cyclohexane		Noncancer	2.74E+03		7.50E+02		9.10E+04	
108-94-1	cyclohexanone		Noncancer	3.20E+02		2.10E+06		1.10E+04	
96-12-8	dibromo-3-chloropropane;1,2-		Cancer	9.14E-02	1.10E-04	3.50E+01	4.20E-02	3.00E+00	3.70E-03
95-50-1	dichlorobenzene;1,2-		Noncancer	9.14E+01		2.50E+03		3.00E+03	
106-46-7	dichlorobenzene;1,4-		Cancer	3.66E+02	2.27E-01	8.00E+03	5.00E+00	1.20E+04	7.60E+00
75-71-8	dichlorodifluoromethane		Noncancer	4.57E+01		4.20E+00		1.50E+03	
75-34-3	dichloroethane;1,1-		Cancer		1.56E+00		1.10E+01		5.20E+01
107-06-2	dichloroethane;1,2- (EDC)	Ecology VI Guidance (2022) (Sect. E-5.2)	Cancer	3.20E+00	9.62E-02	1.20E+02	3.50E+00	1.10E+02	3.20E+00
75-35-4	dichloroethylene;1,1-		Noncancer	9.14E+01		1.30E+02		3.00E+03	
156-59-2	dichloroethylene;cis-1,2-		Noncancer	1.83E+01		1.80E+02		6.10E+02	
156-60-5	dichloroethylene;trans-1,2-		Noncancer	1.83E+01		7.70E+01		6.10E+02	
78-87-5	dichloropropane;1,2-		Cancer	1.83E+00	6.76E-01	2.80E+01	1.00E+01	6.10E+01	2.30E+01
542-75-6	dichloropropene;1,3-		Cancer	9.14E+00	6.25E-01	1.20E+02	8.00E+00	3.00E+02	2.10E+01
75-37-6	difluoroethane;1,1-		Noncancer	1.83E+04		2.90E+04		6.10E+05	
123-91-1	dioxane;1,4-		Cancer	1.37E+01	5.00E-01	1.30E+05	4.70E+03	4.60E+02	1.70E+01
141-78-6	ethyl acetate		Noncancer	3.20E+01		1.00E+04		1.10E+03	
140-88-5	ethyl acrylate		Noncancer	3.66E+00		5.00E+02		1.20E+02	
75-00-3	ethyl chloride		Noncancer	4.57E+03		1.50E+04		1.50E+05	
97-63-2	ethyl methacrylate		Noncancer	1.37E+02		1.40E+04		4.60E+03	
637-92-3	ethyl tertiary butyl ether (ETBE)		Cancer	1.83E+04	3.13E+01	4.60E+05	7.80E+02	6.10E+05	1.00E+03
100-41-4	ethylbenzene	(2)	Noncancer	4.57E+02		2.80E+03		1.50E+04	
106-93-4	ethylene dibromide (EDB)		Cancer	4.11E+00	4.17E-03	2.90E+02	3.00E-01	1.40E+02	1.40E-01
75-21-8	ethylene oxide		Cancer	1.37E+01	2.19E-04	3.30E+03	5.30E-02	4.60E+02	7.30E-03
76-44-8	heptachlor		Cancer		1.92E-03		5.10E-01		6.40E-02
142-82-5	heptane;n-		Noncancer	1.83E+02		4.00E+00		6.10E+03	
118-74-1	hexachlorobenzene		Cancer		5.43E-03		2.40E-01		1.80E-01

Washington State Department of Ecology - Cleanup Levels and Risk Calculation (CLARC) Vapor Intrusion Method B Table - July 2024

CAS #	Chemical Name[1]	Links to Important Notes click here for general VI Guidance (website)	Risk Driver for Individual Chemicals	Indoor Air Cleanup Level Method B Noncancer ($\mu g/m^3$)	Indoor Air Cleanup Level Method B Cancer ($\mu g/m^3$)	Groundwater Screening Level Method B Noncancer ($\mu g/L$)	Groundwater Screening Level Method B Cancer ($\mu g/L$)	Soil Gas Screening Level Method B Noncancer ($\mu g/m^3$)	Soil Gas Screening Level Method B Cancer ($\mu g/m^3$)
87-68-3	hexachlorobutadiene		Cancer		1.14E-01		6.40E-01		3.80E+00
77-47-4	hexachlorocyclopentadiene		Noncancer	9.14E-02		4.20E+00		3.00E+00	
67-72-1	hexachloroethane		Cancer	1.37E+01	2.27E-01	8.60E+01	1.40E+00	4.60E+02	7.60E+00
110-54-3	hexane;n-	(2)	Noncancer	3.20E+02		7.20E+00		1.10E+04	
591-78-6	hexanone;2-		Noncancer	1.37E+01		7.30E+03		4.60E+02	
7783-06-4	hydrogen sulfide		Noncancer	9.14E-01		3.30E+00		3.00E+01	
7439-97-6	mercury		Noncancer	1.37E-01		8.30E-01		4.60E+00	
126-98-7	methacrylonitrile		Noncancer	1.37E+01		2.40E+03		4.60E+02	
67-56-1	methanol		Noncancer	9.14E+03		9.10E+07		3.00E+05	
78-93-3	methyl ethyl ketone		Noncancer	2.29E+03		1.70E+06		7.60E+04	
108-10-1	methyl isobutyl ketone		Noncancer	1.37E+03		4.70E+05		4.60E+04	
80-62-6	methyl methacrylate		Noncancer	3.20E+02		4.80E+04		1.10E+04	
90-12-0	methyl naphthalene;1-		Noncancer	1.37E-03		1.70E-01		4.60E-02	
1634-04-4	methyl tert-butyl ether (MTBE)		Cancer	1.37E+03	9.62E+00	1.20E+05	8.60E+02	4.60E+04	3.20E+02
74-95-3	methylene bromide		Noncancer	1.83E+00		9.70E+01		6.10E+01	
75-09-2	methylene chloride		Cancer	2.74E+02	6.58E+01	3.30E+03	7.80E+02	9.10E+03	2.20E+03
2385-85-5	mirex		Cancer		4.90E-04		1.50E-02		1.60E-02
91-20-3	naphthalene	Ecology VI Guidance (2022) (Sect. E-5.2)	Cancer	1.37E+00	7.35E-02	1.60E+02	8.80E+00	4.60E+01	2.50E+00
79-46-9	nitropropane;2-		Cancer	9.14E+00	4.31E-03	3.70E+03	1.80E+00	3.00E+02	1.40E-01
75-44-5	phosgene		Noncancer	1.37E-01		3.20E-01		4.60E+00	
123-38-6	propionaldehyde		Noncancer	3.66E+00		1.90E+03		1.20E+02	
103-65-1	propylbenzene;n-		Noncancer	4.57E+02		2.30E+03		1.50E+04	
100-42-5	styrene		Noncancer	4.57E+02		8.50E+03		1.50E+04	
630-20-6	tetrachloroethane;1,1,1,2-		Cancer		3.38E-01		7.10E+00		1.10E+01
79-34-5	tetrachloroethane;1,1,2,2-		Cancer		4.31E-02		5.90E+00		1.40E+00
127-18-4	TETRACHLOROETHYLENE (PCE)		Cancer	1.83E+01	9.62E+00	4.80E+01	2.50E+01	6.10E+02	3.20E+02
109-99-9	tetrahydrofuran		Noncancer	9.14E+02		5.30E+05		3.00E+04	
108-88-3	toluene	(2)	Noncancer	2.29E+03		1.50E+04		7.60E+04	
76-13-1	trichloro-1,2,2-trifluoroethane;1,1,2-		Noncancer	2.29E+03		1.70E+02		7.60E+04	
120-82-1	trichlorobenzene;1,2,4-		Noncancer	9.14E-01		3.90E+01		3.00E+01	
71-55-6	trichloroethane;1,1,1-		Noncancer	2.29E+03		5.40E+03		7.60E+04	
79-00-5	trichloroethane;1,1,2-		Noncancer	9.14E-02	1.56E-01	5.10E+00	8.80E+00	3.00E+00	5.20E+00
79-01-6	TRICHLOROETHYLENE (TCE)		Cancer	9.14E-01	3.34E-01	3.90E+00	1.40E+00	3.00E+01	1.10E+01
75-69-4	trichlorofluoromethane		Noncancer	3.20E+02		1.20E+02		1.10E+04	
96-18-4	trichloropropane;1,2,3-		Noncancer	1.37E-01		2.00E+01		4.60E+00	
121-44-8	triethylamine		Noncancer	3.20E+00		9.20E+02		1.10E+02	
526-73-8	trimethylbenzene;1,2,3-		Noncancer	2.74E+01		4.10E+02		9.10E+02	
95-63-6	trimethylbenzene;1,2,4-		Noncancer	2.74E+01		2.40E+02		9.10E+02	
108-67-8	trimethylbenzene;1,3,5-		Noncancer	2.74E+01		1.70E+02		9.10E+02	

Washington State Department of Ecology - Cleanup Levels and Risk Calculation (CLARC) Vapor Intrusion Method B Table - July 2024

CAS #	Chemical Name[1]	Links to Important Notes click here for general VI Guidance (website)	Risk Driver for Individual Chemicals	Indoor Air Cleanup Level Method B Noncancer (µg/m³)	Indoor Air Cleanup Level Method B Cancer (µg/m³)	Groundwater Screening Level Method B Noncancer (µg/L)	Groundwater Screening Level Method B Cancer (µg/L)	Soil Gas Screening Level Method B Noncancer (µg/m³)	Soil Gas Screening Level Method B Cancer (µg/m³)
108-05-4	vinyl acetate		Noncancer	9.14E+01		8.10E+03		3.00E+03	
75-01-4	vinyl chloride		Cancer	4.57E+01	2.84E-01	5.40E+01	3.30E-01	1.50E+03	9.50E+00
1330-20-7	xylenes	(2): Ecology VI Guidance (2022) (Sect. E-5.2)	Noncancer	4.57E+01		3.20E+02		1.50E+03	
None	TPH - Generic cleanup level	(3): Ecology VI Guidance (2022) (Sect. E-7.2)		4.60E+01				1.50E+03	
None	TPH - Site-specific	Ecology VI Guidance (2022) (Sect. E-8)							

Notes:

(1) Chemicals on the VI table have been identified as being sufficiently volatile (i.e., Henry's law > 1E-05 atm-m³/mol or a vapor pressure > 1 mmHg) and toxic under the VI pathway at a groundwater-soil system temperature of 13° Celsius. This list does not include every chemical that could potentially contaminate soil gas and indoor air. As such, on a site-specific basis, Ecology may identify circumstances where it becomes necessary to consider the volatility and toxicity of other chemicals not included on this list.

(2) For this petroleum-related compound, where non-cancer effects drive the cleanup level, the non-cancer based indoor air cleanup level and corresponding groundwater and soil gas screening levels only apply when the compound is found to be present at the site on its own, and not part of a petroleum mixture. Cumulative non-cancer effects must be accounted for when addressing releases of petroleum mixtures that contain any petroleum-related compound with non-cancer based cleanup levels.

(3) Toxicity criteria from EPA's Provisional Peer-Reviewed Toxicity Values (PPRTV) program, along with data from other toxicity sources that included EPA's Integrated Risk Information System (IRIS), were used to update the noncancer references doses for the petroleum fractions (*see* petroleum toxicity guidance link below). As a result of these changes, the TPH generic indoor air screening level was lowered by approximately 3 times to 46 µg/m³.

Link to updated Petroleum Toxicity and Physical/Chemical Properties Guidance (Revised July 2024)

Resident Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	IsChemicalSufficiently Volatileand Toxicto PoseInhalation Risk Via VaporIntrusion from SoilSource? (C_{vp} > $C_{i,a}$,Target?)	Is ChemicalSufficiently Volatile andToxic to PoseInhalation Risk Via VaporIntrusionfrom GroundwaterSource? (C_{hc} > $C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-06or THQ=0.1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis	Target Sub-Slab and Near-sourceSoil Gas Concentration (TCR=1E-06or THQ=0.1) C_{sg},Target ($\mu g/m^3$)	Target Groundwater Concentration (TCR=1E-06or THQ=0.1) C_{gw},Target ($\mu g/L$)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)	Pure Phase Vapor Concentration C_{vp} (25 ℃) ($\mu g/m^3$)	Maximum Groundwater Vapor Concentration C_{hc} ($\mu g/m^3$)	Temperature for Maximum Groundwater Vapor Concentration (℃)	Lower Explosive Limit LEL (% by volume)	LEL Ref	IUR ($\mu g/m^3)^{-1}$	IUR Ref	RfC (mg/m^3)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-06 $C_{ia,c}$($\mu g/m^3$)	Noncarcinogenic VISL THQ=0.1 $C_{ia,nc}$($\mu g/m^3$)
Acetaldehyde	75-07-0	Yes	Yes	Yes	Yes	9.39E-01	NC	3.13E+01	3.44E+02	--	2.14E+09	2.73E+09	2.50E+01	4.00E+00	CRC	2.20E-06	I	9.00E-03	I	No	1.28E+00	9.39E-01
Acetone Cyanohydrin	75-86-5	No	Yes	No (not volatile)	No (not volatile)	2.09E-01		-	-		1.56E+06	8.05E+04	2.50E+01	2.20E+00	CRC	-		2.00E-03	X	No	-	2.09E-01
Acetonitrile	75-05-8	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	4.44E+03	--	1.96E+08	1.41E+09	2.50E+01	3.00E+00	CRC	-		6.00E-02	I	No	-	6.26E+00
Acetylaminofluorene, 2-	53-96-3	No	Yes	No (not volatile)	No (not volatile)	2.16E-03		-	-		1.13E+00	4.34E-02	2.50E+01	-		1.30E-03	C	-		No	2.16E-03	-
Acrolein	107-02-8	Yes	Yes	Yes	Yes	2.09E-03	NC	6.95E-02	4.18E-01	--	8.26E+08	1.06E+09	2.50E+01	2.80E+00	CRC	-		2.00E-05	I	No	-	2.09E-03
Acrylamide	79-06-1	No	Yes	No (not volatile)	No (not volatile)	1.01E-02		-	-		2.68E+04	2.71E+04	2.50E+01	2.70E+00	YAWS	1.00E-04	I	6.00E-03	I	Mut	1.01E-02	6.26E-01
Acrylic Acid	79-10-7	Yes	Yes	Yes	Yes	2.09E-02	NC	6.95E-01	1.38E+03	--	1.54E+07	1.51E+07	2.50E+01	2.40E+00	CRC	-		2.00E-04	P	No	-	2.09E-02
Acrylonitrile	107-13-1	Yes	Yes	Yes	Yes	4.13E-02	CA	1.38E+00	7.32E+00	--	3.10E+08	4.20E+08	2.50E+01	3.00E+00	CRC	6.80E-05	I	2.00E-03	I	No	4.13E-02	2.09E-01
Adiponitrile	111-69-3	No	Yes	No (not volatile)	No (not volatile)	6.26E-01		-	-		3.95E+03	3.96E+03	2.50E+01	1.00E+00	CRC	-		6.00E-03	P	No	-	6.26E-01
Aldrin	309-00-2	Yes	Yes	Yes	Yes	5.73E-04	CA	1.91E-02	3.19E-01	--	2.36E+03	3.06E+01	2.50E+01	-		4.90E-03	I	-		No	5.73E-04	-
Allyl Alcohol	107-18-6	Yes	Yes	Yes	Yes	1.04E-02	NC	3.48E-01	5.11E+01	--	8.15E+07	2.04E+08	2.50E+01	2.50E+00	CRC	-		1.00E-04	X	No	-	1.04E-02
Allyl Chloride	107-05-1	Yes	Yes	Yes	Yes	1.04E-01	NC	3.48E+00	2.32E-01	--	1.51E+09	1.52E+09	2.50E+01	2.90E+00	CRC	6.00E-06	C	1.00E-03	I	No	4.68E-01	1.04E-01
Aluminum	7429-90-5	No	Yes	No (not volatile)	No (not volatile)	5.21E-01		-	-		0.00E+00	-	2.50E+01	-		-		5.00E-03	P	No	-	5.21E-01
Aminobiphenyl, 4-	92-67-1	No	Yes	No (not volatile)	No (not volatile)	4.68E-04		-	-		1.06E+03	1.34E+03	2.50E+01	7.00E-01	YAWS	6.00E-03	C	-		No	4.68E-04	-
Ammonia	7664-41-7	Yes	Yes	Yes	Yes	5.21E+01	NC	1.74E+03	7.92E+04	--	6.88E+09	3.17E+08	2.50E+01	1.60E+01	CRC	-		5.00E-01	I	No	-	5.21E+01
Amyl Alcohol, tert-	75-85-4	Yes	Yes	Yes	Yes	3.13E-01	NC	1.04E+01	5.55E+02	--	7.92E+07	6.21E+07	2.50E+01	1.20E+00	CRC	-		3.00E-03	X	No	-	3.13E-01
Aniline	62-53-3	No	Yes	No (not volatile)	No (not volatile)	1.04E-01		-	-		3.34E+06	2.97E+06	2.50E+01	1.30E+00	CRC	1.60E-06	C	1.00E-03	I	No	1.75E+00	1.04E-01
Antimony (metallic)	7440-36-0	No	Yes	No (not volatile)	No (not volatile)	3.13E-02		-	-		0.00E+00	-	2.50E+01	-		-		3.00E-04	A	No	-	3.13E-02
Antimony Trioxide	1309-64-4	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.09E-02		-	-		-	-	2.50E+01	-		-		2.00E-04	I	No	-	2.09E-02
Aroclor 1016	12674-11-2	Yes	Yes	Yes	Yes	1.40E-01	CA	4.68E+00	1.72E+01	--	5.54E+03	3.43E+03	2.50E+01	-		2.00E-05	G	-		No	1.40E-01	-
Aroclor 1221	11104-28-2	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	5.27E-01	--	6.80E+04	1.40E+05	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Aroclor 1232	11141-16-5	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	1.63E-01	--	4.12E+04	4.36E+04	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Aroclor 1242	53469-21-9	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	3.50E-01	--	1.36E+03	3.88E+03	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Aroclor 1248	12672-29-6	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	2.73E-01	--	7.76E+03	1.80E+03	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Aroclor 1254	11097-69-1	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	4.25E-01	--	1.35E+03	4.98E+02	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Aroclor 1260	11096-82-5	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	3.58E-01	--	8.61E+02	1.98E+02	2.50E+01	-		5.71E-04	G	-		No	4.91E-03	-
Arsenic, Inorganic	7440-38-2	Indeterminate	Yes	No (not volatile)	No (not volatile)	6.53E-04		-	-		-	-	2.50E+01	-		4.30E-03	I	1.50E-05	C	No	6.53E-04	1.56E-03
Arsine	7784-42-1	Indeterminate	Yes	No (not volatile)	No (not volatile)	5.21E-03		-	-		-	-	2.50E+01	5.10E+00	YAWS	-		5.00E-05	I	No	-	5.21E-03
Auramine	492-80-8	No	Yes	No (not volatile)	No (not volatile)	1.12E-02		-	-		1.86E+01	7.97E+00	2.50E+01	-		2.50E-04	C	-		No	1.12E-02	-
Azinphos-methyl	86-50-0	No	Yes	No (not volatile)	No (not volatile)	1.04E+00		-	-		2.73E+01	2.04E+01	2.50E+01	-		-		1.00E-02	A	No	-	1.04E+00
Azobenzene	103-33-3	Yes	Yes	Yes	Yes	9.06E-02	CA	3.02E+00	1.64E+02	--	3.54E+03	3.53E+03	2.50E+01	-		3.10E-05	I	-		No	9.06E-02	-
Azodicarbonamide	123-77-3	No	Yes	No (not volatile)	No (not volatile)	7.30E-04		-	-		1.17E-03	1.17E-03	2.50E+01	-		-		7.00E-06	P	No	-	7.30E-04
Barium	7440-39-3	Indeterminate	Yes	No (not volatile)	No (not volatile)	5.21E-02		-	-		-	-	2.50E+01	-		-		5.00E-04	H	No	-	5.21E-02
Benz[a]anthracene	56-55-3	Yes	Yes	Yes	Yes	1.69E-02	CA	5.63E-01	3.44E+01	--	2.58E+00	4.61E+00	2.50E+01	-		6.00E-05	E	-		Mut	1.69E-02	-
Benzene	71-43-2	Yes	Yes	Yes	Yes	3.60E-01	CA	1.20E+01	1.59E+00	Yes (5)	3.98E+08	4.06E+08	2.50E+01	1.20E+00	CRC	7.80E-06	I	3.00E-02	I	No	3.60E-01	3.13E+00
Benzene, Trimethyl	25551-13-7	Yes	Yes	Yes	Yes	4.17E-01	NC	1.39E+01	1.16E+00	--	4.07E+07	1.73E+07	2.50E+01	-		-		4.00E-03	C	No	-	4.17E-01
Benzidine	92-87-5	No	Yes	No (not volatile)	No (not volatile)	1.51E-05		-	-		8.90E+00	6.81E-01	2.50E+01	1.40E+00	YAWS	6.70E-02	I	-		Mut	1.51E-05	-
Benzo[a]pyrene	50-32-8	No	Yes	No (not volatile)	No (not volatile)	2.09E-04		-	-		7.45E-02	3.03E-02	2.50E+01	-		6.00E-04	I	2.00E-06	I	Mut	1.69E-03	2.09E-04
Benzo[b]fluoranthene	205-99-2	No	Yes	No (not volatile)	No (not volatile)	1.69E-02		-	-		6.79E+00	4.03E-02	2.50E+01	-		6.00E-05	E	-		Mut	1.69E-02	-
Benzo[e]pyrene	192-97-2	No	Yes	No (not volatile)	No (not volatile)	2.09E-04		-	-		7.74E-02	7.66E-02	2.50E+01	-		-		2.00E-06	X	No	-	2.09E-04
Benzo[j]fluoranthene	205-82-3	No	Yes	No (not volatile)	No (not volatile)	2.55E-02		-	-		3.56E-01	2.07E-02	2.50E+01	-		1.10E-04	C	-		No	2.55E-02	-
Benzo[k]fluoranthene	207-08-9	No	Yes	No (not volatile)	No (not volatile)	1.69E-01		-	-		1.31E-02	1.91E-02	2.50E+01	-		6.00E-06	E	-		Mut	1.69E-01	-
Benzyl Chloride	100-44-7	Yes	Yes	Yes	Yes	5.73E-02	CA	1.91E+00	3.40E+00	--	8.37E+06	8.84E+06	2.50E+01	1.10E+00	CRC	4.90E-05	C	1.00E-03	P	No	5.73E-02	1.04E-01
Beryllium and compounds	7440-41-7	No	Yes	No (not volatile)	No (not volatile)	1.17E-03		-	-		0.00E+00	-	2.50E+01	-		2.40E-03	I	2.00E-05	I	No	1.17E-03	2.09E-03
Biphenyl, 1,1'-	92-52-4	Yes	Yes	Yes	Yes	4.17E-02	NC	1.39E+00	3.31E+00	--	7.41E+04	9.42E+04	2.50E+01	6.00E-01	CRC	-		4.00E-04	X	No	-	4.17E-02
Bis(2-chloroethyl)ether	111-44-4	Yes	Yes	Yes	Yes	8.51E-03	CA	2.84E-01	1.22E+01	--	1.19E+07	1.20E+07	2.50E+01	2.70E+00	CRC	3.30E-04	I	-		No	8.51E-03	-
Bis(2-ethylhexyl)phthalate	117-81-7	No	Yes	No (not volatile)	No (not volatile)	1.17E+00		-	-		2.98E+00	2.98E+00	2.50E+01	3.00E-01	YAWS	2.40E-06	C	-		No	1.17E+00	-
Bis(chloromethyl)ether	542-88-1	Yes	Yes	Yes	Yes	4.53E-05	CA	1.51E-03	2.54E-04	--	1.82E+08	3.92E+09	2.50E+01	6.50E+00	YAWS	6.20E-02	I	-		No	4.53E-05	-

Boron And Borates Only	7440-42-8	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.09E+00		-	-		-	-	2.50E+01	-		-		2.00E-02	H	No	-	2.09E+00
Boron Trichloride	10294-34-5	Yes	Yes	Yes		2.09E+00		6.95E+01	-		6.30E+06	-	2.50E+01	-		-		2.00E-02	P	No	-	2.09E+00
Boron Trifluoride	7637-07-2	Yes	Yes	Yes		1.36E+00		4.52E+01	-		1.33E+11	-	2.50E+01	-		-		1.30E-02	C	No	-	1.36E+00
Bromate	15541-45-4	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.01E-02		-	-		-	-	2.50E+01	-		1.40E-04	C	-		No	2.01E-02	-
Bromo-2-chloroethane, 1-	107-04-0	Yes	Yes	Yes	Yes	6.26E-03	NC	2.09E-01	1.68E-01	--	2.55E+08	2.56E+08	2.50E+01	-		-		6.00E-05	X	No	-	6.26E-03
Bromobenzene	108-86-1	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	6.20E+01	--	3.53E+07	4.50E+07	2.50E+01	1.50E+00	YAWS	-		6.00E-02	I	No	-	6.26E+00
Bromochloromethane	74-97-5	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	6.99E+01	--	9.92E+08	9.97E+08	2.50E+01	-		-		4.00E-02	X	No	-	4.17E+00
Bromodichloromethane	75-27-4	Yes	Yes	Yes	Yes	7.59E-02	CA	2.53E+00	8.76E-01	Yes (80)	4.41E+08	2.63E+08	2.50E+01	-		3.70E-05	C	-		No	7.59E-02	-
Bromoform	75-25-2	Yes	Yes	Yes	Yes	2.55E+00	CA	8.51E+01	1.17E+02	No (80)	7.34E+07	6.78E+07	2.50E+01	-		1.10E-06	I	-		No	2.55E+00	-
Bromomethane	74-83-9	Yes	Yes	Yes	Yes	5.21E-01	NC	1.74E+01	1.74E+00	--	8.25E+09	4.56E+09	2.50E+01	1.00E+01	CRC	-		5.00E-03	I	No	-	5.21E-01
Bromopropane, 1-	106-94-5	Yes	Yes	Yes	Yes	7.59E-01	CA	2.53E+01	2.54E+00	--	7.33E+08	7.33E+08	2.50E+01	-		3.70E-06	C	1.00E-01	A	No	7.59E-01	1.04E+01
Butadiene, 1,3-	106-99-0	Yes	Yes	Yes	Yes	9.36E-02	CA	3.12E+00	3.11E-02	--	6.13E+09	2.21E+09	2.50E+01	2.00E+00	CRC	3.00E-05	I	2.00E-03	I	No	9.36E-02	2.09E-01
Butyl Alcohol, t-	75-65-0	Yes	Yes	Yes	Yes	5.21E+02	NC	1.74E+04	1.41E+06	--	1.62E+08	3.70E+08	2.50E+01	2.40E+00	CRC	-		5.00E+00	I	No	-	5.21E+02
Butyl alcohol, sec-	78-92-2	Yes	Yes	Yes	Yes	3.13E+03	NC	1.04E+05	8.45E+06	--	7.31E+07	6.70E+07	2.50E+01	1.70E+00	CRC	-		3.00E+01	P	No	-	3.13E+03
Butylated hydroxyanisole	25013-16-5	No	Yes	No (not volatile)	No (not volatile)	4.93E+01		-	-		4.81E+04	1.02E+04	2.50E+01	-		5.70E-08	C	-		No	4.93E+01	-
Cadmium (Diet)	7440-43-9	No	Yes	No (not volatile)	No (not volatile)	1.04E-03		-	-		0.00E+00	-	2.50E+01	-		1.80E-03	I	1.00E-05	A	No	1.56E-03	1.04E-03
Cadmium (Water)	7440-43-9	No	Yes	No (not volatile)	No (not volatile)	1.04E-03		-	-		0.00E+00	-	2.50E+01	-		1.80E-03	I	1.00E-05	A	No	1.56E-03	1.04E-03
Calcium Cyanide	592-01-8	Indeterminate	Yes	No (not volatile)	No (not volatile)	9.39E-01		-	-		-	-	2.50E+01	-		-		9.00E-03	C	No	-	9.39E-01
Caprolactam	105-60-2	No	Yes	No (not volatile)	No (not volatile)	2.29E-01		-	-		9.74E+03	7.99E+05	2.50E+01	3.00E-01	YAWS	-		2.20E-03	C	No	-	2.29E-01
Captafol	2425-06-1	No	Yes	No (not volatile)	No (not volatile)	6.53E-02		-	-		2.82E-01	2.82E-01	2.50E+01	-		4.30E-05	C	-		No	6.53E-02	-
Captan	133-06-2	No	Yes	No (not volatile)	No (not volatile)	4.25E+00		-	-		1.45E+00	1.46E+00	2.50E+01	-		6.60E-07	C	-		No	4.25E+00	-
Carbon Disulfide	75-15-0	Yes	Yes	Yes	Yes	7.30E+01	NC	2.43E+03	1.24E+02	--	1.47E+09	1.27E+09	2.50E+01	1.30E+00	CRC	-		7.00E-01	I	No	-	7.30E+01
Carbon Tetrachloride	56-23-5	Yes	Yes	Yes	Yes	4.68E-01	CA	1.56E+01	4.15E-01	Yes (5)	9.51E+08	8.95E+08	2.50E+01	-		6.00E-06	I	1.00E-01	I	No	4.68E-01	1.04E+01
Carbonyl Sulfide	463-58-1	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	4.18E-01	--	3.04E+10	3.04E+10	2.50E+01	1.20E+01	CRC	-		1.00E-01	P	No	-	1.04E+01
Ceric oxide	1306-38-3	Indeterminate	Yes	No (not volatile)	No (not volatile)	9.39E-02		-	-		-	-	2.50E+01	-		-		9.00E-04	I	No	-	9.39E-02
Chlordane (technical mixture)	12789-03-6	Yes	Yes	Yes	Yes	2.81E-02	CA	9.36E-01	1.41E+01	No (2)	2.20E+02	1.11E+02	2.50E+01	-		1.00E-04	I	7.00E-04	I	No	2.81E-02	7.30E-02
Chlordecone (Kepone)	143-50-0	No	Yes	No (not volatile)	No (not volatile)	6.10E-04		-	-		5.94E+00	5.94E+00	2.50E+01	-		4.60E-03	C	-		No	6.10E-04	-
Chlorine	7782-50-5	Yes	Yes	Yes	Yes	1.51E-02	NC	5.04E-01	3.16E-02	Yes (4000)	2.23E+10	3.01E+09	2.50E+01	-		-		1.45E-04	A	No	-	1.51E-02
Chlorine Dioxide	10049-04-4	Yes	Yes	Yes	Yes	2.09E-02	NC	6.95E-01	1.27E-02	Yes (800)	2.75E+09	1.31E+10	2.50E+01	-		-		2.00E-04	I	No	-	2.09E-02
Chloro-1,1-difluoroethane, 1-	75-68-3	Yes	Yes	Yes	Yes	5.21E+03	NC	1.74E+05	2.17E+03	--	1.38E+10	3.37E+09	2.50E+01	6.00E+00	CRC	-		5.00E+01	I	No	-	5.21E+03
Chloro-1,3-butadiene, 2- (Chloroprene)	126-99-8	Yes	Yes	Yes	Yes	9.36E-03	CA	3.12E-01	4.08E-03	--	1.03E+09	2.01E+09	2.50E+01	4.00E+00	CRC	3.00E-04	I	2.00E-02	I	No	9.36E-03	2.09E+00
Chloro-2-methylaniline, 4-	95-69-2	No	Yes	No (not volatile)	No (not volatile)	3.65E-02		-	-		3.11E+05	7.76E+04	2.50E+01	-		7.70E-05	C	-		No	3.65E-02	-
Chloroacetophenone, 2-	532-27-4	No	Yes	No (not volatile)	No (not volatile)	3.13E-03		-	-		4.49E+04	1.56E+05	2.50E+01	-		-		3.00E-05	I	No	-	3.13E-03
Chlorobenzene	108-90-7	Yes	Yes	Yes	Yes	5.21E+00	NC	1.74E+02	4.10E+01	Yes (100)	7.25E+07	6.33E+07	2.50E+01	1.30E+00	CRC	-		5.00E-02	P	No	-	5.21E+00
Chlorobenzilate	510-15-6	No	Yes	No (not volatile)	No (not volatile)	9.06E-02		-	-		3.85E+01	3.85E+01	2.50E+01	-		3.10E-05	C	-		No	9.06E-02	-
Chlorobenzotrifluoride, 4-	98-56-6	Yes	Yes	Yes	Yes	3.26E-01	CA	1.09E+01	2.30E-01	--	7.41E+07	4.11E+07	2.50E+01	1.80E+00	YAWS	8.60E-06	C	3.00E-01	P	No	3.26E-01	3.13E+01
Chlorodifluoromethane	75-45-6	Yes	Yes	Yes	Yes	5.21E+03	NC	1.74E+05	3.14E+03	--	3.37E+10	4.60E+09	2.50E+01	-		-		5.00E+01	I	No	-	5.21E+03
Chloroform	67-66-3	Yes	Yes	Yes	Yes	1.22E-01	CA	4.07E+00	8.14E-01	Yes (80)	1.26E+09	1.19E+09	2.50E+01	-		2.30E-05	I	1.95E-03	A	No	1.22E-01	2.03E-01
Chloromethane	74-87-3	Yes	Yes	Yes	Yes	9.39E+00	NC	3.13E+02	2.60E+01	--	1.17E+10	1.92E+09	2.50E+01	8.10E+00	CRC	-		9.00E-02	I	No	-	9.39E+00
Chloromethyl Methyl Ether	107-30-2	Yes	Yes	Yes	Yes	4.07E-03	CA	1.36E-01	3.27E-01	--	1.30E+08	8.63E+08	2.50E+01	-		6.90E-04	C	-		No	4.07E-03	-
Chloronitrobenzene, o-	88-73-3	No	Yes	No (not volatile)	No (not volatile)	1.04E-03		-	-		1.54E+05	1.68E+05	2.50E+01	-		-		1.00E-05	X	No	-	1.04E-03
Chloronitrobenzene, p-	100-00-5	No	Yes	No (not volatile)	No (not volatile)	2.09E-01		-	-		1.86E+05	4.50E+04	2.50E+01	-		-		2.00E-03	P	No	-	2.09E-01
Chloropicrin	76-06-2	Yes	Yes	Yes	Yes	4.17E-02	NC	1.39E+00	4.98E-01	--	2.12E+08	1.36E+08	2.50E+01	-		-		4.00E-04	C	No	-	4.17E-02
Chlorozotocin	54749-90-5	No	Yes	No (not volatile)	No (not volatile)	4.07E-05		-	-		5.69E-07	2.75E-11	2.50E+01	-		6.90E-02	C	-		No	4.07E-05	-
Chromium(III) (Soluble Compounds)	16065-83-1	Indeterminate	Yes	No (not volatile)	No (not volatile)	6.26E-03		-	-		-	-	2.50E+01	-		-		6.00E-05	C	No	-	6.26E-03
Chromium(VI)	18540-29-9	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.21E-05		-	-		-	-	2.50E+01	-		8.40E-02	G	1.00E-04	I	Mut	1.21E-05	1.04E-02
Chrysene	218-01-9	No	Yes	No (not volatile)	No (not volatile)	1.69E+00		-	-		7.65E-02	4.28E-01	2.50E+01	5.00E-01	YAWS	6.00E-07	E	-		Mut	1.69E+00	-
Cobalt	7440-48-4	No	Yes	No (not volatile)	No (not volatile)	3.12E-04		-	-		0.00E+00	-	2.50E+01	-		9.00E-03	P	6.00E-06	P	No	3.12E-04	6.26E-04
Coke Oven Emissions	NA	Yes	Yes			1.64E-03		-	-		-	-	2.50E+01	-		6.20E-04	I	-		Mut	1.64E-03	-
Cresol, m-	108-39-4	No	Yes	No (not volatile)	No (not volatile)	6.26E+01		-	-		6.40E+05	7.94E+05	2.50E+01	1.10E+00	CRC	-		6.00E-01	C	No	-	6.26E+01
Cresol, o-	95-48-7	No	Yes	No (not volatile)	No (not volatile)	6.26E+01		-	-		1.74E+06	1.27E+06	2.50E+01	1.40E+00	CRC	-		6.00E-01	C	No	-	6.26E+01
Cresol, p-	106-44-5	No	Yes	No (not volatile)	No (not volatile)	6.26E+01		-	-		6.40E+05	8.79E+05	2.50E+01	1.10E+00	CRC	-		6.00E-01	C	No	-	6.26E+01
Cresols	1319-77-3	No	Yes	No (not volatile)	No (not volatile)	6.26E+01		-	-		2.97E+06	2.29E+05	2.50E+01	-		-		6.00E-01	C	No	-	6.26E+01
Cumene	98-82-8	Yes	Yes	Yes	Yes	4.17E+01	NC	1.39E+03	8.87E+01	--	2.91E+07	2.88E+07	2.50E+01	9.00E-01	CRC	-		4.00E-01	I	No	-	4.17E+01
Cupferron	135-20-6	No	Yes	No (not volatile)	No (not volatile)	4.46E-02		-	-		5.25E+02	9.00E+04	2.50E+01	-		6.30E-05	C	-		No	4.46E-02	-
Cyanide (CN-)	57-12-5	Yes	Yes	Yes	Yes	8.34E-02	NC	2.78E+00	2.01E+01	Yes (200)	4.31E+08	3.96E+08	2.50E+01	-		-		8.00E-04	G	No	-	8.34E-02
Cyclohexane	110-82-7	Yes	Yes	Yes	Yes	6.26E+02	NC	2.09E+04	1.02E+02	--	4.38E+08	3.37E+08	2.50E+01	1.30E+00	CRC	-		6.00E+00	I	No	-	6.26E+02
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	7.30E+01	NC	2.43E+03	1.98E+05	--	2.29E+07	9.20E+06	2.50E+01	1.10E+00	CRC	-		7.00E-01	P	No	-	7.30E+01
Cyclohexene	110-83-8	Yes	Yes	Yes	Yes	1.04E+02	NC	3.48E+03	5.61E+01	--	3.93E+08	3.96E+08	2.50E+01	1.20E+00	CRC	-		1.00E+00	X	No	-	1.04E+02
Daminozide	1596-84-5	No	Yes	No (not volatile)	No (not volatile)	5.51E-01		-	-		1.72E+03	1.73E+03	2.50E+01	-		5.10E-06	C	-		No	5.51E-01	-
Dibenz[a,h]anthracene	53-70-3	No	Yes	No (not volatile)	No (not volatile)	1.69E-03		-	-		1.43E-02	1.44E-02	2.50E+01	-		6.00E-04	E	-		Mut	1.69E-03	-
Dibenzo[a,e]pyrene	192-65-4	No	Yes	No (not volatile)	No (not volatile)	2.55E-03		-	-		1.14E-03	4.62E-05	2.50E+01	-		1.10E-03	C	-		No	2.55E-03	-

Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	Yes	Yes	Yes	1.69E-04	CA	5.63E-03	2.81E-02	Yes (0)	7.37E+06	7.39E+06	2.50E+01	-		6.00E-03	P	2.00E-04	I	Mut	1.69E-04	2.09E-02
Dibromoethane, 1,2-	106-93-4	Yes	Yes	Yes	Yes	4.68E-03	CA	1.56E-01	1.76E-01	No (0)	1.13E+08	1.04E+08	2.50E+01	-		6.00E-04	I	9.00E-03	I	No	4.68E-03	9.39E-01
Dibromomethane (Methylene Bromide)	74-95-3	Yes	Yes	Yes	Yes	4.17E-01	NC	1.39E+01	1.24E+01	--	4.15E+08	4.00E+08	2.50E+01	-		-		4.00E-03	X	No	-	4.17E-01
Dichloro-2-butene, 1,4-	764-41-0	Yes	Yes	Yes	Yes	6.68E-04	CA	2.23E-02	1.92E-03	--	2.02E+07	2.02E+08	2.50E+01	-		4.20E-03	P	-		No	6.68E-04	-
Dichloro-2-butene, cis-1,4-	1476-11-5	Yes	Yes	Yes	Yes	6.68E-04	CA	2.23E-02	2.46E-02	--	2.75E+07	1.58E+07	2.50E+01	2.50E+00	YAWS	4.20E-03	P	-		No	6.68E-04	-
Dichloro-2-butene, trans-1,4-	110-57-6	Yes	Yes	Yes	Yes	6.68E-04	CA	2.23E-02	2.46E-02	--	2.31E+07	2.31E+07	2.50E+01	1.50E+00	YAWS	4.20E-03	P	-		No	6.68E-04	-
Dichlorobenzene, 1,2-	95-50-1	Yes	Yes	Yes	Yes	2.09E+01	NC	6.95E+02	2.66E+02	Yes (600)	1.08E+07	1.22E+07	2.50E+01	2.20E+00	CRC	-		2.00E-01	H	No	-	2.09E+01
Dichlorobenzene, 1,4-	106-46-7	Yes	Yes	Yes	Yes	2.55E-01	CA	8.51E+00	2.59E+00	Yes (75)	1.38E+07	8.01E+06	2.50E+01	1.80E+00	YAWS	1.10E-05	C	8.00E-01	I	No	2.55E-01	8.34E+01
Dichlorobenzidine, 3,3'-	91-94-1	No	Yes	No (not volatile)	No (not volatile)	8.26E-03		-	-		3.49E+00	3.60E-03	2.50E+01	-		3.40E-04	C	-		No	8.26E-03	-
Dichlorodifluoromethane	75-71-8	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	7.44E-01	--	3.15E+10	3.93E+09	2.50E+01	-		-		1.00E-01	X	No	-	1.04E+01
Dichlorodiphenyldichloroethane, p,p'- (DDD)	72-54-8	No	Yes	No (not volatile)	No (not volatile)	4.07E-02		-	-		2.32E+01	2.43E+01	2.50E+01	-		6.90E-05	C	-		No	4.07E-02	-
Dichlorodiphenyldichloroethylene, p,p'- (DDE)	72-55-9	Yes	Yes	Yes	Yes	2.89E-02	CA	9.65E-01	1.70E+01	--	1.03E+02	6.80E+01	2.50E+01	-		9.70E-05	C	-		No	2.89E-02	-
Dichlorodiphenyltrichloroethane, p,p'- (DDT)	50-29-3	No	Yes	No (not volatile)	No (not volatile)	2.89E-02		-	-		3.05E+00	1.87E+00	2.50E+01	-		9.70E-05	I	-		No	2.89E-02	-
Dichloroethane, 1,1-	75-34-3	Yes	Yes	Yes	Yes	1.75E+00	CA	5.85E+01	7.64E+00	--	1.21E+09	1.16E+09	2.50E+01	5.40E+00	CRC	1.60E-06	C	-		No	1.75E+00	-
Dichloroethane, 1,2-	107-06-2	Yes	Yes	Yes	Yes	1.08E-01	CA	3.60E+00	2.24E+00	Yes (5)	4.20E+08	4.15E+08	2.50E+01	6.20E+00	CRC	2.60E-05	I	7.00E-03	P	No	1.08E-01	7.30E-01
Dichloroethylene, 1,1-	75-35-4	Yes	Yes	Yes	Yes	2.09E+01	NC	6.95E+02	1.95E+01	No (7)	3.13E+09	2.58E+09	2.50E+01	6.50E+00	CRC	-		2.00E-01	I	No	-	2.09E+01
Dichloroethylene, cis-1,2-	156-59-2	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	2.50E+01	Yes (70)	1.04E+09	1.07E+09	2.50E+01	3.00E+00	CRC	-		4.00E-02	X	No	-	4.17E+00
Dichloroethylene, trans-1,2-	156-60-5	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	1.09E+01	Yes (100)	1.73E+09	1.73E+09	2.50E+01	6.00E+00	CRC	-		4.00E-02	X	No	-	4.17E+00
Dichloropropane, 1,2-	78-87-5	Yes	Yes	Yes	Yes	4.17E-01	NC	1.39E+01	3.62E+00	Yes (5)	3.24E+08	3.23E+08	2.50E+01	3.40E+00	YAWS	3.70E-06	P	4.00E-03	I	No	7.59E-01	4.17E-01
Dichloropropene, 1,3-	542-75-6	Yes	Yes	Yes	Yes	7.02E-01	CA	2.34E+01	4.84E+00	--	2.03E+08	4.06E+08	2.50E+01	5.30E+00	N	4.00E-06	I	2.00E-02	I	No	7.02E-01	2.09E+00
Dichlorvos	62-73-7	No	Yes	No (not volatile)	No (not volatile)	3.38E-02		-	-		1.87E+05	1.88E+05	2.50E+01	-		8.30E-05	C	5.00E-04	I	No	3.38E-02	5.21E-02
Dicyclopentadiene	77-73-6	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	1.22E-02	--	1.63E+07	6.76E+07	2.50E+01	1.00E+00	YAWS	-		3.00E-04	X	No	-	3.13E-02
Dieldrin	60-57-1	No	Yes	No (not volatile)	No (not volatile)	6.10E-04		-	-		1.21E+02	7.97E+01	2.50E+01	-		4.60E-03	I	-		No	6.10E-04	-
Diesel Engine Exhaust	NA	Indeterminate	Yes	No (not volatile)	No (not volatile)	9.36E-03		-	-		-	-	2.50E+01	-		3.00E-04	C	5.00E-03	I	No	9.36E-03	5.21E-01
Diethanolamine	111-42-2	No	Yes	No (not volatile)	No (not volatile)	2.09E-02		-	-		1.58E+03	1.58E+03	2.50E+01	2.00E+00	CRC	-		2.00E-04	P	No	-	2.09E-02
Diethylene Glycol Monobutyl Ether	112-34-5	No	Yes	No (not volatile)	No (not volatile)	1.04E-02		-	-		1.91E+05	2.94E+05	2.50E+01	9.00E-01	YAWS	-		1.00E-04	P	No	-	1.04E-02
Diethylene Glycol Monoethyl Ether	111-90-0	No	Yes	No (not volatile)	No (not volatile)	3.13E-02		-	-		9.09E+05	9.12E+05	2.50E+01	1.20E+00	YAWS	-		3.00E-04	P	No	-	3.13E-02
Diethylstilbestrol	56-53-1	No	Yes	No (not volatile)	No (not volatile)	2.81E-05		-	-		2.04E-01	2.85E-03	2.50E+01	-		1.00E-01	C	-		No	2.81E-05	-
Difluoroethane, 1,1-	75-37-6	Yes	Yes	Yes	Yes	4.17E+03	NC	1.39E+05	5.03E+03	--	1.62E+10	2.66E+09	2.50E+01	3.70E+00	YAWS	-		4.00E+01	I	No	-	4.17E+03
Difluoropropane, 2,2-	420-45-1	Yes	Yes	Yes	Yes	3.13E+03	NC	1.04E+05	1.49E+02	--	7.75E+09	3.35E+09	2.50E+01	-		-		3.00E+01	X	No	-	3.13E+03
Dihydrosafrole	94-58-6	Yes	Yes	Yes	Yes	2.16E-01	CA	7.20E+00	4.33E+02	--	4.95E+05	2.84E+04	2.50E+01	-		1.30E-05	C	-		No	2.16E-01	-
Diisopropyl Ether	108-20-3	Yes	Yes	Yes	Yes	7.30E+01	NC	2.43E+03	6.97E+02	--	8.19E+08	9.21E+08	2.50E+01	1.40E+00	CRC	-		7.00E-01	P	No	-	7.30E+01
Dimethylamino azobenzene [p-]	60-11-7	No	Yes	No (not volatile)	No (not volatile)	2.16E-03		-	-		8.48E-01	3.76E-03	2.50E+01	-		1.30E-03	C	-		No	2.16E-03	-
Dimethylbenz[a]anthracene, 7,12-	57-97-6	No	Yes	No (not volatile)	No (not volatile)	1.43E-05		-	-		9.38E+00	9.38E+00	2.50E+01	-		7.10E-02	C	-		Mut	1.43E-05	-
Dimethylformamide	68-12-2	Yes	Yes	Yes	Yes	3.13E+00	NC	1.04E+02	1.04E+06	--	1.52E+07	3.02E+06	2.50E+01	2.20E+00	CRC	-		3.00E-02	I	No	-	3.13E+00
Dimethylhydrazine, 1,1-	57-14-7	Yes	Yes	Yes	Yes	2.09E-04	NC	6.95E-03	3.95E-01	--	5.27E+08	5.27E+08	2.50E+01	2.00E+00	CRC	-		2.00E-06	X	No	-	2.09E-04
Dimethylhydrazine, 1,2-	540-73-8	Yes	Yes	Yes	Yes	1.75E-05	CA	5.85E-04	6.18E+00	--	2.26E+08	2.84E+06	2.50E+01	-		1.60E-01	C	-		No	1.75E-05	-
Dimethylvinylchloride	513-37-1	Yes	Yes	Yes	Yes	2.16E-01	CA	7.20E+00	4.46E+00	--	1.03E+09	4.84E+07	2.50E+01	-		1.30E-05	C	-		No	2.16E-01	-
Dinitroaniline, 3,5-	618-87-1	No	Yes	No (not volatile)	No (not volatile)	2.09E-01		-	-		2.64E+02	1.56E+00	2.50E+01	-		-		2.00E-03	X	No	-	2.09E-01
Dinitrotoluene, 2,4-	121-14-2	No	Yes	No (not volatile)	No (not volatile)	3.15E-02		-	-		1.44E+03	4.42E+02	2.50E+01	1.50E+00	YAWS	8.90E-05	C	-		No	3.15E-02	-
Dioxane, 1,4-	123-91-1	Yes	Yes	Yes	Yes	5.62E-01	CA	1.87E+01	2.86E+03	--	1.80E+08	1.96E+08	2.50E+01	2.00E+00	CRC	5.00E-06	I	3.00E-02	I	No	5.62E-01	3.13E+00
Diphenyl Ether	101-84-8	Yes	Yes	Yes	Yes	4.17E-02	NC	1.39E+00	3.66E+00	--	2.06E+05	2.05E+05	2.50E+01	8.00E-01	CRC	-		4.00E-04	X	No	-	4.17E-02
Diphenylhydrazine, 1,2-	122-66-7	No	Yes	No (not volatile)	No (not volatile)	1.28E-02		-	-		4.32E+03	4.32E+03	2.50E+01	7.00E-01	YAWS	2.20E-04	I	-		No	1.28E-02	-
Direct Black 38	1937-37-7	No	Yes	No (not volatile)	No (not volatile)	1.34E-03		-	-		6.42E-29	1.01E-28	2.50E+01	-		2.10E-03	C	-		No	1.34E-03	-
Direct Blue 6	2602-46-2	No	Yes	No (not volatile)	No (not volatile)	1.34E-03		-	-		4.79E-31	5.09E-40	2.50E+01	-		2.10E-03	C	-		No	1.34E-03	-
Direct Brown 95	16071-86-6	No	Yes	No (not volatile)	No (not volatile)	1.48E-03		-	-		5.85E-34	-	2.50E+01	-		1.90E-03	C	-		No	1.48E-03	-
Epichlorohydrin	106-89-8	Yes	Yes	Yes	Yes	1.04E-01	NC	3.48E+00	8.39E+01	--	8.18E+07	8.19E+07	2.50E+01	3.80E+00	YAWS	1.20E-06	I	1.00E-03	I	No	2.34E+00	1.04E-01
Epoxybutane, 1,2-	106-88-7	Yes	Yes	Yes	Yes	2.09E+00	NC	6.95E+01	2.83E+02	--	6.98E+08	6.99E+08	2.50E+01	1.70E+00	CRC	-		2.00E-02	I	No	-	2.09E+00
Ethoxyethanol Acetate, 2-	111-15-9	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	4.78E+04	--	1.42E+07	2.45E+07	2.50E+01	2.00E+00	CRC	-		6.00E-02	P	No	-	6.26E+00
Ethoxyethanol, 2-	110-80-5	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	2.17E+05	--	2.57E+07	1.92E+07	2.50E+01	3.00E+00	CRC	-		4.00E-02	P	No	-	4.17E+00
Ethyl Acetate	141-78-6	Yes	Yes	Yes	Yes	7.30E+00	NC	2.43E+02	1.33E+03	--	4.42E+08	4.38E+08	2.50E+01	2.00E+00	CRC	-		7.00E-02	P	No	-	7.30E+00
Ethyl Acrylate	140-88-5	Yes	Yes	Yes	Yes	8.34E-01	NC	2.78E+01	6.02E+01	--	2.08E+08	2.08E+08	2.50E+01	1.40E+00	CRC	-		8.00E-03	P	No	-	8.34E-01
Ethyl Chloride	75-00-3	Yes	Yes	Yes	Yes	4.17E+02	NC	1.39E+04	9.19E+02	--	3.50E+09	3.05E+09	2.50E+01	3.80E+00	CRC	-		4.00E+00	P	No	-	4.17E+02
Ethyl Methacrylate	97-63-2	Yes	Yes	Yes	Yes	3.13E+01	NC	1.04E+03	1.34E+03	--	1.26E+08	1.27E+08	2.50E+01	1.80E+00	YAWS	-		3.00E-01	P	No	-	3.13E+01
Ethyl Tertiary Butyl Ether (ETBE)	637-92-3	Yes	Yes	Yes	Yes	3.51E+01	CA	1.17E+03	5.23E+02	--	6.81E+08	8.05E+08	2.50E+01	1.20E+00	YAWS	8.00E-08	I	4.00E+01	I	No	3.51E+01	4.17E+03
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	1.12E+00	CA	3.74E+01	3.49E+00	Yes (700)	5.48E+07	5.44E+07	2.50E+01	8.00E-01	CRC	2.50E-06	C	1.00E+00	I	No	1.12E+00	1.04E+02
Ethylene Glycol	107-21-1	No	Yes	No (not volatile)	No (not volatile)	4.17E+01		-	-		3.07E+05	2.45E+06	2.50E+01	3.20E+00	CRC	-		4.00E-01	C	No	-	4.17E+01
Ethylene Glycol Monobutyl Ether	111-76-2	No	Yes	No (not volatile)	No (not volatile)	1.67E+02		-	-		5.59E+06	6.54E+07	2.50E+01	4.00E+00	CRC	-		1.60E+00	I	No	-	1.67E+02
Ethylene Oxide	75-21-8	Yes	Yes	Yes	Yes	3.38E-04	CA	1.13E-02	5.59E-02	--	3.11E+09	6.05E+09	2.50E+01	3.00E+00	CRC	3.00E-03	I	3.00E-02	C	Mut	3.38E-04	3.13E+00
Ethylene Thiourea	96-45-7	No	Yes	No (not volatile)	No (not volatile)	2.16E-01		-	-		1.11E+01	1.11E+01	2.50E+01	-		1.30E-05	C	-		No	2.16E-01	-
Ethyleneimine	151-56-4	Yes	Yes	Yes	Yes	1.48E-04	CA	4.93E-03	2.99E-01	--	4.93E+08	4.95E+08	2.50E+01	3.30E+00	CRC	1.90E-02	C	-		No	1.48E-04	-
Fluoride	16984-48-8	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.36E+00		-	-		-	-	2.50E+01	-		-		1.30E-02	C	No	-	1.36E+00
Fluorine (Soluble Fluoride)	7782-41-4	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.36E+00		-	-		-	-	2.50E+01	-		-		1.30E-02	C	No	-	1.36E+00
Formaldehyde	50-00-0	Yes	Yes	Yes	Yes	2.16E-01	CA	7.20E+00	1.57E+04	--	6.28E+09	5.51E+06	2.50E+01	7.00E+00	CRC	1.30E-05	I	9.82E-03	A	No	2.16E-01	1.02E+00
Formic Acid	64-18-6	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	4.58E+03	--	1.05E+08	6.83E+06	2.50E+01	1.80E+01	CRC	-		3.00E-04	X	No	-	3.13E-02
Furfural	98-01-1	Yes	Yes	Yes	Yes	5.21E+00	NC	1.74E+02	3.38E+04	--	1.14E+07	1.14E+07	2.50E+01	2.10E+00	CRC	-		5.00E-02	H	No	-	5.21E+00
Furium	531-82-8	No	Yes	No (not volatile)	No (not volatile)	6.53E-03		-	-		1.20E-01	2.29E-04	2.50E+01	-		4.30E-04	C	-		No	6.53E-03	-

Furmecyclox	60568-05-0	No	Yes	No (not volatile)	No (not volatile)	3.26E-01		-	-		1.13E+03	8.45E-02	2.50E+01	-		8.60E-06	C	-		No	3.26E-01	-
Glutaraldehyde	111-30-8	No	Yes	No (not volatile)	No (not volatile)	8.34E-03		-	-		3.23E+06	3.02E+05	2.50E+01	-		-		8.00E-05	C	No	-	8.34E-03
Glycidaldehyde	765-34-4	Yes	Yes	Yes	Yes	1.04E-01	NC	3.48E+00	4.99E+03	--	1.76E+08	2.09E+07	2.50E+01	-		-		1.00E-03	X	No	-	1.04E-01
Heptachlor	76-44-8	Yes	Yes	Yes	Yes	2.16E-03	CA	7.20E-02	1.80E-01	Yes (0)	8.03E+03	2.16E+03	2.50E+01	-		1.30E-03	I	-		No	2.16E-03	-
Heptachlor Epoxide	1024-57-3	Yes	Yes	Yes	Yes	1.08E-03	CA	3.60E-02	1.26E+00	No (0)	4.08E+02	1.72E+02	2.50E+01	-		2.60E-03	I	-		No	1.08E-03	-
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	1.19E+00	--	2.76E+00	1.56E+00	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	Yes	Yes	Yes	Yes	7.39E-06	CA	2.46E-04	1.28E-02	--	7.77E-04	7.78E-04	2.50E+01	-		3.80E-01	W	4.00E-06	W	No	7.39E-06	4.17E-04
Heptanal, n-	111-71-7	Yes	Yes	Yes	Yes	3.13E-01	NC	1.04E+01	2.83E+01	--	2.16E+07	1.38E+07	2.50E+01	-		-		3.00E-03	X	No	-	3.13E-01
Heptane, N-	142-82-5	Yes	Yes	Yes	Yes	4.17E+01	NC	1.39E+03	5.10E-01	--	2.48E+08	2.78E+08	2.50E+01	1.05E+00	CRC	-		4.00E-01	P	No	-	4.17E+01
Hexachlorobenzene	118-74-1	Yes	Yes	Yes	Yes	6.10E-03	CA	2.03E-01	8.78E-02	Yes (1)	2.76E+02	4.31E+02	2.50E+01	3.50E+00	YAWS	4.60E-04	I	-		No	6.10E-03	-
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	8.79E-01	--	1.13E+01	6.23E+00	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Hexachlorobiphenyl, 2,3',4,4',5'- (PCB 157)	69782-90-7	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	3.72E-01	--	1.13E+01	1.09E+01	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	4.21E-01	--	3.12E+01	3.12E+01	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	Yes	Yes	Yes	Yes	2.46E-06	CA	8.21E-05	8.79E-04	--	1.13E+01	1.43E+00	2.50E+01	-		1.14E+00	W	1.33E-06	W	No	2.46E-06	1.39E-04
Hexachlorobutadiene	87-68-3	Yes	Yes	Yes	Yes	1.28E-01	CA	4.25E+00	3.03E-01	--	3.09E+06	1.35E+06	2.50E+01	2.90E+00	YAWS	2.20E-05	I	-		No	1.28E-01	-
Hexachlorocyclohexane, Alpha-	319-84-6	No	Yes	No (not volatile)	No (not volatile)	1.56E-03		-	-		5.51E+02	5.48E+02	2.50E+01	-		1.80E-03	I	-		No	1.56E-03	-
Hexachlorocyclohexane, Beta-	319-85-7	No	Yes	No (not volatile)	No (not volatile)	5.30E-03		-	-		5.63E+00	4.32E+00	2.50E+01	-		5.30E-04	I	-		No	5.30E-03	-
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	No	Yes	No (not volatile)	No (not volatile)	9.06E-03		-	-		6.57E+02	1.53E+03	2.50E+01	-		3.10E-04	C	-		No	9.06E-03	-
Hexachlorocyclohexane, Technical	608-73-1	No	Yes	No (not volatile)	No (not volatile)	5.51E-03		-	-		5.51E+02	1.68E+03	2.50E+01	-		5.10E-04	I	-		No	5.51E-03	-
Hexachlorocyclopentadiene	77-47-4	Yes	Yes	Yes	Yes	2.09E-02	NC	6.95E-01	1.89E-02	Yes (50)	8.80E+05	1.99E+06	2.50E+01	-		-		2.00E-04	I	No	-	2.09E-02
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No	Yes	No (not volatile)	No (not volatile)	7.39E-07		-	-		8.05E-04	7.11E-04	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
Hexachlorodibenzo-p-dioxin, Mixture	34465-46-8	No	Yes	No (not volatile)	No (not volatile)	2.16E-06		-	-		9.25E-04	9.32E-04	2.50E+01	-		1.30E+00	I	-		No	2.16E-06	-
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	Yes	Yes	Yes	Yes	7.39E-07	CA	2.46E-05	4.66E-04	--	2.26E+00	4.73E-03	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
Hexachloroethane	67-72-1	Yes	Yes	Yes	Yes	2.55E-01	CA	8.51E+00	1.60E+00	--	2.67E+06	7.95E+06	2.50E+01	-		1.10E-05	C	3.00E-02	I	No	2.55E-01	3.13E+00
Hexamethylene Diisocyanate, 1,6-	822-06-0	Yes	Yes	Yes	Yes	1.04E-03	NC	3.48E-02	5.31E-01	--	2.71E+05	2.30E+05	2.50E+01	-		-		1.00E-05	I	No	-	1.04E-03
Hexamethylene diisocyanate biuret	4035-89-6	No	Yes	No (not volatile)	No (not volatile)	4.17E-02		-	-		6.49E-08	8.41E-15	2.50E+01	-		-		4.00E-04	C	No	-	4.17E-02
Hexamethylene diisocyanate isocyanurate	3779-63-3	No	Yes	No (not volatile)	No (not volatile)	4.17E-02		-	-		2.65E-09	2.65E-16	2.50E+01	-		-		4.00E-04	C	No	-	4.17E-02
Hexane, Commercial	NA	Yes	Yes	Yes	Yes	1.40E+01	CA	4.68E+02	1.91E-01	--	7.01E+08	6.99E+08	2.50E+01	1.10E+00	CRC	2.00E-07	X	6.00E-01	P	No	1.40E+01	6.26E+01
Hexane, N-	110-54-3	Yes	Yes	Yes	Yes	7.30E+01	NC	2.43E+03	9.92E-01	--	7.01E+08	6.99E+08	2.50E+01	1.10E+00	CRC	-		7.00E-01	I	No	-	7.30E+01
Hexanol, 1-,2-ethyl- (2-Ethyl-1-hexanol)	104-76-7	Yes	Yes	Yes	Yes	4.17E-02	NC	1.39E+00	3.85E+01	--	9.53E+05	9.53E+05	2.50E+01	8.80E-01	CRC	-		4.00E-04	P	No	-	4.17E-02
Hexanone, 2-	591-78-6	Yes	Yes	Yes	Yes	3.13E+00	NC	1.04E+02	8.21E+02	--	6.25E+07	6.55E+07	2.50E+01	1.00E+00	CRC	-		3.00E-02	I	No	-	3.13E+00
HpCDD, 1,2,3,4,6,7,8,-	35822-46-9	Yes	Yes	Yes	Yes	7.39E-06	CA	2.46E-04	1.03E-03	--	1.72E-02	1.72E-02	2.50E+01	-		3.80E-01	W	4.00E-06	W	No	7.39E-06	4.17E-04
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	Yes	Yes	Yes	Yes	7.39E-06	CA	2.46E-04	1.28E-02	--	7.77E-04	7.78E-04	2.50E+01	-		3.80E-01	W	4.00E-06	W	No	7.39E-06	4.17E-04
HxCDD, 1,2,3,6,7,8-	57653-85-7	No	Yes	No (not volatile)	No (not volatile)	7.39E-07		-	-		7.57E-04	2.10E-03	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
HxCDD, 1,2,3,7,8,9-	19408-74-3	No	Yes	No (not volatile)	No (not volatile)	7.39E-07		-	-		7.57E-04	2.10E-03	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
HxCDF, 1,2,3,6,7,8-	57117-44-9	Yes	Yes	Yes	Yes	7.39E-07	CA	2.46E-05	4.66E-04	--	2.26E+00	5.54E-01	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
HxCDF, 1,2,3,7,8,9-	72918-21-9	No	Yes	No (not volatile)	No (not volatile)	7.39E-07		-	-		1.55E+00	5.39E-01	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
HxCDF, 2,3,4,6,7,8-	60851-34-5	No	Yes	No (not volatile)	No (not volatile)	7.39E-07		-	-		2.26E+00	1.64E-02	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
Hydrazine	302-01-2	Yes	Yes	Yes	Yes	5.73E-04	CA	1.91E-02	2.31E+01	--	2.48E+07	2.48E+07	2.50E+01	5.00E+00	CRC	4.90E-03	I	3.00E-05	P	No	5.73E-04	3.13E-03
Hydrazine Sulfate	10034-93-2	Indeterminate	Yes	No (not volatile)	No (not volatile)	5.73E-04		-	-		-	-	2.50E+01	-		4.90E-03	I	-		No	5.73E-04	-
Hydrogen Chloride	7647-01-0	Yes	Yes	Yes	Yes	2.09E+00	NC	6.95E+01	1.04E+08	--	6.75E+10	1.35E+04	2.50E+01	-		-		2.00E-02	I	No	-	2.09E+00
Hydrogen Cyanide	74-90-8	Yes	Yes	Yes	Yes	8.34E-02	NC	2.78E+00	1.53E+01	--	1.08E+09	5.44E+09	2.50E+01	6.00E+00	CRC	-		8.00E-04	I	No	-	8.34E-02
Hydrogen Fluoride	7664-39-3	Yes	Yes	Yes	Yes	1.46E+00	NC	4.87E+01	3.43E+02	--	9.87E+08	4.25E+09	2.50E+01	-		-		1.40E-02	C	No	-	1.46E+00
Hydrogen Sulfide	7783-06-4	Yes	Yes	Yes	Yes	2.09E-01	NC	6.95E+00	5.96E-01	--	2.87E+10	1.31E+09	2.50E+01	4.00E+00	CRC	-		2.00E-03	I	No	-	2.09E-01
Indeno[1,2,3-cd]pyrene	193-39-5	No	Yes	No (not volatile)	No (not volatile)	1.69E-02		-	-		1.86E-03	2.70E-03	2.50E+01	-		6.00E-05	E	-		Mut	1.69E-02	-
Isobutyl Alcohol	78-83-1	Yes	Yes	Yes	Yes	4.17E+01	NC	1.39E+03	1.04E+05	--	4.17E+07	3.40E+07	2.50E+01	1.70E+00	CRC	-		4.00E-01	X	No	-	4.17E+01
Isophorone	78-59-1	No	Yes	No (not volatile)	No (not volatile)	2.09E+02		-	-		3.26E+06	3.26E+06	2.50E+01	8.00E-01	CRC	-		2.00E+00	C	No	-	2.09E+02
Isopropanol	67-63-0	Yes	Yes	Yes	Yes	2.09E+01	NC	6.95E+02	6.30E+04	--	1.47E+08	3.31E+08	2.50E+01	2.00E+00	CRC	-		2.00E-01	P	No	-	2.09E+01
Jet propulsion fuel 7 (JP-7)	NA	Yes	Yes		Yes	3.13E+01	NC	-	7.65E+01	--	-	4.25E+06	2.50E+01	-		-		3.00E-01	A	No	-	3.13E+01
Lead Phosphate	7446-27-7	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.34E-01		-	-		-	-	2.50E+01	-		1.20E-05	C	-		No	2.34E-01	-
Lead acetate	301-04-2	No	Yes	No (not volatile)	No (not volatile)	3.51E-02		-	-		1.27E+04	-	2.50E+01	-		8.00E-05	C	-		No	3.51E-02	-
Lead subacetate	1335-32-6	No	Yes	No (not volatile)	No (not volatile)	2.55E-01		-	-		1.29E-02	-	2.50E+01	-		1.10E-05	C	-		No	2.55E-01	-
Maleic Anhydride	108-31-6	No	Yes	No (not volatile)	No (not volatile)	7.30E-02		-	-		1.32E+06	2.62E+07	2.50E+01	1.40E+00	CRC	-		7.00E-04	C	No	-	7.30E-02
Manganese (Diet)	7439-96-5	No	Yes	No (not volatile)	No (not volatile)	5.21E-03		-	-		0.00E+00	-	2.50E+01	-		-		5.00E-05	I	No	-	5.21E-03
Manganese (Non-diet)	7439-96-5	No	Yes	No (not volatile)	No (not volatile)	5.21E-03		-	-		0.00E+00	-	2.50E+01	-		-		5.00E-05	I	No	-	5.21E-03
Mercuric Chloride	7487-94-7	Indeterminate	Yes	No (not volatile)	No (not volatile)	3.13E-02		-	-		-	-	2.50E+01	-		-		3.00E-04	G	No	-	3.13E-02
Mercury (elemental)	7439-97-6	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	8.89E-02	Yes (2)	2.11E+04	2.11E+04	2.50E+01	-		-		3.00E-04	I	No	-	3.13E-02
Methacrylonitrile	126-98-7	Yes	Yes	Yes	Yes	3.13E+00	NC	1.04E+02	3.10E+02	--	2.57E+08	2.56E+08	2.50E+01	2.00E+00	CRC	-		3.00E-02	P	No	-	3.13E+00
Methanol	67-56-1	Yes	Yes	Yes	Yes	2.09E+03	NC	6.95E+04	1.12E+07	--	2.19E+08	1.86E+08	2.50E+01	6.00E+00	CRC	-		2.00E+01	I	No	-	2.09E+03
Methoxyethanol Acetate, 2-	110-49-6	Yes	Yes	Yes	Yes	1.04E-01	NC	3.48E+00	8.20E+03	--	4.45E+07	1.27E+07	2.50E+01	1.50E+00	CRC	-		1.00E-03	P	No	-	1.04E-01
Methoxyethanol, 2-	109-86-4	Yes	Yes	Yes	Yes	7.30E-01	NC	2.43E+01	5.41E+04	--	3.89E+07	1.35E+07	2.50E+01	1.80E+00	CRC	-		7.00E-03	P	No	-	7.30E-01
Methyl Acrylate	96-33-3	Yes	Yes	Yes	Yes	2.09E+00	NC	6.95E+01	2.56E+02	--	4.01E+08	4.02E+08	2.50E+01	2.80E+00	CRC	-		2.00E-02	P	No	-	2.09E+00
Methyl Ethyl Ketone (2-Butanone)	78-93-3	Yes	Yes	Yes	Yes	5.21E+02	NC	1.74E+04	2.24E+05	--	3.51E+08	5.19E+08	2.50E+01	1.40E+00	CRC	-		5.00E+00	I	No	-	5.21E+02
Methyl Hydrazine	60-34-4	Yes	Yes	Yes	Yes	2.09E-03	NC	6.95E-02	1.68E+01	--	1.24E+08	1.24E+08	2.50E+01	2.50E+00	CRC	1.00E-03	X	2.00E-05	X	No	2.81E-03	2.09E-03
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	Yes	Yes	Yes	Yes	3.13E+02	NC	1.04E+04	5.55E+04	--	1.07E+08	1.07E+08	2.50E+01	1.20E+00	CRC	-		3.00E+00	I	No	-	3.13E+02

Methyl Isocyanate	624-83-9	Yes	Yes	Yes	Yes	1.04E-01	NC	3.48E+00	2.75E+00	--	1.07E+09	1.11E+09	2.50E+01	5.30E+00	CRC	-		1.00E-03	C	No	-	1.04E-01
Methyl Methacrylate	80-62-6	Yes	Yes	Yes	Yes	7.30E+01	NC	2.43E+03	5.60E+03	--	2.07E+08	1.96E+08	2.50E+01	1.70E+00	CRC	-		7.00E-01	I	No	-	7.30E+01
Methyl Styrene (Mixed Isomers)	25013-15-4	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	3.89E+01	--	2.86E+07	9.53E+06	2.50E+01	-		-		4.00E-02	H	No	-	4.17E+00
Methyl methanesulfonate	66-27-3	No	Yes	No (not volatile)	No (not volatile)	1.00E-01		-	-		1.84E+06	3.30E+07	2.50E+01	-		2.80E-05	C	-		No	1.00E-01	-
Methyl tert-Butyl Ether (MTBE)	1634-04-4	Yes	Yes	Yes	Yes	1.08E+01	CA	3.60E+02	4.50E+02	--	1.19E+09	1.22E+09	2.50E+01	2.00E+00	YAWS	2.60E-07	C	3.00E+00	I	No	1.08E+01	3.13E+02
Methyl-2-Pentanol, 4-	108-11-2	Yes	Yes	Yes	Yes	3.13E+02	NC	1.04E+04	1.72E+05	--	2.91E+07	2.98E+07	2.50E+01	1.00E+00	CRC	-		3.00E+00	X	No	-	3.13E+02
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	No	Yes	No (not volatile)	No (not volatile)	1.17E-03		-	-		9.49E+02	1.33E+01	2.50E+01	-		2.40E-03	C	-		No	1.17E-03	-
Methylaniline Hydrochloride, 2-	636-21-5	No	Yes	No (not volatile)	No (not volatile)	7.59E-02		-	-		2.26E+06	7.12E+05	2.50E+01	-		3.70E-05	C	-		No	7.59E-02	-
Methylcholanthrene, 3-	56-49-5	No	Yes	No (not volatile)	No (not volatile)	1.61E-04		-	-		6.21E-01	6.21E-01	2.50E+01	-		6.30E-03	C	-		Mut	1.61E-04	-
Methylcyclohexane	108-87-2	Yes	Yes	Yes	Yes	9.91E+00	NC	3.30E+02	5.64E-01	--	2.43E+08	2.46E+08	2.50E+01	1.20E+00	CRC	-		9.50E-02	X	No	-	9.91E+00
Methylene Chloride	75-09-2	Yes	Yes	Yes	Yes	6.26E+01	NC	2.09E+03	4.71E+02	No (5)	1.99E+09	1.73E+09	2.50E+01	1.30E+01	CRC	1.00E-08	I	6.00E-01	I	Mut	1.01E+02	6.26E+01
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	No	Yes	No (not volatile)	No (not volatile)	2.36E-03		-	-		4.11E+00	2.31E-02	2.50E+01	-		4.30E-04	C	-		Mut	2.36E-03	-
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	No	Yes	No (not volatile)	No (not volatile)	2.16E-01		-	-		2.39E+02	1.81E-01	2.50E+01	-		1.30E-05	C	-		No	2.16E-01	-
Methylenebisbenzenamine, 4,4'-	101-77-9	No	Yes	No (not volatile)	No (not volatile)	6.10E-03		-	-		2.16E+00	2.17E+00	2.50E+01	-		4.60E-04	C	2.00E-02	C	No	6.10E-03	2.09E+00
Methylenediphenyl Diisocyanate	101-68-8	No	Yes	No (not volatile)	No (not volatile)	6.26E-02		-	-		6.73E+01	3.03E+01	2.50E+01	6.00E-01	YAWS	-		6.00E-04	I	No	-	6.26E-02
Methylnaphthalene, 1-	90-12-0	Yes	Yes	Yes	Yes	3.13E-04	NC	1.04E-02	1.49E-02	--	5.12E+05	5.42E+05	2.50E+01	8.00E-01	YAWS	-		3.00E-06	P	No	-	3.13E-04
Midrange Aliphatic Hydrocarbon Streams	NA	Yes	Yes	Yes	Yes	6.24E-01	CA	2.08E+01	4.49E-03	--	3.07E+07	3.06E+07	2.50E+01	8.00E-01	CRC	4.50E-06	X	1.00E-01	P	No	6.24E-01	1.04E+01
Mirex	2385-85-5	Yes	Yes	Yes	Yes	5.51E-04	CA	1.84E-02	1.66E-02	--	2.35E+01	2.82E+03	2.50E+01	-		5.10E-03	C	-		No	5.51E-04	-
Molybdenum	7439-98-7	No	Yes	No (not volatile)	No (not volatile)	2.09E-01		-	-		0.00E+00	-	2.50E+01	-		-		2.00E-03	A	No	-	2.09E-01
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	Yes	Yes		Yes	1.04E+01	NC	-	5.80E+02	--	-	5.58E+05	2.50E+01	-		-		1.00E-01	P	No	-	1.04E+01
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	8.26E-02	CA	2.75E+00	4.59E+00	--	5.86E+05	5.58E+05	2.50E+01	9.00E-01	CRC	3.40E-05	C	3.00E-03	I	No	8.26E-02	3.13E-01
Naphthylamine, 2-	91-59-8	No	Yes	No (not volatile)	No (not volatile)	-		-	-		1.97E+03	6.26E+02	2.50E+01	-		0.00E+00	C	-		No	-	-
Nickel Acetate	373-02-4	No	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		1.70E+02	-	2.50E+01	-		2.60E-04	C	1.40E-05	C	No	1.08E-02	1.46E-03
Nickel Carbonate	3333-67-3	No	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		2.27E+01	-	2.50E+01	-		2.60E-04	C	1.40E-05	C	No	1.08E-02	1.46E-03
Nickel Carbonyl	13463-39-3	Yes	Yes	Yes	Yes	1.46E-03	NC	4.87E-02	7.14E-05	--	2.89E+09	3.68E+09	2.50E+01	2.00E+00	N	2.60E-04	C	1.40E-05	C	No	1.08E-02	1.46E-03
Nickel Hydroxide	12054-48-7	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		-	-	2.50E+01	-		2.60E-04	C	1.40E-05	C	No	1.08E-02	1.46E-03
Nickel Oxide	1313-99-1	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.09E-03		-	-		-	-	2.50E+01	-		2.60E-04	C	2.00E-05	C	No	1.08E-02	2.09E-03
Nickel Refinery Dust	NA	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		-	-	2.50E+01	-		2.40E-04	I	1.40E-05	C	No	1.17E-02	1.46E-03
Nickel Soluble Salts	7440-02-0	No	Yes	No (not volatile)	No (not volatile)	1.04E-03		-	-		0.00E+00	-	2.50E+01	-		2.60E-04	C	1.00E-05	A	No	1.08E-02	1.04E-03
Nickel Subsulfide	12035-72-2	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		-	-	2.50E+01	-		4.80E-04	I	1.40E-05	C	No	5.85E-03	1.46E-03
Nickelocene	1271-28-9	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.46E-03		-	-		-	-	2.50E+01	-		2.60E-04	C	1.40E-05	C	No	1.08E-02	1.46E-03
Nitroaniline, 2-	88-74-4	No	Yes	No (not volatile)	No (not volatile)	5.21E-03		-	-		2.06E+04	3.55E+03	2.50E+01	1.50E+00	YAWS	-		5.00E-05	X	No	-	5.21E-03
Nitroaniline, 4-	100-01-6	No	Yes	No (not volatile)	No (not volatile)	6.26E-01		-	-		2.38E+01	3.75E+01	2.50E+01	1.50E+00	YAWS	-		6.00E-03	P	No	-	6.26E-01
Nitrobenzene	98-95-3	Yes	Yes	Yes	Yes	7.02E-02	CA	2.34E+00	7.15E+01	--	1.62E+06	2.05E+06	2.50E+01	1.80E+00	CRC	4.00E-05	I	9.00E-03	I	No	7.02E-02	9.39E-01
Nitrofurazone	59-87-0	No	Yes	No (not volatile)	No (not volatile)	7.59E-03		-	-		4.59E+01	2.66E-03	2.50E+01	-		3.70E-04	C	-		No	7.59E-03	-
Nitromethane	75-52-5	Yes	Yes	Yes	Yes	3.19E-01	CA	1.06E+01	2.73E+02	--	1.18E+08	1.30E+08	2.50E+01	7.30E+00	CRC	8.80E-06	P	5.00E-03	P	No	3.19E-01	5.21E-01
Nitropropane, 2-	79-46-9	Yes	Yes	Yes	Yes	4.84E-03	CA	1.61E-01	9.95E-01	--	8.25E+07	8.27E+07	2.50E+01	2.60E+00	CRC	5.80E-04	X	2.00E-02	I	No	4.84E-03	2.09E+00
Nitropyrene, 4-	57835-92-4	No	Yes	No (not volatile)	No (not volatile)	2.55E-02		-	-		7.40E-01	6.80E-02	2.50E+01	-		1.10E-04	C	-		No	2.55E-02	-
Nitroso-N-ethylurea, N-	759-73-9	No	Yes	No (not volatile)	No (not volatile)	1.32E-04		-	-		1.15E+05	7.02E+01	2.50E+01	-		7.70E-03	C	-		Mut	1.32E-04	-
Nitroso-N-methylurea, N-	684-93-5	No	Yes	No (not volatile)	No (not volatile)	2.98E-05		-	-		1.62E+05	5.83E+01	2.50E+01	-		3.40E-02	C	-		Mut	2.98E-05	-
Nitrosodibutylamine, N-	924-16-3	Yes	Yes	Yes	Yes	1.75E-03	CA	5.85E-02	3.25E+00	--	3.99E+05	6.85E+05	2.50E+01	-		1.60E-03	I	-		No	1.75E-03	-
Nitrosodiethanolamine, N-	1116-54-7	No	Yes	No (not volatile)	No (not volatile)	3.51E-03		-	-		3.61E+03	1.98E+02	2.50E+01	-		8.00E-04	C	-		No	3.51E-03	-
Nitrosodiethylamine, N-	55-18-5	No	Yes	No (not volatile)	No (not volatile)	2.36E-05		-	-		4.72E+06	1.57E+07	2.50E+01	-		4.30E-02	I	-		Mut	2.36E-05	-
Nitrosodimethylamine, N-	62-75-9	Yes	Yes	Yes	Yes	7.24E-05	CA	2.41E-03	9.73E-01	--	1.08E+07	7.44E+07	2.50E+01	-		1.40E-02	I	4.00E-05	X	Mut	7.24E-05	4.17E-03
Nitrosodiphenylamine, N-	86-30-6	No	Yes	No (not volatile)	No (not volatile)	1.08E+00		-	-		1.07E+06	1.73E+03	2.50E+01	-		2.60E-06	C	-		No	1.08E+00	-
Nitrosodipropylamine, N-	621-64-7	No	Yes	No (not volatile)	No (not volatile)	1.40E-03		-	-		6.02E+05	2.86E+06	2.50E+01	-		2.00E-03	C	-		No	1.40E-03	-
Nitrosomethylethylamine, N-	10595-95-6	Yes	Yes	Yes	Yes	4.46E-04	CA	1.49E-02	7.57E+00	--	5.21E+06	1.77E+07	2.50E+01	-		6.30E-03	C	-		No	4.46E-04	-
Nitrosomorpholine [N-]	59-89-2	No	Yes	No (not volatile)	No (not volatile)	1.48E-03		-	-		2.25E+05	1.00E+06	2.50E+01	-		1.90E-03	C	-		No	1.48E-03	-
Nitrosopiperidine [N-]	100-75-4	No	Yes	No (not volatile)	No (not volatile)	1.04E-03		-	-		5.65E+05	2.64E+06	2.50E+01	-		2.70E-03	C	-		No	1.04E-03	-
Nitrosopyrrolidine, N-	930-55-2	No	Yes	No (not volatile)	No (not volatile)	4.60E-03		-	-		3.23E+05	2.00E+06	2.50E+01	-		6.10E-04	I	-		No	4.60E-03	-
Nonane, n-	111-84-2	Yes	Yes	Yes	Yes	2.09E+00	NC	6.95E+01	1.50E-02	--	3.07E+07	3.06E+07	2.50E+01	8.00E-01	CRC	-		2.00E-02	P	No	-	2.09E+00
OCDD	3268-87-9	No	Yes	No (not volatile)	No (not volatile)	2.46E-04		-	-		2.04E-05	6.31E-05	2.50E+01	-		1.14E-02	W	1.33E-04	W	No	2.46E-04	1.39E-02
OCDF	39001-02-0	No	Yes	No (not volatile)	No (not volatile)	2.46E-04		-	-		8.95E-05	3.16E-05	2.50E+01	-		1.14E-02	W	1.33E-04	W	No	2.46E-04	1.39E-02
PeCDF, 1,2,3,7,8-	57117-41-6	No	Yes	No (not volatile)	No (not volatile)	2.46E-06		-	-		3.17E-02	4.81E-02	2.50E+01	-		1.14E+00	W	1.33E-06	W	No	2.46E-06	1.39E-04
PeCDF, 2,3,4,7,8-	57117-31-4	No	Yes	No (not volatile)	No (not volatile)	2.46E-07		-	-		3.17E-02	4.81E-02	2.50E+01	-		1.14E+01	W	1.33E-07	W	No	2.46E-07	1.39E-05

Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	3.17E-01	--	9.60E+01	1.24E+02	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	2.09E-01	--	1.58E+02	1.58E+02	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	2.13E-01	--	1.15E+02	3.93E+01	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	Yes	Yes	Yes	Yes	2.46E-03	CA	8.21E-02	6.52E-01	--	9.60E+01	6.04E+01	2.50E+01	-		1.14E-03	W	1.33E-03	W	No	2.46E-03	1.39E-01
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	Yes	Yes	Yes	Yes	7.39E-07	CA	2.46E-05	9.51E-05	--	3.90E+01	5.69E+01	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No	Yes	No (not volatile)	No (not volatile)	7.39E-08		-	-		8.34E-03	1.63E-02	2.50E+01	-		3.80E+01	W	4.00E-08	W	No	7.39E-08	4.17E-06
Pentachlorophenol	87-86-5	No	Yes	No (not volatile)	No (not volatile)	5.51E-01		-	-		1.58E+03	1.40E+01	2.50E+01	-		5.10E-06	C	-		No	5.51E-01	-
Pentane, n-	109-66-0	Yes	Yes	Yes	Yes	1.04E+02	NC	3.48E+03	2.04E+00	--	1.99E+09	1.94E+09	2.50E+01	1.40E+00	CRC	-		1.00E+00	P	No	-	1.04E+02
Perylene	198-55-0	No	Yes	No (not volatile)	No (not volatile)	2.09E-04		-	-		7.12E-02	5.97E-02	2.50E+01	-		-		2.00E-06	X	No	-	2.09E-04
Phenacetin	62-44-2	No	Yes	No (not volatile)	No (not volatile)	4.46E+00		-	-		6.67E+00	6.67E+00	2.50E+01	-		6.30E-07	C	-		No	4.46E+00	-
Phenol	108-95-2	No	Yes	No (not volatile)	No (not volatile)	2.09E+01		-	-		1.77E+06	1.13E+06	2.50E+01	1.80E+00	CRC	-		2.00E-01	C	No	-	2.09E+01
Phosgene	75-44-5	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	4.58E-02	--	7.54E+09	4.66E+09	2.50E+01	-		-		3.00E-04	I	No	-	3.13E-02
Phosphine	7803-51-2	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	3.13E-02	--	5.36E+10	2.59E+11	2.50E+01	1.80E+00	CRC	-		3.00E-04	I	No	-	3.13E-02
Phosphoric Acid	7664-38-2	No	Yes	No (not volatile)	No (not volatile)	1.04E+00		-	-		1.58E+05	-	2.50E+01	-		-		1.00E-02	I	No	-	1.04E+00
Phthalic Anhydride	85-44-9	No	Yes	No (not volatile)	No (not volatile)	2.09E+00		-	-		4.12E+03	4.13E+03	2.50E+01	1.70E+00	CRC	-		2.00E-02	C	No	-	2.09E+00
Polybrominated Biphenyls	36355-01-8	Indeterminate	Yes	No (not volatile)	No (not volatile)	3.26E-04		-	-		-	-	2.50E+01	-		8.60E-03	C	-		No	3.26E-04	-
Polychlorinated Biphenyls (high risk)	1336-36-3	Yes	Yes	Yes	Yes	4.91E-03	CA	1.64E-01	2.90E-01	Yes (1)	7.76E+03	1.19E+04	2.50E+01	-		5.71E-04	I	-		No	4.91E-03	-
Polychlorinated Biphenyls (low risk)	1336-36-3	Yes	Yes	Yes	Yes	2.81E-02	CA	9.36E-01	1.65E+00	No (1)	7.76E+03	1.19E+04	2.50E+01	-		1.00E-04	I	-		No	2.81E-02	-
Polychlorinated Biphenyls (lowest risk)	1336-36-3	Yes	Yes	Yes	Yes	1.40E-01	CA	4.68E+00	8.27E+00	No (1)	7.76E+03	1.19E+04	2.50E+01	-		2.00E-05	I	-		No	1.40E-01	-
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No	Yes	No (not volatile)	No (not volatile)	6.26E-02		-	-		1.49E-05	9.51E-10	2.50E+01	-		-		6.00E-04	I	No	-	6.26E-02
Potassium Cyanide	151-50-8	No	Yes	No (not volatile)	No (not volatile)	9.39E-01		-	-		0.00E+00	-	2.50E+01	-		-		9.00E-03	C	No	-	9.39E-01
Propionaldehyde	123-38-6	Yes	Yes	Yes	Yes	8.34E-01	NC	2.78E+01	2.78E+02	--	9.90E+08	9.18E+08	2.50E+01	2.60E+00	CRC	-		8.00E-03	I	No	-	8.34E-01
Propyl benzene	103-65-1	Yes	Yes	Yes	Yes	1.04E+02	NC	3.48E+03	2.43E+02	--	2.21E+07	2.24E+07	2.50E+01	8.00E-01	CRC	-		1.00E+00	X	No	-	1.04E+02
Propylene	115-07-1	Yes	Yes	Yes	Yes	3.13E+02	NC	1.04E+04	3.90E+01	--	1.97E+10	1.60E+09	2.50E+01	2.00E+00	CRC	-		3.00E+00	C	No	-	3.13E+02
Propylene Glycol Dinitrate	6423-43-4	No	Yes	No (not volatile)	No (not volatile)	2.83E-02		-	-		3.38E+06	1.26E+05	2.50E+01	-		-		2.72E-04	A	No	-	2.83E-02
Propylene Glycol Monomethyl Ether	107-98-2	Yes	Yes	Yes	Yes	2.09E+02	NC	6.95E+03	5.55E+06	--	6.06E+07	3.76E+07	2.50E+01	1.60E+00	N	-		2.00E+00	I	No	-	2.09E+02
Propylene Oxide	75-56-9	Yes	Yes	Yes	Yes	7.59E-01	CA	2.53E+01	2.67E+02	--	1.68E+09	1.68E+09	2.50E+01	1.90E+00	YAWS	3.70E-06	I	3.00E-02	I	No	7.59E-01	3.13E+00
Refractory Ceramic Fibers (units in fibers)	NA	Indeterminate	Yes	No (not volatile)	No (not volatile)	3.13E+03		-	-		-	-	2.50E+01	-		-		3.00E+04	A	No	-	3.13E+03
Safrole	94-59-7	No	Yes	No (not volatile)	No (not volatile)	1.61E-02		-	-		6.54E+05	4.49E+04	2.50E+01	-		6.30E-05	C	-		Mut	1.61E-02	-
Selenium	7782-49-2	No	Yes	No (not volatile)	No (not volatile)	2.09E+00		-	-		6.03E-04	-	2.50E+01	-		-		2.00E-02	C	No	-	2.09E+00
Selenium Sulfide	7446-34-6	Indeterminate	Yes	No (not volatile)	No (not volatile)	2.09E+00		-	-		-	-	2.50E+01	-		-		2.00E-02	C	No	-	2.09E+00
Silica (crystalline, respirable)	7631-86-9	Indeterminate	Yes	No (not volatile)	No (not volatile)	3.13E-01		-	-		-	-	2.50E+01	-		-		3.00E-03	C	No	-	3.13E-01
Sodium Cyanide	143-33-9	No	Yes	No (not volatile)	No (not volatile)	9.39E-01		-	-		0.00E+00	-	2.50E+01	-		-		9.00E-03	C	No	-	9.39E-01
Sodium Fluoride	7681-49-4	No	Yes	No (not volatile)	No (not volatile)	1.46E+00		-	-		0.00E+00	-	2.50E+01	-		-		1.40E-02	C	No	-	1.46E+00
Styrene	100-42-5	Yes	Yes	Yes	Yes	1.04E+02	NC	3.48E+03	9.28E+02	No (100)	3.58E+07	3.49E+07	2.50E+01	9.00E-01	CRC	-		1.00E+00	I	No	-	1.04E+02
Sulfolane	126-33-0	No	Yes	No (not volatile)	No (not volatile)	2.09E-01		-	-		2.64E+04	1.98E+08	2.50E+01	-		-		2.00E-03	X	No	-	2.09E-01
Sulfur Trioxide	7446-11-9	Yes	Yes	Yes		1.04E-01		3.48E+00	-		1.13E+09	-	2.50E+01	-		-		1.00E-03	C	No	-	1.04E-01
Sulfuric Acid	7664-93-9	No	Yes	No (not volatile)	No (not volatile)	1.04E-01		-	-		3.13E+02	-	2.50E+01	-		-		1.00E-03	C	No	-	1.04E-01
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	No	Yes	No (not volatile)	No (not volatile)	3.95E-01		-	-		3.93E+00	4.58E+00	2.50E+01	-		7.10E-06	I	-		No	3.95E-01	-
TCDD, 2,3,7,8-	1746-01-6	Yes	Yes	Yes	Yes	7.39E-08	CA	2.46E-06	3.61E-05	No (0)	2.60E-02	4.09E-01	2.50E+01	-		3.80E+01	C	4.00E-08	C	No	7.39E-08	4.17E-06
TCDF, 2,3,7,8-	51207-31-9	Yes	Yes	Yes	Yes	7.39E-07	CA	2.46E-05	1.08E-03	--	2.47E-01	4.72E-01	2.50E+01	-		3.80E+00	W	4.00E-07	W	No	7.39E-07	4.17E-05
Tert-Butyl Acetate	540-88-5	Yes	Yes	Yes	Yes	2.16E+00	CA	7.20E+01	6.13E+01	--	2.94E+08	2.94E+08	2.50E+01	-		1.30E-06	C	-		No	2.16E+00	-
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No	Yes	No (not volatile)	No (not volatile)	7.39E-04		-	-		2.58E+02	2.19E-01	2.50E+01	-		3.80E-03	W	4.00E-04	W	No	7.39E-04	4.17E-02
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	Yes	Yes	Yes	Yes	2.46E-04	CA	8.21E-03	2.70E-02	--	1.33E+02	2.94E+02	2.50E+01	-		1.14E-02	W	1.33E-04	W	No	2.46E-04	1.39E-02
Tetrachloroethane, 1,1,1,2-	630-20-6	Yes	Yes	Yes	Yes	3.79E-01	CA	1.26E+01	3.71E+00	--	1.08E+08	1.09E+08	2.50E+01	4.90E+00	YAWS	7.40E-06	I	-		No	3.79E-01	-
Tetrachloroethane, 1,1,2,2-	79-34-5	Yes	Yes	Yes	Yes	4.84E-02	CA	1.61E+00	3.23E+00	--	4.17E+07	4.25E+07	2.50E+01	-		5.80E-05	C	-		No	4.84E-02	-
Tetrachloroethylene	127-18-4	Yes	Yes	Yes	Yes	4.17E+00	NC	1.39E+02	5.76E+00	No (5)	1.65E+08	1.49E+08	2.50E+01	-		2.60E-07	I	4.00E-02	I	No	1.08E+01	4.17E+00
Tetrafluoroethane, 1,1,1,2-	811-97-2	Yes	Yes	Yes	Yes	8.34E+03	NC	2.78E+05	4.08E+03	--	2.74E+10	4.17E+09	2.50E+01	-		-		8.00E+01	I	No	-	8.34E+03
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	2.09E+02	NC	6.95E+03	7.24E+04	--	6.29E+08	2.88E+09	2.50E+01	2.00E+00	CRC	-		2.00E+00	I	No	-	2.09E+02
Titanium Tetrachloride	7550-45-0	Yes	Yes	Yes		1.04E-02		3.48E-01	-		1.02E+08	-	2.50E+01	-		-		1.00E-04	A	No	-	1.04E-02
Toluene	108-88-3	Yes	Yes	Yes	Yes	5.21E+02	NC	1.74E+04	1.92E+03	No (1000)	1.41E+08	1.43E+08	2.50E+01	1.10E+00	CRC	-		5.00E+00	I	No	-	5.21E+02
Toluene-2,4-diisocyanate	584-84-9	Yes	Yes	Yes	Yes	8.34E-04	NC	2.78E-02	1.84E+00	--	7.49E+04	1.70E+04	2.50E+01	9.00E-01	CRC	1.10E-05	C	8.00E-06	C	No	2.55E-01	8.34E-04
Toluene-2,6-diisocyanate	91-08-7	Yes	Yes	Yes	Yes	8.34E-04	NC	2.78E-02	1.84E+00	--	1.96E+05	1.70E+04	2.50E+01	1.10E+00	YAWS	1.10E-05	C	8.00E-06	C	No	2.55E-01	8.34E-04
Toluidine, o- (Methylaniline, 2-)	95-53-4	No	Yes	No (not volatile)	No (not volatile)	5.51E-02		-	-		1.50E+06	1.34E+06	2.50E+01	1.20E+00	YAWS	5.10E-05	C	-		No	5.51E-02	-
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes	Yes	Yes	Yes	4.17E+01	NC	1.39E+03	2.24E+01	--	4.59E+08	1.40E+08	2.50E+01	1.12E+00	CRC	-		4.00E-01	P	No	-	4.17E+01
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	7.50E-02	--	3.07E+07	3.06E+07	2.50E+01	8.00E-01	CRC	-		1.00E-01	P	No	-	1.04E+01
Total Petroleum Hydrocarbons (Aromatic High)	NA	No	Yes	No (not volatile)	No (not volatile)	2.09E-04		-	-		7.45E-02	3.03E-02	2.50E+01	-		-		2.00E-06	P	Mut	-	2.09E-04
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	2.38E+01	--	1.35E+07	1.58E+07	2.50E+01	9.00E-01	CRC	-		6.00E-02	P	No	-	6.26E+00
Toxaphene	8001-35-2	No	Yes	No (not volatile)	No (not volatile)	8.77E-03		-	-		1.61E+02	1.35E+02	2.50E+01	-		3.20E-04	I	-		No	8.77E-03	-
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	Yes	Yes	Yes	Yes	5.21E+02	NC	1.74E+04	2.42E+01	--	3.65E+09	3.66E+09	2.50E+01	-		-		5.00E+00	P	No	-	5.21E+02
Trichlorobenzene, 1,2,4-	120-82-1	Yes	Yes	Yes	Yes	2.09E-01	NC	6.95E+00	3.59E+00	Yes (70)	4.49E+06	2.84E+06	2.50E+01	2.50E+00	CRC	-		2.00E-03	P	No	-	2.09E-01
Trichloroethane, 1,1,1-	71-55-6	Yes	Yes	Yes	Yes	5.21E+02	NC	1.74E+04	7.42E+02	No (200)	8.90E+08	9.07E+08	2.50E+01	8.00E+00	CRC	-		5.00E+00	I	No	-	5.21E+02
Trichloroethane, 1,1,2-	79-00-5	Yes	Yes	Yes	Yes	2.09E-02	NC	6.95E-01	6.19E-01	Yes (5)	1.65E+08	1.55E+08	2.50E+01	6.00E+00	CRC	1.60E-05	I	2.00E-04	X	No	1.75E-01	2.09E-02

Trichloroethylene	79-01-6	Yes	Yes	Yes	Yes	2.09E-01	NC	6.95E+00	5.18E-01	Yes (5)	4.88E+08	5.15E+08	2.50E+01	8.00E+00	CRC	4.10E-06	I	2.00E-03	I	Mut	4.78E-01	2.09E-01
Trichlorophenol, 2,4,6-	88-06-2	No	Yes	No (not volatile)	No (not volatile)	9.06E-01		-	-		8.50E+04	8.50E+04	2.50E+01	-		3.10E-06	I	-		No	9.06E-01	-
Trichloropropane, 1,2,3-	96-18-4	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	2.23E+00	--	2.93E+07	2.45E+07	2.50E+01	3.20E+00	CRC	-		3.00E-04	I	Mut	-	3.13E-02
Trichloropropene, 1,2,3-	96-19-5	Yes	Yes	Yes	Yes	3.13E-02	NC	1.04E+00	4.35E-02	--	3.44E+07	2.40E+08	2.50E+01	-		-		3.00E-04	P	No	-	3.13E-02
Triethylamine	121-44-8	Yes	Yes	Yes	Yes	7.30E-01	NC	2.43E+01	1.20E+02	--	3.11E+08	4.18E+08	2.50E+01	1.20E+00	CRC	-		7.00E-03	I	No	-	7.30E-01
Trifluoroethane, 1,1,1-	420-46-2	Yes	Yes	Yes	Yes	2.09E+03	NC	6.95E+04	6.63E+01	--	4.31E+10	2.40E+10	2.50E+01	-		-		2.00E+01	P	No	-	2.09E+03
Trimethylbenzene, 1,2,3-	526-73-8	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	3.51E+01	--	1.09E+07	1.34E+07	2.50E+01	8.00E-01	CRC	-		6.00E-02	I	No	-	6.26E+00
Trimethylbenzene, 1,2,4-	95-63-6	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	2.48E+01	--	1.36E+07	1.44E+07	2.50E+01	9.00E-01	CRC	-		6.00E-02	I	No	-	6.26E+00
Trimethylbenzene, 1,3,5-	108-67-8	Yes	Yes	Yes	Yes	6.26E+00	NC	2.09E+02	1.75E+01	--	1.60E+07	1.73E+07	2.50E+01	1.00E+00	CRC	-		6.00E-02	I	No	-	6.26E+00
Tris(2,3-dibromopropyl)phosphate	126-72-7	Yes	Yes	Yes	Yes	4.25E-03	CA	1.42E-01	4.77E+00	--	7.13E+03	7.13E+03	2.50E+01	-		6.60E-04	C	-		No	4.25E-03	-
Uranium	7440-61-1	No	Yes	No (not volatile)	No (not volatile)	4.17E-03		-	-		0.00E+00	-	2.50E+01	-		-		4.00E-05	A	No	-	4.17E-03
Urethane	51-79-6	No	Yes	No (not volatile)	No (not volatile)	3.50E-03		-	-		1.26E+06	1.26E+06	2.50E+01	-		2.90E-04	C	-		Mut	3.50E-03	-
Vanadium Pentoxide	1314-62-1	No	Yes	No (not volatile)	No (not volatile)	3.38E-04		-	-		0.00E+00	-	2.50E+01	-		8.30E-03	P	7.00E-06	P	No	3.38E-04	7.30E-04
Vanadium and Compounds	7440-62-2	Indeterminate	Yes	No (not volatile)	No (not volatile)	1.04E-02		-	-		-	-	2.50E+01	-		-		1.00E-04	A	No	-	1.04E-02
Vinyl Acetate	108-05-4	Yes	Yes	Yes	Yes	2.09E+01	NC	6.95E+02	9.98E+02	--	4.17E+08	4.18E+08	2.50E+01	2.60E+00	CRC	-		2.00E-01	I	No	-	2.09E+01
Vinyl Bromide	593-60-2	Yes	Yes	Yes	Yes	1.87E-01	CA	6.24E+00	3.72E-01	--	5.94E+09	3.82E+09	2.50E+01	9.00E+00	CRC	1.50E-05	P	3.00E-03	I	No	1.87E-01	3.13E-01
Vinyl Chloride	75-01-4	Yes	Yes	Yes	Yes	1.68E-01	CA	5.59E+00	1.47E-01	Yes (2)	1.00E+10	1.00E+10	2.50E+01	3.60E+00	CRC	4.40E-06	I	1.00E-01	I	Mut	1.68E-01	1.04E+01
Xylene, m-	108-38-3	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	3.55E+01	--	4.73E+07	4.73E+07	2.50E+01	1.10E+00	CRC	-		1.00E-01	G	No	-	1.04E+01
Xylene, o-	95-47-6	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	4.92E+01	--	3.77E+07	3.77E+07	2.50E+01	9.00E-01	CRC	-		1.00E-01	G	No	-	1.04E+01
Xylene, p-	106-42-3	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	3.70E+01	--	5.05E+07	4.57E+07	2.50E+01	1.10E+00	CRC	-		1.00E-01	G	No	-	1.04E+01
Xylenes	1330-20-7	Yes	Yes	Yes	Yes	1.04E+01	NC	3.48E+02	3.85E+01	Yes (10000)	4.56E+07	2.87E+07	2.50E+01	-		-		1.00E-01	I	No	-	1.04E+01

Default

Resident Risk-Based Regional Screening Levels (RSL) for Air

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; T = ATSDR DRAFT; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	IUR ($ug/m^3)^{-1}$	IUR Ref	RfC (mg/m^3)	RfC Ref	CarcinogenicSL TR=1E-06 (ug/m^3)	NoncarcinogenicSL THI=0.1 (ug or $fibers/m^3$)	Screening Level (ug or $fibers/m^3$)
Acenaphthene	83-32-9	No	Yes	Organics	-		-		-	-	
Acephate	30560-19-1	No	No	Organics	-		-		-	-	
Acetaldehyde	75-07-0	No	Yes	Organics	2.20E-06	I	9.00E-03	I	1.28E+00	9.39E-01	9.39E-01 nc
Acetochlor	34256-82-1	No	No	Organics	-		-		-	-	
Acetone	67-64-1	No	Yes	Organics	-		-		-	-	
Acetone Cyanohydrin	75-86-5	No	No	Organics	-		2.00E-03	X	-	2.09E-01	2.09E-01 nc
Acetonitrile	75-05-8	No	Yes	Organics	-		6.00E-02	I	-	6.26E+00	6.26E+00 nc
Acetophenone	98-86-2	No	Yes	Organics	-		-		-	-	
Acetylaminofluorene, 2-	53-96-3	No	No	Organics	1.30E-03	C	-		2.16E-03	-	2.16E-03 ca
Acrolein	107-02-8	No	Yes	Organics	-		2.00E-05	I	-	2.09E-03	2.09E-03 nc
Acrylamide	79-06-1	Yes	No	Organics	1.00E-04	I	6.00E-03	I	1.01E-02	6.26E-01	1.01E-02 ca*
Acrylic Acid	79-10-7	No	Yes	Organics	-		2.00E-04	P	-	2.09E-02	2.09E-02 nc
Acrylonitrile	107-13-1	No	Yes	Organics	6.80E-05	I	2.00E-03	I	4.13E-02	2.09E-01	4.13E-02 ca**
Adiponitrile	111-69-3	No	No	Organics	-		6.00E-03	P	-	6.26E-01	6.26E-01 nc
Alachlor	15972-60-8	No	No	Organics	-		-		-	-	
Aldicarb	116-06-3	No	No	Organics	-		-		-	-	
Aldicarb Sulfone	1646-88-4	No	No	Organics	-		-		-	-	
Aldrin	309-00-2	No	Yes	Organics	4.90E-03	I	-		5.73E-04	-	5.73E-04 ca
Allyl Alcohol	107-18-6	No	Yes	Organics	-		1.00E-04	X	-	1.04E-02	1.04E-02 nc
Allyl Chloride	107-05-1	No	Yes	Organics	6.00E-06	C	1.00E-03	I	4.68E-01	1.04E-01	1.04E-01 nc
Aluminum	7429-90-5	No	No	Inorganics	-		5.00E-03	P	-	5.21E-01	5.21E-01 nc
Aluminum Phosphide	20859-73-8	No	No	Inorganics	-		-		-	-	
Aluminum metaphosphate	13776-88-0	No	No	Inorganics	-		-		-	-	
Aluminum salts of inorganic phosphates	NA	No	No	Inorganics	-		-		-	-	
Ametryn	834-12-8	No	No	Organics	-		-		-	-	
Aminobiphenyl, 4-	92-67-1	No	No	Organics	6.00E-03	C	-		4.68E-04	-	4.68E-04 ca
Aminophenol, m-	591-27-5	No	No	Organics	-		-		-	-	
Aminophenol, o-	95-55-6	No	No	Organics	-		-		-	-	
Aminophenol, p-	123-30-8	No	No	Organics	-		-		-	-	
Amitraz	33089-61-1	No	No	Organics	-		-		-	-	
Ammonia	7664-41-7	No	Yes	Inorganics	-		5.00E-01	I	-	5.21E+01	5.21E+01 nc
Ammonium Perchlorate	7790-98-9	No	No	Inorganics	-		-		-	-	
Ammonium Picrate	131-74-8	No	No	Organics	-		-		-	-	

Ammonium Sulfamate	7773-06-0	No	No	Inorganics	-		-		-	-	
Ammonium perfluoro-2-methyl-3-oxahexanoate	62037-80-3	No	No	Organics	-		-		-	-	
Ammonium perfluorobutanoate	10495-86-0	No	Yes	Organics	-		-		-	-	
Ammonium perfluorohexanoate	21615-47-4	No	No	Organics	-		-		-	-	
Ammonium perfluorooctanoate	3825-26-1	No	No	Organics	-		-		-	-	
Amyl Alcohol, tert-	75-85-4	No	Yes	Organics	-		3.00E-03	X	-	3.13E-01	3.13E-01 nc
Aniline	62-53-3	No	No	Organics	1.60E-06	C	1.00E-03	I	1.75E+00	1.04E-01	1.04E-01 nc
Anthracene	120-12-7	No	Yes	Organics	-		-		-	-	
Anthraquinone, 9,10-	84-65-1	No	No	Organics	-		-		-	-	
Antimony (metallic)	7440-36-0	No	No	Inorganics	-		3.00E-04	A	-	3.13E-02	3.13E-02 nc
Antimony Pentoxide	1314-60-9	No	No	Inorganics	-		-		-	-	
Antimony Tetroxide	1332-81-6	No	No	Inorganics	-		-		-	-	
Antimony Trioxide	1309-64-4	No	No	Inorganics	-		2.00E-04	I	-	2.09E-02	2.09E-02 nc
Aroclor 1016	12674-11-2	No	Yes	Organics	2.00E-05	G	-		1.40E-01	-	1.40E-01 ca
Aroclor 1221	11104-28-2	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 1232	11141-16-5	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 1242	53469-21-9	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 1248	12672-29-6	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 1254	11097-69-1	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 1260	11096-82-5	No	Yes	Organics	5.71E-04	G	-		4.91E-03	-	4.91E-03 ca
Aroclor 5460	11126-42-4	No	Yes	Organics	-		-		-	-	
Arsenic, Inorganic	7440-38-2	No	No	Inorganics	4.30E-03	I	1.50E-05	C	6.53E-04	1.56E-03	6.53E-04 ca**
Arsine	7784-42-1	No	No	Inorganics	-		5.00E-05	I	-	5.21E-03	5.21E-03 nc
Asulam	3337-71-1	No	No	Organics	-		-		-	-	
Atrazine	1912-24-9	No	No	Organics	-		-		-	-	
Auramine	492-80-8	No	No	Organics	2.50E-04	C	-		1.12E-02	-	1.12E-02 ca
Avermectin B1	65195-55-3	No	No	Organics	-		-		-	-	
Azinphos-methyl	86-50-0	No	No	Organics	-		1.00E-02	A	-	1.04E+00	1.04E+00 nc
Azobenzene	103-33-3	No	Yes	Organics	3.10E-05	I	-		9.06E-02	-	9.06E-02 ca
Azodicarbonamide	123-77-3	No	No	Organics	-		7.00E-06	P	-	7.30E-04	7.30E-04 nc
Barium	7440-39-3	No	No	Inorganics	-		5.00E-04	H	-	5.21E-02	5.21E-02 nc
Benfluralin	1861-40-1	No	Yes	Organics	-		-		-	-	
Benomyl	17804-35-2	No	No	Organics	-		-		-	-	
Bensulfuron-methyl	83055-99-6	No	No	Organics	-		-		-	-	
Bentazon	25057-89-0	No	No	Organics	-		-		-	-	
Benz[a]anthracene	56-55-3	Yes	Yes	Organics	6.00E-05	E	-		1.69E-02	-	1.69E-02 ca
Benzaldehyde	100-52-7	No	Yes	Organics	-		-		-	-	
Benzene	71-43-2	No	Yes	Organics	7.80E-06	I	3.00E-02	I	3.60E-01	3.13E+00	3.60E-01 ca**
Benzene, Trimethyl	25551-13-7	No	Yes	Organics	-		4.00E-03	C	-	4.17E-01	4.17E-01 nc
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	No	No	Organics	-		-		-	-	
Benzenethiol	108-98-5	No	Yes	Organics	-		-		-	-	
Benzidine	92-87-5	Yes	No	Organics	6.70E-02	I	-		1.51E-05	-	1.51E-05 ca
Benzo[a]pyrene	50-32-8	Yes	No	Organics	6.00E-04	I	2.00E-06	I	1.69E-03	2.09E-04	2.09E-04 nc
Benzo[b]fluoranthene	205-99-2	Yes	No	Organics	6.00E-05	E	-		1.69E-02	-	1.69E-02 ca
Benzo[e]pyrene	192-97-2	No	No	Organics	-		2.00E-06	X	-	2.09E-04	2.09E-04 nc
Benzo[j]fluoranthene	205-82-3	No	No	Organics	1.10E-04	C	-		2.55E-02	-	2.55E-02 ca

Benzo[k]fluoranthene	207-08-9	Yes	No	Organics	6.00E-06	E	-		1.69E-01	-	1.69E-01 ca
Benzoic Acid	65-85-0	No	No	Organics	-		-		-	-	
Benzotrichloride	98-07-7	No	Yes	Organics	-		-		-	-	
Benzyl Alcohol	100-51-6	No	No	Organics	-		-		-	-	
Benzyl Chloride	100-44-7	No	Yes	Organics	4.90E-05	C	1.00E-03	P	5.73E-02	1.04E-01	5.73E-02 ca**
Beryllium and compounds	7440-41-7	No	No	Inorganics	2.40E-03	I	2.00E-05	I	1.17E-03	2.09E-03	1.17E-03 ca**
Bifenox	42576-02-3	No	No	Organics	-		-		-	-	
Biphenthrin	82657-04-3	No	No	Organics	-		-		-	-	
Biphenyl, 1,1'-	92-52-4	No	Yes	Organics	-		4.00E-04	X	-	4.17E-02	4.17E-02 nc
Bis(2-chloro-1-methylethyl) ether	108-60-1	No	Yes	Organics	-		-		-	-	
Bis(2-chloroethoxy)methane	111-91-1	No	No	Organics	-		-		-	-	
Bis(2-chloroethyl)ether	111-44-4	No	Yes	Organics	3.30E-04	I	-		8.51E-03	-	8.51E-03 ca
Bis(2-ethylhexyl)phthalate	117-81-7	No	No	Organics	2.40E-06	C	-		1.17E+00	-	1.17E+00 ca
Bis(chloromethyl)ether	542-88-1	No	Yes	Organics	6.20E-02	I	-		4.53E-05	-	4.53E-05 ca
Bis(trifluoromethylsulfonyl)amine (TFSI)	82113-65-3	No	Yes	Organics	-		-		-	-	
Bisphenol A	80-05-7	No	No	Organics	-		-		-	-	
Boron And Borates Only	7440-42-8	No	No	Inorganics	-		2.00E-02	H	-	2.09E+00	2.09E+00 nc
Boron Trichloride	10294-34-5	No	Yes	Inorganics	-		2.00E-02	P	-	2.09E+00	2.09E+00 nc
Boron Trifluoride	7637-07-2	No	Yes	Inorganics	-		1.30E-02	C	-	1.36E+00	1.36E+00 nc
Bromate	15541-45-4	No	No	Inorganics	1.40E-04	C	-		2.01E-02	-	2.01E-02 ca
Bromo-2-chloroethane, 1-	107-04-0	No	Yes	Organics	-		6.00E-05	X	-	6.26E-03	6.26E-03 nc
Bromo-3-fluorobenzene, 1-	1073-06-9	No	Yes	Organics	-		-		-	-	
Bromo-4-fluorobenzene, 1-	460-00-4	No	Yes	Organics	-		-		-	-	
Bromoacetic acid	79-08-3	No	No	Organics	-		-		-	-	
Bromobenzene	108-86-1	No	Yes	Organics	-		6.00E-02	I	-	6.26E+00	6.26E+00 nc
Bromochloromethane	74-97-5	No	Yes	Organics	-		4.00E-02	X	-	4.17E+00	4.17E+00 nc
Bromodichloromethane	75-27-4	No	Yes	Organics	3.70E-05	C	-		7.59E-02	-	7.59E-02 ca
Bromoform	75-25-2	No	Yes	Organics	1.10E-06	I	-		2.55E+00	-	2.55E+00 ca
Bromomethane	74-83-9	No	Yes	Organics	-		5.00E-03	I	-	5.21E-01	5.21E-01 nc
Bromophos	2104-96-3	No	Yes	Organics	-		-		-	-	
Bromopropane, 1-	106-94-5	No	Yes	Organics	3.70E-06	C	1.00E-01	A	7.59E-01	1.04E+01	7.59E-01 ca*
Bromoxynil	1689-84-5	No	No	Organics	-		-		-	-	
Bromoxynil Octanoate	1689-99-2	No	Yes	Organics	-		-		-	-	
Butadiene, 1,3-	106-99-0	No	Yes	Organics	3.00E-05	I	2.00E-03	I	9.36E-02	2.09E-01	9.36E-02 ca**
Butanol, N-	71-36-3	No	Yes	Organics	-		-		-	-	
Butyl Alcohol, t-	75-65-0	No	Yes	Organics	-		5.00E+00	I	-	5.21E+02	5.21E+02 nc

Butyl Benzyl Phthalate	85-68-7	No	No	Organics	-		-		-	-	
Butyl alcohol, sec-	78-92-2	No	Yes	Organics	-		3.00E+01	P	-	3.13E+03	3.13E+03 nc
Butylate	2008-41-5	No	Yes	Organics	-		-		-	-	
Butylated hydroxyanisole	25013-16-5	No	No	Organics	5.70E-08	C	-		4.93E+01	-	4.93E+01 ca
Butylated hydroxytoluene	128-37-0	No	No	Organics	-		-		-	-	
Butylbenzene, n-	104-51-8	No	Yes	Organics	-		-		-	-	
Butylbenzene, sec-	135-98-8	No	Yes	Organics	-		-		-	-	
Butylbenzene, tert-	98-06-6	No	Yes	Organics	-		-		-	-	
Butylphthalyl Butylglycolate	85-70-1	No	No	Organics	-		-		-	-	
Cacodylic Acid	75-60-5	No	No	Organics	-		-		-	-	
Cadmium (Diet)	7440-43-9	No	No	Inorganics	1.80E-03	I	1.00E-05	A	1.56E-03	1.04E-03	1.04E-03 nc
Cadmium (Water)	7440-43-9	No	No	Inorganics	1.80E-03	I	1.00E-05	A	1.56E-03	1.04E-03	1.04E-03 nc
Calcium Cyanide	592-01-8	No	No	Inorganics	-		9.00E-03	C	-	9.39E-01	9.39E-01 nc
Caprolactam	105-60-2	No	No	Organics	-		2.20E-03	C	-	2.29E-01	2.29E-01 nc
Captafol	2425-06-1	No	No	Organics	4.30E-05	C	-		6.53E-02	-	6.53E-02 ca
Captan	133-06-2	No	No	Organics	6.60E-07	C	-		4.25E+00	-	4.25E+00 ca
Carbaryl	63-25-2	No	No	Organics	-		-		-	-	
Carbofuran	1563-66-2	No	No	Organics	-		-		-	-	
Carbon Disulfide	75-15-0	No	Yes	Organics	-		7.00E-01	I	-	7.30E+01	7.30E+01 nc
Carbon Tetrachloride	56-23-5	No	Yes	Organics	6.00E-06	I	1.00E-01	I	4.68E-01	1.04E+01	4.68E-01 ca*
Carbonyl Sulfide	463-58-1	No	Yes	Organics	-		1.00E-01	P	-	1.04E+01	1.04E+01 nc
Carbosulfan	55285-14-8	No	No	Organics	-		-		-	-	
Carboxin	5234-68-4	No	No	Organics	-		-		-	-	
Ceric oxide	1306-38-3	No	No	Inorganics	-		9.00E-04	I	-	9.39E-02	9.39E-02 nc
Chloral Hydrate	302-17-0	No	Yes	Organics	-		-		-	-	
Chloramben	133-90-4	No	No	Organics	-		-		-	-	
Chloranil	118-75-2	No	No	Organics	-		-		-	-	
Chlordane (alpha)	5103-71-9	No	Yes	Organics	-		-		-	-	
Chlordane (gamma)	5103-74-2	No	Yes	Organics	-		-		-	-	
Chlordane (technical mixture)	12789-03-6	No	Yes	Organics	1.00E-04	I	7.00E-04	I	2.81E-02	7.30E-02	2.81E-02 ca**
Chlordecone (Kepone)	143-50-0	No	No	Organics	4.60E-03	C	-		6.10E-04	-	6.10E-04 ca
Chlorfenvinphos	470-90-6	No	No	Organics	-		-		-	-	
Chlorimuron, Ethyl-	90982-32-4	No	No	Organics	-		-		-	-	
Chlorine	7782-50-5	No	Yes	Inorganics	-		1.45E-04	A	-	1.51E-02	1.51E-02 nc
Chlorine Dioxide	10049-04-4	No	Yes	Inorganics	-		2.00E-04	I	-	2.09E-02	2.09E-02 nc
Chlorite (Sodium Salt)	7758-19-2	No	No	Inorganics	-		-		-	-	
Chloro-1,1-difluoroethane, 1-	75-68-3	No	Yes	Organics	-		5.00E+01	I	-	5.21E+03	5.21E+03 nc
Chloro-1,3-butadiene, 2- (Chloroprene)	126-99-8	No	Yes	Organics	3.00E-04	I	2.00E-02	I	9.36E-03	2.09E+00	9.36E-03 ca
Chloro-2-methylaniline HCl, 4-	3165-93-3	No	No	Organics	-		-		-	-	
Chloro-2-methylaniline, 4-	95-69-2	No	No	Organics	7.70E-05	C	-		3.65E-02	-	3.65E-02 ca
Chloroacetaldehyde, 2-	107-20-0	No	Yes	Organics	-		-		-	-	

Chloroacetic Acid	79-11-8	No	No	Organics	-		-		-	-	
Chloroacetophenone, 2-	532-27-4	No	No	Organics	-		3.00E-05	I	-	3.13E-03	3.13E-03 nc
Chloroaniline, p-	106-47-8	No	No	Organics	-		-		-	-	
Chlorobenzene	108-90-7	No	Yes	Organics	-		5.00E-02	P	-	5.21E+00	5.21E+00 nc
Chlorobenzene sulfonic acid, p-	98-66-8	No	No	Organics	-		-		-	-	
Chlorobenzilate	510-15-6	No	No	Organics	3.10E-05	C	-		9.06E-02	-	9.06E-02 ca
Chlorobenzoic Acid, p-	74-11-3	No	No	Organics	-		-		-	-	
Chlorobenzotrifluoride, 4-	98-56-6	No	Yes	Organics	8.60E-06	C	3.00E-01	P	3.26E-01	3.13E+01	3.26E-01 ca*
Chlorobutane, 1-	109-69-3	No	Yes	Organics	-		-		-	-	
Chlorodifluoromethane	75-45-6	No	Yes	Organics	-		5.00E+01	I	-	5.21E+03	5.21E+03 nc
Chloroethanol, 2-	107-07-3	No	Yes	Organics	-		-		-	-	
Chloroform	67-66-3	No	Yes	Organics	2.30E-05	I	1.95E-03	A	1.22E-01	2.03E-01	1.22E-01 ca**
Chloromethane	74-87-3	No	Yes	Organics	-		9.00E-02	I	-	9.39E+00	9.39E+00 nc
Chloromethyl Methyl Ether	107-30-2	No	Yes	Organics	6.90E-04	C	-		4.07E-03	-	4.07E-03 ca
Chloronaphthalene, Beta-	91-58-7	No	Yes	Organics	-		-		-	-	
Chloronitrobenzene, o-	88-73-3	No	No	Organics	-		1.00E-05	X	-	1.04E-03	1.04E-03 nc
Chloronitrobenzene, p-	100-00-5	No	No	Organics	-		2.00E-03	P	-	2.09E-01	2.09E-01 nc
Chlorophenol, 2-	95-57-8	No	Yes	Organics	-		-		-	-	
Chloropicrin	76-06-2	No	Yes	Organics	-		4.00E-04	C	-	4.17E-02	4.17E-02 nc
Chlorothalonil	1897-45-6	No	No	Organics	-		-		-	-	
Chlorotoluene, o-	95-49-8	No	Yes	Organics	-		-		-	-	
Chlorotoluene, p-	106-43-4	No	Yes	Organics	-		-		-	-	
Chlorozotocin	54749-90-5	No	No	Organics	6.90E-02	C	-		4.07E-05	-	4.07E-05 ca
Chlorpropham	101-21-3	No	No	Organics	-		-		-	-	
Chlorpyrifos	2921-88-2	No	No	Organics	-		-		-	-	
Chlorpyrifos Methyl	5598-13-0	No	No	Organics	-		-		-	-	
Chlorsulfuron	64902-72-3	No	No	Organics	-		-		-	-	
Chlorthal-dimethyl	1861-32-1	No	No	Organics	-		-		-	-	
Chlorthiophos	60238-56-4	No	No	Organics	-		-		-	-	
Chromium(III) (Soluble Compounds)	16065-83-1	No	No	Inorganics	-		6.00E-05	C	-	6.26E-03	6.26E-03 nc
Chromium(III), Insoluble Salts	16065-83-1	No	No	Inorganics	-		-		-	-	
Chromium(VI)	18540-29-9	Yes	No	Inorganics	8.40E-02	G	1.00E-04	I	1.21E-05	1.04E-02	1.21E-05 ca
Chrysene	218-01-9	Yes	No	Organics	6.00E-07	E	-		1.69E+00	-	1.69E+00 ca
Clofentezine	74115-24-5	No	No	Organics	-		-		-	-	
Cobalt	7440-48-4	No	No	Inorganics	9.00E-03	P	6.00E-06	P	3.12E-04	6.26E-04	3.12E-04 ca**
Coke Oven Emissions	NA	Yes	Yes	Organics	6.20E-04	I	-		1.64E-03	-	1.64E-03 ca
Copper	7440-50-8	No	No	Inorganics	-		-		-	-	
Copper Cyanide	544-92-3	No	No	Inorganics	-		-		-	-	
Cresol, m-	108-39-4	No	No	Organics	-		6.00E-01	C	-	6.26E+01	6.26E+01 nc
Cresol, o-	95-48-7	No	No	Organics	-		6.00E-01	C	-	6.26E+01	6.26E+01 nc

Cresol, p-	106-44-5	No	No	Organics	-		6.00E-01	C	-	6.26E+01	6.26E+01 nc
Cresol, p-chloro-m-	59-50-7	No	No	Organics	-		-		-	-	
Cresols	1319-77-3	No	No	Organics	-		6.00E-01	C	-	6.26E+01	6.26E+01 nc
Crotonaldehyde, trans-	123-73-9	No	Yes	Organics	-		-		-	-	
Cumene	98-82-8	No	Yes	Organics	-		4.00E-01	I	-	4.17E+01	4.17E+01 nc
Cupferron	135-20-6	No	No	Organics	6.30E-05	C	-		4.46E-02	-	4.46E-02 ca
Cyanazine	21725-46-2	No	No	Organics	-		-		-	-	
Cyanide (CN-)	57-12-5	No	Yes	Inorganics	-		8.00E-04	G	-	8.34E-02	8.34E-02 nc
Cyanogen	460-19-5	No	Yes	Inorganics	-		-		-	-	
Cyanogen Bromide	506-68-3	No	Yes	Inorganics	-		-		-	-	
Cyanogen Chloride	506-77-4	No	Yes	Inorganics	-		-		-	-	
Cyclohexane	110-82-7	No	Yes	Organics	-		6.00E+00	I	-	6.26E+02	6.26E+02 nc
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	No	No	Organics	-		-		-	-	
Cyclohexanone	108-94-1	No	Yes	Organics	-		7.00E-01	P	-	7.30E+01	7.30E+01 nc
Cyclohexene	110-83-8	No	Yes	Organics	-		1.00E+00	X	-	1.04E+02	1.04E+02 nc
Cyclohexylamine	108-91-8	No	Yes	Organics	-		-		-	-	
Cyfluthrin	68359-37-5	No	No	Organics	-		-		-	-	
Cyromazine	66215-27-8	No	No	Organics	-		-		-	-	
Dalapon	75-99-0	No	No	Organics	-		-		-	-	
Daminozide	1596-84-5	No	No	Organics	5.10E-06	C	-		5.51E-01	-	5.51E-01 ca
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	No	No	Organics	-		-		-	-	
Demeton	8065-48-3	No	No	Organics	-		-		-	-	
Di(2-ethylhexyl)adipate	103-23-1	No	No	Organics	-		-		-	-	
Diallate	2303-16-4	No	No	Organics	-		-		-	-	
Diazinon	333-41-5	No	No	Organics	-		-		-	-	
Dibenz[a,h]anthracene	53-70-3	Yes	No	Organics	6.00E-04	E	-		1.69E-03	-	1.69E-03 ca
Dibenzo[a,e]pyrene	192-65-4	No	No	Organics	1.10E-03	C	-		2.55E-03	-	2.55E-03 ca
Dibenzofuran	132-64-9	No	Yes	Organics	-		-		-	-	
Dibromo-3-chloropropane, 1,2-	96-12-8	Yes	Yes	Organics	6.00E-03	P	2.00E-04	I	1.69E-04	2.09E-02	1.69E-04 ca
Dibromoacetic acid	631-64-1	No	No	Organics	-		-		-	-	
Dibromobenzene, 1,3-	108-36-1	No	Yes	Organics	-		-		-	-	
Dibromobenzene, 1,4-	106-37-6	No	Yes	Organics	-		-		-	-	
Dibromochloromethane	124-48-1	No	Yes	Organics	-		-		-	-	
Dibromoethane, 1,2-	106-93-4	No	Yes	Organics	6.00E-04	I	9.00E-03	I	4.68E-03	9.39E-01	4.68E-03 ca
Dibromomethane (Methylene Bromide)	74-95-3	No	Yes	Organics	-		4.00E-03	X	-	4.17E-01	4.17E-01 nc
Dibutyl Phthalate	84-74-2	No	No	Organics	-		-		-	-	
Dibutyltin Compounds	NA	No	No	Organics	-		-		-	-	
Dicamba	1918-00-9	No	No	Organics	-		-		-	-	
Dichloro-2-butene, 1,4-	764-41-0	No	Yes	Organics	4.20E-03	P	-		6.68E-04	-	6.68E-04 ca
Dichloro-2-butene, cis-1,4-	1476-11-5	No	Yes	Organics	4.20E-03	P	-		6.68E-04	-	6.68E-04 ca
Dichloro-2-butene, trans-1,4-	110-57-6	No	Yes	Organics	4.20E-03	P	-		6.68E-04	-	6.68E-04 ca
Dichloroacetic Acid	79-43-6	No	No	Organics	-		-		-	-	

Dichlorobenzene, 1,2-	95-50-1	No	Yes	Organics	-		2.00E-01	H	-	2.09E+01	2.09E+01 nc
Dichlorobenzene, 1,4-	106-46-7	No	Yes	Organics	1.10E-05	C	8.00E-01	I	2.55E-01	8.34E+01	2.55E-01 ca
Dichlorobenzidine, 3,3'-	91-94-1	No	No	Organics	3.40E-04	C	-		8.26E-03	-	8.26E-03 ca
Dichlorobenzophenone, 4,4'-	90-98-2	No	No	Organics	-		-		-	-	
Dichlorodifluoromethane	75-71-8	No	Yes	Organics	-		1.00E-01	X	-	1.04E+01	1.04E+01 nc
Dichlorodiphenyldichloroethane, p,p'- (DDD)	72-54-8	No	No	Organics	6.90E-05	C	-		4.07E-02	-	4.07E-02 ca
Dichlorodiphenyldichloroethylene, p,p'- (DDE)	72-55-9	No	Yes	Organics	9.70E-05	C	-		2.89E-02	-	2.89E-02 ca
Dichlorodiphenyltrichloroethane, p,p'- (DDT)	50-29-3	No	No	Organics	9.70E-05	I	-		2.89E-02	-	2.89E-02 ca
Dichloroethane, 1,1-	75-34-3	No	Yes	Organics	1.60E-06	C	-		1.75E+00	-	1.75E+00 ca
Dichloroethane, 1,2-	107-06-2	No	Yes	Organics	2.60E-05	I	7.00E-03	P	1.08E-01	7.30E-01	1.08E-01 ca**
Dichloroethylene, 1,1-	75-35-4	No	Yes	Organics	-		2.00E-01	I	-	2.09E+01	2.09E+01 nc
Dichloroethylene, cis-1,2-	156-59-2	No	Yes	Organics	-		4.00E-02	X	-	4.17E+00	4.17E+00 nc
Dichloroethylene, trans-1,2-	156-60-5	No	Yes	Organics	-		4.00E-02	X	-	4.17E+00	4.17E+00 nc
Dichlorophenol, 2,4-	120-83-2	No	No	Organics	-		-		-	-	
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	No	No	Organics	-		-		-	-	
Dichloropropane, 1,2-	78-87-5	No	Yes	Organics	3.70E-06	P	4.00E-03	I	7.59E-01	4.17E-01	4.17E-01 nc
Dichloropropane, 1,3-	142-28-9	No	Yes	Organics	-		-		-	-	
Dichloropropanol, 2,3-	616-23-9	No	No	Organics	-		-		-	-	
Dichloropropene, 1,3-	542-75-6	No	Yes	Organics	4.00E-06	I	2.00E-02	I	7.02E-01	2.09E+00	7.02E-01 ca**
Dichlorvos	62-73-7	No	No	Organics	8.30E-05	C	5.00E-04	I	3.38E-02	5.21E-02	3.38E-02 ca**
Dicrotophos	141-66-2	No	No	Organics	-		-		-	-	
Dicyclopentadiene	77-73-6	No	Yes	Organics	-		3.00E-04	X	-	3.13E-02	3.13E-02 nc
Dieldrin	60-57-1	No	No	Organics	4.60E-03	I	-		6.10E-04	-	6.10E-04 ca
Diesel Engine Exhaust	NA	No	No	Organics	3.00E-04	C	5.00E-03	I	9.36E-03	5.21E-01	9.36E-03 ca*
Diethanolamine	111-42-2	No	No	Organics	-		2.00E-04	P	-	2.09E-02	2.09E-02 nc
Diethyl Phthalate	84-66-2	No	No	Organics	-		-		-	-	
Diethylene Glycol Monobutyl Ether	112-34-5	No	No	Organics	-		1.00E-04	P	-	1.04E-02	1.04E-02 nc
Diethylene Glycol Monoethyl Ether	111-90-0	No	No	Organics	-		3.00E-04	P	-	3.13E-02	3.13E-02 nc
Diethylformamide	617-84-5	No	Yes	Organics	-		-		-	-	
Diethylstilbestrol	56-53-1	No	No	Organics	1.00E-01	C	-		2.81E-05	-	2.81E-05 ca
Difenzoquat	43222-48-6	No	No	Organics	-		-		-	-	
Diflubenzuron	35367-38-5	No	No	Organics	-		-		-	-	
Difluoroethane, 1,1-	75-37-6	No	Yes	Organics	-		4.00E+01	I	-	4.17E+03	4.17E+03 nc
Difluoropropane, 2,2-	420-45-1	No	Yes	Organics	-		3.00E+01	X	-	3.13E+03	3.13E+03 nc
Dihydrosafrole	94-58-6	No	Yes	Organics	1.30E-05	C	-		2.16E-01	-	2.16E-01 ca

Diisopropyl Ether	108-20-3	No	Yes	Organics	-		7.00E-01	P	-	7.30E+01	7.30E+01 nc
Diisopropyl Methylphosphonate	1445-75-6	No	Yes	Organics	-		-		-	-	
Dimethipin	55290-64-7	No	No	Organics	-		-		-	-	
Dimethoate	60-51-5	No	No	Organics	-		-		-	-	
Dimethoxybenzidine, 3,3'-	119-90-4	No	No	Organics	-		-		-	-	
Dimethyl methylphosphonate	756-79-6	No	No	Organics	-		-		-	-	
Dimethylamino azobenzene [p-]	60-11-7	No	No	Organics	1.30E-03	C	-		2.16E-03	-	2.16E-03 ca
Dimethylaniline HCl, 2,4-	21436-96-4	No	No	Organics	-		-		-	-	
Dimethylaniline, 2,4-	95-68-1	No	No	Organics	-		-		-	-	
Dimethylaniline, N,N-	121-69-7	No	Yes	Organics	-		-		-	-	
Dimethylbenz[a]anthracene, 7,12-	57-97-6	Yes	No	Organics	7.10E-02	C	-		1.43E-05	-	1.43E-05 ca
Dimethylbenzidine, 3,3'-	119-93-7	No	No	Organics	-		-		-	-	
Dimethylformamide	68-12-2	No	Yes	Organics	-		3.00E-02	I	-	3.13E+00	3.13E+00 nc
Dimethylhydrazine, 1,1-	57-14-7	No	Yes	Organics	-		2.00E-06	X	-	2.09E-04	2.09E-04 nc
Dimethylhydrazine, 1,2-	540-73-8	No	Yes	Organics	1.60E-01	C	-		1.75E-05	-	1.75E-05 ca
Dimethylphenol, 2,4-	105-67-9	No	No	Organics	-		-		-	-	
Dimethylphenol, 2,6-	576-26-1	No	No	Organics	-		-		-	-	
Dimethylphenol, 3,4-	95-65-8	No	No	Organics	-		-		-	-	
Dimethylterephthalate	120-61-6	No	Yes	Organics	-		-		-	-	
Dimethylvinylchloride	513-37-1	No	Yes	Organics	1.30E-05	C	-		2.16E-01	-	2.16E-01 ca
Dinitro-o-cresol, 4,6-	534-52-1	No	No	Organics	-		-		-	-	
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	No	No	Organics	-		-		-	-	
Dinitroaniline, 3,5-	618-87-1	No	No	Organics	-		2.00E-03	X	-	2.09E-01	2.09E-01 nc
Dinitrobenzene, 1,2-	528-29-0	No	No	Organics	-		-		-	-	
Dinitrobenzene, 1,3-	99-65-0	No	No	Organics	-		-		-	-	
Dinitrobenzene, 1,4-	100-25-4	No	No	Organics	-		-		-	-	
Dinitrophenol, 2,4-	51-28-5	No	No	Organics	-		-		-	-	
Dinitrotoluene Mixture, 2,4/2,6-	NA	No	No	Organics	-		-		-	-	
Dinitrotoluene, 2,4-	121-14-2	No	No	Organics	8.90E-05	C	-		3.15E-02	-	3.15E-02 ca
Dinitrotoluene, 2,6-	606-20-2	No	No	Organics	-		-		-	-	
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	No	No	Organics	-		-		-	-	
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	No	No	Organics	-		-		-	-	
Dinitrotoluene, Technical grade	25321-14-6	No	No	Organics	-		-		-	-	
Dinoseb	88-85-7	No	No	Organics	-		-		-	-	
Dioxane, 1,4-	123-91-1	No	Yes	Organics	5.00E-06	I	3.00E-02	I	5.62E-01	3.13E+00	5.62E-01 ca**
Diphenamid	957-51-7	No	No	Organics	-		-		-	-	
Diphenyl Ether	101-84-8	No	Yes	Organics	-		4.00E-04	X	-	4.17E-02	4.17E-02 nc
Diphenyl Sulfone	127-63-9	No	No	Organics	-		-		-	-	
Diphenylamine	122-39-4	No	No	Organics	-		-		-	-	
Diphenylhydrazine, 1,2-	122-66-7	No	No	Organics	2.20E-04	I	-		1.28E-02	-	1.28E-02 ca
Dipotassium phosphate	7758-11-4	No	No	Inorganics	-		-		-	-	
Diquat	2764-72-9	No	No	Organics	-		-		-	-	
Direct Black 38	1937-37-7	No	No	Organics	2.10E-03	C	-		1.34E-03	-	1.34E-03 ca
Direct Blue 6	2602-46-2	No	No	Organics	2.10E-03	C	-		1.34E-03	-	1.34E-03 ca
Direct Brown 95	16071-86-6	No	No	Organics	1.90E-03	C	-		1.48E-03	-	1.48E-03 ca
Disodium phosphate	7558-79-4	No	No	Inorganics	-		-		-	-	

Disulfoton	298-04-4	No	No	Organics	-		-		-	-	
Dithiane, 1,4-	505-29-3	No	Yes	Organics	-		-		-	-	
Diuron	330-54-1	No	No	Organics	-		-		-	-	
Dodine	2439-10-3	No	No	Organics	-		-		-	-	
EPTC	759-94-4	No	Yes	Organics	-		-		-	-	
Endosulfan	115-29-7	No	Yes	Organics	-		-		-	-	
Endosulfan Sulfate	1031-07-8	No	No	Organics	-		-		-	-	
Endothall	145-73-3	No	No	Organics	-		-		-	-	
Endrin	72-20-8	No	No	Organics	-		-		-	-	
Epichlorohydrin	106-89-8	No	Yes	Organics	1.20E-06	I	1.00E-03	I	2.34E+00	1.04E-01	1.04E-01 nc
Epoxybutane, 1,2-	106-88-7	No	Yes	Organics	-		2.00E-02	I	-	2.09E+00	2.09E+00 nc
Ethanol, 2-(2-methoxyethoxy)-	111-77-3	No	No	Organics	-		-		-	-	
Ethephon	16672-87-0	No	No	Organics	-		-		-	-	
Ethion	563-12-2	No	No	Organics	-		-		-	-	
Ethoxyethanol Acetate, 2-	111-15-9	No	Yes	Organics	-		6.00E-02	P	-	6.26E+00	6.26E+00 nc
Ethoxyethanol, 2-	110-80-5	No	Yes	Organics	-		4.00E-02	P	-	4.17E+00	4.17E+00 nc
Ethyl Acetate	141-78-6	No	Yes	Organics	-		7.00E-02	P	-	7.30E+00	7.30E+00 nc
Ethyl Acrylate	140-88-5	No	Yes	Organics	-		8.00E-03	P	-	8.34E-01	8.34E-01 nc
Ethyl Chloride	75-00-3	No	Yes	Organics	-		4.00E+00	P	-	4.17E+02	4.17E+02 nc
Ethyl Ether	60-29-7	No	Yes	Organics	-		-		-	-	
Ethyl Methacrylate	97-63-2	No	Yes	Organics	-		3.00E-01	P	-	3.13E+01	3.13E+01 nc
Ethyl Tertiary Butyl Ether (ETBE)	637-92-3	No	Yes	Organics	8.00E-08	I	4.00E+01	I	3.51E+01	4.17E+03	3.51E+01 ca
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	No	No	Organics	-		-		-	-	
Ethylbenzene	100-41-4	No	Yes	Organics	2.50E-06	C	1.00E+00	I	1.12E+00	1.04E+02	1.12E+00 ca*
Ethylene Cyanohydrin	109-78-4	No	No	Organics	-		-		-	-	
Ethylene Diamine	107-15-3	No	Yes	Organics	-		-		-	-	
Ethylene Glycol	107-21-1	No	No	Organics	-		4.00E-01	C	-	4.17E+01	4.17E+01 nc
Ethylene Glycol Monobutyl Ether	111-76-2	No	No	Organics	-		1.60E+00	I	-	1.67E+02	1.67E+02 nc
Ethylene Oxide	75-21-8	Yes	Yes	Organics	3.00E-03	I	3.00E-02	C	3.38E-04	3.13E+00	3.38E-04 ca
Ethylene Thiourea	96-45-7	No	No	Organics	1.30E-05	C	-		2.16E-01	-	2.16E-01 ca
Ethyleneimine	151-56-4	No	Yes	Organics	1.90E-02	C	-		1.48E-04	-	1.48E-04 ca
Ethylphthalyl Ethyl Glycolate	84-72-0	No	No	Organics	-		-		-	-	
Fenamiphos	22224-92-6	No	No	Organics	-		-		-	-	
Fenpropathrin	39515-41-8	No	No	Organics	-		-		-	-	
Fenvalerate	51630-58-1	No	No	Organics	-		-		-	-	
Fluometuron	2164-17-2	No	No	Organics	-		-		-	-	
Fluoranthene	206-44-0	No	No	Organics	-		-		-	-	
Fluorene	86-73-7	No	Yes	Organics	-		-		-	-	

Fluoride	16984-48-8	No	No	Inorganics	-		1.30E-02	C	-	1.36E+00	1.36E+00 nc
Fluorine (Soluble Fluoride)	7782-41-4	No	No	Inorganics	-		1.30E-02	C	-	1.36E+00	1.36E+00 nc
Fluridone	59756-60-4	No	No	Organics	-		-		-	-	
Flurprimidol	56425-91-3	No	No	Organics	-		-		-	-	
Flusilazole	85509-19-9	No	No	Organics	-		-		-	-	
Flutolanil	66332-96-5	No	No	Organics	-		-		-	-	
Fluvalinate	69409-94-5	No	No	Organics	-		-		-	-	
Folpet	133-07-3	No	No	Organics	-		-		-	-	
Fomesafen	72178-02-0	No	No	Organics	-		-		-	-	
Fonofos	944-22-9	No	No	Organics	-		-		-	-	
Formaldehyde	50-00-0	No	Yes	Organics	1.30E-05	I	9.82E-03	A	2.16E-01	1.02E+00	2.16E-01 ca**
Formic Acid	64-18-6	No	Yes	Organics	-		3.00E-04	X	-	3.13E-02	3.13E-02 nc
Fosetyl-AL	39148-24-8	No	No	Organics	-		-		-	-	
Furan	110-00-9	No	Yes	Organics	-		-		-	-	
Furazolidone	67-45-8	No	No	Organics	-		-		-	-	
Furfural	98-01-1	No	Yes	Organics	-		5.00E-02	H	-	5.21E+00	5.21E+00 nc
Furium	531-82-8	No	No	Organics	4.30E-04	C	-		6.53E-03	-	6.53E-03 ca
Furmecyclox	60568-05-0	No	No	Organics	8.60E-06	C	-		3.26E-01	-	3.26E-01 ca
Glufosinate, Ammonium	77182-82-2	No	No	Organics	-		-		-	-	
Glutaraldehyde	111-30-8	No	No	Organics	-		8.00E-05	C	-	8.34E-03	8.34E-03 nc
Glycidaldehyde	765-34-4	No	Yes	Organics	-		1.00E-03	X	-	1.04E-01	1.04E-01 nc
Glyphosate	1071-83-6	No	No	Organics	-		-		-	-	
Guanidine	113-00-8	No	Yes	Organics	-		-		-	-	
Guanidine Chloride	50-01-1	No	No	Organics	-		-		-	-	
Guanidine Nitrate	506-93-4	No	No	Organics	-		-		-	-	
Haloxyfop, Methyl	69806-40-2	No	No	Organics	-		-		-	-	
Heptachlor	76-44-8	No	Yes	Organics	1.30E-03	I	-		2.16E-03	-	2.16E-03 ca
Heptachlor Epoxide	1024-57-3	No	Yes	Organics	2.60E-03	I	-		1.08E-03	-	1.08E-03 ca
Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Heptachlorodibenzofuran, 1,2,3,4,6,7,8-	67562-39-4	No	Yes	Organics	3.80E-01	W	4.00E-06	W	7.39E-06	4.17E-04	7.39E-06 ca*
Heptanal, n-	111-71-7	No	Yes	Organics	-		3.00E-03	X	-	3.13E-01	3.13E-01 nc
Heptane, N-	142-82-5	No	Yes	Organics	-		4.00E-01	P	-	4.17E+01	4.17E+01 nc
Hexabromobenzene	87-82-1	No	Yes	Organics	-		-		-	-	
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	No	No	Organics	-		-		-	-	
Hexachlorobenzene	118-74-1	No	Yes	Organics	4.60E-04	I	-		6.10E-03	-	6.10E-03 ca
Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*

Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	No	Yes	Organics	1.14E+00	W	1.33E-06	W	2.46E-06	1.39E-04	2.46E-06 ca*
Hexachlorobutadiene	87-68-3	No	Yes	Organics	2.20E-05	I	-		1.28E-01	-	1.28E-01 ca
Hexachlorocyclohexane, Alpha-	319-84-6	No	No	Organics	1.80E-03	I	-		1.56E-03	-	1.56E-03 ca
Hexachlorocyclohexane, Beta-	319-85-7	No	No	Organics	5.30E-04	I	-		5.30E-03	-	5.30E-03 ca
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	No	No	Organics	3.10E-04	C	-		9.06E-03	-	9.06E-03 ca
Hexachlorocyclohexane, Technical	608-73-1	No	No	Organics	5.10E-04	I	-		5.51E-03	-	5.51E-03 ca
Hexachlorocyclopentadiene	77-47-4	No	Yes	Organics	-		2.00E-04	I	-	2.09E-02	2.09E-02 nc
Hexachlorodibenzo-p-dioxin, 1,2,3,4,7,8-	39227-28-6	No	No	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
Hexachlorodibenzo-p-dioxin, Mixture	34465-46-8	No	No	Organics	1.30E+00	I	-		2.16E-06	-	2.16E-06 ca
Hexachlorodibenzofuran, 1,2,3,4,7,8-	70648-26-9	No	Yes	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
Hexachloroethane	67-72-1	No	Yes	Organics	1.10E-05	C	3.00E-02	I	2.55E-01	3.13E+00	2.55E-01 ca*
Hexachlorophene	70-30-4	No	No	Organics	-		-		-	-	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	No	Yes	Organics	-		-		-	-	
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	No	No	Organics	-		-		-	-	
Hexamethylene Diisocyanate, 1,6-	822-06-0	No	Yes	Organics	-		1.00E-05	I	-	1.04E-03	1.04E-03 nc
Hexamethylene diisocyanate biuret	4035-89-6	No	No	Organics	-		4.00E-04	C	-	4.17E-02	4.17E-02 nc
Hexamethylene diisocyanate isocyanurate	3779-63-3	No	No	Organics	-		4.00E-04	C	-	4.17E-02	4.17E-02 nc
Hexamethylphosphoramide	680-31-9	No	No	Organics	-		-		-	-	
Hexane, Commercial	NA	No	Yes	Organics	2.00E-07	X	6.00E-01	P	1.40E+01	6.26E+01	1.40E+01 ca**
Hexane, N-	110-54-3	No	Yes	Organics	-		7.00E-01	I	-	7.30E+01	7.30E+01 nc
Hexanedioic Acid	124-04-9	No	No	Organics	-		-		-	-	
Hexanol, 1-,2-ethyl- (2-Ethyl-1-hexanol)	104-76-7	No	Yes	Organics	-		4.00E-04	P	-	4.17E-02	4.17E-02 nc
Hexanone, 2-	591-78-6	No	Yes	Organics	-		3.00E-02	I	-	3.13E+00	3.13E+00 nc
Hexazinone	51235-04-2	No	No	Organics	-		-		-	-	
Hexythiazox	78587-05-0	No	No	Organics	-		-		-	-	
HpCDD, 1,2,3,4,6,7,8,-	35822-46-9	No	Yes	Organics	3.80E-01	W	4.00E-06	W	7.39E-06	4.17E-04	7.39E-06 ca*
HpCDF, 1,2,3,4,7,8,9-	55673-89-7	No	Yes	Organics	3.80E-01	W	4.00E-06	W	7.39E-06	4.17E-04	7.39E-06 ca*
HxCDD, 1,2,3,6,7,8-	57653-85-7	No	No	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
HxCDD, 1,2,3,7,8,9-	19408-74-3	No	No	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
HxCDF, 1,2,3,6,7,8-	57117-44-9	No	Yes	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
HxCDF, 1,2,3,7,8,9-	72918-21-9	No	No	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
HxCDF, 2,3,4,6,7,8-	60851-34-5	No	No	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
Hydramethylnon	67485-29-4	No	No	Organics	-		-		-	-	

Hydrazine	302-01-2	No	Yes	Inorganics	4.90E-03	I	3.00E-05	P	5.73E-04	3.13E-03	5.73E-04 ca**
Hydrazine Sulfate	10034-93-2	No	No	Inorganics	4.90E-03	I	-		5.73E-04	-	5.73E-04 ca
Hydrogen Chloride	7647-01-0	No	Yes	Inorganics	-		2.00E-02	I	-	2.09E+00	2.09E+00 nc
Hydrogen Cyanide	74-90-8	No	Yes	Inorganics	-		8.00E-04	I	-	8.34E-02	8.34E-02 nc
Hydrogen Fluoride	7664-39-3	No	Yes	Inorganics	-		1.40E-02	C	-	1.46E+00	1.46E+00 nc
Hydrogen Sulfide	7783-06-4	No	Yes	Inorganics	-		2.00E-03	I	-	2.09E-01	2.09E-01 nc
Hydroquinone	123-31-9	No	No	Organics	-		-		-	-	
Imazalil	35554-44-0	No	No	Organics	-		-		-	-	
Imazaquin	81335-37-7	No	No	Organics	-		-		-	-	
Imazethapyr	81335-77-5	No	No	Organics	-		-		-	-	
Indeno[1,2,3-cd]pyrene	193-39-5	Yes	No	Organics	6.00E-05	E	-		1.69E-02	-	1.69E-02 ca
Iodine	7553-56-2	No	No	Inorganics	-		-		-	-	
Iprodione	36734-19-7	No	No	Organics	-		-		-	-	
Iron	7439-89-6	No	No	Inorganics	-		-		-	-	
Isobutyl Alcohol	78-83-1	No	Yes	Organics	-		4.00E-01	X	-	4.17E+01	4.17E+01 nc
Isophorone	78-59-1	No	No	Organics	-		2.00E+00	C	-	2.09E+02	2.09E+02 nc
Isopropalin	33820-53-0	No	Yes	Organics	-		-		-	-	
Isopropanol	67-63-0	No	Yes	Organics	-		2.00E-01	P	-	2.09E+01	2.09E+01 nc
Isopropyl Methyl Phosphonic Acid	1832-54-8	No	No	Organics	-		-		-	-	
Isoxaben	82558-50-7	No	No	Organics	-		-		-	-	
Jet propulsion fuel 7 (JP-7)	NA	No	Yes	Organics	-		3.00E-01	A	-	3.13E+01	3.13E+01 nc
Lactofen	77501-63-4	No	No	Organics	-		-		-	-	
Lactonitrile	78-97-7	No	No	Organics	-		-		-	-	
Lanthanum	7439-91-0	No	No	Inorganics	-		-		-	-	
Lanthanum Acetate Hydrate	100587-90-4	No	No	Organics	-		-		-	-	
Lanthanum Chloride Heptahydrate	10025-84-0	No	No	Inorganics	-		-		-	-	
Lanthanum Chloride, Anhydrous	10099-58-8	No	No	Inorganics	-		-		-	-	
Lanthanum Nitrate Hexahydrate	10277-43-7	No	No	Inorganics	-		-		-	-	
Lead Phosphate	7446-27-7	No	No	Inorganics	1.20E-05	C	-		2.34E-01	-	2.34E-01 ca
Lead acetate	301-04-2	No	No	Organics	8.00E-05	C	-		3.51E-02	-	3.51E-02 ca
Lead subacetate	1335-32-6	No	No	Organics	1.10E-05	C	-		2.55E-01	-	2.55E-01 ca
Lewisite	541-25-3	No	Yes	Organics	-		-		-	-	
Linuron	330-55-2	No	No	Organics	-		-		-	-	
Lithium	7439-93-2	No	No	Inorganics	-		-		-	-	
Lithium Perchlorate	7791-03-9	No	No	Inorganics	-		-		-	-	
Lithium bis[(trifluoromethyl)sulfonyl]azanide	90076-65-6	No	Yes	Organics	-		-		-	-	
MCPA	94-74-6	No	No	Organics	-		-		-	-	
MCPB	94-81-5	No	No	Organics	-		-		-	-	
MCPP	93-65-2	No	No	Organics	-		-		-	-	
Malathion	121-75-5	No	No	Organics	-		-		-	-	
Maleic Anhydride	108-31-6	No	No	Organics	-		7.00E-04	C	-	7.30E-02	7.30E-02 nc
Maleic Hydrazide	123-33-1	No	No	Organics	-		-		-	-	

Malononitrile	109-77-3	No	No	Organics	-		-		-	-	
Mancozeb	8018-01-7	No	No	Organics	-		-		-	-	
Maneb	12427-38-2	No	No	Organics	-		-		-	-	
Manganese (Diet)	7439-96-5	No	No	Inorganics	-		5.00E-05	I	-	5.21E-03	5.21E-03 nc
Manganese (Non-diet)	7439-96-5	No	No	Inorganics	-		5.00E-05	I	-	5.21E-03	5.21E-03 nc
Mephosfolan	950-10-7	No	No	Organics	-		-		-	-	
Mepiquat Chloride	24307-26-4	No	No	Organics	-		-		-	-	
Mercaptobenzothiazole, 2-	149-30-4	No	No	Organics	-		-		-	-	
Mercuric Chloride	7487-94-7	No	No	Inorganics	-		3.00E-04	G	-	3.13E-02	3.13E-02 nc
Mercury (elemental)	7439-97-6	No	Yes	Inorganics	-		3.00E-04	I	-	3.13E-02	3.13E-02 nc
Merphos	150-50-5	No	Yes	Organics	-		-		-	-	
Metalaxyl	57837-19-1	No	No	Organics	-		-		-	-	
Methacrylonitrile	126-98-7	No	Yes	Organics	-		3.00E-02	P	-	3.13E+00	3.13E+00 nc
Methamidophos	10265-92-6	No	No	Organics	-		-		-	-	
Methanol	67-56-1	No	Yes	Organics	-		2.00E+01	I	-	2.09E+03	2.09E+03 nc
Methidathion	950-37-8	No	No	Organics	-		-		-	-	
Methomyl	16752-77-5	No	No	Organics	-		-		-	-	
Methoxy-5-nitroaniline, 2-	99-59-2	No	No	Organics	-		-		-	-	
Methoxychlor	72-43-5	No	No	Organics	-		-		-	-	
Methoxyethanol Acetate, 2-	110-49-6	No	Yes	Organics	-		1.00E-03	P	-	1.04E-01	1.04E-01 nc
Methoxyethanol, 2-	109-86-4	No	Yes	Organics	-		7.00E-03	P	-	7.30E-01	7.30E-01 nc
Methyl Acetate	79-20-9	No	Yes	Organics	-		-		-	-	
Methyl Acrylate	96-33-3	No	Yes	Organics	-		2.00E-02	P	-	2.09E+00	2.09E+00 nc
Methyl Ethyl Ketone (2-Butanone)	78-93-3	No	Yes	Organics	-		5.00E+00	I	-	5.21E+02	5.21E+02 nc
Methyl Hydrazine	60-34-4	No	Yes	Organics	1.00E-03	X	2.00E-05	X	2.81E-03	2.09E-03	2.09E-03 nc
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	No	Yes	Organics	-		3.00E+00	I	-	3.13E+02	3.13E+02 nc
Methyl Isocyanate	624-83-9	No	Yes	Organics	-		1.00E-03	C	-	1.04E-01	1.04E-01 nc
Methyl Mercury	22967-92-6	No	No	Inorganics	-		-		-	-	
Methyl Methacrylate	80-62-6	No	Yes	Organics	-		7.00E-01	I	-	7.30E+01	7.30E+01 nc
Methyl Parathion	298-00-0	No	No	Organics	-		-		-	-	
Methyl Phosphonic Acid	993-13-5	No	No	Organics	-		-		-	-	
Methyl Styrene (Mixed Isomers)	25013-15-4	No	Yes	Organics	-		4.00E-02	H	-	4.17E+00	4.17E+00 nc
Methyl methanesulfonate	66-27-3	No	No	Organics	2.80E-05	C	-		1.00E-01	-	1.00E-01 ca
Methyl tert-Butyl Ether (MTBE)	1634-04-4	No	Yes	Organics	2.60E-07	C	3.00E+00	I	1.08E+01	3.13E+02	1.08E+01 ca*
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	No	No	Organics	-		-		-	-	
Methyl-2-Pentanol, 4-	108-11-2	No	Yes	Organics	-		3.00E+00	X	-	3.13E+02	3.13E+02 nc
Methyl-5-Nitroaniline, 2-	99-55-8	No	No	Organics	-		-		-	-	
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	No	No	Organics	2.40E-03	C	-		1.17E-03	-	1.17E-03 ca
Methylaniline Hydrochloride, 2-	636-21-5	No	No	Organics	3.70E-05	C	-		7.59E-02	-	7.59E-02 ca
Methylarsonic acid	124-58-3	No	No	Organics	-		-		-	-	

Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	No	No	Organics	-		-		-	-	
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	No	No	Organics	-		-		-	-	
Methylcholanthrene, 3-	56-49-5	Yes	No	Organics	6.30E-03	C	-		1.61E-04	-	1.61E-04 ca
Methylcyclohexane	108-87-2	No	Yes	Organics	-		9.50E-02	X	-	9.91E+00	9.91E+00 nc
Methylene Chloride	75-09-2	Yes	Yes	Organics	1.00E-08	I	6.00E-01	I	1.01E+02	6.26E+01	6.26E+01 nc
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	Yes	No	Organics	4.30E-04	C	-		2.36E-03	-	2.36E-03 ca
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	No	No	Organics	1.30E-05	C	-		2.16E-01	-	2.16E-01 ca
Methylenebisbenzenamine, 4,4'-	101-77-9	No	No	Organics	4.60E-04	C	2.00E-02	C	6.10E-03	2.09E+00	6.10E-03 ca
Methylenediphenyl Diisocyanate	101-68-8	No	No	Organics	-		6.00E-04	I	-	6.26E-02	6.26E-02 nc
Methylnaphthalene, 1-	90-12-0	No	Yes	Organics	-		3.00E-06	P	-	3.13E-04	3.13E-04 nc
Methylnaphthalene, 2-	91-57-6	No	Yes	Organics	-		-		-	-	
Methylstyrene, Alpha-	98-83-9	No	Yes	Organics	-		-		-	-	
Metolachlor	51218-45-2	No	No	Organics	-		-		-	-	
Metribuzin	21087-64-9	No	No	Organics	-		-		-	-	
Metsulfuron-methyl	74223-64-6	No	No	Organics	-		-		-	-	
Midrange Aliphatic Hydrocarbon Streams	NA	No	Yes	Organics	4.50E-06	X	1.00E-01	P	6.24E-01	1.04E+01	6.24E-01 ca*
Mineral oils	8012-95-1	No	Yes	Organics	-		-		-	-	
Mirex	2385-85-5	No	Yes	Organics	5.10E-03	C	-		5.51E-04	-	5.51E-04 ca
Molinate	2212-67-1	No	No	Organics	-		-		-	-	
Molybdenum	7439-98-7	No	No	Inorganics	-		2.00E-03	A	-	2.09E-01	2.09E-01 nc
Monoaluminum phosphate	13530-50-2	No	No	Inorganics	-		-		-	-	
Monochloramine	10599-90-3	No	No	Inorganics	-		-		-	-	
Monomethylaniline	100-61-8	No	No	Organics	-		-		-	-	
Monopotassium phosphate	7778-77-0	No	No	Inorganics	-		-		-	-	
Monosodium phosphate	7558-80-7	No	No	Inorganics	-		-		-	-	
Myclobutanil	88671-89-0	No	No	Organics	-		-		-	-	
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	No	No	Organics	-		-		-	-	
Naled	300-76-5	No	Yes	Organics	-		-		-	-	
Naphtha, High Flash Aromatic (HFAN)	64742-95-6	No	Yes	Organics	-		1.00E-01	P	-	1.04E+01	1.04E+01 nc
Naphthalene	91-20-3	No	Yes	Organics	3.40E-05	C	3.00E-03	I	8.26E-02	3.13E-01	8.26E-02 ca**
Naphthylamine, 2-	91-59-8	No	No	Organics	0.00E+00	C	-		-	-	
Napropamide	15299-99-7	No	No	Organics	-		-		-	-	
Nickel Acetate	373-02-4	No	No	Organics	2.60E-04	C	1.40E-05	C	1.08E-02	1.46E-03	1.46E-03 nc
Nickel Carbonate	3333-67-3	No	No	Organics	2.60E-04	C	1.40E-05	C	1.08E-02	1.46E-03	1.46E-03 nc
Nickel Carbonyl	13463-39-3	No	Yes	Organics	2.60E-04	C	1.40E-05	C	1.08E-02	1.46E-03	1.46E-03 nc
Nickel Hydroxide	12054-48-7	No	No	Inorganics	2.60E-04	C	1.40E-05	C	1.08E-02	1.46E-03	1.46E-03 nc
Nickel Oxide	1313-99-1	No	No	Inorganics	2.60E-04	C	2.00E-05	C	1.08E-02	2.09E-03	2.09E-03 nc
Nickel Refinery Dust	NA	No	No	Inorganics	2.40E-04	I	1.40E-05	C	1.17E-02	1.46E-03	1.46E-03 nc
Nickel Soluble Salts	7440-02-0	No	No	Inorganics	2.60E-04	C	1.00E-05	A	1.08E-02	1.04E-03	1.04E-03 nc
Nickel Subsulfide	12035-72-2	No	No	Inorganics	4.80E-04	I	1.40E-05	C	5.85E-03	1.46E-03	1.46E-03 nc
Nickelocene	1271-28-9	No	No	Organics	2.60E-04	C	1.40E-05	C	1.08E-02	1.46E-03	1.46E-03 nc
Nitrate (measured as nitrogen)	14797-55-8	No	No	Inorganics	-		-		-	-	
Nitrite (measured as nitrogen)	14797-65-0	No	No	Inorganics	-		-		-	-	
Nitroaniline, 2-	88-74-4	No	No	Organics	-		5.00E-05	X	-	5.21E-03	5.21E-03 nc

Nitroaniline, 4-	100-01-6	No	No	Organics	-		6.00E-03	P	-	6.26E-01	6.26E-01 nc
Nitrobenzene	98-95-3	No	Yes	Organics	4.00E-05	I	9.00E-03	I	7.02E-02	9.39E-01	7.02E-02 ca*
Nitrocellulose	9004-70-0	No	No	Organics	-		-		-	-	
Nitrofurantoin	67-20-9	No	No	Organics	-		-		-	-	
Nitrofurazone	59-87-0	No	No	Organics	3.70E-04	C	-		7.59E-03	-	7.59E-03 ca
Nitroglycerin	55-63-0	No	No	Organics	-		-		-	-	
Nitroguanidine	556-88-7	No	No	Organics	-		-		-	-	
Nitromethane	75-52-5	No	Yes	Organics	8.80E-06	P	5.00E-03	P	3.19E-01	5.21E-01	3.19E-01 ca**
Nitropropane, 2-	79-46-9	No	Yes	Organics	5.80E-04	X	2.00E-02	I	4.84E-03	2.09E+00	4.84E-03 ca
Nitropyrene, 4-	57835-92-4	No	No	Organics	1.10E-04	C	-		2.55E-02	-	2.55E-02 ca
Nitroso-N-ethylurea, N-	759-73-9	Yes	No	Organics	7.70E-03	C	-		1.32E-04	-	1.32E-04 ca
Nitroso-N-methylurea, N-	684-93-5	Yes	No	Organics	3.40E-02	C	-		2.98E-05	-	2.98E-05 ca
Nitrosodibutylamine, N-	924-16-3	No	Yes	Organics	1.60E-03	I	-		1.75E-03	-	1.75E-03 ca
Nitrosodiethanolamine, N-	1116-54-7	No	No	Organics	8.00E-04	C	-		3.51E-03	-	3.51E-03 ca
Nitrosodiethylamine, N-	55-18-5	Yes	No	Organics	4.30E-02	I	-		2.36E-05	-	2.36E-05 ca
Nitrosodimethylamine, N-	62-75-9	Yes	Yes	Organics	1.40E-02	I	4.00E-05	X	7.24E-05	4.17E-03	7.24E-05 ca*
Nitrosodiphenylamine, N-	86-30-6	No	No	Organics	2.60E-06	C	-		1.08E+00	-	1.08E+00 ca
Nitrosodipropylamine, N-	621-64-7	No	No	Organics	2.00E-03	C	-		1.40E-03	-	1.40E-03 ca
Nitrosomethylethylamine, N-	10595-95-6	No	Yes	Organics	6.30E-03	C	-		4.46E-04	-	4.46E-04 ca
Nitrosomorpholine [N-]	59-89-2	No	No	Organics	1.90E-03	C	-		1.48E-03	-	1.48E-03 ca
Nitrosopiperidine [N-]	100-75-4	No	No	Organics	2.70E-03	C	-		1.04E-03	-	1.04E-03 ca
Nitrosopyrrolidine, N-	930-55-2	No	No	Organics	6.10E-04	I	-		4.60E-03	-	4.60E-03 ca
Nitrotoluene, m-	99-08-1	No	No	Organics	-		-		-	-	
Nitrotoluene, o-	88-72-2	No	Yes	Organics	-		-		-	-	
Nitrotoluene, p-	99-99-0	No	No	Organics	-		-		-	-	
Nonane, n-	111-84-2	No	Yes	Organics	-		2.00E-02	P	-	2.09E+00	2.09E+00 nc
Norflurazon	27314-13-2	No	No	Organics	-		-		-	-	
OCDD	3268-87-9	No	No	Organics	1.14E-02	W	1.33E-04	W	2.46E-04	1.39E-02	2.46E-04 ca*
OCDF	39001-02-0	No	No	Organics	1.14E-02	W	1.33E-04	W	2.46E-04	1.39E-02	2.46E-04 ca*
Octabromodiphenyl Ether	32536-52-0	No	No	Organics	-		-		-	-	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	No	No	Organics	-		-		-	-	
Octamethylpyrophosphoramide	152-16-9	No	No	Organics	-		-		-	-	
Octyl Phthalate, di-N-	117-84-0	No	No	Organics	-		-		-	-	
Oryzalin	19044-88-3	No	No	Organics	-		-		-	-	
Oxadiazon	19666-30-9	No	No	Organics	-		-		-	-	
Oxamyl	23135-22-0	No	No	Organics	-		-		-	-	
Oxyfluorfen	42874-03-3	No	No	Organics	-		-		-	-	
Paclobutrazol	76738-62-0	No	No	Organics	-		-		-	-	
Paraquat Dichloride	1910-42-5	No	No	Organics	-		-		-	-	
Parathion	56-38-2	No	No	Organics	-		-		-	-	
PeCDF, 1,2,3,7,8-	57117-41-6	No	No	Organics	1.14E+00	W	1.33E-06	W	2.46E-06	1.39E-04	2.46E-06 ca*

PeCDF, 2,3,4,7,8-	57117-31-4	No	No	Organics	1.14E+01	W	1.33E-07	W	2.46E-07	1.39E-05	2.46E-07 ca*
Pebulate	1114-71-2	No	Yes	Organics	-		-		-	-	
Pendimethalin	40487-42-1	No	No	Organics	-		-		-	-	
Pentabromodiphenyl Ether	32534-81-9	No	Yes	Organics	-		-		-	-	
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	No	No	Organics	-		-		-	-	
Pentachlorobenzene	608-93-5	No	Yes	Organics	-		-		-	-	
Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	No	Yes	Organics	1.14E-03	W	1.33E-03	W	2.46E-03	1.39E-01	2.46E-03 ca*
Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	No	Yes	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
Pentachlorodibenzo-p-dioxin, 1,2,3,7,8-	40321-76-4	No	No	Organics	3.80E+01	W	4.00E-08	W	7.39E-08	4.17E-06	7.39E-08 ca*
Pentachloroethane	76-01-7	No	Yes	Organics	-		-		-	-	
Pentachloronitrobenzene	82-68-8	No	Yes	Organics	-		-		-	-	
Pentachlorophenol	87-86-5	No	No	Organics	5.10E-06	C	-		5.51E-01	-	5.51E-01 ca
Pentaerythritol tetranitrate (PETN)	78-11-5	No	No	Organics	-		-		-	-	
Pentamethylphosphoramide (PMPA)	10159-46-3	No	No	Organics	-		-		-	-	
Pentane, n-	109-66-0	No	Yes	Organics	-		1.00E+00	P	-	1.04E+02	1.04E+02 nc
Perchlorate and Perchlorate Salts	14797-73-0	No	No	Inorganics	-		-		-	-	
Perfluorobutanesulfonate	45187-15-3	No	No	Organics	-		-		-	-	
Perfluorobutanesulfonic acid (PFBS)	375-73-5	No	No	Organics	-		-		-	-	
Perfluorobutanoate	45048-62-2	No	Yes	Organics	-		-		-	-	
Perfluorobutanoic acid (PFBA)	375-22-4	No	Yes	Organics	-		-		-	-	
Perfluorododecanoic acid (PFDoDA)	307-55-1	No	No	Organics	-		-		-	-	
Perfluorohexanesulfonate	108427-53-8	No	No	Organics	-		-		-	-	
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	No	No	Organics	-		-		-	-	
Perfluorohexanoate	92612-52-7	No	No	Organics	-		-		-	-	
Perfluorohexanoic acid (PFHxA)	307-24-4	No	No	Organics	-		-		-	-	
Perfluorononanoate	72007-68-2	No	No	Organics	-		-		-	-	
Perfluorononanoic acid (PFNA)	375-95-1	No	No	Organics	-		-		-	-	
Perfluorooctadecanoic acid (PFODA)	16517-11-6	No	No	Organics	-		-		-	-	
Perfluorooctanesulfonate	45298-90-6	No	No	Organics	-		-		-	-	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	No	No	Organics	-		-		-	-	
Perfluorooctanoate	45285-51-6	No	No	Organics	-		-		-	-	
Perfluorooctanoic acid (PFOA)	335-67-1	No	No	Organics	-		-		-	-	
Perfluoropropanoic acid (PFPrA)	422-64-0	No	Yes	Organics	-		-		-	-	
Perfluorotetradecanoic acid (PFTetDA)	376-06-7	No	No	Organics	-		-		-	-	
Perfluoroundecanoic acid (PFUDA)	2058-94-8	No	No	Organics	-		-		-	-	
Permethrin	52645-53-1	No	No	Organics	-		-		-	-	
Perylene	198-55-0	No	No	Organics	-		2.00E-06	X	-	2.09E-04	2.09E-04 nc

Phenacetin	62-44-2	No	No	Organics	6.30E-07	C	-		4.46E+00	-	4.46E+00 ca
Phenmedipham	13684-63-4	No	No	Organics	-		-		-	-	
Phenol	108-95-2	No	No	Organics	-		2.00E-01	C	-	2.09E+01	2.09E+01 nc
Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	No	No	Organics	-		-		-	-	
Phenothiazine	92-84-2	No	No	Organics	-		-		-	-	
Phenyl Isothiocyanate	103-72-0	No	Yes	Organics	-		-		-	-	
Phenylenediamine, m-	108-45-2	No	No	Organics	-		-		-	-	
Phenylenediamine, o-	95-54-5	No	No	Organics	-		-		-	-	
Phenylenediamine, p-	106-50-3	No	No	Organics	-		-		-	-	
Phenylmercuric Acetate	62-38-4	No	No	Organics	-		-		-	-	
Phenylphenol, 2-	90-43-7	No	No	Organics	-		-		-	-	
Phorate	298-02-2	No	No	Organics	-		-		-	-	
Phosgene	75-44-5	No	Yes	Organics	-		3.00E-04	I	-	3.13E-02	3.13E-02 nc
Phosmet	732-11-6	No	No	Organics	-		-		-	-	
Phosphine	7803-51-2	No	Yes	Inorganics	-		3.00E-04	I	-	3.13E-02	3.13E-02 nc
Phosphoric Acid	7664-38-2	No	No	Inorganics	-		1.00E-02	I	-	1.04E+00	1.04E+00 nc
Phosphoric acid, aluminum salt (1:1) [aluminum phosphate]	7784-30-7	No	No	Inorganics	-		-		-	-	
Phosphoric acid, aluminum sodium salt (1:X:X) [sodium aluminum phosphate acidic (acidic SALP)]	7785-88-8	No	No	Inorganics	-		-		-	-	
Phosphorus	7723-14-0	No	Yes	Inorganics	-		-		-	-	
Phthalic Acid, p-	100-21-0	No	No	Organics	-		-		-	-	
Phthalic Anhydride	85-44-9	No	No	Organics	-		2.00E-02	C	-	2.09E+00	2.09E+00 nc
Picloram	1918-02-1	No	No	Organics	-		-		-	-	
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	No	No	Organics	-		-		-	-	
Picric Acid (2,4,6-Trinitrophenol)	88-89-1	No	No	Organics	-		-		-	-	
Pirimiphos, Methyl	29232-93-7	No	No	Organics	-		-		-	-	
Polybrominated Biphenyls	36355-01-8	No	No	Organics	8.60E-03	C	-		3.26E-04	-	3.26E-04 ca
Polychlorinated Biphenyls (high risk)	1336-36-3	No	Yes	Organics	5.71E-04	I	-		4.91E-03	-	4.91E-03 ca
Polychlorinated Biphenyls (low risk)	1336-36-3	No	Yes	Organics	1.00E-04	I	-		2.81E-02	-	2.81E-02 ca
Polychlorinated Biphenyls (lowest risk)	1336-36-3	No	Yes	Organics	2.00E-05	I	-		1.40E-01	-	1.40E-01 ca
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	No	No	Organics	-		6.00E-04	I	-	6.26E-02	6.26E-02 nc
Polyphosphoric acid	8017-16-1	No	No	Inorganics	-		-		-	-	
Potassium Cyanide	151-50-8	No	No	Inorganics	-		9.00E-03	C	-	9.39E-01	9.39E-01 nc
Potassium Perchlorate	7778-74-7	No	No	Inorganics	-		-		-	-	
Potassium Silver Cyanide	506-61-6	No	No	Inorganics	-		-		-	-	
Potassium perfluorobutanesulfonate	29420-49-3	No	No	Organics	-		-		-	-	
Potassium perfluorobutanoate	2966-54-3	No	Yes	Organics	-		-		-	-	
Potassium perfluorooctanesulfonate	2795-39-3	No	No	Organics	-		-		-	-	
Potassium salts of inorganic phosphates	NA	No	No	Inorganics	-		-		-	-	
Potassium tripolyphosphate	13845-36-8	No	No	Inorganics	-		-		-	-	
Prochloraz	67747-09-5	No	No	Organics	-		-		-	-	
Profluralin	26399-36-0	No	Yes	Organics	-		-		-	-	
Prometon	1610-18-0	No	No	Organics	-		-		-	-	
Prometryn	7287-19-6	No	No	Organics	-		-		-	-	
Pronamide	23950-58-5	No	No	Organics	-		-		-	-	

Propachlor	1918-16-7	No	No	Organics	-		-		-	-	
Propanil	709-98-8	No	No	Organics	-		-		-	-	
Propargite	2312-35-8	No	No	Organics	-		-		-	-	
Propargyl Alcohol	107-19-7	No	Yes	Organics	-		-		-	-	
Propazine	139-40-2	No	No	Organics	-		-		-	-	
Propham	122-42-9	No	No	Organics	-		-		-	-	
Propiconazole	60207-90-1	No	No	Organics	-		-		-	-	
Propionaldehyde	123-38-6	No	Yes	Organics	-		8.00E-03	I	-	8.34E-01	8.34E-01 nc
Propyl benzene	103-65-1	No	Yes	Organics	-		1.00E+00	X	-	1.04E+02	1.04E+02 nc
Propylene	115-07-1	No	Yes	Organics	-		3.00E+00	C	-	3.13E+02	3.13E+02 nc
Propylene Glycol	57-55-6	No	No	Organics	-		-		-	-	
Propylene Glycol Dinitrate	6423-43-4	No	No	Organics	-		2.72E-04	A	-	2.83E-02	2.83E-02 nc
Propylene Glycol Monomethyl Ether	107-98-2	No	Yes	Organics	-		2.00E+00	I	-	2.09E+02	2.09E+02 nc
Propylene Oxide	75-56-9	No	Yes	Organics	3.70E-06	I	3.00E-02	I	7.59E-01	3.13E+00	7.59E-01 ca**
Pyrene	129-00-0	No	Yes	Organics	-		-		-	-	
Pyridine	110-86-1	No	Yes	Organics	-		-		-	-	
Quinalphos	13593-03-8	No	No	Organics	-		-		-	-	
Quinoline	91-22-5	No	No	Organics	-		-		-	-	
Quizalofop-ethyl	76578-14-8	No	No	Organics	-		-		-	-	
Refractory Ceramic Fibers (units in fibers)	NA	No	No	Inorganics	-		3.00E+04	A	-	3.13E+03	3.13E+03 nc
Resmethrin	10453-86-8	No	No	Organics	-		-		-	-	
Ronnel	299-84-3	No	Yes	Organics	-		-		-	-	
Rotenone	83-79-4	No	No	Organics	-		-		-	-	
Safrole	94-59-7	Yes	No	Organics	6.30E-05	C	-		1.61E-02	-	1.61E-02 ca
Selenious Acid	7783-00-8	No	No	Inorganics	-		-		-	-	
Selenium	7782-49-2	No	No	Inorganics	-		2.00E-02	C	-	2.09E+00	2.09E+00 nc
Selenium Sulfide	7446-34-6	No	No	Inorganics	-		2.00E-02	C	-	2.09E+00	2.09E+00 nc
Sethoxydim	74051-80-2	No	No	Organics	-		-		-	-	
Silica (crystalline, respirable)	7631-86-9	No	No	Inorganics	-		3.00E-03	C	-	3.13E-01	3.13E-01 nc
Silver	7440-22-4	No	No	Inorganics	-		-		-	-	
Silver Cyanide	506-64-9	No	No	Inorganics	-		-		-	-	
Simazine	122-34-9	No	No	Organics	-		-		-	-	
Sodium Acifluorfen	62476-59-9	No	No	Organics	-		-		-	-	
Sodium Azide	26628-22-8	No	No	Inorganics	-		-		-	-	
Sodium Cyanide	143-33-9	No	No	Inorganics	-		9.00E-03	C	-	9.39E-01	9.39E-01 nc
Sodium Diethyldithiocarbamate	148-18-5	No	No	Organics	-		-		-	-	
Sodium Fluoride	7681-49-4	No	No	Inorganics	-		1.40E-02	C	-	1.46E+00	1.46E+00 nc
Sodium Fluoroacetate	62-74-8	No	No	Organics	-		-		-	-	
Sodium Metavanadate	13718-26-8	No	No	Inorganics	-		-		-	-	
Sodium Perchlorate	7601-89-0	No	No	Inorganics	-		-		-	-	
Sodium Tungstate	13472-45-2	No	No	Inorganics	-		-		-	-	

Sodium aluminum phosphate (anhydrous)	10279-59-1	No	No	Inorganics	-		-		-	-	
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	No	No	Inorganics	-		-		-	-	
Sodium hexametaphosphate	10124-56-8	No	No	Inorganics	-		-		-	-	
Sodium perfluorobutanoate	2218-54-4	No	Yes	Organics	-		-		-	-	
Sodium perfluorohexanoate	2923-26-4	No	No	Organics	-		-		-	-	
Sodium polyphosphate	68915-31-1	No	No	Inorganics	-		-		-	-	
Sodium pyrophosphate	7758-16-9	No	No	Inorganics	-		-		-	-	
Sodium salts of inorganic phosphates	NA	No	No	Inorganics	-		-		-	-	
Sodium trimetaphosphate	7785-84-4	No	No	Inorganics	-		-		-	-	
Sodium tripolyphosphate	7758-29-4	No	No	Inorganics	-		-		-	-	
Stirofos (Tetrachlorovinphos)	961-11-5	No	No	Organics	-		-		-	-	
Strontium, Stable	7440-24-6	No	No	Inorganics	-		-		-	-	
Strychnine	57-24-9	No	No	Organics	-		-		-	-	
Styrene	100-42-5	No	Yes	Organics	-		1.00E+00	I	-	1.04E+02	1.04E+02 nc
Styrene-Acrylonitrile (SAN) Trimer (THNA isomer)	57964-39-3	No	No	Organics	-		-		-	-	
Styrene-Acrylonitrile (SAN) Trimer (THNP isomer)	57964-40-6	No	No	Organics	-		-		-	-	
Sulfolane	126-33-0	No	No	Organics	-		2.00E-03	X	-	2.09E-01	2.09E-01 nc
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	No	No	Organics	-		-		-	-	
Sulfur Trioxide	7446-11-9	No	Yes	Inorganics	-		1.00E-03	C	-	1.04E-01	1.04E-01 nc
Sulfuric Acid	7664-93-9	No	No	Inorganics	-		1.00E-03	C	-	1.04E-01	1.04E-01 nc
Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	No	No	Organics	7.10E-06	I	-		3.95E-01	-	3.95E-01 ca
TCDD, 2,3,7,8-	1746-01-6	No	Yes	Organics	3.80E+01	C	4.00E-08	C	7.39E-08	4.17E-06	7.39E-08 ca*
TCDF, 2,3,7,8-	51207-31-9	No	Yes	Organics	3.80E+00	W	4.00E-07	W	7.39E-07	4.17E-05	7.39E-07 ca*
Tebuthiuron	34014-18-1	No	No	Organics	-		-		-	-	
Temephos	3383-96-8	No	No	Organics	-		-		-	-	
Terbacil	5902-51-2	No	No	Organics	-		-		-	-	
Terbufos	13071-79-9	No	Yes	Organics	-		-		-	-	
Terbutryn	886-50-0	No	No	Organics	-		-		-	-	
Tert-Butyl Acetate	540-88-5	No	Yes	Organics	1.30E-06	C	-		2.16E+00	-	2.16E+00 ca
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	No	No	Organics	-		-		-	-	
Tetrachlorobenzene, 1,2,4,5-	95-94-3	No	Yes	Organics	-		-		-	-	
Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	No	No	Organics	3.80E-03	W	4.00E-04	W	7.39E-04	4.17E-02	7.39E-04 ca*
Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	No	Yes	Organics	1.14E-02	W	1.33E-04	W	2.46E-04	1.39E-02	2.46E-04 ca*
Tetrachloroethane, 1,1,1,2-	630-20-6	No	Yes	Organics	7.40E-06	I	-		3.79E-01	-	3.79E-01 ca
Tetrachloroethane, 1,1,2,2-	79-34-5	No	Yes	Organics	5.80E-05	C	-		4.84E-02	-	4.84E-02 ca
Tetrachloroethylene	127-18-4	No	Yes	Organics	2.60E-07	I	4.00E-02	I	1.08E+01	4.17E+00	4.17E+00 nc
Tetrachlorophenol, 2,3,4,6-	58-90-2	No	No	Organics	-		-		-	-	
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	No	Yes	Organics	-		-		-	-	
Tetraethyl Dithiopyrophosphate	3689-24-5	No	No	Organics	-		-		-	-	
Tetraethyl Lead	78-00-2	No	Yes	Organics	-		-		-	-	

Tetrafluoroethane, 1,1,1,2-	811-97-2	No	Yes	Organics	-		8.00E+01	I	-	8.34E+03	8.34E+03 nc
Tetrahydrofuran	109-99-9	No	Yes	Organics	-		2.00E+00	I	-	2.09E+02	2.09E+02 nc
Tetramethylphosphoramide, -N,N,N',N" (TMPA)	16853-36-4	No	No	Organics	-		-		-	-	
Tetrapotassium phosphate	7320-34-5	No	No	Inorganics	-		-		-	-	
Tetrasodium pyrophosphate	7722-88-5	No	No	Inorganics	-		-		-	-	
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	No	No	Organics	-		-		-	-	
Thallic Oxide	1314-32-5	No	No	Inorganics	-		-		-	-	
Thallium (I) Nitrate	10102-45-1	No	No	Inorganics	-		-		-	-	
Thallium (Soluble Salts)	7440-28-0	No	No	Inorganics	-		-		-	-	
Thallium Acetate	563-68-8	No	Yes	Organics	-		-		-	-	
Thallium Carbonate	6533-73-9	No	No	Inorganics	-		-		-	-	
Thallium Chloride	7791-12-0	No	No	Inorganics	-		-		-	-	
Thallium Selenite	12039-52-0	No	No	Inorganics	-		-		-	-	
Thallium Sulfate	7446-18-6	No	No	Inorganics	-		-		-	-	
Thifensulfuron-methyl	79277-27-3	No	No	Organics	-		-		-	-	
Thiobencarb	28249-77-6	No	No	Organics	-		-		-	-	
Thiocyanates	NA	No	No	Inorganics	-		-		-	-	
Thiocyanic Acid	463-56-9	No	Yes	Inorganics	-		-		-	-	
Thiocyanic acid, (2-benzothiazolylthio)methyl ester (TCMTB)	21564-17-0	No	No	Organics	-		-		-	-	
Thiodiglycol	111-48-8	No	No	Organics	-		-		-	-	
Thiofanox	39196-18-4	No	No	Organics	-		-		-	-	
Thiophanate, Methyl	23564-05-8	No	No	Organics	-		-		-	-	
Thiram	137-26-8	No	No	Organics	-		-		-	-	
Tin	7440-31-5	No	No	Inorganics	-		-		-	-	
Titanium Tetrachloride	7550-45-0	No	Yes	Inorganics	-		1.00E-04	A	-	1.04E-02	1.04E-02 nc
Toluene	108-88-3	No	Yes	Organics	-		5.00E+00	I	-	5.21E+02	5.21E+02 nc
Toluene-2,4-diisocyanate	584-84-9	No	Yes	Organics	1.10E-05	C	8.00E-06	C	2.55E-01	8.34E-04	8.34E-04 nc
Toluene-2,6-diisocyanate	91-08-7	No	Yes	Organics	1.10E-05	C	8.00E-06	C	2.55E-01	8.34E-04	8.34E-04 nc
Toluenediamine, 2,3-	2687-25-4	No	No	Organics	-		-		-	-	
Toluenediamine, 2,5-	95-70-5	No	No	Organics	-		-		-	-	
Toluenediamine, 3,4-	496-72-0	No	No	Organics	-		-		-	-	
Toluic Acid, p-	99-94-5	No	No	Organics	-		-		-	-	
Toluidine, o- (Methylaniline, 2-)	95-53-4	No	No	Organics	5.10E-05	C	-		5.51E-02	-	5.51E-02 ca
Toluidine, p-	106-49-0	No	No	Organics	-		-		-	-	
Total Petroleum Hydrocarbons (Aliphatic High)	NA	No	Yes	Organics	-		-		-	-	
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	No	Yes	Organics	-		4.00E-01	P	-	4.17E+01	4.17E+01 nc
Total Petroleum Hydrocarbons (Aliphatic Medium)	NA	No	Yes	Organics	-		1.00E-01	P	-	1.04E+01	1.04E+01 nc
Total Petroleum Hydrocarbons (Aromatic High)	NA	Yes	No	Organics	-		2.00E-06	P	-	2.09E-04	2.09E-04 nc
Total Petroleum Hydrocarbons (Aromatic Medium)	NA	No	Yes	Organics	-		6.00E-02	P	-	6.26E+00	6.26E+00 nc
Toxaphene	8001-35-2	No	No	Organics	3.20E-04	I	-		8.77E-03	-	8.77E-03 ca
Toxaphene, Weathered	NA	No	No	Organics	-		-		-	-	
Tralomethrin	66841-25-6	No	No	Organics	-		-		-	-	
Tri-n-butyltin	688-73-3	No	Yes	Organics	-		-		-	-	

Triacetin	102-76-1	No	No	Organics	-		-		-	-	
Triadimefon	43121-43-3	No	No	Organics	-		-		-	-	
Triallate	2303-17-5	No	Yes	Organics	-		-		-	-	
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	No	No	Inorganics	-		-		-	-	
Triasulfuron	82097-50-5	No	No	Organics	-		-		-	-	
Tribenuron-methyl	101200-48-0	No	No	Organics	-		-		-	-	
Tribromobenzene, 1,2,4-	615-54-3	No	Yes	Organics	-		-		-	-	
Tribromophenol, 2,4,6-	118-79-6	No	No	Organics	-		-		-	-	
Tribufos	78-48-8	No	No	Organics	-		-		-	-	
Tributyl Phosphate	126-73-8	No	No	Organics	-		-		-	-	
Tributyltin Compounds	NA	No	No	Organics	-		-		-	-	
Tributyltin Oxide	56-35-9	No	No	Organics	-		-		-	-	
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	No	Yes	Organics	-		5.00E+00	P	-	5.21E+02	5.21E+02 nc
Trichloroacetic Acid	76-03-9	No	No	Organics	-		-		-	-	
Trichloroaniline HCl, 2,4,6-	33663-50-2	No	No	Organics	-		-		-	-	
Trichloroaniline, 2,4,6-	634-93-5	No	No	Organics	-		-		-	-	
Trichlorobenzene, 1,2,3-	87-61-6	No	Yes	Organics	-		-		-	-	
Trichlorobenzene, 1,2,4-	120-82-1	No	Yes	Organics	-		2.00E-03	P	-	2.09E-01	2.09E-01 nc
Trichloroethane, 1,1,1-	71-55-6	No	Yes	Organics	-		5.00E+00	I	-	5.21E+02	5.21E+02 nc
Trichloroethane, 1,1,2-	79-00-5	No	Yes	Organics	1.60E-05	I	2.00E-04	X	1.75E-01	2.09E-02	2.09E-02 nc
Trichloroethylene	79-01-6	Yes	Yes	Organics	4.10E-06	I	2.00E-03	I	4.78E-01	2.09E-01	2.09E-01 nc
Trichlorofluoromethane	75-69-4	No	Yes	Organics	-		-		-	-	
Trichlorophenol, 2,4,5-	95-95-4	No	No	Organics	-		-		-	-	
Trichlorophenol, 2,4,6-	88-06-2	No	No	Organics	3.10E-06	I	-		9.06E-01	-	9.06E-01 ca
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	No	No	Organics	-		-		-	-	
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	No	No	Organics	-		-		-	-	
Trichloropropane, 1,1,2-	598-77-6	No	Yes	Organics	-		-		-	-	
Trichloropropane, 1,2,3-	96-18-4	Yes	Yes	Organics	-		3.00E-04	I	-	3.13E-02	3.13E-02 nc
Trichloropropene, 1,2,3-	96-19-5	No	Yes	Organics	-		3.00E-04	P	-	3.13E-02	3.13E-02 nc
Tricresyl Phosphate (TCP)	1330-78-5	No	No	Organics	-		-		-	-	
Tridiphane	58138-08-2	No	No	Organics	-		-		-	-	
Triethylamine	121-44-8	No	Yes	Organics	-		7.00E-03	I	-	7.30E-01	7.30E-01 nc
Triethylene Glycol	112-27-6	No	No	Organics	-		-		-	-	
Trifluoroethane, 1,1,1-	420-46-2	No	Yes	Organics	-		2.00E+01	P	-	2.09E+03	2.09E+03 nc
Trifluralin	1582-09-8	No	Yes	Organics	-		-		-	-	
Trimethyl Phosphate	512-56-1	No	No	Organics	-		-		-	-	
Trimethylbenzene, 1,2,3-	526-73-8	No	Yes	Organics	-		6.00E-02	I	-	6.26E+00	6.26E+00 nc
Trimethylbenzene, 1,2,4-	95-63-6	No	Yes	Organics	-		6.00E-02	I	-	6.26E+00	6.26E+00 nc
Trimethylbenzene, 1,3,5-	108-67-8	No	Yes	Organics	-		6.00E-02	I	-	6.26E+00	6.26E+00 nc
Trimethylpentene, 2,4,4-	25167-70-8	No	Yes	Organics	-		-		-	-	
Trinitrobenzene, 1,3,5-	99-35-4	No	No	Organics	-		-		-	-	
Trinitrotoluene, 2,4,6-	118-96-7	No	No	Organics	-		-		-	-	

Triphenylphosphine Oxide	791-28-6	No	No	Organics	-		-		-	-	
Triphosphoric acid, aluminum salt (1:1) [aluminum triphosphate]	13939-25-8	No	No	Inorganics	-		-		-	-	
Tripotassium phosphate	7778-53-2	No	No	Inorganics	-		-		-	-	
Tris(1,3-Dichloro-2-propyl) Phosphate	13674-87-8	No	No	Organics	-		-		-	-	
Tris(1-chloro-2-propyl)phosphate	13674-84-5	No	No	Organics	-		-		-	-	
Tris(2,3-dibromopropyl)phosphate	126-72-7	No	Yes	Organics	6.60E-04	C	-		4.25E-03	-	4.25E-03 ca
Tris(2-chloroethyl)phosphate	115-96-8	No	No	Organics	-		-		-	-	
Tris(2-ethylhexyl)phosphate	78-42-2	No	No	Organics	-		-		-	-	
Trisodium phosphate	7601-54-9	No	No	Inorganics	-		-		-	-	
Tungsten	7440-33-7	No	No	Inorganics	-		-		-	-	
Uranium	7440-61-1	No	No	Inorganics	-		4.00E-05	A	-	4.17E-03	4.17E-03 nc
Urethane	51-79-6	Yes	No	Organics	2.90E-04	C	-		3.50E-03	-	3.50E-03 ca
Vanadium Pentoxide	1314-62-1	No	No	Inorganics	8.30E-03	P	7.00E-06	P	3.38E-04	7.30E-04	3.38E-04 ca**
Vanadium and Compounds	7440-62-2	No	No	Inorganics	-		1.00E-04	A	-	1.04E-02	1.04E-02 nc
Vernolate	1929-77-7	No	Yes	Organics	-		-		-	-	
Vinclozolin	50471-44-8	No	No	Organics	-		-		-	-	
Vinyl Acetate	108-05-4	No	Yes	Organics	-		2.00E-01	I	-	2.09E+01	2.09E+01 nc
Vinyl Bromide	593-60-2	No	Yes	Organics	1.50E-05	P	3.00E-03	I	1.87E-01	3.13E-01	1.87E-01 ca**
Vinyl Chloride	75-01-4	Yes	Yes	Organics	4.40E-06	I	1.00E-01	I	1.68E-01	1.04E+01	1.68E-01 ca*
Warfarin	81-81-2	No	No	Organics	-		-		-	-	
Xylene, m-	108-38-3	No	Yes	Organics	-		1.00E-01	G	-	1.04E+01	1.04E+01 nc
Xylene, o-	95-47-6	No	Yes	Organics	-		1.00E-01	G	-	1.04E+01	1.04E+01 nc
Xylene, p-	106-42-3	No	Yes	Organics	-		1.00E-01	G	-	1.04E+01	1.04E+01 nc
Xylenes	1330-20-7	No	Yes	Organics	-		1.00E-01	I	-	1.04E+01	1.04E+01 nc
Zinc Cyanide	557-21-1	No	No	Inorganics	-		-		-	-	
Zinc Phosphide	1314-84-7	No	No	Inorganics	-		-		-	-	
Zinc and Compounds	7440-66-6	No	No	Inorganics	-		-		-	-	
Zineb	12122-67-7	No	No	Organics	-		-		-	-	
Zirconium	7440-67-7	No	No	Inorganics	-		-		-	-	